LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Terranext
4050 E. Cotton Center Blvd. Ste 73
Phoenix, AZ 85040
ATTN: Mr. Chuck Gordon

October 30, 2013

SUBJECT: West Van Buren Area, Data Validation

Dear Mr. Gordon,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on October 9, 2013. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 30552:

SDG #	Fraction
469804, 469984 470083, 471056 470164, 470334 470337, 470483 470619, 470623 470624, 470854 470871, 470874	Volatiles, Chromium

The data validation was performed under EPA Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

The following are definitions of the Arizona Data Qualifiers (ADQ):

Method Blank:

B1 Target analyte detected in method blank at or above the method reporting limit.

B2 Non-target analyte detected in method blank and sample, producing interference.

B3 Target analyte detected in calibration blank at or above the method reporting limit.

B4 Target analyte detected in blank at or above method acceptance criteria.

B5 Target analyte detected in method blank at or above the method reporting limit, but below trigger level or MCL.

B6 Target analyte detected in calibration blank at or above the method reporting limit, but below trigger level or MCL.

B7 Target analyte detected in method blank at or above the method reporting limit. Concentration found in the sample was 10 times above the concentration found in the method blank.

Confirmation:

C1 Confirmatory analysis not performed as required by the method.

C3 Qualitative confirmation performed.

C4 Confirmatory analysis was past holding time.

C5 Confirmatory analysis was past holding time. Original result not confirmed.

C6 Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the higher value was reported as there was no obvious chromatographic interference.

C7 Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the lower value was reported due to apparent chromatographic interference.

Dilution:

D1 Sample required dilution due to matrix interference.

D2 Sample required dilution due to high concentration of target analyte.

D3 Sample dilution required due to insufficient sample.

D4 Minimum reporting level (MRL) adjusted to reflect sample amount received and analyzed.

Estimated Concentration:

E1 Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to insufficient sample.

E2 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.

E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.

E4 Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL).

E5 Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL), but not confirmed by alternate analysis.

E6 Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

E7 Concentration estimated. Internal standard recoveries did not meet laboratory acceptance criteria.

Hold Time:

H1 Sample analysis performed past holding time.

H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.

H3 Sample was received and analyzed past holding time.

H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time.

Laboratory Fortified Blank/Blank Spike:

L1 The associated blank spike recovery was above laboratory acceptance limits.

L2 The associated blank spike recovery was below laboratory acceptance limits.

L3 The associated blank spike recovery was above method acceptance limits.

L4 The associated blank spike recovery was below method acceptance limits.

Matrix Spike:

M1 Matrix spike recovery was high, the method control sample recovery was acceptable.

M2 Matrix spike recovery was low, the method control sample recovery was acceptable.

M3 The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

M4 The analysis of the spiked sample required a dilution such that the spike concentration was diluted below the reporting limit. The method control sample recovery was acceptable.

M5 Analyte concentration was determined by the method of standard addition (MSA).

M6 Matrix spike recovery was high. Data reported per ADEQ policy 0154.000.

M7 Matrix spike recovery was low. Data reported per ADEQ policy 0154.000.

Sample Quality:

Q1 Sample integrity was not maintained.

Q2 Sample received with head space.

Q3 Sample received with improper chemical preservation.

Q4 Sample received and analyzed without chemical preservation.

Q5 Sample received with inadequate chemical preservation, but preserved by the laboratory.

Q6 Sample was received above recommended temperature.

Q7 Sample inadequately dechlorinated.

Q8 Insufficient sample received to meet method QC requirements. Batch QC requirements satisfies ADEQ policies 0154 and 0155.

Q9 Insufficient sample received to meet method QC requirements.

Q10 Sample received in inappropriate sample container.

Q11 Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.

Duplicates:

R1 RPD exceeded the method control limit.

R2 RPD exceeded the laboratory control limit.

R4 MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.

R5 MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

R6 LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.

R7 LFB/LFBD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

R8 Sample RPD exceeded the method control limit.

R9 Sample RPD exceeded the laboratory control limit.

R10 Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the lower value was reported due to apparent chromatographic problems.

R11 The RPD calculation for the MS/MSD does not provide useful information due to varying sample weights when Encore samplers/methanol preserved samples are used.

Surrogates:

S1 Surrogate recovery was above laboratory acceptance limits, but within method acceptance limits.

S3 Surrogate recovery was above laboratory acceptance limits, but within method acceptance limits. No target analytes were detected in the sample.

S4 Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.

S5 Surrogate recovery was below laboratory acceptance limits, but within method acceptance limits.

S6 Surrogate recovery was below laboratory and method acceptance limits. Reextraction and/or reanalysis confirms low recovery caused by matrix effect.

S7 Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

S8 The analysis of the sample required a dilution such that the surrogate recovery calculation does not provide any useful information. The method control sample recovery was acceptable.

S10 Surrogate recovery was above laboratory and method acceptance limits. See case narrative.

S11 Surrogate recovery was high. Data reported per ADEQ policy 0154.000.

S12 Surrogate recovery was low. Data reported per ADEQ policy 0154.000.

Calibration Verification:

V1 CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

V2 CCV recovery was above method acceptance limits. This target analyte was detected in the sample. The sample could not be reanalyzed due to insufficient sample.

V3 CCV recovery was above method acceptance limits. This target analyte was detected in the sample, but the sample could not be reanalyzed. See case narrative.

V4 CCV recovery was below method acceptance limits. The sample could not be reanalyzed due to insufficient sample.

V5 CCV recovery after a group of samples was above method acceptance limits. This target analyte was not detected in the sample. Acceptable per EPA Method 8000B.

V6 Data reported from one-point calibration criteria per ADEQ policy 0155.000.

V7 Calibration verification recovery was above the method control limit for this analyte, however the average % difference or % drift for all the analytes met method criteria.

V8 Calibration verification recovery was below the method control limit for this analyte, however the average % difference or % drift for all the analytes met method criteria.

Calibration:

W1 The % RSD for this compound was above 20%. The average % RSD for all compounds in the calibration met the 20% criteria as specified in EPA Method 8000B.

W2 The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria as specified in EPA Method 8260B/8270C.

Please feel free to contact us if you have any questions.

Sincerely,

Minh-Hwa Hwang
Project Manager/Senior Chemist

448 pages-SF

Attachment 1

Level III/IV-Client Select

LDC #30552 (Terranext-Phoenix, AZ / West Van Buren Area)

Project #0310-3154-16

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		Cr (6010B)		Diss. Cr (6010B)																													
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	469804	10/09/13	10/30/13	4	0	3	0	3	0																												
B	469984	10/09/13	10/30/13	6	0	5	0	5	0																												
C	470083	10/09/13	10/30/13	9	0	7	0	7	0																												
D	471056	10/09/13	10/30/13	17	0	1	0	1	0																												
E	470164	10/09/13	10/30/13	4	0	3	0	3	0																												
F	470334	10/09/13	10/30/13	8	0	7	0	7	0																												
G	470337	10/09/13	10/30/13	9	0	7	0	8	0																												
H	470483	10/09/13	10/30/13	7	0	6	0	6	0																												
I	470619	10/09/13	10/30/13	7	0	6	0	6	0																												
J	470623	10/09/13	10/30/13	4	0	2	0	2	0																												
K	470624	10/09/13	10/30/13	2	0	2	0	2	0																												
L	470854	10/09/13	10/30/13	4	0	-	-	-	-																												
M	470871	10/09/13	10/30/13	14	0	-	-	-	-																												
N	470874	10/09/13	10/30/13	16	0	-	-	-	-																												
Total	A/LR			111	0	49	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	210

Shaded cells indicate Level IV validation (all other cells are Level IIII validation). These sample counts do not include MS/MSD, and DUPs

30552ST.wpd

LDC Report# 30552A1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 9, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	469804

Sample Identification

AVB124-0202-1000
AVB124-0200-15270
AVB131-0100-15215
AVB131-0104-1000

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB124-0202-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB131-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
643635-LCS/D (All samples in SDG 469804)	Bromomethane Chloroethane	150 (58-138) 151 (60-146)	141 (58-138) 176 (60-146)	- -	J (all detects) J (all detects)	P
643635-LCS/D (All samples in SDG 469804)	Naphthalene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	61 (64-133) - -	- - -	36 (≤27) 36 (≤27) 28 (≤20)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 469804

SDG	Sample	Compound	Flag	A or P	Reason (Code)
469804	AVB124-0202-1000 AVB124-0200-15270 AVB131-0100-15215 AVB131-0104-1000	Bromomethane Chloroethane	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L1)
469804	AVB124-0202-1000 AVB124-0200-15270 AVB131-0100-15215 AVB131-0104-1000	Naphthalene	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)(RPD) (L2,R2)
469804	AVB124-0202-1000 AVB124-0200-15270 AVB131-0100-15215 AVB131-0104-1000	1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 469804

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 469804

No Sample Data Qualified in this SDG

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0202-1000** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-001 Date Collected: 09.09.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.09.13 18.55		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.09.13 18.55		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.09.13 18.55		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.09.13 18.55		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.09.13 18.55		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.09.13 18.55		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.09.13 18.55	L1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.09.13 18.55		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.09.13 18.55		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.09.13 18.55		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.09.13 18.55		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.09.13 18.55		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.09.13 18.55		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.09.13 18.55		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.09.13 18.55		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.09.13 18.55	N1V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.09.13 18.55		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.09.13 18.55		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.09.13 18.55		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.09.13 18.55		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.09.13 18.55		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.09.13 18.55		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.09.13 18.55		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.09.13 18.55		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.09.13 18.55		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.09.13 18.55		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.09.13 18.55		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.09.13 18.55		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.09.13 18.55		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.09.13 18.55		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.09.13 18.55		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.09.13 18.55		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.09.13 18.55		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.09.13 18.55		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.09.13 18.55		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.09.13 18.55		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.09.13 18.55		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.09.13 18.55		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.09.13 18.55		1

 Final 1.000

02/10/30/13

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0202-1000** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-001 Date Collected: 09.09.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.09.13 18.55		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.09.13 18.55		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.09.13 18.55		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.09.13 18.55		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.09.13 18.55		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.09.13 18.55		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.09.13 18.55		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.09.13 18.55		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.09.13 18.55	L2UJ (L2,1R2)	1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.09.13 18.55		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.09.13 18.55		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.09.13 18.55		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.09.13 18.55		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.09.13 18.55		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.09.13 18.55		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.09.13 18.55	UJ (R2)	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.09.13 18.55	UJ (R2)	1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.09.13 18.55		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.09.13 18.55		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.09.13 18.55		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.09.13 18.55		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.09.13 18.55		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.09.13 18.55		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.09.13 18.55		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.09.13 18.55		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.09.13 18.55		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.09.13 18.55		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.09.13 18.55		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.09.13 18.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	69-133	09.09.13 18.55	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.09.13 18.55	
Toluene-D8	2037-26-5	98	%	70-130	09.09.13 18.55	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.09.13 18.55	

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0200-15270** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-002 Date Collected: 09.09.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.09.13 19.20		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.09.13 19.20		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.09.13 19.20		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.09.13 19.20		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.09.13 19.20		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.09.13 19.20		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.09.13 19.20	L1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.09.13 19.20		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.09.13 19.20		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.09.13 19.20		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.09.13 19.20		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.09.13 19.20		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.09.13 19.20		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.09.13 19.20		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.09.13 19.20		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.09.13 19.20	N1V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.09.13 19.20		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.09.13 19.20		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.09.13 19.20		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.09.13 19.20		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.09.13 19.20		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.09.13 19.20		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.09.13 19.20		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.09.13 19.20		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.09.13 19.20		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.09.13 19.20		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.09.13 19.20		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.09.13 19.20		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.09.13 19.20		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.09.13 19.20		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.09.13 19.20		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.09.13 19.20		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.09.13 19.20		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.09.13 19.20		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.09.13 19.20		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.09.13 19.20		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.09.13 19.20		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.09.13 19.20		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.09.13 19.20		1

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Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0200-15270** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-002 Date Collected: 09.09.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.09.13 19.20		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.09.13 19.20		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.09.13 19.20		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.09.13 19.20		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.09.13 19.20		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.09.13 19.20		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.09.13 19.20		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.09.13 19.20		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.09.13 19.20	L2 UJ(L2,R2)	1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.09.13 19.20		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.09.13 19.20		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.09.13 19.20		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.09.13 19.20		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.09.13 19.20		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.09.13 19.20		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.09.13 19.20	UJ(R2)	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.09.13 19.20	UJ(R2)	1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.09.13 19.20		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.09.13 19.20		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.09.13 19.20		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.09.13 19.20		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.09.13 19.20		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.09.13 19.20		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.09.13 19.20		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.09.13 19.20		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.09.13 19.20		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.09.13 19.20		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.09.13 19.20		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.09.13 19.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	69-133	09.09.13 19.20	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.09.13 19.20	
Toluene-D8	2037-26-5	97	%	70-130	09.09.13 19.20	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.09.13 19.20	

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Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB131-0100-15215** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-003 Date Collected: 09.09.13 12.23

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.09.13 19.45		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.09.13 19.45		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.09.13 19.45		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.09.13 19.45		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.09.13 19.45		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.09.13 19.45		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.09.13 19.45	L1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.09.13 19.45		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.09.13 19.45		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.09.13 19.45		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.09.13 19.45		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.09.13 19.45		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.09.13 19.45		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.09.13 19.45		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.09.13 19.45		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.09.13 19.45	N1V1	1
Chloroform	67-66-3	**1.75**	0.500	ug/L	09.09.13 19.45		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.09.13 19.45		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.09.13 19.45		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.09.13 19.45		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.09.13 19.45		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.09.13 19.45		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.09.13 19.45		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.09.13 19.45		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.09.13 19.45		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.09.13 19.45		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.09.13 19.45		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.09.13 19.45		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.09.13 19.45		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.09.13 19.45		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.09.13 19.45		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.09.13 19.45		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.09.13 19.45		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.09.13 19.45		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.09.13 19.45		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.09.13 19.45		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.09.13 19.45		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.09.13 19.45		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.09.13 19.45		1

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Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

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Sample Id: **AVB131-0100-15215** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-003 Date Collected: 09.09.13 12.23

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.09.13 19.45		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.09.13 19.45		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.09.13 19.45		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.09.13 19.45		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.09.13 19.45		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.09.13 19.45		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.09.13 19.45		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.09.13 19.45		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.09.13 19.45	L2 UJ(L2,RR)	
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.09.13 19.45		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.09.13 19.45		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.09.13 19.45		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.09.13 19.45		1
Tetrachloroethylene	127-18-4	**0.730**	0.500	ug/L	09.09.13 19.45		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.09.13 19.45		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.09.13 19.45	UJ(R2)	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.09.13 19.45	UJ(R2)	1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.09.13 19.45		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.09.13 19.45		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.09.13 19.45		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.09.13 19.45		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.09.13 19.45		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.09.13 19.45		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.09.13 19.45		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.09.13 19.45		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.09.13 19.45		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.09.13 19.45		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.09.13 19.45		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.09.13 19.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	69-133	09.09.13 19.45	
1,2-Dichloroethane-D4	17060-07-0	101	%	66-139	09.09.13 19.45	
Toluene-D8	2037-26-5	96	%	70-130	09.09.13 19.45	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.09.13 19.45	

Final 1.000

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XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB131-0104-1000** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-004 Date Collected: 09.09.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.09.13 20.10		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.09.13 20.10		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.09.13 20.10		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.09.13 20.10		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.09.13 20.10		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.09.13 20.10		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.09.13 20.10	L1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.09.13 20.10		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.09.13 20.10		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.09.13 20.10		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.09.13 20.10		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.09.13 20.10		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.09.13 20.10		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.09.13 20.10		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.09.13 20.10		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.09.13 20.10	N1V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.09.13 20.10		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.09.13 20.10		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.09.13 20.10		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.09.13 20.10		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.09.13 20.10		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.09.13 20.10		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.09.13 20.10		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.09.13 20.10		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.09.13 20.10		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.09.13 20.10		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.09.13 20.10		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.09.13 20.10		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.09.13 20.10		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.09.13 20.10		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.09.13 20.10		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.09.13 20.10		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.09.13 20.10		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.09.13 20.10		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.09.13 20.10		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.09.13 20.10		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.09.13 20.10		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.09.13 20.10		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.09.13 20.10		1

CR 10/30/13

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB131-0104-1000** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-004 Date Collected: 09.09.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.09.13 14.34
Seq Number: 922435

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.09.13 20.10		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.09.13 20.10		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.09.13 20.10		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.09.13 20.10		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.09.13 20.10		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.09.13 20.10		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.09.13 20.10		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.09.13 20.10		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.09.13 20.10	L2 UJ(L2,RP)	
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.09.13 20.10		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.09.13 20.10		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.09.13 20.10		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.09.13 20.10		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.09.13 20.10		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.09.13 20.10		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.09.13 20.10	UJ(R2)	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.09.13 20.10	UJ(R2)	1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.09.13 20.10		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.09.13 20.10		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.09.13 20.10		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.09.13 20.10		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.09.13 20.10		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.09.13 20.10		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.09.13 20.10		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.09.13 20.10		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.09.13 20.10		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.09.13 20.10		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.09.13 20.10		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.09.13 20.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	123	%	69-133	09.09.13 20.10	
1,2-Dichloroethane-D4	17060-07-0	114	%	66-139	09.09.13 20.10	
Toluene-D8	2037-26-5	97	%	70-130	09.09.13 20.10	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.09.13 20.10	

C2 10/30/13

LDC #: 30552A1a

SDG #: 469804

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer: EB

2nd Reviewer: CV

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/9/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1 EB = 4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	AVB124-0202-1000	11	643635-1-BLK	21		31	
2	AVB124-0200-15270	12		22		32	
3	AVB131-0100-15215	13		23		33	
4	AVB131-0104-1000	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552A/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: FT
2nd Reviewer: OK

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		643635-LCS/LCSD	B	150 (58-138)	141 (58-138)		All	J/Pdet
			D	151 (60-146)	176 (60-146)			
			MMM	61 (64-133)		36 (27)		J/UJ/P
			NNN			~~38 (20)~~ 36 (27)		
			KKK			28 (20)		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 9, 2013

LDC Report Date: October 10, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 469804

Sample Identification

AVB124-0200-15270
AVB131-0100-15215
AVB131-0104-1000
AVB124-0200-15270F
AVB131-0100-15215F
AVB131-0104-1000F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB131-0104-1000 and AVB131-0104-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 469804

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 469804

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 469804

No Sample Data Qualified in this SDG

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0200-15270** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-002 Date Collected: 09.09.13 09.50

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0356**	0.0100	mg/L	09.11.13 14.56		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.11.13 14.39		1

Final 1.000

02/10/30/13

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB131-0100-15215** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-003 Date Collected: 09.09.13 12.23

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0535**	0.0100	mg/L	09.11.13 15.02		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.11.13 14.45		1

CR 10/30/13

XENCO Laboratories
Trans West Analytical Services, LLC

Certificate of Analytical Results 469804

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB131-0104-1000** Matrix: Water Date Received:09.09.13 14.30
Lab Sample Id: 469804-004 Date Collected: 09.09.13 13.45

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.11.13 15.08		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.11.13 10.00
Seq Number: 922485 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.11.13 14.50		1

CL 10/30/13

LDC #: 30552A4

SDG #: 469804

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/10/13

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/9/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	N	ICS
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	A	
XIV.	Field Blanks	ND	EB = 3, 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: AJ

1	AVB124-0200-15270	11	MW	21		11	
2	AVB131-0100-15215	12		22		12	
3	AVB131-0104-1000	13		23		13	
4	AVB124-0200-15270F	14		24		14	
5	AVB131-0100-15215F	15		25		15	
6	AVB131-0104-1000F	16		26		16	
7		17		27		17	
8		18		28		18	
9		19		29		19	
10		20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 10, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 469984

Sample Identification

AVB126-0300-12325
AVB126-0200-13230
AVB133-0100-15200
AVB132-0200-14280
AVB132-0204-1000
AVB126-0300-12325F
AVB126-0200-13230F
AVB133-0100-15200F
AVB132-0200-14280F
AVB132-0204-1000F
AVB126-0300-12325FMS
AVB126-0300-12325FMSD

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 12 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB132-0204-1000 and AVB132-0204-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 469984

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 469984

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 469984

No Sample Data Qualified in this SDG

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0300-12325** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-002 Date Collected: 09.10.13 08.57

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.16.13 08.00

Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0299**	0.0100	mg/L	09.16.13 15.19		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.17.13 12.20

Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0187**	0.0100	mg/L	09.17.13 18.07		1

C210130/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0200-13230** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-003 Date Collected: 09.10.13 10.17

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.16.13 08.00

Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 15.25		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.17.13 12.20

Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 18.36		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB133-0100-15200** Matrix: Water Date Received:09.11.13 08.15
Lab Sample Id: 469984-004 Date Collected: 09.10.13 13.40

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 15.30		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 18.42		1

Final 1.000

SR 10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0200-14280** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-005 Date Collected: 09.10.13 16.20

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.16.13 08.00

Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 15.36		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.17.13 12.20

Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.00		1

CR 10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0204-1000** Matrix: Water Date Received:09.11.13 08.15
Lab Sample Id: 469984-006 Date Collected: 09.10.13 16.36

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 15.42		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.06		1

CR 10/30/13

LDC #: 30552B4
SDG #: 469984
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/10/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	ND	EB= 5,10

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: [illegible]

1	AVB126-0300-12325	11	AVB126-0300-12325FMS	21	MS	11	
2	AVB126-0200-13230	12	AVB126-0300-12325FMSD	22		12	
3	AVB133-0100-15200	13		23		13	
4	AVB132-0200-14280	14		24		14	
5	AVB132-0204-1000	15		25		15	
6	AVB126-0300-12325F	16		26		16	
7	AVB126-0200-13230F	17		27		17	
8	AVB133-0100-15200F	18		28		18	
9	AVB132-0200-14280F	19		29		19	
10	AVB132-0204-1000F	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC Report# 30552B1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 10, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	469984

Sample Identification

AVB126-0301-1000
AVB126-0300-12325
AVB126-0200-13230
AVB133-0100-15200
AVB132-0200-14280
AVB132-0204-1000
AVB126-0300-12325MS
AVB126-0300-12325MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB126-0301-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB132-0204-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB126-0300-12325MS/MSD (AVB126-0300-12325)	Bromomethane	-	150 (53-141)	-	J (all detects)	A
	1,3-Dichloropropane	-	116 (67-115)	-	J (all detects)	
	1,1,2-Trichloroethane	-	117 (65-112)	-	J (all detects)	
	1,2,3-Trichloropropane	-	121 (58-116)	-	J (all detects)	

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
643872-LCS/D (All samples from SDG 469984)	Bromomethane	152 (58-138)	160 (58-138)	-	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 469984

SDG	Sample	Compound	Flag	A or P	Reason (Code)
469984	AVB126-0300-12325	Bromomethane 1,3-Dichloropropane 1,1,2-Trichloroethane 1,2,3-Trichloropropane	J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (M1)
469984	AVB126-0301-1000 AVB126-0300-12325 AVB126-0200-13230 AVB133-0100-15200 AVB132-0200-14280 AVB132-0204-1000	Bromomethane	J (all detects)	P	Laboratory control samples (%R) (L1)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 469984

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 469984

No Sample Data Qualified in this SDG

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0301-1000**
Lab Sample Id: 469984-001

Matrix: Water
Date Collected: 09.10.13 08.00

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 14.15	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 14.15		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 14.15		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 14.15		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 14.15		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 14.15		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 14.15	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 14.15	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 14.15		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 14.15		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 14.15		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 14.15		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 14.15		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 14.15		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 14.15		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 14.15	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 14.15		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 14.15		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 14.15		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 14.15		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 14.15		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 14.15		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 14.15		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 14.15		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 14.15		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 14.15		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 14.15		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 14.15		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 14.15		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 14.15		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 14.15		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 14.15		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 14.15		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 14.15		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 14.15		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 14.15		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 14.15		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 14.15		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 14.15		1

CR 10/30/13

Final 1.000

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0301-1000**
Lab Sample Id: 469984-001

Matrix: Water
Date Collected: 09.10.13 08.00

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 14.15		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 14.15		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 14.15		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 14.15	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 14.15		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 14.15		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 14.15		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 14.15		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 14.15		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 14.15		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 14.15		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 14.15		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 14.15		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 14.15		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 14.15		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 14.15		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 14.15		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 14.15		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 14.15		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 14.15		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 14.15		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 14.15		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 14.15		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 14.15		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 14.15		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 14.15		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 14.15		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 14.15		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 14.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	114	%	69-133	09.13.13 14.15	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.13.13 14.15	
Toluene-D8	2037-26-5	100	%	70-130	09.13.13 14.15	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.13.13 14.15	

Final 1.000

0210130B

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0300-12325**
Lab Sample Id: 469984-002

Matrix: Water
Date Collected: 09.10.13 08.57

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 14.40	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 14.40		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 14.40		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 14.40		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 14.40		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 14.40		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 14.40	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 14.40	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 14.40		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 14.40		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 14.40		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 14.40		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 14.40		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 14.40		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 14.40		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 14.40	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 14.40		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 14.40		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 14.40		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 14.40		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 14.40		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 14.40		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 14.40		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 14.40		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 14.40		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 14.40		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 14.40		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 14.40		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 14.40		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 14.40		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 14.40		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 14.40		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 14.40		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 14.40		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 14.40		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 14.40	M1	1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 14.40		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 14.40		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 14.40		1

02/01/30/13

Final 1.000

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0300-12325**
Lab Sample Id: 469984-002

Matrix: Water
Date Collected: 09.10.13 08.57

Date Received: 09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 14.40		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 14.40		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 14.40		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 14.40	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 14.40		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 14.40		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 14.40		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 14.40		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 14.40		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 14.40		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 14.40		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 14.40		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 14.40		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 14.40		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 14.40		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 14.40		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 14.40		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 14.40		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 14.40	M1	1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 14.40		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 14.40		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 14.40	M1	1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 14.40		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 14.40		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 14.40		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 14.40		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 14.40		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 14.40		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 14.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.13.13 14.40	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.13.13 14.40	
Toluene-D8	2037-26-5	98	%	70-130	09.13.13 14.40	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 14.40	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0200-13230**
Lab Sample Id: 469984-003

Matrix: Water
Date Collected: 09.10.13 10.17

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 15.06	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 15.06		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 15.06		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 15.06		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 15.06		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 15.06		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 15.06	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 15.06	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 15.06		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 15.06		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 15.06		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 15.06		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 15.06		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 15.06		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 15.06		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 15.06	V1	1
Chloroform	67-66-3	**0.980**	0.500	ug/L	09.13.13 15.06		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 15.06		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 15.06		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 15.06		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 15.06		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 15.06		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 15.06		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 15.06		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 15.06		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 15.06		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 15.06		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 15.06		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 15.06		1
1,1-Dichloroethane	75-34-3	**2.81**	0.500	ug/L	09.13.13 15.06		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 15.06		1
1,1-Dichloroethene	75-35-4	**5.46**	0.500	ug/L	09.13.13 15.06		1
cis-1,2-Dichloroethene	156-59-2	**2.73**	0.500	ug/L	09.13.13 15.06		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 15.06		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 15.06		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 15.06		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 15.06		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 15.06		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 15.06		1

C210130113

Final 1.000

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0200-13230** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-003 Date Collected: 09.10.13 10.17

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 15.06		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 15.06		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 15.06		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 15.06	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 15.06		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 15.06		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 15.06		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 15.06		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 15.06		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 15.06		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 15.06		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 15.06		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 15.06		1
Tetrachloroethylene	127-18-4	**1.45**	0.500	ug/L	09.13.13 15.06		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 15.06		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 15.06		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 15.06		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 15.06		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 15.06		1
Trichloroethene	79-01-6	**13.0**	0.500	ug/L	09.13.13 15.06		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 15.06		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 15.06		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 15.06		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 15.06		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 15.06		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 15.06		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 15.06		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 15.06		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 15.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	69-133	09.13.13 15.06	
1,2-Dichloroethane-D4	17060-07-0	120	%	66-139	09.13.13 15.06	
Toluene-D8	2037-26-5	100	%	70-130	09.13.13 15.06	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.13.13 15.06	

02/10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB133-0100-15200**
Lab Sample Id: 469984-004

Matrix: Water
Date Collected: 09.10.13 13.40

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 17.15	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 17.15		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 17.15		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 17.15		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 17.15		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 17.15		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 17.15	NI	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 17.15	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 17.15		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 17.15		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 17.15		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 17.15		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 17.15		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 17.15		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 17.15		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 17.15	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 17.15		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 17.15		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 17.15		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 17.15		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 17.15		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 17.15		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 17.15		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 17.15		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 17.15		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 17.15		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 17.15		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 17.15		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 17.15		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 17.15		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 17.15		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 17.15		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 17.15		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 17.15		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 17.15		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 17.15		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 17.15		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 17.15		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 17.15		1

Final 1.000

CS 10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB133-0100-15200** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-004 Date Collected: 09.10.13 13.40

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 17.15		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 17.15		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 17.15		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 17.15	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 17.15		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 17.15		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 17.15		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 17.15		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 17.15		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 17.15		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 17.15		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 17.15		1
1,1,2,2-Tetrachloroethane	79-34-5	**0.560**	0.500	ug/L	09.13.13 17.15		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 17.15		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 17.15		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 17.15		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 17.15		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 17.15		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 17.15		1
Trichloroethene	79-01-6	**0.560**	0.500	ug/L	09.13.13 17.15		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 17.15		1
1,2,3-Trichloropropane	96-18-4	**1.30**	1.00	ug/L	09.13.13 17.15		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 17.15		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 17.15		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 17.15		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 17.15		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 17.15		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 17.15		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 17.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	109	%	69-133	09.13.13 17.15	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.13.13 17.15	
Toluene-D8	2037-26-5	97	%	70-130	09.13.13 17.15	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 17.15	

0210/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0200-14280**
Lab Sample Id: 469984-005

Matrix: Water
Date Collected: 09.10.13 16.20

Date Received:09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 17.41	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 17.41		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 17.41		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 17.41		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 17.41		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 17.41		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 17.41	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 17.41	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 17.41		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 17.41		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 17.41		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 17.41		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 17.41		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 17.41		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 17.41		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 17.41	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 17.41		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 17.41		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 17.41		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 17.41		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 17.41		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 17.41		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 17.41		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 17.41		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 17.41		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 17.41		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 17.41		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 17.41		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 17.41		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 17.41		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 17.41		1
1,1-Dichloroethene	75-35-4	**0.650**	0.500	ug/L	09.13.13 17.41		1
cis-1,2-Dichloroethene	156-59-2	**0.590**	0.500	ug/L	09.13.13 17.41		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 17.41		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 17.41		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 17.41		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 17.41		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 17.41		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 17.41		1

Final 1.000

CL 10/30/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0200-14280**
Lab Sample Id: 469984-005

Matrix: Water
Date Collected: 09.10.13 16.20

Date Received: 09.11.13 08.15

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923535

Date Prep: 09.13.13 09.06

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 17.41		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 17.41		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 17.41		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 17.41	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 17.41		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 17.41		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 17.41		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 17.41		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 17.41		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 17.41		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 17.41		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 17.41		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 17.41		1
Tetrachloroethylene	127-18-4	**1.67**	0.500	ug/L	09.13.13 17.41		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 17.41		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 17.41		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 17.41		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 17.41		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 17.41		1
Trichloroethene	79-01-6	**7.15**	0.500	ug/L	09.13.13 17.41		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 17.41		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 17.41		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 17.41		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 17.41		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 17.41		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 17.41		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 17.41		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 17.41		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 17.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	69-133	09.13.13 17.41	
1,2-Dichloroethane-D4	17060-07-0	117	%	66-139	09.13.13 17.41	
Toluene-D8	2037-26-5	99	%	70-130	09.13.13 17.41	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.13.13 17.41	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0204-1000** Matrix: Water Date Received:09.11.13 08.15
Lab Sample Id: 469984-006 Date Collected: 09.10.13 16.36

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 18.06	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 18.06		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 18.06		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 18.06		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 18.06		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 18.06		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 18.06	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 18.06	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 18.06		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 18.06		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 18.06		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 18.06		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 18.06		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 18.06		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 18.06		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 18.06	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 18.06		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 18.06		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 18.06		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 18.06		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 18.06		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 18.06		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 18.06		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 18.06		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 18.06		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 18.06		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 18.06		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 18.06		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 18.06		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 18.06		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 18.06		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 18.06		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 18.06		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 18.06		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 18.06		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 18.06		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 18.06		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 18.06		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 18.06		1

Final 1.000

0210/3d/13

Certificate of Analytical Results 469984

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0204-1000** Matrix: Water Date Received:09.11.13 08.15

Lab Sample Id: 469984-006 Date Collected: 09.10.13 16.36

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 18.06		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 18.06		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 18.06		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 18.06	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 18.06		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 18.06		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 18.06		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 18.06		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 18.06		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 18.06		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 18.06		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 18.06		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 18.06		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 18.06		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 18.06		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 18.06		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 18.06		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 18.06		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 18.06		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 18.06		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 18.06		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 18.06		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 18.06		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 18.06		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 18.06		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 18.06		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 18.06		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 18.06		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 18.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	69-133	09.13.13 18.06	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.13.13 18.06	
Toluene-D8	2037-26-5	98	%	70-130	09.13.13 18.06	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 18.06	

CR 10/30/13

LDC #: 30552B1a
SDG #: 469984
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/8/13
Page: 1 of 1
Reviewer: EJ
2nd Reviewer: CW

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/10/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	NP	TB = 1 EB = 6

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: water

1	AVB126-0301-1000	11	643872-1-BLK	21		31	
2	AVB126-0300-12325	12		22		32	
3	AVB126-0200-13230	13		23		33	
4	AVB133-0100-15200	14		24		34	
5	AVB132-0200-14280	15		25		35	
6	AVB132-0204-1000	16		26		36	
7	AVB126-0300-12325MS	17		27		37	
8	AVB126-0300-12325MSD	18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552B/a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		7+8	7&8	B ( )	150 (53-141)	( )	#2	J/A det
				SS ( )	116 (67-115)	( )		
				U ( )	117 (65-112)	( )		
				XX ( )	121 (58-116)	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC #: 30552B1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: FT
2nd Reviewer: CQ

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		643872-LCS/D	B	152 (58-138)	160 (58-138		All	J/Pdet

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 11, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470083

Sample Identification

AVB91-0300-11360
AVB82-0200-11410
AVB82-0201-11410
AVB142-0100-10335
AVB137-0100-12260
AVB21-0200-12240
AVB121-00204-1000
AVB91-0300-11360F
AVB82-0200-11410F
AVB82-0201-11410F
AVB142-0100-10335F
AVB137-0100-12260F
AVB21-0200-12240F
AVB121-00204-1000F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 14 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB121-00204-1000 and AVB121-00204-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples AVB82-0200-11410 and AVB82-0201-11410 and samples AVB82-0200-11410F and AVB82-0201-11410F were identified as field duplicates. No chromium was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD (Limits)	Flag	A or P
	AVB82-0200-11410	AVB82-0201-11410			
Chromium	0.0153	0.0158	3 (≤20)	-	-

Analyte	Concentration (mg/L)		RPD (Limits)	Flag	A or P
	AVB82-0200-11410F	AVB82-0201-11410F			
Chromium	0.0175	0.0112	44 (≤20)	J (all detects)	A

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470083

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
470083	AVB82-0200-11410F AVB82-0201-11410F	Chromium	J (all detects)	A	Field duplicates (RPD) (R8)

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470083

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470083

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0300-11360** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-002 Date Collected: 09.11.13 07.21

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0129**	0.0100	mg/L	09.16.13 15.48		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0110**	0.0100	mg/L	09.17.13 19.11		1

02/10/30/B

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0200-11410** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-004 Date Collected: 09.11.13 11.30

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0153**	0.0100	mg/L	09.16.13 15.54		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0175**	0.0100 J (R8)	mg/L	09.17.13 19.17		1

0210/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0201-11410** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-005 Date Collected: 09.11.13 11.35

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0158**	0.0100	mg/L	09.16.13 16.00		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0112**	0.0100 J(R8)	mg/L	09.17.13 19.23		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB142-0100-10335** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-006 Date Collected: 09.11.13 14.00

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 16.06		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.29		1

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB137-0100-12260** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-007 Date Collected: 09.11.13 16.10

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 16.23		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.35		1

02/01/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB21-0200-12240** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-008 Date Collected: 09.11.13 17.45

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 16.29		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.41		1

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB121-0204-1000** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-009 Date Collected: 09.11.13 17.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.16.13 08.00
Seq Number: 922794 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.16.13 16.35		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.17.13 12.20
Seq Number: 922917 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.17.13 19.47		1

OCIG/30/13

LDC #: 30552C4
SDG #: 470083
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/11/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	3 MS/MSD from SDG 469984
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS 10
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	(3,4) (11, 12)
XIV.	Field Blanks	ND	TB = 8, 16

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: A2

1	AVB91-0300-11360	11	AVB82-0200-11410F	21	MB	11	
2	~~AVB82-0100-23327~~	12	AVB82-0201-11410F	22		12	
3	AVB82-0200-11410	13	AVB142-0100-10335F	23		13	
4	AVB82-0201-11410	14	AVB137-0100-12260F	24		14	
5	AVB142-0100-10335	15	AVB21-0200-12240F	25		15	
6	AVB137-0100-12260	16	AVB121-00204-1000F	26		16	
7	AVB21-0200-12240	17		27		17	
8	AVB121-00204-1000	18		28		18	
9	AVB91-0300-11360F	19		29		19	
10	~~AVB82-0100-23327F~~	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC#: 30552C4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B)

Analyte	Concentration (mg/L)		RPD (≤20)	Qual Parent
	3	4		
Chromium	0.0153	0.0158	3	

Analyte	Concentration (mg/L)		RPD (≤20)	Qual Parent
	11	12		
Chromium	0.0175	0.0112	44	J det / A (R8)

V:\FIELD DUPLICATES\FD_inorganic\30552C4.wpd

LDC Report# 30552C1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 11, 2013
LDC Report Date:	October 30, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470083

Sample Identification

AVB91-0301-1000
AVB91-0300-11360
AVB82-0100-23327
AVB82-0200-11410
AVB82-0201-11410
AVB142-0100-10335
AVB137-0100-12260
AVB21-0200-12240
AVB121-0204-1000

Introduction

This data review covers 9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB91-0301-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB121-0204-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
643872-LCS/D (AVB91-0301-1000 AVB91-0300-11360 AVB82-0100-23327 AVB82-0200-11410 AVB82-0201-11410 AVB142-0100-10335 AVB137-0100-12260 643872-1-BLK)	Bromomethane	152 (58-138)	160 (58-138)	-	J (all detects)	P
643961-LCS/D (AVB21-0200-12240 AVB121-0204-1000 643961-1-BLK)	Acetone Bromomethane Chloromethane	- 15 (58-138) -	- 16 (58-138) -	31 (≤28) - 36 (≤26)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB82-0200-11410 and AVB82-0201-11410 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flags	A or P
	AVB82-0200-11410	AVB82-0201-11410			
1,1-Dichloroethene	1.39	1.43	3 (≤20)	-	-
Tetrachloroethene	5.02	4.98	0.8 (≤20)	-	-

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470083

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470083	AVB91-0301-1000 AVB91-0300-11360 AVB82-0100-23327 AVB82-0200-11410 AVB82-0201-11410 AVB142-0100-10335 AVB137-0100-12260	Bromomethane	J (all detects)	P	Laboratory control samples (%R) (L1)
470083	AVB21-0200-12240 AVB121-0204-1000	Bromomethane	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)
470083	AVB21-0200-12240 AVB121-0204-1000	Acetone Chloromethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470083

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470083

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0301-1000** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-001 Date Collected: 09.11.13 06.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 18.32	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 18.32		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 18.32		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 18.32		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 18.32		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 18.32		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 18.32	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 18.32	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 18.32		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 18.32		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 18.32		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 18.32		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 18.32		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 18.32		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 18.32		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 18.32	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 18.32		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 18.32		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 18.32		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 18.32		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 18.32		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 18.32		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 18.32		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 18.32		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 18.32		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 18.32		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 18.32		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 18.32		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 18.32		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 18.32		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 18.32		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 18.32		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 18.32		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 18.32		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 18.32		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 18.32		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 18.32		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 18.32		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 18.32		1

02/10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0301-1000** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-001 Date Collected: 09.11.13 06.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 18.32		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 18.32		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 18.32		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 18.32	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 18.32		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 18.32		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 18.32		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 18.32		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 18.32		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 18.32		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 18.32		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 18.32		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 18.32		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 18.32		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 18.32		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 18.32		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 18.32		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 18.32		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 18.32		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 18.32		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 18.32		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 18.32		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 18.32		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 18.32		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 18.32		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 18.32		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 18.32		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 18.32		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 18.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.13.13 18.32	
1,2-Dichloroethane-D4	17060-07-0	121	%	66-139	09.13.13 18.32	
Toluene-D8	2037-26-5	99	%	70-130	09.13.13 18.32	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.13.13 18.32	

Final 1.000

CRL 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0300-11360** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-002 Date Collected: 09.11.13 07.21

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 18.57	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 18.57		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 18.57		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 18.57		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 18.57		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 18.57		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 18.57	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 18.57	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 18.57		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 18.57		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 18.57		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 18.57		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 18.57		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 18.57		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 18.57		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 18.57	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 18.57		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 18.57		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 18.57		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 18.57		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 18.57		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 18.57		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 18.57		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 18.57		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 18.57		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 18.57		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 18.57		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 18.57		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 18.57		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 18.57		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 18.57		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 18.57		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 18.57		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 18.57		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 18.57		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 18.57		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 18.57		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 18.57		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 18.57		1

Final 1.000

0210130113

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0300-11360** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-002 Date Collected: 09.11.13 07.21

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 18.57		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 18.57		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 18.57		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 18.57	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 18.57		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 18.57		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 18.57		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 18.57		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 18.57		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 18.57		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 18.57		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 18.57		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 18.57		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 18.57		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 18.57		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 18.57		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 18.57		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 18.57		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 18.57		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 18.57		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 18.57		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 18.57		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 18.57		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 18.57		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 18.57		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 18.57		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 18.57		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 18.57		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 18.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	114	%	69-133	09.13.13 18.57	
1,2-Dichloroethane-D4	17060-07-0	121	%	66-139	09.13.13 18.57	
Toluene-D8	2037-26-5	99	%	70-130	09.13.13 18.57	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.13.13 18.57	

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0100-23327** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-003 Date Collected: 09.11.13 10.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 19.23	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 19.23		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 19.23		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 19.23		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 19.23		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 19.23		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 19.23	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 19.23	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 19.23		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 19.23		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 19.23		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 19.23		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 19.23		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 19.23		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 19.23		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 19.23	V1	1
Chloroform	67-66-3	**1.15**	0.500	ug/L	09.13.13 19.23		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 19.23		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 19.23		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 19.23		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 19.23		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 19.23		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 19.23		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 19.23		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 19.23		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 19.23		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 19.23		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 19.23		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 19.23		1
1,1-Dichloroethane	75-34-3	**1.01**	0.500	ug/L	09.13.13 19.23		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 19.23		1
1,1-Dichloroethene	75-35-4	**25.1**	0.500	ug/L	09.13.13 19.23		1
cis-1,2-Dichloroethene	156-59-2	**1.41**	0.500	ug/L	09.13.13 19.23		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 19.23		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 19.23		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 19.23		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 19.23		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 19.23		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 19.23		1

Final 1.000

C210/3d/3

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0100-23327** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-003 Date Collected: 09.11.13 10.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 19.23		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 19.23		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 19.23		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 19.23	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 19.23		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 19.23		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 19.23		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 19.23		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 19.23		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 19.23		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 19.23		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 19.23		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 19.23		1
Tetrachloroethylene	127-18-4	**56.5**	0.500	ug/L	09.13.13 19.23		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 19.23		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 19.23		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 19.23		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 19.23		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 19.23		1
Trichloroethene	79-01-6	**20.0**	0.500	ug/L	09.13.13 19.23		1
Trichlorofluoromethane	75-69-4	**4.34**	2.00	ug/L	09.13.13 19.23		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 19.23		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 19.23		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 19.23		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 19.23		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 19.23		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 19.23		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 19.23		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 19.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	112	%	69-133	09.13.13 19.23	
1,2-Dichloroethane-D4	17060-07-0	119	%	66-139	09.13.13 19.23	
Toluene-D8	2037-26-5	98	%	70-130	09.13.13 19.23	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 19.23	

OZ 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0200-11410** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-004 Date Collected: 09.11.13 11.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 19.48	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 19.48		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 19.48		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 19.48		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 19.48		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 19.48		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 19.48	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 19.48	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 19.48		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 19.48		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 19.48		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 19.48		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 19.48		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 19.48		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 19.48		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 19.48	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 19.48		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 19.48		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 19.48		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 19.48		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 19.48		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 19.48		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 19.48		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 19.48		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 19.48		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 19.48		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 19.48		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 19.48		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 19.48		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 19.48		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 19.48		1
1,1-Dichloroethene	75-35-4	**1.39**	0.500	ug/L	09.13.13 19.48		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 19.48		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 19.48		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 19.48		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 19.48		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 19.48		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 19.48		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 19.48		1

Final 1.000

02 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0200-11410** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-004 Date Collected: 09.11.13 11.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 19.48		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 19.48		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 19.48		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 19.48	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 19.48		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 19.48		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 19.48		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 19.48		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 19.48		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 19.48		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 19.48		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 19.48		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 19.48		1
Tetrachloroethylene	127-18-4	**5.02**	0.500	ug/L	09.13.13 19.48		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 19.48		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 19.48		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 19.48		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 19.48		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 19.48		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 19.48		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 19.48		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 19.48		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 19.48		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 19.48		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 19.48		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 19.48		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 19.48		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 19.48		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 19.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	114	%	69-133	09.13.13 19.48	
1,2-Dichloroethane-D4	17060-07-0	120	%	66-139	09.13.13 19.48	
Toluene-D8	2037-26-5	98	%	70-130	09.13.13 19.48	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 19.48	

02 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0201-11410** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-005 Date Collected: 09.11.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 20.13	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 20.13		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 20.13		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 20.13		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 20.13		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 20.13		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 20.13	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 20.13	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 20.13		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 20.13		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 20.13		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 20.13		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 20.13		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 20.13		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 20.13		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 20.13	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 20.13		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 20.13		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 20.13		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 20.13		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 20.13		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 20.13		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 20.13		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 20.13		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 20.13		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 20.13		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 20.13		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 20.13		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 20.13		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 20.13		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 20.13		1
1,1-Dichloroethene	75-35-4	**1.43**	0.500	ug/L	09.13.13 20.13		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 20.13		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 20.13		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 20.13		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 20.13		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 20.13		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 20.13		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 20.13		1

CS 10/30/R

Final 1.000

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB82-0201-11410** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-005 Date Collected: 09.11.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 20.13		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 20.13		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 20.13		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 20.13	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 20.13		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 20.13		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 20.13		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 20.13		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 20.13		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 20.13		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 20.13		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 20.13		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 20.13		1
Tetrachloroethylene	127-18-4	**4.98**	0.500	ug/L	09.13.13 20.13		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 20.13		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 20.13		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 20.13		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 20.13		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 20.13		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 20.13		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 20.13		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 20.13		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 20.13		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 20.13		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 20.13		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 20.13		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 20.13		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 20.13		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 20.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	113	%	69-133	09.13.13 20.13	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.13.13 20.13	
Toluene-D8	2037-26-5	99	%	70-130	09.13.13 20.13	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.13.13 20.13	

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB142-0100-10335** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-006 Date Collected: 09.11.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 20.38	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 20.38		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 20.38		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 20.38		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 20.38		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 20.38		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 20.38	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 20.38	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 20.38		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 20.38		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 20.38		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 20.38		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 20.38		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 20.38		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 20.38		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 20.38	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 20.38		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 20.38		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 20.38		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 20.38		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 20.38		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 20.38		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 20.38		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 20.38		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 20.38		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 20.38		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 20.38		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 20.38		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 20.38		1
1,1-Dichloroethane	75-34-3	**1.16**	0.500	ug/L	09.13.13 20.38		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 20.38		1
1,1-Dichloroethene	75-35-4	**2.16**	0.500	ug/L	09.13.13 20.38		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 20.38		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 20.38		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 20.38		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 20.38		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 20.38		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 20.38		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 20.38		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB142-0100-10335** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-006 Date Collected: 09.11.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.13.13 09.06

Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 20.38		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 20.38		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 20.38		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 20.38	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 20.38		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 20.38		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 20.38		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 20.38		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 20.38		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 20.38		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 20.38		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 20.38		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 20.38		1
Tetrachloroethylene	127-18-4	**3.76**	0.500	ug/L	09.13.13 20.38		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 20.38		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 20.38		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 20.38		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 20.38		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 20.38		1
Trichloroethene	79-01-6	**1.87**	0.500	ug/L	09.13.13 20.38		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 20.38		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 20.38		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 20.38		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 20.38		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 20.38		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 20.38		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 20.38		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 20.38		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 20.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	115	%	69-133	09.13.13 20.38	
1,2-Dichloroethane-D4	17060-07-0	120	%	66-139	09.13.13 20.38	
Toluene-D8	2037-26-5	100	%	70-130	09.13.13 20.38	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.13.13 20.38	

Final 1.000

C2 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB137-0100-12260** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-007 Date Collected: 09.11.13 16.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.13.13 21.03	V1	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.13.13 21.03		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.13.13 21.03		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.13.13 21.03		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.13.13 21.03		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.13.13 21.03		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.13.13 21.03	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.13.13 21.03	V1	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.13.13 21.03		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.13.13 21.03		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.13.13 21.03		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.13.13 21.03		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.13.13 21.03		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.13.13 21.03		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.13.13 21.03		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.13.13 21.03	V1	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.13.13 21.03		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.13.13 21.03		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.13.13 21.03		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.13.13 21.03		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.13.13 21.03		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.13.13 21.03		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.13.13 21.03		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.13.13 21.03		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.13.13 21.03		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.13.13 21.03		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.13.13 21.03		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.13.13 21.03		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.13.13 21.03		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.13.13 21.03		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.13.13 21.03		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.13.13 21.03		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.13.13 21.03		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.13.13 21.03		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.13.13 21.03		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.13.13 21.03		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.13.13 21.03		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.13.13 21.03		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.13.13 21.03		1

Final 1.000

CS 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB137-0100-12260** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-007 Date Collected: 09.11.13 16.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.13.13 09.06
Seq Number: 923535

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.13.13 21.03		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.13.13 21.03		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.13.13 21.03		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.13.13 21.03	V1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.13.13 21.03		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.13.13 21.03		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.13.13 21.03		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.13.13 21.03		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.13.13 21.03		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.13.13 21.03		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.13.13 21.03		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.13.13 21.03		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.13.13 21.03		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.13.13 21.03		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.13.13 21.03		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.13.13 21.03		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.13.13 21.03		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.13.13 21.03		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.13.13 21.03		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.13.13 21.03		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.13.13 21.03		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.13.13 21.03		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.13.13 21.03		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.13.13 21.03		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.13.13 21.03		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.13.13 21.03		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.13.13 21.03		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.13.13 21.03		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.13.13 21.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	116	%	69-133	09.13.13 21.03	
1,2-Dichloroethane-D4	17060-07-0	121	%	66-139	09.13.13 21.03	
Toluene-D8	2037-26-5	101	%	70-130	09.13.13 21.03	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.13.13 21.03	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB21-0200-12240** Matrix: Water Date Received:09.12.13 09.00

Lab Sample Id: 470083-008 Date Collected: 09.11.13 17.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.17.13 10.33

Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 13.53	R7 UJ(R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 13.53		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 13.53		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 13.53		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 13.53		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 13.53		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 13.53	L2 UJ(L2)	
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 13.53		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 13.53		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 13.53		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 13.53		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 13.53		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 13.53		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 13.53		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 13.53		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 13.53		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.17.13 13.53		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 13.53	R7 UJ(R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 13.53		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 13.53		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 13.53		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 13.53		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 13.53		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 13.53		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 13.53		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 13.53		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 13.53		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 13.53		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 13.53		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.17.13 13.53		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 13.53		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.17.13 13.53		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.17.13 13.53		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 13.53		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 13.53		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 13.53		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 13.53		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 13.53		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 13.53		1

Final 1.000

CE 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB21-0200-12240** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-008 Date Collected: 09.11.13 17.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 13.53		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 13.53		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 13.53		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 13.53		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 13.53		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.17.13 13.53		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 13.53		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 13.53		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 13.53		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 13.53		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 13.53		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 13.53		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 13.53		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.17.13 13.53		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 13.53		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 13.53		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 13.53		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 13.53		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 13.53		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.17.13 13.53		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 13.53		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 13.53		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 13.53		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 13.53		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 13.53		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 13.53		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 13.53		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 13.53		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 13.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	120	%	69-133	09.17.13 13.53	
1,2-Dichloroethane-D4	17060-07-0	92	%	66-139	09.17.13 13.53	
Toluene-D8	2037-26-5	105	%	70-130	09.17.13 13.53	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.17.13 13.53	

CR 10/30/13

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB121-0204-1000** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-009 Date Collected: 09.11.13 17.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 14.20	R7 UJ(R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 14.20		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 14.20		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 14.20		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 14.20		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 14.20		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 14.20	L2 UJ(L2)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 14.20		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 14.20		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 14.20		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 14.20		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 14.20		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 14.20		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 14.20		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 14.20		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 14.20		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.17.13 14.20		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 14.20	R7 UJ(R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 14.20		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 14.20		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 14.20		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 14.20		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 14.20		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 14.20		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 14.20		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 14.20		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 14.20		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 14.20		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 14.20		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.17.13 14.20		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 14.20		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.17.13 14.20		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.17.13 14.20		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 14.20		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 14.20		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 14.20		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 14.20		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 14.20		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 14.20		1

CZ 10/30/13

Final 1.000

Certificate of Analytical Results 470083

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB121-0204-1000** Matrix: Water Date Received:09.12.13 09.00
Lab Sample Id: 470083-009 Date Collected: 09.11.13 17.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 14.20		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 14.20		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 14.20		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 14.20		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 14.20		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.17.13 14.20		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 14.20		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 14.20		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 14.20		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 14.20		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 14.20		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 14.20		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 14.20		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.17.13 14.20		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 14.20		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 14.20		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 14.20		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 14.20		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 14.20		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.17.13 14.20		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 14.20		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 14.20		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 14.20		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 14.20		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 14.20		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 14.20		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 14.20		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 14.20		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 14.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	126	%	69-133	09.17.13 14.20	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	09.17.13 14.20	
Toluene-D8	2037-26-5	108	%	70-130	09.17.13 14.20	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.17.13 14.20	

CR 10/30/13

LDC #: 30552C1a

SDG #: 470083

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer: F

2nd Reviewer: GV

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/11/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCSD
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 4 + 5
XVII.	Field blanks	ND	TB = 1 EB = 9

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ~~:~~ w all

1	AVB91-0301-1000 TB	11	643872-1-BLK	21		31	
2	AVB91-0300-11360	12	643961-1-BLK	22		32	
3	AVB82-0100-23327	13		23		33	
4	AVB82-0200-11410 D	14		24		34	
5	AVB82-0201-11410 D	15		25		35	
6	AVB142-0100-10335	16		26		36	
7	AVB137-0100-12260	17		27		37	
8 ✓	AVB21-0200-12240	18		28		38	
9 ✓	AVB121-00204-1000 EB	19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552c/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: 5
2nd Reviewer: CR

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		643872-LCS/D	B	152 (58-138)	160 (58-138)		643872-1-BLK, 1→7	J/Pdet
		643961-LCS/D	F			31 (28)	643961-1-BLK, 8,9	J/UJ/P
			B	15 (58-138)	16 (58-138)			↓
			A			36 (26)		↓

LDC #: 30552C1a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FI
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method 8260)B

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ng/L)		≤ 20 RPD
	4	5	
H	1.39	1.43	3
AA	5.02	4.98	0.8

no qual ↓

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 26, 2013
LDC Report Date:	October 11, 2013
Matrix:	Water
Parameters:	Chromium
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	471056

Sample Identification

AVB125-0100-18148
AVB125-0100-18148F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 471056

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 471056

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 471056

No Sample Data Qualified in this SDG

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB125-0100-18148** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-002 Date Collected: 09.26.13 07.44

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 10.01.13 07.00

Seq Number: 924066 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.187**	0.0100	mg/L	10.01.13 15.19		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 10.01.13 07.00

Seq Number: 924066 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.179**	0.0100	mg/L	10.01.13 15.25		1

Final 1.000

10/30/13

LDC #: 30552D4
SDG #: 471056
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/26/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	N	3 CS.
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	AVB125-0100-18148	11	MB	21		11	
2	AVB125-0100-18148F	12		22		12	
3		13		23		13	
4		14		24		14	
5		15		25		15	
6		16		26		16	
7		17		27		17	
8		18		28		18	
9		19		29		19	
10		20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 26, 2013

LDC Report Date: October 21, 2013

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 471056

Sample Identification

AVB125-0102-1000
AVB125-0100-18148
AVB69-0100-26255
AVB69-0101-26255
AVB99-0100-22109
AVB83-0100-23114
AVB68-0400-25255
AVB68-0401-25255
AVB68-0200-25110
AVB115-0100-20127
AVB38-0400-06110
AVB106-0200-25177
AVB106-0300-25100
AVB77-0100-25108
AVB77-0200-25140
AVB77-0300-25215
AVB18-0100-36108
AVB69-0100-26255MS
AVB69-0100-26255MSD

Introduction

This data review covers 19 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB125-0102-1000 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644794-LCS/D (All samples in SDG 471056)	Acetone 2-Butanone 2-Hexanone	29 (55-165) 50 (58-146) 57 (65-129)	30 (55-165) 51 (58-146) 58 (65-129)	- - -	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB69-0100-26255 and AVB69-0101-26255 and samples AVB68-0400-25255 and AVB68-0401-25255 were identified as field duplicates. No volatiles were detected in any of the samples.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 471056

SDG	Sample	Compound	Flag	A or P	Reason (Code)
471056	AVB125-0102-1000 AVB125-0100-18148 AVB69-0100-26255 AVB69-0101-26255 AVB99-0100-22109 AVB83-0100-23114 AVB68-0400-25255 AVB68-0401-25255 AVB68-0200-25110 AVB115-0100-20127 AVB38-0400-06110 AVB106-0200-25177 AVB106-0300-25100 AVB77-0100-25108 AVB77-0200-25140 AVB77-0300-25215 AVB18-0100-36108	Acetone 2-Butanone 2-Hexanone	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 471056

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 471056

No Sample Data Qualified in this SDG

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB125-0102-1000** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-001 Date Collected: 09.26.13 07.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 13.24	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 13.24		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 13.24		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 13.24		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 13.24		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 13.24		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 13.24		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 13.24	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 13.24		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 13.24		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 13.24		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 13.24		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 13.24		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 13.24		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 13.24		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 13.24		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 13.24		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 13.24		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 13.24		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 13.24		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 13.24		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 13.24		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 13.24		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 13.24		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 13.24		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 13.24		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 13.24		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 13.24		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 13.24		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 13.24		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 13.24		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 13.24		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 13.24		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 13.24		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 13.24		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 13.24		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 13.24		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 13.24		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 13.24		1

CR 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB125-0102-1000** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-001 Date Collected: 09.26.13 07.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 13.24		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 13.24		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 13.24		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 13.24	L2 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 13.24		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 13.24		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 13.24		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 13.24		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 13.24		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 13.24		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 13.24		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 13.24		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 13.24		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 13.24		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 13.24		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 13.24		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 13.24		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 13.24		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 13.24		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 13.24		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 13.24		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 13.24		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 13.24		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 13.24		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 13.24		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 13.24		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 13.24		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 13.24		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 13.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	10.02.13 13.24	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	10.02.13 13.24	
Toluene-D8	2037-26-5	91	%	70-130	10.02.13 13.24	
4-Bromofluorobenzene	460-00-4	90	%	70-135	10.02.13 13.24	

CLO 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB125-0100-18148** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-002 Date Collected: 09.26.13 07.44

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 13.49	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 13.49		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 13.49		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 13.49		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 13.49		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 13.49		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 13.49		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 13.49	L2U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 13.49		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 13.49		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 13.49		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 13.49		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 13.49		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 13.49		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 13.49		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 13.49		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 13.49		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 13.49		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 13.49		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 13.49		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 13.49		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 13.49		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 13.49		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 13.49		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 13.49		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 13.49		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 13.49		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 13.49		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 13.49		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 13.49		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 13.49		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 13.49		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 13.49		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 13.49		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 13.49		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 13.49		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 13.49		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 13.49		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 13.49		1

Final 1.000

02/10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB125-0100-18148** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-002 Date Collected: 09.26.13 07.44

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 13.49		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 13.49		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 13.49		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 13.49	L2 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 13.49		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 13.49		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 13.49		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 13.49		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 13.49		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 13.49		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 13.49		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 13.49		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 13.49		1
Tetrachloroethylene	127-18-4	**16.2**	0.500	ug/L	10.02.13 13.49		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 13.49		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 13.49		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 13.49		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 13.49		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 13.49		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 13.49		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 13.49		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 13.49		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 13.49		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 13.49		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 13.49		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 13.49		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 13.49		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 13.49		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 13.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	10.02.13 13.49	
1,2-Dichloroethane-D4	17060-07-0	91	%	66-139	10.02.13 13.49	
Toluene-D8	2037-26-5	93	%	70-130	10.02.13 13.49	
4-Bromofluorobenzene	460-00-4	94	%	70-135	10.02.13 13.49	

CLO/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0100-26255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-003 Date Collected: 09.26.13 08.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 14.14	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 14.14		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 14.14		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 14.14		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 14.14		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 14.14		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 14.14		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 14.14	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 14.14		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 14.14		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 14.14		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 14.14		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 14.14		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 14.14		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 14.14		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 14.14		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 14.14		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 14.14		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 14.14		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 14.14		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 14.14		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 14.14		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 14.14		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 14.14		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 14.14		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 14.14		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 14.14		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 14.14		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 14.14		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 14.14		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 14.14		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 14.14		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 14.14		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 14.14		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 14.14		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 14.14		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 14.14		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 14.14		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 14.14		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0100-26255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-003 Date Collected: 09.26.13 08.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 14.14		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 14.14		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 14.14		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 14.14	L2 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 14.14		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 14.14		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 14.14		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 14.14		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 14.14		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 14.14		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 14.14		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 14.14		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 14.14		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 14.14		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 14.14		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 14.14		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 14.14		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 14.14		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 14.14		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 14.14		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 14.14		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 14.14		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 14.14		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 14.14		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 14.14		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 14.14		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 14.14		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 14.14		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 14.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	10.02.13 14.14	
1,2-Dichloroethane-D4	17060-07-0	90	%	66-139	10.02.13 14.14	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 14.14	
4-Bromofluorobenzene	460-00-4	92	%	70-135	10.02.13 14.14	

Final 1.000

CRD 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0101-26255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-004 Date Collected: 09.26.13 08.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 14.40	L2 UJ(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 14.40		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 14.40		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 14.40		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 14.40		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 14.40		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 14.40		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 14.40	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 14.40		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 14.40		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 14.40		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 14.40		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 14.40		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 14.40		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 14.40		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 14.40		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 14.40		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 14.40		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 14.40		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 14.40		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 14.40		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 14.40		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 14.40		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 14.40		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 14.40		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 14.40		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 14.40		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 14.40		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 14.40		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 14.40		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 14.40		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 14.40		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 14.40		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 14.40		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 14.40		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 14.40		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 14.40		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 14.40		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 14.40		1

CR 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0101-26255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-004 Date Collected: 09.26.13 08.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 14.40		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 14.40		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 14.40		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 14.40	L2U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 14.40		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 14.40		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 14.40		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 14.40		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 14.40		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 14.40		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 14.40		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 14.40		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 14.40		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 14.40		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 14.40		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 14.40		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 14.40		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 14.40		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 14.40		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 14.40		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 14.40		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 14.40		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 14.40		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 14.40		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 14.40		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 14.40		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 14.40		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 14.40		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 14.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	10.02.13 14.40	
1,2-Dichloroethane-D4	17060-07-0	89	%	66-139	10.02.13 14.40	
Toluene-D8	2037-26-5	90	%	70-130	10.02.13 14.40	
4-Bromofluorobenzene	460-00-4	91	%	70-135	10.02.13 14.40	

Final 1.000

CL 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB99-0100-22109** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-005 Date Collected: 09.26.13 08.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 15.05	L2 U5(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 15.05		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 15.05		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 15.05		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 15.05		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 15.05		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 15.05		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 15.05	L2U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 15.05		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 15.05		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 15.05		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 15.05		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 15.05		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 15.05		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 15.05		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 15.05		1
Chloroform	67-66-3	**0.840**	0.500	ug/L	10.02.13 15.05		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 15.05		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 15.05		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 15.05		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 15.05		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 15.05		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 15.05		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 15.05		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 15.05		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 15.05		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 15.05		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 15.05		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 15.05		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 15.05		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 15.05		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 15.05		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 15.05		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 15.05		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 15.05		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 15.05		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 15.05		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 15.05		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 15.05		1

CZ 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB99-0100-22109** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-005 Date Collected: 09.26.13 08.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 15.05		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 15.05		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 15.05		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 15.05	L2 U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 15.05		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 15.05		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 15.05		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 15.05		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 15.05		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 15.05		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 15.05		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 15.05		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 15.05		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 15.05		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 15.05		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 15.05		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 15.05		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 15.05		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 15.05		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 15.05		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 15.05		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 15.05		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 15.05		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 15.05		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 15.05		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 15.05		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 15.05		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 15.05		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 15.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	87	%	69-133	10.02.13 15.05	
1,2-Dichloroethane-D4	17060-07-0	90	%	66-139	10.02.13 15.05	
Toluene-D8	2037-26-5	89	%	70-130	10.02.13 15.05	
4-Bromofluorobenzene	460-00-4	88	%	70-135	10.02.13 15.05	

CSU 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB83-0100-23114** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-006 Date Collected: 09.26.13 09.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 15.30	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 15.30		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 15.30		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 15.30		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 15.30		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 15.30		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 15.30		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 15.30	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 15.30		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 15.30		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 15.30		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 15.30		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 15.30		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 15.30		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 15.30		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 15.30		1
Chloroform	67-66-3	**0.530**	0.500	ug/L	10.02.13 15.30		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 15.30		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 15.30		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 15.30		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 15.30		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 15.30		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 15.30		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 15.30		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 15.30		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 15.30		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 15.30		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 15.30		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 15.30		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 15.30		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 15.30		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 15.30		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 15.30		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 15.30		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 15.30		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 15.30		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 15.30		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 15.30		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 15.30		1

Final 1.000

02/10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB83-0100-23114** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-006 Date Collected: 09.26.13 09.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 15.30		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 15.30		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 15.30		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 15.30	L2 U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 15.30		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 15.30		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 15.30		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 15.30		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 15.30		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 15.30		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 15.30		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 15.30		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 15.30		1
Tetrachloroethylene	127-18-4	**1.29**	0.500	ug/L	10.02.13 15.30		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 15.30		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 15.30		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 15.30		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 15.30		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 15.30		1
Trichloroethene	79-01-6	**1.68**	0.500	ug/L	10.02.13 15.30		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 15.30		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 15.30		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 15.30		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 15.30		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 15.30		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 15.30		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 15.30		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 15.30		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 15.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	10.02.13 15.30	
1,2-Dichloroethane-D4	17060-07-0	93	%	66-139	10.02.13 15.30	
Toluene-D8	2037-26-5	90	%	70-130	10.02.13 15.30	
4-Bromofluorobenzene	460-00-4	92	%	70-135	10.02.13 15.30	

C2 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0400-25255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-007 Date Collected: 09.26.13 09.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 15.55	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 15.55		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 15.55		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 15.55		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 15.55		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 15.55		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 15.55		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 15.55	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 15.55		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 15.55		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 15.55		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 15.55		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 15.55		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 15.55		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 15.55		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 15.55		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 15.55		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 15.55		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 15.55		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 15.55		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 15.55		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 15.55		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 15.55		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 15.55		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 15.55		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 15.55		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 15.55		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 15.55		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 15.55		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 15.55		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 15.55		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 15.55		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 15.55		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 15.55		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 15.55		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 15.55		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 15.55		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 15.55		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 15.55		1

Final 1.000

CS 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0400-25255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-007 Date Collected: 09.26.13 09.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 15.55		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 15.55		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 15.55		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 15.55	L2UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 15.55		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 15.55		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 15.55		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 15.55		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 15.55		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 15.55		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 15.55		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 15.55		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 15.55		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 15.55		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 15.55		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 15.55		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 15.55		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 15.55		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 15.55		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 15.55		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 15.55		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 15.55		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 15.55		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 15.55		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 15.55		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 15.55		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 15.55		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 15.55		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 15.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	10.02.13 15.55	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	10.02.13 15.55	
Toluene-D8	2037-26-5	93	%	70-130	10.02.13 15.55	
4-Bromofluorobenzene	460-00-4	95	%	70-135	10.02.13 15.55	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0401-25255** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-008 Date Collected: 09.26.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 16.21	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 16.21		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 16.21		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 16.21		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 16.21		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 16.21		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 16.21		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 16.21	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 16.21		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 16.21		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 16.21		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 16.21		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 16.21		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 16.21		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 16.21		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 16.21		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 16.21		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 16.21		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 16.21		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 16.21		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 16.21		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 16.21		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 16.21		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 16.21		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 16.21		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 16.21		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 16.21		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 16.21		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 16.21		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 16.21		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 16.21		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 16.21		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 16.21		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 16.21		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 16.21		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 16.21		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 16.21		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 16.21		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 16.21		1

CS 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0401-25255** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-008 Date Collected: 09.26.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 16.21		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 16.21		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 16.21		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 16.21	L2 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 16.21		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 16.21		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 16.21		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 16.21		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 16.21		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 16.21		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 16.21		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 16.21		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 16.21		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 16.21		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 16.21		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 16.21		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 16.21		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 16.21		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 16.21		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 16.21		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 16.21		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 16.21		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 16.21		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 16.21		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 16.21		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 16.21		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 16.21		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 16.21		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 16.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	10.02.13 16.21	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	10.02.13 16.21	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 16.21	
4-Bromofluorobenzene	460-00-4	93	%	70-135	10.02.13 16.21	

Final 1.000

02/6/36/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0200-25110** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-009 Date Collected: 09.26.13 10.08

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 16.46	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 16.46		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 16.46		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 16.46		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 16.46		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 16.46		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 16.46		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 16.46	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 16.46		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 16.46		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 16.46		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 16.46		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 16.46		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 16.46		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 16.46		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 16.46		1
Chloroform	67-66-3	**1.14**	0.500	ug/L	10.02.13 16.46		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 16.46		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 16.46		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 16.46		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 16.46		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 16.46		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 16.46		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 16.46		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 16.46		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 16.46		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 16.46		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 16.46		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 16.46		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 16.46		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 16.46		1
1,1-Dichloroethene	75-35-4	**0.820**	0.500	ug/L	10.02.13 16.46		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 16.46		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 16.46		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 16.46		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 16.46		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 16.46		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 16.46		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 16.46		1

Final 1.000

02/10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB68-0200-25110** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-009 Date Collected: 09.26.13 10.08

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 16.46		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 16.46		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 16.46		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 16.46	L2 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 16.46		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 16.46		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 16.46		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 16.46		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 16.46		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 16.46		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 16.46		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 16.46		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 16.46		1
Tetrachloroethylene	127-18-4	**0.520**	0.500	ug/L	10.02.13 16.46		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 16.46		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 16.46		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 16.46		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 16.46		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 16.46		1
Trichloroethene	79-01-6	**1.63**	0.500	ug/L	10.02.13 16.46		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 16.46		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 16.46		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 16.46		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 16.46		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 16.46		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 16.46		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 16.46		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 16.46		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 16.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	10.02.13 16.46	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	10.02.13 16.46	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 16.46	
4-Bromofluorobenzene	460-00-4	93	%	70-135	10.02.13 16.46	

CSU 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB115-0100-20127** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-010 Date Collected: 09.26.13 10.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 17.11	L2UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 17.11		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 17.11		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 17.11		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 17.11		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 17.11		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 17.11		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 17.11	L2UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 17.11		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 17.11		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 17.11		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 17.11		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 17.11		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 17.11		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 17.11		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 17.11		1
Chloroform	67-66-3	**2.12**	0.500	ug/L	10.02.13 17.11		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 17.11		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 17.11		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 17.11		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 17.11		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 17.11		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 17.11		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 17.11		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 17.11		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 17.11		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 17.11		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 17.11		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 17.11		1
1,1-Dichloroethane	75-34-3	**1.99**	0.500	ug/L	10.02.13 17.11		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 17.11		1
1,1-Dichloroethene	75-35-4	**4.13**	0.500	ug/L	10.02.13 17.11		1
cis-1,2-Dichloroethene	156-59-2	**6.92**	0.500	ug/L	10.02.13 17.11		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 17.11		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 17.11		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 17.11		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 17.11		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 17.11		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 17.11		1

Final 1.000

CZ 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB115-0100-20127**
Lab Sample Id: 471056-010

Matrix: Water
Date Collected: 09.26.13 10.55

Date Received: 09.26.13 15.00

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 924373

Date Prep: 10.02.13 10.18

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 17.11		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 17.11		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 17.11		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 17.11	L2 05(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 17.11		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 17.11		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 17.11		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 17.11		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 17.11		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 17.11		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 17.11		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 17.11		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 17.11		1
Tetrachloroethylene	127-18-4	**1.80**	0.500	ug/L	10.02.13 17.11		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 17.11		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 17.11		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 17.11		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 17.11		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 17.11		1
Trichloroethene	79-01-6	**38.0**	0.500	ug/L	10.02.13 17.11		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 17.11		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 17.11		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 17.11		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 17.11		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 17.11		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 17.11		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 17.11		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 17.11		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 17.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	10.02.13 17.11	
1,2-Dichloroethane-D4	17060-07-0	92	%	66-139	10.02.13 17.11	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 17.11	
4-Bromofluorobenzene	460-00-4	93	%	70-135	10.02.13 17.11	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB38-0400-06110**
Lab Sample Id: 471056-011

Matrix: Water
Date Collected: 09.26.13 11.25

Date Received: 09.26.13 15.00

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 924373

Date Prep: 10.02.13 10.18

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 17.36	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 17.36		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 17.36		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 17.36		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 17.36		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 17.36		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 17.36		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 17.36	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 17.36		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 17.36		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 17.36		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 17.36		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 17.36		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 17.36		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 17.36		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 17.36		1
Chloroform	67-66-3	**2.80**	0.500	ug/L	10.02.13 17.36		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 17.36		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 17.36		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 17.36		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 17.36		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 17.36		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 17.36		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 17.36		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 17.36		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 17.36		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 17.36		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 17.36		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 17.36		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 17.36		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 17.36		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 17.36		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 17.36		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 17.36		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 17.36		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 17.36		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 17.36		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 17.36		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 17.36		1

02/10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB38-0400-06110** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-011 Date Collected: 09.26.13 11.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 17.36		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 17.36		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 17.36		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 17.36	L2 U5 (L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 17.36		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 17.36		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 17.36		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 17.36		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 17.36		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 17.36		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 17.36		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 17.36		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 17.36		1
Tetrachloroethylene	127-18-4	**1.90**	0.500	ug/L	10.02.13 17.36		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 17.36		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 17.36		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 17.36		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 17.36		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 17.36		1
Trichloroethene	79-01-6	**0.800**	0.500	ug/L	10.02.13 17.36		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 17.36		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 17.36		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 17.36		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 17.36		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 17.36		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 17.36		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 17.36		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 17.36		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 17.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	10.02.13 17.36	
1,2-Dichloroethane-D4	17060-07-0	91	%	66-139	10.02.13 17.36	
Toluene-D8	2037-26-5	91	%	70-130	10.02.13 17.36	
4-Bromofluorobenzene	460-00-4	89	%	70-135	10.02.13 17.36	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0200-25177** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-012 Date Collected: 09.26.13 12.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 19.07	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 19.07		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 19.07		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 19.07		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 19.07		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 19.07		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 19.07		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 19.07	L2U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 19.07		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 19.07		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 19.07		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 19.07		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 19.07		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 19.07		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 19.07		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 19.07		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 19.07		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 19.07		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 19.07		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 19.07		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 19.07		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 19.07		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 19.07		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 19.07		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 19.07		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 19.07		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 19.07		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 19.07		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 19.07		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 19.07		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 19.07		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 19.07		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 19.07		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 19.07		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 19.07		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 19.07		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 19.07		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 19.07		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 19.07		1

10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0200-25177** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-012 Date Collected: 09.26.13 12.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 19.07		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 19.07		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 19.07		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 19.07	L2 U3(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 19.07		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 19.07		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 19.07		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 19.07		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 19.07		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 19.07		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 19.07		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 19.07		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 19.07		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 19.07		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 19.07		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 19.07		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 19.07		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 19.07		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 19.07		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 19.07		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 19.07		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 19.07		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 19.07		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 19.07		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 19.07		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 19.07		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 19.07		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 19.07		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 19.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	10.02.13 19.07	
1,2-Dichloroethane-D4	17060-07-0	91	%	66-139	10.02.13 19.07	
Toluene-D8	2037-26-5	90	%	70-130	10.02.13 19.07	
4-Bromofluorobenzene	460-00-4	92	%	70-135	10.02.13 19.07	

OZ 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0300-25100** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-013 Date Collected: 09.26.13 12.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 19.31	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 19.31		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 19.31		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 19.31		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 19.31		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 19.31		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 19.31		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 19.31	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 19.31		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 19.31		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 19.31		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 19.31		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 19.31		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 19.31		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 19.31		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 19.31		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 19.31		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 19.31		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 19.31		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 19.31		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 19.31		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 19.31		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 19.31		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 19.31		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 19.31		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 19.31		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 19.31		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 19.31		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 19.31		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 19.31		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 19.31		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 19.31		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 19.31		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 19.31		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 19.31		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 19.31		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 19.31		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 19.31		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 19.31		1

CS 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0300-25100** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-013 Date Collected: 09.26.13 12.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 19.31		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 19.31		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 19.31		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 19.31	L2U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 19.31		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 19.31		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 19.31		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 19.31		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 19.31		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 19.31		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 19.31		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 19.31		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 19.31		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 19.31		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 19.31		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 19.31		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 19.31		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 19.31		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 19.31		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 19.31		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 19.31		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 19.31		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 19.31		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 19.31		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 19.31		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 19.31		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 19.31		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 19.31		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 19.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	10.02.13 19.31	
1,2-Dichloroethane-D4	17060-07-0	92	%	66-139	10.02.13 19.31	
Toluene-D8	2037-26-5	89	%	70-130	10.02.13 19.31	
4-Bromofluorobenzene	460-00-4	92	%	70-135	10.02.13 19.31	

02/01/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0100-25108** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-014 Date Collected: 09.26.13 13.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 19.55	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 19.55		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 19.55		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 19.55		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 19.55		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 19.55		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 19.55		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 19.55	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 19.55		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 19.55		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 19.55		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 19.55		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 19.55		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 19.55		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 19.55		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 19.55		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 19.55		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 19.55		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 19.55		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 19.55		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 19.55		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 19.55		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 19.55		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 19.55		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 19.55		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 19.55		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 19.55		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 19.55		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 19.55		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 19.55		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 19.55		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 19.55		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 19.55		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 19.55		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 19.55		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 19.55		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 19.55		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 19.55		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 19.55		1

02/6/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0100-25108** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-014 Date Collected: 09.26.13 13.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 19.55		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 19.55		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 19.55		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 19.55	L2 U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 19.55		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 19.55		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 19.55		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 19.55		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 19.55		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 19.55		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 19.55		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 19.55		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 19.55		1
Tetrachloroethylene	127-18-4	**1.40**	0.500	ug/L	10.02.13 19.55		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 19.55		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 19.55		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 19.55		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 19.55		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 19.55		1
Trichloroethene	79-01-6	**2.61**	0.500	ug/L	10.02.13 19.55		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 19.55		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 19.55		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 19.55		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 19.55		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 19.55		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 19.55		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 19.55		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 19.55		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 19.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	10.02.13 19.55	
1,2-Dichloroethane-D4	17060-07-0	92	%	66-139	10.02.13 19.55	
Toluene-D8	2037-26-5	90	%	70-130	10.02.13 19.55	
4-Bromofluorobenzene	460-00-4	94	%	70-135	10.02.13 19.55	

02/10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0200-25140** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-015 Date Collected: 09.26.13 13.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 20.19	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 20.19		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 20.19		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 20.19		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 20.19		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 20.19		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 20.19		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 20.19	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 20.19		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 20.19		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 20.19		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 20.19		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 20.19		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 20.19		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 20.19		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 20.19		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 20.19		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 20.19		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 20.19		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 20.19		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 20.19		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 20.19		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 20.19		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 20.19		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 20.19		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 20.19		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 20.19		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 20.19		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 20.19		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 20.19		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 20.19		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 20.19		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 20.19		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 20.19		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 20.19		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 20.19		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 20.19		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 20.19		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 20.19		1

C2 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0200-25140**
Lab Sample Id: 471056-015

Matrix: Water
Date Collected: 09.26.13 13.30

Date Received:09.26.13 15.00

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 924373

Date Prep: 10.02.13 10.18

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 20.19		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 20.19		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 20.19		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 20.19	L2 U5'(2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 20.19		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 20.19		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 20.19		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 20.19		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 20.19		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 20.19		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 20.19		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 20.19		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 20.19		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 20.19		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 20.19		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 20.19		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 20.19		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 20.19		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 20.19		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 20.19		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 20.19		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 20.19		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 20.19		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 20.19		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 20.19		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 20.19		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 20.19		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 20.19		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 20.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	10.02.13 20.19	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	10.02.13 20.19	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 20.19	
4-Bromofluorobenzene	460-00-4	91	%	70-135	10.02.13 20.19	

Final 1.000

0200/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0300-25215** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-016 Date Collected: 09.26.13 13.40

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 20.43	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 20.43		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 20.43		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 20.43		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 20.43		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 20.43		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 20.43		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 20.43	L2U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 20.43		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 20.43		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 20.43		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 20.43		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 20.43		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 20.43		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 20.43		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 20.43		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 20.43		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 20.43		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 20.43		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 20.43		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 20.43		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 20.43		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 20.43		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 20.43		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 20.43		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 20.43		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 20.43		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 20.43		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 20.43		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 20.43		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 20.43		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 20.43		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 20.43		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 20.43		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 20.43		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 20.43		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 20.43		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 20.43		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 20.43		1

CR 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB77-0300-25215**
Lab Sample Id: 471056-016

Matrix: Water
Date Collected: 09.26.13 13.40

Date Received:09.26.13 15.00

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 924373

Date Prep: 10.02.13 10.18

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 20.43		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 20.43		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 20.43		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 20.43	L2 VJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 20.43		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 20.43		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 20.43		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 20.43		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 20.43		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 20.43		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 20.43		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 20.43		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 20.43		1
Tetrachloroethylene	127-18-4	**0.570**	0.500	ug/L	10.02.13 20.43		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 20.43		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 20.43		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 20.43		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 20.43		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 20.43		1
Trichloroethene	79-01-6	**1.18**	0.500	ug/L	10.02.13 20.43		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 20.43		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 20.43		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 20.43		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 20.43		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 20.43		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 20.43		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 20.43		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 20.43		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 20.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	10.02.13 20.43	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	10.02.13 20.43	
Toluene-D8	2037-26-5	92	%	70-130	10.02.13 20.43	
4-Bromofluorobenzene	460-00-4	95	%	70-135	10.02.13 20.43	

OZ 10/30/13

Final 1.000

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB18-0100-36108** Matrix: Water Date Received:09.26.13 15.00

Lab Sample Id: 471056-017 Date Collected: 09.26.13 14.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.02.13 10.18

Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 21.07	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 21.07		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 21.07		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 21.07		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 21.07		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 21.07		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 21.07		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 21.07	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 21.07		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 21.07		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 21.07		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 21.07		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 21.07		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 21.07		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 21.07		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 21.07		1
Chloroform	67-66-3	**0.530**	0.500	ug/L	10.02.13 21.07		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 21.07		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 21.07		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 21.07		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 21.07		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 21.07		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 21.07		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 21.07		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 21.07		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 21.07		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 21.07		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 21.07		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 21.07		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 21.07		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 21.07		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 21.07		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 21.07		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 21.07		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 21.07		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 21.07		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 21.07		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 21.07		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 21.07		1

Final 1.000

OZ 10/30/13

Certificate of Analytical Results 471056

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB18-0100-36108** Matrix: Water Date Received:09.26.13 15.00
Lab Sample Id: 471056-017 Date Collected: 09.26.13 14.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.02.13 10.18
Seq Number: 924373

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 21.07		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 21.07		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 21.07		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 21.07	L2 U3(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 21.07		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 21.07		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 21.07		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 21.07		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 21.07		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 21.07		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 21.07		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 21.07		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 21.07		1
Tetrachloroethylene	127-18-4	**0.650**	0.500	ug/L	10.02.13 21.07		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 21.07		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 21.07		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 21.07		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 21.07		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 21.07		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 21.07		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 21.07		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 21.07		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 21.07		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 21.07		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 21.07		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 21.07		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 21.07		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 21.07		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 21.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	10.02.13 21.07	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	10.02.13 21.07	
Toluene-D8	2037-26-5	93	%	70-130	10.02.13 21.07	
4-Bromofluorobenzene	460-00-4	93	%	70-135	10.02.13 21.07	

Final 1.000

02/10/30/13

LDC #: 30552D1a

SDG #: 471056

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer: FP

2nd Reviewer: CN

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	Δ	Sampling dates: 9/26/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	Δ	
VI.	Surrogate spikes	Δ	
VII.	Matrix spike/Matrix spike duplicates	Δ	
VIII.	Laboratory control samples	SW	LCS IP
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	Δ	
XVI.	Field duplicates	ND	D = 3,4 7,8
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

water

1	AVB125-0102-1000	11	AVB38-0400-06110	21		31	
2	AVB125-0100-18148	12	AVB106-0200-25177	22		32	
3	AVB69-0100-26255 D	13	AVB106-0300-25100	23		33	
4	AVB69-0101-26255 D	14	AVB77-0100-25108	24		34	
5	AVB99-0100-22109	15	AVB77-0200-25140	25		35	
6	AVB83-0100-23114	16	AVB77-0300-25215	26		36	
7	AVB68-0400-25255 D	17	AVB18-0100-36108	27		37	
8	AVB68-0401-25255 D	18	AVB69-0100-26255MS	28		38	
9	AVB68-0200-25110	19	AVB69-0100-26255MSD	29		39	
10	AVB115-0100-20127	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552D/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: FT
2nd Reviewer: Q

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		644794-LCS/D	F	29 (55-165)	30 (55-165)		All	J/UJ/P
			M	50 (58-146)	51 (58-146)		↓	↓
			Z	57 (65-129)	58 (65-129		↓	↓

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 12, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470164

Sample Identification

AVB136-0100-13235
AVB141-0100-12285
AVB141-0104-1000
AVB136-0100-13235F
AVB141-0100-12285F
AVB141-0104-1000F
AVB136-0100-13235MS
AVB136-0100-13235MSD
AVB136-0100-13235FMS
AVB136-0100-13235FMSD

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 10 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB141-0104-1000 and AVB141-0104-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470164

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470164

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470164

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB136-0100-13235** Matrix: Water Date Received:09.12.13 16.15

Lab Sample Id: 470164-002 Date Collected: 09.12.13 06.42

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.00

Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0607**	0.0100	mg/L	09.19.13 17.39		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.20

Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 20.39		1

09/10/2013

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0100-12285** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-003 Date Collected: 09.12.13 09.02

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0146**	0.0100	mg/L	09.19.13 18.20		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0128**	0.0100	mg/L	09.19.13 21.08		1

10/30/13

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0104-1000** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-004 Date Collected: 09.12.13 14.35

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 18.25		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.14		1

02/03/13

LDC #: 30552E4
SDG #: 470164
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/12/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	ND	EB= 3.6

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: All

1	AVB136-0100-13235	11	MB	21		11	
2	AVB141-0100-12285	12		22		12	
3	AVB141-0104-1000	13		23		13	
4	AVB136-0100-13235F	14		24		14	
5	AVB141-0100-12285F	15		25		15	
6	AVB141-0104-1000F	16		26		16	
7	AVB136-0100-13235MS	17		27		17	
8	AVB136-0100-13235MSD	18		28		18	
9	AVB136-0100-13235FMS	19		29		19	
10	AVB136-0100-13235FMSD	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC Report# 30552E1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 12, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470164

Sample Identification

AVB136-0102-1000
AVB136-0100-13235
AVB141-0100-12285
AVB141-0104-1000

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB136-0102-1000 was identified as a trip blank. No volatile contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
AVB136-0102-1000	9/12/13	Methylene chloride	9.85 ug/L	AVB136-0100-13235 AVB141-0100-12285 AVB141-0104-1000

Sample AVB141-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
AVB141-0104-1000	Diboromofluoromethane	139 (69-133)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
643961-LCS/D (All samples in SDG 470164)	Acetone Bromomethane Chloromethane	- 15 (58-138) -	- 16 (58-138) -	31 (≤28) - 30 (≤26)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470164

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470164	AVB141-0104-1000	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S10)
470164	AVB136-0102-1000 AVB136-0100-13235 AVB141-0100-12285 AVB141-0104-1000	Bromomethane	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)
470164	AVB136-0102-1000 AVB136-0100-13235 AVB141-0100-12285 AVB141-0104-1000	Acetone Chloromethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470164

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470164

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB136-0102-1000** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-001 Date Collected: 09.12.13 06.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 16.07	UJ (R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 16.07		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 16.07		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 16.07		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 16.07		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 16.07		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 16.07	L2 UJ(L2)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 16.07		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 16.07		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 16.07		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 16.07		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 16.07		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 16.07		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 16.07		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 16.07		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 16.07		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.17.13 16.07		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 16.07	UJ(R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 16.07		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 16.07		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 16.07		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 16.07		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 16.07		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 16.07		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 16.07		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 16.07		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 16.07		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 16.07		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 16.07		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.17.13 16.07		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 16.07		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.17.13 16.07		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.17.13 16.07		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 16.07		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 16.07		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 16.07		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 16.07		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 16.07		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 16.07		1

Final 1.000

0210/3013

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB136-0102-1000** Matrix: Water Date Received:09.12.13 16.15

Lab Sample Id: 470164-001 Date Collected: 09.12.13 06.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.17.13 10.33

Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 16.07		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 16.07		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 16.07		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 16.07		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 16.07		1
Methylene Chloride	75-09-2	**9.85**	3.00	ug/L	09.17.13 16.07		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 16.07		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 16.07		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 16.07		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 16.07		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 16.07		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 16.07		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 16.07		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.17.13 16.07		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 16.07		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 16.07		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 16.07		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 16.07		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 16.07		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.17.13 16.07		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 16.07		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 16.07		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 16.07		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 16.07		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 16.07		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 16.07		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 16.07		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 16.07		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 16.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	130	%	69-133	09.17.13 16.07	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.17.13 16.07	
Toluene-D8	2037-26-5	107	%	70-130	09.17.13 16.07	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.17.13 16.07	

10/30/13

Final 1.000

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB136-0100-13235** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-002 Date Collected: 09.12.13 06.42

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 14.47	UJ (R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 14.47		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 14.47		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 14.47		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 14.47		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 14.47		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 14.47	L2 UJ (L2)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 14.47		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 14.47		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 14.47		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 14.47		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 14.47		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 14.47		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 14.47		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 14.47		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 14.47		1
Chloroform	67-66-3	**1.36**	0.500	ug/L	09.17.13 14.47		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 14.47	UJ (R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 14.47		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 14.47		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 14.47		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 14.47		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 14.47		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 14.47		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 14.47		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 14.47		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 14.47		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 14.47		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 14.47		1
1,1-Dichloroethane	75-34-3	**1.42**	0.500	ug/L	09.17.13 14.47		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 14.47		1
1,1-Dichloroethene	75-35-4	**4.24**	0.500	ug/L	09.17.13 14.47		1
cis-1,2-Dichloroethene	156-59-2	**4.57**	0.500	ug/L	09.17.13 14.47		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 14.47		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 14.47		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 14.47		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 14.47		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 14.47		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 14.47		1

 Final 1.000

02/03/13

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB136-0100-13235** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-002 Date Collected: 09.12.13 06.42

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 14.47		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 14.47		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 14.47		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 14.47		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 14.47		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.17.13 14.47		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 14.47		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 14.47		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 14.47		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 14.47		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 14.47		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 14.47		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 14.47		1
Tetrachloroethylene	127-18-4	**7.23**	0.500	ug/L	09.17.13 14.47		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 14.47		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 14.47		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 14.47		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 14.47		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 14.47		1
Trichloroethene	79-01-6	**19.0**	0.500	ug/L	09.17.13 14.47		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 14.47		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 14.47		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 14.47		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 14.47		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 14.47		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 14.47		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 14.47		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 14.47		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 14.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	126	%	69-133	09.17.13 14.47	
1,2-Dichloroethane-D4	17060-07-0	97	%	66-139	09.17.13 14.47	
Toluene-D8	2037-26-5	107	%	70-130	09.17.13 14.47	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.17.13 14.47	

CU 09/13

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0100-12285** Matrix: Water Date Received:09.12.13 16.15

Lab Sample Id: 470164-003 Date Collected: 09.12.13 09.02

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.17.13 10.33

Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 15.14	UJ(R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 15.14		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 15.14		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 15.14		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 15.14		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 15.14		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 15.14	L2 UJ(L2)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 15.14		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 15.14		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 15.14		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 15.14		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 15.14		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 15.14		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 15.14		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 15.14		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 15.14		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.17.13 15.14		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 15.14	UJ(R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 15.14		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 15.14		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 15.14		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 15.14		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 15.14		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 15.14		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 15.14		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 15.14		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 15.14		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 15.14		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 15.14		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.17.13 15.14		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 15.14		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.17.13 15.14		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.17.13 15.14		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 15.14		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 15.14		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 15.14		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 15.14		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 15.14		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 15.14		1

09/20/13

Final 1.000

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0100-12285** Matrix: Water Date Received:09.12.13 16.15

Lab Sample Id: 470164-003 Date Collected: 09.12.13 09.02

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.17.13 10.33

Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 15.14		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 15.14		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 15.14		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 15.14		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 15.14		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.17.13 15.14		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 15.14		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 15.14		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 15.14		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 15.14		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 15.14		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 15.14		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 15.14		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.17.13 15.14		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 15.14		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 15.14		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 15.14		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 15.14		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 15.14		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.17.13 15.14		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 15.14		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 15.14		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 15.14		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 15.14		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 15.14		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 15.14		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 15.14		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 15.14		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 15.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	126	%	69-133	09.17.13 15.14	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.17.13 15.14	
Toluene-D8	2037-26-5	109	%	70-130	09.17.13 15.14	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.17.13 15.14	

Final 1.000

01/03/13

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0104-1000** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-004 Date Collected: 09.12.13 14.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.17.13 15.40	UJ (R2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.17.13 15.40		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.17.13 15.40		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.17.13 15.40		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.17.13 15.40		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.17.13 15.40		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.17.13 15.40	L2 UJ(L2)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.17.13 15.40		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.17.13 15.40		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.17.13 15.40		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.17.13 15.40		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.17.13 15.40		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.17.13 15.40		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.17.13 15.40		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.17.13 15.40		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.17.13 15.40		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.17.13 15.40		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.17.13 15.40	UJ(R2)	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.17.13 15.40		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.17.13 15.40		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.17.13 15.40		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.17.13 15.40		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.17.13 15.40		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.17.13 15.40		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.17.13 15.40		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.17.13 15.40		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.17.13 15.40		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.17.13 15.40		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.17.13 15.40		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.17.13 15.40		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.17.13 15.40		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.17.13 15.40		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.17.13 15.40		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.17.13 15.40		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.17.13 15.40		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.17.13 15.40		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.17.13 15.40		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.17.13 15.40		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.17.13 15.40		1

Final 1.000

10/30/13

Certificate of Analytical Results 470164

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB141-0104-1000** Matrix: Water Date Received:09.12.13 16.15
Lab Sample Id: 470164-004 Date Collected: 09.12.13 14.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.17.13 10.33
Seq Number: 923597

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.17.13 15.40		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.17.13 15.40		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.17.13 15.40		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.17.13 15.40		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.17.13 15.40		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.17.13 15.40		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.17.13 15.40		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.17.13 15.40		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.17.13 15.40		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.17.13 15.40		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.17.13 15.40		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.17.13 15.40		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.17.13 15.40		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.17.13 15.40		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.17.13 15.40		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.17.13 15.40		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.17.13 15.40		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.17.13 15.40		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.17.13 15.40		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.17.13 15.40		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.17.13 15.40		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.17.13 15.40		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.17.13 15.40		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.17.13 15.40		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.17.13 15.40		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.17.13 15.40		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.17.13 15.40		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.17.13 15.40		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.17.13 15.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	139	%	69-133	09.17.13 15.40	S4
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.17.13 15.40	
Toluene-D8	2037-26-5	113	%	70-130	09.17.13 15.40	
4-Bromofluorobenzene	460-00-4	102	%	70-135	09.17.13 15.40	

CL 10/30/13

LDC #: 30552E1a

SDG #: 470164

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer: FT

2nd Reviewer: CV

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/12/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	TB = 1 *EB = 4

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

*ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: water

1	AVB136-0102-1000	11		21		31	
2	AVB136-0100-13235	12		22		32	
3	AVB141-0100-12285	13		23		33	
4	AVB141-0104-1000	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552E1a

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)
Y N /N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:** ug/L
Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: TB Associated Samples: 2 → 4 (ND)

Compound	Blank ID 1	Blank ID	Sample Identification							
Sampling Date	9/12/13									
E	9.85									

Blank units: _____ **Associated sample units:** _____
Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: _____ Associated Samples: _____

Compound	Blank ID	Blank ID	Sample Identification							
Sampling Date										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 30552E|a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: 5
2nd Reviewer: 6

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		4	DFM	139 (69-133)	J/Polet
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(TOL) = Toluene-d8
(BFB) = Bromofluorobenzene
(DCE) = 1,2-Dichloroethane-d4
(DFM) = Dibromofluoromethane

LDC #: 30552E1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		643961-LCS/D	F			31 (28)	All	J/UJ/P
			B	15 (58-138)	16 (58-138)		↓	↓
			A			30 (26)		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 16, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470334

Sample Identification

AVB122-0300-17330
AVB139-0100-12290
AVB61-0100-31450
AVB61-0101-31450
AVB10-0200-37290
AVB10-0100-38120
AVB10-0104-1000
AVB122-0300-17330F
AVB139-0100-12290F
AVB61-0100-31450F
AVB61-0101-31450F
AVB10-0200-37290F
AVB10-0100-38120F
AVB10-0104-1000F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 14 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB10-0104-1000 and AVB10-0104-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples AVB61-0100-31450 and AVB61-0101-31450 and samples AVB61-0100-31450F and AVB61-0101-31450F were identified as field duplicates. No chromium was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD (Limits)	Flag	A or P
	AVB61-0100-31450	AVB61-0101-31450			
Chromium	0.0479	0.0293	48 (≤20)	J (all detects)	A

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470334

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
470334	AVB61-0100-31450 AVB61-0101-31450	Chromium	J (all detects)	A	Field duplicates (RPD) (R8)

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470334

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470334

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0300-17330** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-002 Date Collected: 09.16.13 06.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 18.31		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.32		1

0210130/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB139-0100-12290** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-003 Date Collected: 09.16.13 09.05

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0171**	0.0100	mg/L	09.19.13 18.37		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.38		1

CR 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0100-31450** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-004 Date Collected: 09.16.13 11.35

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0479**	0.0100	JCR8)	mg/L	09.19.13 18.43		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.44		1

OL 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0101-31450** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-005 Date Collected: 09.16.13 11.40

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.00

Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0293**	0.0100 JLR8)	mg/L	09.19.13 18.49		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.20

Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.49		1

C2 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0200-37290** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-006 Date Collected: 09.16.13 13.45

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0300**	0.0100	mg/L	09.19.13 18.55		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 21.55		1

02/03/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0100-38120** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-007 Date Collected: 09.16.13 15.00

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0430**	0.0100	mg/L	09.19.13 19.00		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 22.01		1

09/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0104-1000** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-008 Date Collected: 09.16.13 15.18

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.00

Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 19.06		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.19.13 09.20

Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 22.07		1

02/03/13

LDC #: 30552F4
SDG #: 470334
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/20/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/16/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	3 MS/MSD from SDG 470164.
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	(3, 4), (10, 11)*
XIV.	Field Blanks	MB	TB = 7, 14

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
*ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: All

1	AVB122-0300-17330	11	AVB61-0101-31450F	21	HB	11	
2	AVB139-0100-12290	12	AVB10-0200-37290F	22		12	
3	AVB61-0100-31450	13	AVB10-0100-38120F	23		13	
4	AVB61-0101-31450	14	AVB10-0104-1000F	24		14	
5	AVB10-0200-37290	15		25		15	
6	AVB10-0100-38120	16		26		16	
7	AVB10-0104-1000	17		27		17	
8	AVB122-0300-17330F	18		28		18	
9	AVB139-0100-12290F	19		29		19	
10	AVB61-0100-31450F	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC#: 30552F4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B)

Analyte	Concentration (mg/L)		RPD (≤20)	Qual Parent
	3	4		
Chromium	0.0479	0.0293	48	J det / A (R8)

V:\FIELD DUPLICATES\FD_inorganic\30552F4.wpd

LDC Report# 30552F1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 16, 2013
LDC Report Date:	October 22, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470334

Sample Identification

AVB122-0302-1000
AVB122-0300-17330
AVB139-0100-12290
AVB61-0100-31450
AVB61-0101-31450
AVB10-0200-37290
AVB10-0100-38120
AVB10-0104-1000

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB122-0302-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB10-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB61-0100-31450 and AVB61-0101-31450 were identified as field duplicates. No volatiles were detected in any of the samples.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470334

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470334

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470334

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0302-1000** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-001 Date Collected: 09.16.13 06.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 17.33		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 17.33		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 17.33		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 17.33		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 17.33		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 17.33		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 17.33		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 17.33		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 17.33		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 17.33		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 17.33		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 17.33		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 17.33		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 17.33		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 17.33		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 17.33		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 17.33		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 17.33		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 17.33		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 17.33		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 17.33		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 17.33		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 17.33		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 17.33		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 17.33		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 17.33		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 17.33		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 17.33		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 17.33		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 17.33		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 17.33		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 17.33		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 17.33		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 17.33		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 17.33		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 17.33		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 17.33		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 17.33		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 17.33		1

CRD 30/13

Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0302-1000** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-001 Date Collected: 09.16.13 06.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 17.33		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 17.33		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 17.33		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 17.33		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 17.33		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 17.33		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 17.33		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 17.33		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 17.33		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 17.33		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 17.33		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 17.33		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 17.33		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 17.33		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 17.33		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 17.33		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 17.33		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 17.33		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 17.33		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 17.33		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 17.33		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 17.33		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 17.33		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 17.33		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 17.33		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 17.33		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 17.33		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 17.33		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 17.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.18.13 17.33	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.18.13 17.33	
Toluene-D8	2037-26-5	103	%	70-130	09.18.13 17.33	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.18.13 17.33	

CL 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0300-17330** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-002 Date Collected: 09.16.13 06.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 17.58		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 17.58		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 17.58		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 17.58		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 17.58		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 17.58		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 17.58		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 17.58		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 17.58		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 17.58		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 17.58		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 17.58		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 17.58		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 17.58		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 17.58		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 17.58		1
Chloroform	67-66-3	**0.950**	0.500	ug/L	09.18.13 17.58		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 17.58		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 17.58		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 17.58		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 17.58		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 17.58		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 17.58		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 17.58		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 17.58		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 17.58		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 17.58		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 17.58		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 17.58		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 17.58		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 17.58		1
1,1-Dichloroethene	75-35-4	**0.570**	0.500	ug/L	09.18.13 17.58		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 17.58		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 17.58		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 17.58		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 17.58		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 17.58		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 17.58		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 17.58		1

CS 10/30/13

Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0300-17330** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-002 Date Collected: 09.16.13 06.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 17.58		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 17.58		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 17.58		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 17.58		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 17.58		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 17.58		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 17.58		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 17.58		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 17.58		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 17.58		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 17.58		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 17.58		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 17.58		1
Tetrachloroethylene	127-18-4	**1.82**	0.500	ug/L	09.18.13 17.58		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 17.58		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 17.58		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 17.58		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 17.58		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 17.58		1
Trichloroethene	79-01-6	**1.72**	0.500	ug/L	09.18.13 17.58		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 17.58		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 17.58		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 17.58		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 17.58		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 17.58		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 17.58		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 17.58		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 17.58		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 17.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	69-133	09.18.13 17.58	
1,2-Dichloroethane-D4	17060-07-0	97	%	66-139	09.18.13 17.58	
Toluene-D8	2037-26-5	101	%	70-130	09.18.13 17.58	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.18.13 17.58	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB139-0100-12290**
Lab Sample Id: 470334-003

Matrix: Water
Date Collected: 09.16.13 09.05

Date Received:09.16.13 16.25

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923601

Date Prep: 09.18.13 11.43

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 18.24		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 18.24		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 18.24		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 18.24		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 18.24		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 18.24		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 18.24		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 18.24		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 18.24		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 18.24		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 18.24		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 18.24		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 18.24		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 18.24		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 18.24		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 18.24		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 18.24		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 18.24		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 18.24		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 18.24		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 18.24		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 18.24		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 18.24		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 18.24		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 18.24		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 18.24		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 18.24		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 18.24		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 18.24		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 18.24		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 18.24		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 18.24		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 18.24		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 18.24		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 18.24		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 18.24		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 18.24		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 18.24		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 18.24		1

CC 10/30/13

Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB139-0100-12290** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-003 Date Collected: 09.16.13 09.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 18.24		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 18.24		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 18.24		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 18.24		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 18.24		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 18.24		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 18.24		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 18.24		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 18.24		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 18.24		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 18.24		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 18.24		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 18.24		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 18.24		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 18.24		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 18.24		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 18.24		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 18.24		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 18.24		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 18.24		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 18.24		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 18.24		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 18.24		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 18.24		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 18.24		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 18.24		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 18.24		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 18.24		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 18.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.18.13 18.24	
1,2-Dichloroethane-D4	17060-07-0	98	%	66-139	09.18.13 18.24	
Toluene-D8	2037-26-5	102	%	70-130	09.18.13 18.24	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.18.13 18.24	

CL 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0100-31450** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-004 Date Collected: 09.16.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 18.49		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 18.49		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 18.49		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 18.49		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 18.49		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 18.49		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 18.49		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 18.49		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 18.49		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 18.49		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 18.49		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 18.49		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 18.49		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 18.49		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 18.49		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 18.49		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 18.49		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 18.49		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 18.49		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 18.49		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 18.49		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 18.49		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 18.49		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 18.49		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 18.49		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 18.49		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 18.49		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 18.49		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 18.49		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 18.49		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 18.49		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 18.49		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 18.49		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 18.49		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 18.49		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 18.49		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 18.49		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 18.49		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 18.49		1

CS 10/30/13

Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0100-31450** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-004 Date Collected: 09.16.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 18.49		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 18.49		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 18.49		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 18.49		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 18.49		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 18.49		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 18.49		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 18.49		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 18.49		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 18.49		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 18.49		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 18.49		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 18.49		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 18.49		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 18.49		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 18.49		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 18.49		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 18.49		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 18.49		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 18.49		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 18.49		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 18.49		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 18.49		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 18.49		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 18.49		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 18.49		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 18.49		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 18.49		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 18.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	69-133	09.18.13 18.49	
1,2-Dichloroethane-D4	17060-07-0	98	%	66-139	09.18.13 18.49	
Toluene-D8	2037-26-5	103	%	70-130	09.18.13 18.49	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.18.13 18.49	

CLO 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0101-31450** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-005 Date Collected: 09.16.13 11.40

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 19.14		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 19.14		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 19.14		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 19.14		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 19.14		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 19.14		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 19.14		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 19.14		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 19.14		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 19.14		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 19.14		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 19.14		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 19.14		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 19.14		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 19.14		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 19.14		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 19.14		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 19.14		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 19.14		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 19.14		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 19.14		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 19.14		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 19.14		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 19.14		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 19.14		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 19.14		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 19.14		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 19.14		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 19.14		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 19.14		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 19.14		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 19.14		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 19.14		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 19.14		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 19.14		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 19.14		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 19.14		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 19.14		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 19.14		1

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Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB61-0101-31450** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-005 Date Collected: 09.16.13 11.40

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 19.14		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 19.14		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 19.14		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 19.14		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 19.14		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 19.14		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 19.14		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 19.14		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 19.14		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 19.14		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 19.14		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 19.14		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 19.14		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 19.14		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 19.14		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 19.14		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 19.14		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 19.14		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 19.14		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 19.14		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 19.14		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 19.14		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 19.14		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 19.14		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 19.14		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 19.14		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 19.14		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 19.14		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 19.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	69-133	09.18.13 19.14	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.18.13 19.14	
Toluene-D8	2037-26-5	103	%	70-130	09.18.13 19.14	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.18.13 19.14	

CW 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0200-37290** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-006 Date Collected: 09.16.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 19.40		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 19.40		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 19.40		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 19.40		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 19.40		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 19.40		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 19.40		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 19.40		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 19.40		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 19.40		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 19.40		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 19.40		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 19.40		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 19.40		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 19.40		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 19.40		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 19.40		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 19.40		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 19.40		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 19.40		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 19.40		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 19.40		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 19.40		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 19.40		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 19.40		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 19.40		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 19.40		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 19.40		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 19.40		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 19.40		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 19.40		1
1,1-Dichloroethene	75-35-4	**1.27**	0.500	ug/L	09.18.13 19.40		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 19.40		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 19.40		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 19.40		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 19.40		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 19.40		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 19.40		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 19.40		1

CL 10/30/13

Final 1.000

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0200-37290** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-006 Date Collected: 09.16.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 19.40		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 19.40		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 19.40		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 19.40		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 19.40		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 19.40		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 19.40		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 19.40		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 19.40		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 19.40		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 19.40		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 19.40		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 19.40		1
Tetrachloroethylene	127-18-4	**4.76**	0.500	ug/L	09.18.13 19.40		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 19.40		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 19.40		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 19.40		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 19.40		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 19.40		1
Trichloroethene	79-01-6	**1.73**	0.500	ug/L	09.18.13 19.40		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 19.40		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 19.40		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 19.40		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 19.40		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 19.40		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 19.40		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 19.40		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 19.40		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 19.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	69-133	09.18.13 19.40	
1,2-Dichloroethane-D4	17060-07-0	97	%	66-139	09.18.13 19.40	
Toluene-D8	2037-26-5	102	%	70-130	09.18.13 19.40	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.18.13 19.40	

CLO 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0100-38120** Matrix: Water Date Received:09.16.13 16.25
Lab Sample Id: 470334-007 Date Collected: 09.16.13 15.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 20.05		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 20.05		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 20.05		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 20.05		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 20.05		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 20.05		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 20.05		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 20.05		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 20.05		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 20.05		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 20.05		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 20.05		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 20.05		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 20.05		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 20.05		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 20.05		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 20.05		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 20.05		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 20.05		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 20.05		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 20.05		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 20.05		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 20.05		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 20.05		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 20.05		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 20.05		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 20.05		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 20.05		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 20.05		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 20.05		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 20.05		1
1,1-Dichloroethene	75-35-4	**0.590**	0.500	ug/L	09.18.13 20.05		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 20.05		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 20.05		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 20.05		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 20.05		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 20.05		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 20.05		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 20.05		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0100-38120** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-007 Date Collected: 09.16.13 15.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 20.05		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 20.05		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 20.05		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 20.05		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 20.05		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 20.05		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 20.05		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 20.05		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 20.05		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 20.05		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 20.05		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 20.05		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 20.05		1
Tetrachloroethylene	127-18-4	**14.3**	0.500	ug/L	09.18.13 20.05		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 20.05		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 20.05		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 20.05		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 20.05		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 20.05		1
Trichloroethene	79-01-6	**1.48**	0.500	ug/L	09.18.13 20.05		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 20.05		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 20.05		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 20.05		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 20.05		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 20.05		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 20.05		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 20.05		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 20.05		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 20.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	69-133	09.18.13 20.05	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.18.13 20.05	
Toluene-D8	2037-26-5	102	%	70-130	09.18.13 20.05	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.18.13 20.05	

Final 1.000

C2 10/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0104-1000** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-008 Date Collected: 09.16.13 15.18

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 20.30		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 20.30		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 20.30		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 20.30		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 20.30		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 20.30		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 20.30		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 20.30		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 20.30		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 20.30		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 20.30		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 20.30		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 20.30		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 20.30		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 20.30		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 20.30		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 20.30		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 20.30		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 20.30		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 20.30		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 20.30		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 20.30		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 20.30		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 20.30		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 20.30		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 20.30		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 20.30		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 20.30		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 20.30		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 20.30		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 20.30		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 20.30		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 20.30		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 20.30		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 20.30		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 20.30		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 20.30		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 20.30		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 20.30		1

Final 1.000

09/30/13

Certificate of Analytical Results 470334

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB10-0104-1000** Matrix: Water Date Received:09.16.13 16.25

Lab Sample Id: 470334-008 Date Collected: 09.16.13 15.18

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 20.30		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 20.30		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 20.30		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 20.30		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 20.30		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 20.30		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 20.30		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 20.30		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 20.30		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 20.30		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 20.30		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 20.30		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 20.30		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 20.30		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 20.30		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 20.30		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 20.30		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 20.30		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 20.30		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 20.30		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 20.30		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 20.30		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 20.30		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 20.30		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 20.30		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 20.30		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 20.30		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 20.30		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 20.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	69-133	09.18.13 20.30	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.18.13 20.30	
Toluene-D8	2037-26-5	104	%	70-130	09.18.13 20.30	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.18.13 20.30	

Final 1.000

09/20/13

LDC #: 30552F1a

SDG #: 470334

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer: P

2nd Reviewer: d

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/16/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 4, 5
XVII.	Field blanks	ND	TB = 1 EB = 8

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Water

1	AVB122-0302-1000	11		21		31	
2	AVB122-0300-17330	12		22		32	
3	AVB139-0100-12290	13		23		33	
4	AVB61-0100-31450 D	14		24		34	
5	AVB61-0101-31450 D	15		25		35	
6	AVB10-0200-37290	16		26		36	
7	AVB10-0100-38120	17		27		37	
8	AVB10-0104-1000	18		28		38	
9		19		29		39	
10		20		30		40	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 17, 2013

LDC Report Date: October 30, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level IV

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470337

Sample Identification

AVB106-0100-26101
AVB12-0100-37105
AVB14-0100-35109
AVB69-0200-02120
AVB88-0100-24116
AVB97-0100-21119
AVB126-0100-14135
AVB106-0100-26101F
AVB12-0100-37105F
AVB14-0100-35109F
AVB69-0200-02120F
AVB88-0100-24116F
AVB97-0100-21119F
AVB126-0100-14135F
AVB126-0104-1000F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 15 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the initial, continuing and preparation blanks.

Sample AVB126-0104-1000F was identified as an equipment blank. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

All sample result verifications were acceptable.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470337

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470337

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470337

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0100-26101** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-002 Date Collected: 09.17.13 08.35

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0188**	0.0100	mg/L	09.19.13 19.12		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 22.13		1

CLO/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB12-0100-37105** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-003 Date Collected: 09.17.13 09.25

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.193**	0.0100	mg/L	09.19.13 19.30		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0221**	0.0100	mg/L	09.19.13 22.19		1

02/03/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB14-0100-35109** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-004 Date Collected: 09.17.13 09.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.205**	0.0100	mg/L	09.19.13 19.35		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0102**	0.0100	mg/L	09.19.13 22.24		1

CL 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0200-02120** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-005 Date Collected: 09.17.13 10.50

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.157**	0.0100	mg/L	09.19.13 19.41		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 22.42		1

CLLO3013

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB88-0100-24116** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-006 Date Collected: 09.17.13 11.30

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.247**	0.0100	mg/L	09.19.13 19.47		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 22.48		1

C2 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB97-0100-21119** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-007 Date Collected: 09.17.13 12.15

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.104**	0.0100	mg/L	09.19.13 19.53		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0312**	0.0100	mg/L	09.19.13 22.54		1

CL 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0100-14135** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-008 Date Collected: 09.17.13 12.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.00
Seq Number: 923153 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0156**	0.0100	mg/L	09.19.13 19.59		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.19.13 09.20
Seq Number: 923156 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0136**	0.0100	mg/L	09.19.13 22.59		1

CL 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0104-1000**
Lab Sample Id: 470337-009

Matrix: Water
Date Collected: 09.17.13 14.00

Date Received: 09.17.13 15.25

Analytical Method: Metals, Dissolved, by EPA 6010B
Tech: MLI
Analyst: MKO
Seq Number: 923156

Date Prep: 09.19.13 09.20

Prep Method: SW3010A
% Moisture:

SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.19.13 23.05		1

09/30/13

LDC #: 30552G4
SDG #: 470337
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10/30/13
Page: 1 of 1
Reviewer: OL
2nd Reviewer: MG

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/17/13
II.	Calibration	~~N~~ A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	MS/D (SDG: 470164)
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	ND	EB=15

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: water

1	AVB106-0100-26101	11	AVB69-0200-02120F	21		11	
2	AVB12-0100-37105	12	AVB88-0100-24116F	22		12	
3	AVB14-0100-35109	13	AVB97-0100-21119F	23		13	
4	AVB69-0200-02120	14	AVB126-0100-14135F	24		14	
5	AVB88-0100-24116	15	AVB126-0104-1000F	25		15	
6	AVB97-0100-21119	16		26		16	
7	AVB126-0100-14135	17		27		17	
8	AVB106-0100-26101F	18		28		18	
9	AVB12-0100-37105F	19		29		19	
10	AVB14-0100-35109F	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC #: 30552G4

VALIDATION FINDINGS CHECKLIST

Reviewer: QR
2nd Reviewer: MG

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?			✓	
Were %RSD of isotopes in the tuning solution ≤5%?			✓	
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

LDC #: 30552G4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: MG

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysis have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?			✓	
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 30552G9

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: QR
2nd Reviewer: MG

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Cr	1988	2000	99	—	Y
	ICP/MS (Initial calibration)						
	CVAA (Initial calibration)						
CCV3	ICP (Continuing calibration)	Cr	1955	2000	98	—	Y
	ICP/MS (Continuing calibration)						
	CVAA (Continuing calibration)						
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30552G4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: 9R
2nd Reviewer: MG

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Cr	477.1	500	95	–	Y
LCS	Laboratory control sample		1.02	1.00	102	102	
AVB136010-3235	Matrix spike		(SSR-SR) 0.9893	1.00	99	99	
↓	Duplicate		1.05	1.03	2	2	
N	ICP serial dilution						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

LDC #: 30552G4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: MG

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Cr were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$1 = \frac{18.76 ug/L}{1000} = 0.01876 mg/L$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
	1	Cr	0.0188	0.0188	Y
	2		0.193	0.193	
	9		0.0221	0.0221	
	3		0.205	0.205	
	10		0.0102	0.0102	
	4		0.157	0.157	
	5		0.247	0.247	
	6		0.104	0.104	
	13		0.0312	0.0312	
	7		0.0156	0.0156	
	14		0.0136	0.0136	

Note:

LDC Report# 30552G1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 17, 2013
LDC Report Date:	October 28, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level IV
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470337

Sample Identification

AVB106-0102-1000
AVB106-0100-26101
AVB12-0100-37105
AVB14-0100-35109
AVB69-0200-02120
AVB88-0100-24116
AVB97-0100-21119
AVB126-0100-14135
AVB126-0104-1000
AVB69-0200-02120MS
AVB69-0200-02120MSD

Introduction

This data review covers 11 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
9/19/13	Bromomethane	40	AVB14-0100-35109 AVB69-0200-02120 AVB88-0100-24116 AVB97-0100-21119 AVB126-0100-14135 AVB126-0104-1000 AVB69-0200-02120MS AVB69-0200-02120MSD 644126-1-BLK	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
9/16/13	Dichlorodifluoromethane	35	All samples in SDG 470337	J (all detects) UJ (all non-detects)	A

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB106-0102-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB126-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB69-0200-02120MS/MSD (AVB69-0200-02120)	Acetone	-	-	27 (≤20)	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation

All compound quantitations were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470337

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470337	AVB14-0100-35109 AVB69-0200-02120 AVB88-0100-24116 AVB97-0100-21119 AVB126-0100-14135 AVB126-0104-1000	Bromomethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (V1)
470337	AVB106-0102-1000 AVB106-0100-26101 AVB12-0100-37105 AVB14-0100-35109 AVB69-0200-02120 AVB88-0100-24116 AVB97-0100-21119 AVB126-0100-14135 AVB126-0104-1000	Dichlorodifluoromethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (V1)
470337	AVB69-0200-02120	Acetone	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470337

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470337

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0102-1000** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-001 Date Collected: 09.17.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 21.44		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 21.44		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 21.44		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 21.44		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 21.44		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 21.44		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 21.44		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 21.44		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 21.44		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 21.44		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 21.44		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 21.44		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 21.44		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 21.44		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 21.44		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 21.44		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.18.13 21.44		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 21.44		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 21.44		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 21.44		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 21.44		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 21.44		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 21.44		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 21.44		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 21.44		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 21.44		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 21.44		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 21.44		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 21.44	UJ (V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 21.44		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 21.44		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 21.44		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 21.44		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 21.44		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 21.44		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 21.44		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 21.44		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 21.44		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 21.44		1

02 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0102-1000** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-001 Date Collected: 09.17.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 21.44		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 21.44		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 21.44		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 21.44		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 21.44		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 21.44		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 21.44		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 21.44		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 21.44		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 21.44		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 21.44		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 21.44		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 21.44		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.18.13 21.44		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 21.44		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 21.44		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 21.44		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 21.44		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 21.44		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.18.13 21.44		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 21.44		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 21.44		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 21.44		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 21.44		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 21.44		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 21.44		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 21.44		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 21.44		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 21.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	69-133	09.18.13 21.44	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.18.13 21.44	
Toluene-D8	2037-26-5	102	%	70-130	09.18.13 21.44	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.18.13 21.44	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0100-26101** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-002 Date Collected: 09.17.13 08.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 22.09		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 22.09		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 22.09		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 22.09		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 22.09		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 22.09		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 22.09		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 22.09		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 22.09		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 22.09		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 22.09		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 22.09		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 22.09		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 22.09		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 22.09		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 22.09		1
Chloroform	67-66-3	**7.72**	0.500	ug/L	09.18.13 22.09		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 22.09		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 22.09		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 22.09		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 22.09		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 22.09		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 22.09		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 22.09		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 22.09		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 22.09		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 22.09		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 22.09		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 22.09	UJ(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 22.09		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 22.09		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 22.09		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 22.09		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 22.09		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 22.09		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 22.09		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 22.09		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 22.09		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 22.09		1

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB106-0100-26101** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-002 Date Collected: 09.17.13 08.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.18.13 11.43
Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 22.09		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 22.09		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 22.09		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 22.09		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 22.09		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 22.09		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 22.09		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 22.09		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 22.09		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 22.09		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 22.09		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 22.09		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 22.09		1
Tetrachloroethylene	127-18-4	**2.68**	0.500	ug/L	09.18.13 22.09		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 22.09		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 22.09		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 22.09		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 22.09		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 22.09		1
Trichloroethene	79-01-6	**9.73**	0.500	ug/L	09.18.13 22.09		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 22.09		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 22.09		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 22.09		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 22.09		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 22.09		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 22.09		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 22.09		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 22.09		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 22.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	69-133	09.18.13 22.09	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.18.13 22.09	
Toluene-D8	2037-26-5	102	%	70-130	09.18.13 22.09	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.18.13 22.09	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB12-0100-37105** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-003 Date Collected: 09.17.13 09.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.18.13 22.34		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.18.13 22.34		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.18.13 22.34		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.18.13 22.34		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.18.13 22.34		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.18.13 22.34		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.18.13 22.34		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.18.13 22.34		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.18.13 22.34		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.18.13 22.34		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.18.13 22.34		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.18.13 22.34		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.18.13 22.34		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.18.13 22.34		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.18.13 22.34		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.18.13 22.34		1
Chloroform	67-66-3	**0.530**	0.500	ug/L	09.18.13 22.34		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.18.13 22.34		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.18.13 22.34		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.18.13 22.34		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.18.13 22.34		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.18.13 22.34		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.18.13 22.34		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.18.13 22.34		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.18.13 22.34		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.18.13 22.34		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.18.13 22.34		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.18.13 22.34		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.18.13 22.34	US(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.18.13 22.34		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.18.13 22.34		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.18.13 22.34		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.18.13 22.34		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.18.13 22.34		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.18.13 22.34		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.18.13 22.34		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.18.13 22.34		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.18.13 22.34		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.18.13 22.34		1

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB12-0100-37105** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-003 Date Collected: 09.17.13 09.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.18.13 11.43

Seq Number: 923601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.18.13 22.34		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.18.13 22.34		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.18.13 22.34		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.18.13 22.34		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.18.13 22.34		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.18.13 22.34		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.18.13 22.34		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.18.13 22.34		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.18.13 22.34		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.18.13 22.34		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.18.13 22.34		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.18.13 22.34		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.18.13 22.34		1
Tetrachloroethylene	127-18-4	**1.84**	0.500	ug/L	09.18.13 22.34		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.18.13 22.34		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.18.13 22.34		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.18.13 22.34		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.18.13 22.34		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.18.13 22.34		1
Trichloroethene	79-01-6	**2.27**	0.500	ug/L	09.18.13 22.34		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.18.13 22.34		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.18.13 22.34		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.18.13 22.34		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.18.13 22.34		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.18.13 22.34		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.18.13 22.34		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.18.13 22.34		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.18.13 22.34		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.18.13 22.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	69-133	09.18.13 22.34	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.18.13 22.34	
Toluene-D8	2037-26-5	101	%	70-130	09.18.13 22.34	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.18.13 22.34	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB14-0100-35109** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-004 Date Collected: 09.17.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 15.02		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 15.02		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 15.02		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 15.02		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 15.02		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 15.02		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 15.02	UJ(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 15.02		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 15.02		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 15.02		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 15.02		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 15.02		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 15.02		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 15.02		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 15.02		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 15.02		1
Chloroform	67-66-3	**2.83**	0.500	ug/L	09.19.13 15.02		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 15.02		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 15.02		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 15.02		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 15.02		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 15.02		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 15.02		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 15.02		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 15.02		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 15.02		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 15.02		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 15.02		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 15.02	UJ(V1)	1
1,1-Dichloroethane	75-34-3	**1.37**	0.500	ug/L	09.19.13 15.02		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 15.02		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 15.02		1
cis-1,2-Dichloroethene	156-59-2	**1.61**	0.500	ug/L	09.19.13 15.02		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 15.02		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 15.02		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 15.02		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 15.02		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 15.02		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 15.02		1

02/03/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB14-0100-35109** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-004 Date Collected: 09.17.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 15.02		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 15.02		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 15.02		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 15.02		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 15.02		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 15.02		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 15.02		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 15.02		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 15.02		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 15.02		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 15.02		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 15.02		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 15.02		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.19.13 15.02		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 15.02		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 15.02		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 15.02		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 15.02		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 15.02		1
Trichloroethene	79-01-6	**5.84**	0.500	ug/L	09.19.13 15.02		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 15.02		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 15.02		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 15.02		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 15.02		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 15.02		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 15.02		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 15.02		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 15.02		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 15.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.19.13 15.02	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	09.19.13 15.02	
Toluene-D8	2037-26-5	99	%	70-130	09.19.13 15.02	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.19.13 15.02	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0200-02120** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-005 Date Collected: 09.17.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 15.27		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 15.27		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 15.27		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 15.27		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 15.27		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 15.27		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 15.27	UJ(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 15.27		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 15.27		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 15.27		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 15.27		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 15.27		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 15.27		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 15.27		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 15.27		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 15.27		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.19.13 15.27		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 15.27		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 15.27		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 15.27		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 15.27		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 15.27		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 15.27		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 15.27		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 15.27		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 15.27		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 15.27		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 15.27		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 15.27	UJ(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 15.27		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 15.27		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 15.27		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 15.27		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 15.27		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 15.27		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 15.27		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 15.27		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 15.27		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 15.27		1

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB69-0200-02120** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-005 Date Collected: 09.17.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 15.27		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 15.27		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 15.27		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 15.27		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 15.27		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 15.27		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 15.27		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 15.27		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 15.27		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 15.27		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 15.27		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 15.27		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 15.27		1
Tetrachloroethylene	127-18-4	**5.28**	0.500	ug/L	09.19.13 15.27		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 15.27		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 15.27		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 15.27		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 15.27		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 15.27		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.19.13 15.27		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 15.27		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 15.27		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 15.27		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 15.27		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 15.27		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 15.27		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 15.27		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 15.27		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 15.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.19.13 15.27	
1,2-Dichloroethane-D4	17060-07-0	97	%	66-139	09.19.13 15.27	
Toluene-D8	2037-26-5	99	%	70-130	09.19.13 15.27	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.19.13 15.27	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB88-0100-24116** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-006 Date Collected: 09.17.13 11.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.19.13 12.14

Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 15.53		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 15.53		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 15.53		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 15.53		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 15.53		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 15.53		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 15.53	UJ(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 15.53		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 15.53		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 15.53		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 15.53		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 15.53		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 15.53		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 15.53		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 15.53		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 15.53		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.19.13 15.53		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 15.53		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 15.53		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 15.53		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 15.53		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 15.53		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 15.53		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 15.53		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 15.53		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 15.53		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 15.53		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 15.53		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 15.53	UJ(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 15.53		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 15.53		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 15.53		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 15.53		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 15.53		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 15.53		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 15.53		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 15.53		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 15.53		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 15.53		1

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB88-0100-24116** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-006 Date Collected: 09.17.13 11.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.19.13 12.14

Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 15.53		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 15.53		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 15.53		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 15.53		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 15.53		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 15.53		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 15.53		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 15.53		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 15.53		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 15.53		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 15.53		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 15.53		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 15.53		1
Tetrachloroethylene	127-18-4	**9.28**	0.500	ug/L	09.19.13 15.53		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 15.53		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 15.53		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 15.53		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 15.53		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 15.53		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.19.13 15.53		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 15.53		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 15.53		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 15.53		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 15.53		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 15.53		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 15.53		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 15.53		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 15.53		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 15.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	69-133	09.19.13 15.53	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	09.19.13 15.53	
Toluene-D8	2037-26-5	99	%	70-130	09.19.13 15.53	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.19.13 15.53	

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB97-0100-21119** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-007 Date Collected: 09.17.13 12.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.19.13 12.14

Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 16.19		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 16.19		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 16.19		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 16.19		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 16.19		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 16.19		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 16.19	US(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 16.19		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 16.19		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 16.19		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 16.19		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 16.19		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 16.19		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 16.19		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 16.19		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 16.19		1
Chloroform	67-66-3	**0.900**	0.500	ug/L	09.19.13 16.19		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 16.19		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 16.19		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 16.19		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 16.19		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 16.19		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 16.19		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 16.19		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 16.19		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 16.19		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 16.19		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 16.19		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 16.19	US(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 16.19		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 16.19		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 16.19		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 16.19		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 16.19		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 16.19		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 16.19		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 16.19		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 16.19		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 16.19		1

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB97-0100-21119** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-007 Date Collected: 09.17.13 12.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 16.19		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 16.19		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 16.19		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 16.19		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 16.19		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 16.19		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 16.19		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 16.19		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 16.19		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 16.19		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 16.19		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 16.19		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 16.19		1
Tetrachloroethylene	127-18-4	**0.680**	0.500	ug/L	09.19.13 16.19		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 16.19		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 16.19		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 16.19		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 16.19		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 16.19		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.19.13 16.19		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 16.19		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 16.19		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 16.19		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 16.19		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 16.19		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 16.19		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 16.19		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 16.19		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 16.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.19.13 16.19	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.19.13 16.19	
Toluene-D8	2037-26-5	99	%	70-130	09.19.13 16.19	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.19.13 16.19	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0100-14135**
Lab Sample Id: 470337-008

Matrix: Water
Date Collected: 09.17.13 12.55

Date Received: 09.17.13 15.25

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923605

Date Prep: 09.19.13 12.14

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 16.44		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 16.44		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 16.44		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 16.44		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 16.44		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 16.44		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 16.44	UJ(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 16.44		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 16.44		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 16.44		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 16.44		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 16.44		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 16.44		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 16.44		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 16.44		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 16.44		1
Chloroform	67-66-3	**0.840**	0.500	ug/L	09.19.13 16.44		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 16.44		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 16.44		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 16.44		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 16.44		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 16.44		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 16.44		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 16.44		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 16.44		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 16.44		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 16.44		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 16.44		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 16.44	UJ(V1)	1
1,1-Dichloroethane	75-34-3	**0.840**	0.500	ug/L	09.19.13 16.44		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 16.44		1
1,1-Dichloroethene	75-35-4	**1.21**	0.500	ug/L	09.19.13 16.44		1
cis-1,2-Dichloroethene	156-59-2	**1.21**	0.500	ug/L	09.19.13 16.44		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 16.44		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 16.44		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 16.44		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 16.44		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 16.44		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 16.44		1

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Final 1.000

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0100-14135** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-008 Date Collected: 09.17.13 12.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 16.44		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 16.44		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 16.44		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 16.44		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 16.44		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 16.44		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 16.44		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 16.44		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 16.44		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 16.44		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 16.44		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 16.44		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 16.44		1
Tetrachloroethylene	127-18-4	**2.43**	0.500	ug/L	09.19.13 16.44		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 16.44		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 16.44		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 16.44		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 16.44		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 16.44		1
Trichloroethene	79-01-6	**4.36**	0.500	ug/L	09.19.13 16.44		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 16.44		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 16.44		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 16.44		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 16.44		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 16.44		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 16.44		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 16.44		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 16.44		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 16.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.19.13 16.44	
1,2-Dichloroethane-D4	17060-07-0	97	%	66-139	09.19.13 16.44	
Toluene-D8	2037-26-5	100	%	70-130	09.19.13 16.44	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.19.13 16.44	

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Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0104-1000** Matrix: Water Date Received:09.17.13 15.25
Lab Sample Id: 470337-009 Date Collected: 09.17.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 17.10		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 17.10		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 17.10		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 17.10		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 17.10		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 17.10		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 17.10	UJ(V1)	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 17.10		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 17.10		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 17.10		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 17.10		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 17.10		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 17.10		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 17.10		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 17.10		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 17.10		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.19.13 17.10		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 17.10		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 17.10		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 17.10		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 17.10		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 17.10		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 17.10		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 17.10		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 17.10		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 17.10		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 17.10		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 17.10		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 17.10	UJ(V1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 17.10		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 17.10		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 17.10		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 17.10		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 17.10		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 17.10		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 17.10		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 17.10		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 17.10		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 17.10		1

CR 10/30/13

Certificate of Analytical Results 470337

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB126-0104-1000** Matrix: Water Date Received:09.17.13 15.25

Lab Sample Id: 470337-009 Date Collected: 09.17.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.19.13 12.14

Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 17.10		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 17.10		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 17.10		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 17.10		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 17.10		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 17.10		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 17.10		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 17.10		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 17.10		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 17.10		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 17.10		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 17.10		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 17.10		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.19.13 17.10		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 17.10		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 17.10		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 17.10		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 17.10		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 17.10		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.19.13 17.10		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 17.10		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 17.10		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 17.10		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 17.10		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 17.10		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 17.10		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 17.10		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 17.10		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 17.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	69-133	09.19.13 17.10	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.19.13 17.10	
Toluene-D8	2037-26-5	98	%	70-130	09.19.13 17.10	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.19.13 17.10	

CR 10/30/13

LDC #: 30552G1a

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 10/22/13

SDG #: 470337

Page: 1 of 1

Laboratory: Xenco Laboratories

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/17/13
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	SW	IW/CW ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1 EB = 9

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	1	AVB106-0102-1000 TB	11	2	AVB69-0200-02120MSD	21	1	644123-1-BLK	31
2	1	AVB106-0100-26101	12			22	2	644126-1-BLK	32
3	1	AVB12-0100-37105	13			23			33
4	2	AVB14-0100-35109	14			24			34
5	2	AVB69-0200-02120	15			25			35
6	2	AVB88-0100-24116	16			26			36
7	2	AVB97-0100-21119	17			27			37
8	2	AVB126-0100-14135	18			28			38
9	2	AVB126-0104-1000 EB	19			29			39
10	2	AVB69-0200-02120MS	20			30			40

LDC #: 30552G1a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: CN

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30%/15% FT and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ ~~20%~~ 25 FT and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 30552 G|a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: CV

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552G1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ~~≤20.0~~ 25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ~~≤20.0~~ 25%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	9/19/13	13091904-ccv	B	40		644126-1-BLK, 4→11	J/UJ/A
	9/16/13	ICV	JJ	35		All	J/UJ/A

CONCAL

LDC #: 30552G1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: cl

METHOD: ✓ GC ____ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD)analyzed for each matrix in this SDG?
Y N N/A Were an MS/MSD) analyzed for every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		10 + 11	F	( )	( )	27 (20)	5	~~J/UN/A~~ J det/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )			
				( )	( )	( )		
				( )	( )	( )		
				( )	( )			
				( )	( )	( )		
				( )	( )	( )		
				( )	( )			
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )			
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 30523/a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	9/16/13	A (1st internal standard)	1.656	1.656	1.815	1.815	8.177	8.177
			V (2nd internal standard)	2.015	2.015	2.104	2.104	6.386	6.386
			CC (3rd internal standard)	1.253	1.253	1.294	1.294	8.122	8.122
			JJJ (4th internal standard)	1.305	1.305	1.397	1.397	7.46	7.46
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30552 G/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 6 of 1
Reviewer: FT
2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	13091804	9/18/13	A (1st internal standard)	1.815	1.810	1.810	0.3	0.3
			V (2nd internal standard)	2.104	2.086	2.086	0.9	0.9
			CC (3rd internal standard)	1.294	1.244	1.244	3.9	3.9
			JJ (4th internal standard)	1.397	1.330	1.330	4.8	4.8
2	13091904	9/19/13	A (1st internal standard)		1.826	1.826	0.6	0.6
			V (2nd internal standard)		2.111	2.111	0.3	0.3
			CC (3rd internal standard)		1.202	1.202	7.1	7.1
			JJJ (4th internal standard)		1.298	1.298	7.1	7.1
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30529/a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: CV

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	53.67	107	107	0
1,2-Dichloroethane-d4	✓	49.79	100	100	✓
Toluene-d8		50.82	102	102	
Bromofluorobenzene		47.84	96	96	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 30552G/a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration, SA = Spike added, SC = Sample concentration

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD sample: 10 + 11

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20.0	20.0	ND	21.1	21.9	106	106	110	110	4	4
Trichloroethene	↓	↓	↓	21.1	21.0	106	106	105	105	0	0
Benzene	↓	↓	↓	20.7	20.8	104	104	104	104	0	0
Toluene	↓	↓	↓	19.9	19.8	100	100	99	99	1	1
Chlorobenzene	↓	↓	↓	21.5	21.2	108	108	106	106	1	1

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30552G/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 644123-1-BS/D

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	20	20	19.7	19.7	99	99	99	99	0	0
Trichloroethene	↓	↓	20.6	20.4	103	103	102	102	1	1
Benzene	↓	↓	20.7	20.3	104	104	102	102	2	2
Toluene	↓	↓	19.5	19.2	98	98	96	96	2	2
Chlorobenzene	↓	↓	20.8	20.9	104	104	105	105	0	0

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 30552G/a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: CV

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #2, K:

Conc. = $\frac{(46504)(5\mu)(\quad)}{(133996)(2.248)(\quad)(\quad)}$

= 7.72 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 18, 2013

LDC Report Date: October 10, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470483

Sample Identification

PS-9
AVB135-0100-13130
AVB71-0100-26134
AVB140-0100-10112
AVB140-0101-10112
AVB140-0104-1000
PS-9F
AVB135-0100-13130F
AVB71-0100-26134F
AVB140-0100-10112F
AVB140-0101-10112F
AVB140-0104-1000F
AVB140-0104-1000MS
AVB140-0104-1000MSD

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 14 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB140-0104-1000 and AVB140-0104-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples AVB140-0100-10112 and AVB140-0101-10112 and samples AVB140-0100-10112F and AVB140-0101-10112F were identified as field duplicates. No chromium was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD (Limits)	Flag	A or P
	AVB140-0100-10112	AVB140-0101-10112			
Chromium	0.137	0.0142	162 (≤20)	J (all detects)	A

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470483

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
470483	AVB140-0100-10112 AVB140-0101-10112	Chromium	J (all detects)	A	Field duplicates (RPD) (R8)

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470483

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470483

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **PS-9** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-002 Date Collected: 09.18.13 08.30

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.188**	0.0100	mg/L	09.22.13 11.37		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 12.54		1

ou 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB135-0100-13130** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-003 Date Collected: 09.18.13 10.07

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0370**	0.0100	mg/L	09.22.13 11.43		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 13.00		1

02/03/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB71-0100-26134** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-004 Date Collected: 09.18.13 11.42

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**1.40**	0.0100	mg/L	09.22.13 11.49		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0239**	0.0100	mg/L	09.22.13 13.06		1

C2 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0100-10112** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-005 Date Collected: 09.18.13 13.00

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.137**	0.0100	J (R8)	mg/L	09.22.13 11.55		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 13.12		1

C2 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0101-10112** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-006 Date Collected: 09.18.13 13.05

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0142**	0.0100	JCR8)	mg/L	09.22.13 12.01		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 13.18		1

CL 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0104-1000** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-007 Date Collected: 09.18.13 13.45

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 11.08		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.21.13 09.00
Seq Number: 923257 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.22.13 13.24		1

09/30/13

LDC #: 30552H4
SDG #: 470483
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/b
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	(4,5),(10,11)*
XIV.	Field Blanks	ND	EB = 6,12

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

*ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: AL

1	PS-9	11	AVB140-0101-10112F	21	MB	11	
2	AVB135-0100-13130	12	AVB140-0104-1000F	22		12	
3	AVB71-0100-26134	13	AVB140-0104-1000MS	23		13	
4	AVB140-0100-10112	14	AVB140-0104-1000MSD	24		14	
5	AVB140-0101-10112	15		25		15	
6	AVB140-0104-1000	16		26		16	
7	PS-9F	17		27		17	
8	AVB135-0100-13130F	18		28		18	
9	AVB71-0100-26134F	19		29		19	
10	AVB140-0100-10112F	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

LDC#: 30552H4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B)

Analyte	Concentration (mg/L)		RPD (≤20)	Qual Parent
	4	5		
Chromium	0.137	0.0142	162	J det / A (R8)

V:\FIELD DUPLICATES\FD_inorganic\30552H4.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 18, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470483

Sample Identification

PS-9-0102-1000
PS-9
AVB135-0100-13130
AVB71-0100-26134
AVB140-0100-10112
AVB140-0101-10112
AVB140-0104-1000
AVB135-0100-13130MS
AVB135-0100-13130MSD

Introduction

This data review covers 9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample PS-9-0102-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB140-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB135-0100-13130MS/MSD (AVB135-0100-13130)	Bromomethane	-	142 (53-141)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB140-0100-10112 and AVB140-0101-10112 were identified as field duplicates. No volatiles were detected in any of the samples.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470483

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470483	AVB135-0100-13130	Bromomethane	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (M1)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470483

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470483

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **PS-9-0102-1000**
Lab Sample Id: 470483-001

Matrix: Water
Date Collected: 09.18.13 08.00

Date Received:09.18.13 15.30

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923605

Date Prep: 09.19.13 12.14

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 21.45		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 21.45		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 21.45		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 21.45		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 21.45		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 21.45		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 21.45		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 21.45		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 21.45		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 21.45		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 21.45		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 21.45		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 21.45		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 21.45		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 21.45		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 21.45		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.19.13 21.45		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 21.45		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 21.45		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 21.45		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 21.45		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 21.45		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 21.45		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 21.45		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 21.45		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 21.45		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 21.45		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 21.45		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 21.45		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 21.45		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 21.45		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 21.45		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 21.45		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 21.45		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 21.45		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 21.45		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 21.45		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 21.45		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 21.45		1

Final 1.000

02/10/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **PS-9-0102-1000** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-001 Date Collected: 09.18.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.19.13 12.14
Seq Number: 923605

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 21.45		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 21.45		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 21.45		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 21.45		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 21.45		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 21.45		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 21.45		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 21.45		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 21.45		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 21.45		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 21.45		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 21.45		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 21.45		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.19.13 21.45		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 21.45		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 21.45		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 21.45		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 21.45		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 21.45		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.19.13 21.45		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 21.45		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 21.45		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 21.45		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 21.45		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 21.45		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 21.45		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 21.45		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 21.45		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 21.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	69-133	09.19.13 21.45	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	09.19.13 21.45	
Toluene-D8	2037-26-5	102	%	70-130	09.19.13 21.45	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.19.13 21.45	

9/26/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **PS-9**
Lab Sample Id: 470483-002

Matrix: Water
Date Collected: 09.18.13 08.30

Date Received:09.18.13 15.30

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923605

Date Prep: 09.19.13 12.14

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.19.13 22.09		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.19.13 22.09		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.19.13 22.09		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.19.13 22.09		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.19.13 22.09		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.19.13 22.09		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.19.13 22.09		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.19.13 22.09		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.19.13 22.09		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.19.13 22.09		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.19.13 22.09		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.19.13 22.09		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.19.13 22.09		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.19.13 22.09		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.19.13 22.09		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.19.13 22.09		1
Chloroform	67-66-3	**18.4**	0.500	ug/L	09.19.13 22.09		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.19.13 22.09		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.19.13 22.09		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.19.13 22.09		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.19.13 22.09		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.19.13 22.09		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.19.13 22.09		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.19.13 22.09		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.19.13 22.09		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.19.13 22.09		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.19.13 22.09		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.19.13 22.09		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.19.13 22.09		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.19.13 22.09		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.19.13 22.09		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.19.13 22.09		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.19.13 22.09		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.19.13 22.09		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.19.13 22.09		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.19.13 22.09		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.19.13 22.09		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.19.13 22.09		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.19.13 22.09		1

Final 1.000

CR10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **PS-9**
Lab Sample Id: 470483-002

Matrix: Water
Date Collected: 09.18.13 08.30

Date Received:09.18.13 15.30

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923605

Date Prep: 09.19.13 12.14

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.19.13 22.09		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.19.13 22.09		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.19.13 22.09		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.19.13 22.09		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.19.13 22.09		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.19.13 22.09		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.19.13 22.09		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.19.13 22.09		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.19.13 22.09		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.19.13 22.09		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.19.13 22.09		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.19.13 22.09		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.19.13 22.09		1
Tetrachloroethylene	127-18-4	**1.91**	0.500	ug/L	09.19.13 22.09		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.19.13 22.09		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.19.13 22.09		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.19.13 22.09		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.19.13 22.09		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.19.13 22.09		1
Trichloroethene	79-01-6	**4.34**	0.500	ug/L	09.19.13 22.09		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.19.13 22.09		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.19.13 22.09		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.19.13 22.09		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.19.13 22.09		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.19.13 22.09		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.19.13 22.09		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.19.13 22.09		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.19.13 22.09		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.19.13 22.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	69-133	09.19.13 22.09	
1,2-Dichloroethane-D4	17060-07-0	92	%	66-139	09.19.13 22.09	
Toluene-D8	2037-26-5	98	%	70-130	09.19.13 22.09	
4-Bromofluorobenzene	460-00-4	90	%	70-135	09.19.13 22.09	

Final 1.000

09/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB135-0100-13130** Matrix: Water Date Received:09.18.13 15.30

Lab Sample Id: 470483-003 Date Collected: 09.18.13 10.07

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 16.59		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 16.59		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 16.59		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 16.59		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 16.59		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 16.59		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 16.59	M1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 16.59		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 16.59		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 16.59		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 16.59		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 16.59		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 16.59		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 16.59		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 16.59		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 16.59		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 16.59		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 16.59		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 16.59		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 16.59		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 16.59		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 16.59		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 16.59		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 16.59		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 16.59		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 16.59		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 16.59		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 16.59		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 16.59		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 16.59		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 16.59		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 16.59		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 16.59		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 16.59		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 16.59		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 16.59		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 16.59		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 16.59		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 16.59		1

CEL 10/30/13

Final 1.000

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB135-0100-13130** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-003 Date Collected: 09.18.13 10.07

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 16.59		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 16.59		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 16.59		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 16.59		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 16.59		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 16.59		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 16.59		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 16.59		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 16.59		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 16.59		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 16.59		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 16.59		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 16.59		1
Tetrachloroethylene	127-18-4	**0.560**	0.500	ug/L	09.20.13 16.59		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 16.59		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 16.59		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 16.59		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 16.59		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 16.59		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 16.59		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 16.59		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 16.59		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 16.59		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 16.59		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 16.59		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 16.59		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 16.59		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 16.59		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 16.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	69-133	09.20.13 16.59	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.20.13 16.59	
Toluene-D8	2037-26-5	99	%	70-130	09.20.13 16.59	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.20.13 16.59	

CL 10/30/13

Final 1.000

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB71-0100-26134**
Lab Sample Id: 470483-004

Matrix: Water
Date Collected: 09.18.13 11.42

Date Received:09.18.13 15.30

Analytical Method: VOCs by EPA 8260B
Tech: OEM
Analyst: OEM
Seq Number: 923608

Date Prep: 09.20.13 12.58

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 17.25		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 17.25		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 17.25		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 17.25		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 17.25		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 17.25		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 17.25		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 17.25		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 17.25		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 17.25		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 17.25		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 17.25		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 17.25		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 17.25		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 17.25		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 17.25		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 17.25		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 17.25		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 17.25		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 17.25		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 17.25		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 17.25		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 17.25		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 17.25		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 17.25		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 17.25		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 17.25		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 17.25		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 17.25		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 17.25		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 17.25		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 17.25		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 17.25		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 17.25		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 17.25		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 17.25		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 17.25		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 17.25		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 17.25		1

CL 10/30/13

Final 1.000

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB71-0100-26134** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-004 Date Collected: 09.18.13 11.42

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 17.25		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 17.25		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 17.25		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 17.25		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 17.25		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 17.25		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 17.25		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 17.25		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 17.25		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 17.25		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 17.25		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 17.25		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 17.25		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 17.25		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 17.25		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 17.25		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 17.25		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 17.25		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 17.25		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 17.25		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 17.25		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 17.25		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 17.25		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 17.25		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 17.25		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 17.25		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 17.25		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 17.25		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 17.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.20.13 17.25	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.20.13 17.25	
Toluene-D8	2037-26-5	96	%	70-130	09.20.13 17.25	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.20.13 17.25	

10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0100-10112** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-005 Date Collected: 09.18.13 13.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 17.50		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 17.50		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 17.50		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 17.50		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 17.50		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 17.50		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 17.50		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 17.50		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 17.50		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 17.50		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 17.50		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 17.50		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 17.50		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 17.50		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 17.50		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 17.50		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 17.50		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 17.50		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 17.50		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 17.50		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 17.50		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 17.50		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 17.50		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 17.50		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 17.50		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 17.50		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 17.50		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 17.50		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 17.50		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 17.50		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 17.50		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 17.50		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 17.50		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 17.50		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 17.50		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 17.50		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 17.50		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 17.50		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 17.50		1

Final 1.000

10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0100-10112** Matrix: Water Date Received:09.18.13 15.30

Lab Sample Id: 470483-005 Date Collected: 09.18.13 13.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 17.50		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 17.50		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 17.50		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 17.50		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 17.50		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 17.50		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 17.50		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 17.50		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 17.50		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 17.50		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 17.50		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 17.50		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 17.50		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 17.50		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 17.50		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 17.50		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 17.50		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 17.50		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 17.50		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 17.50		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 17.50		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 17.50		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 17.50		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 17.50		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 17.50		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 17.50		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 17.50		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 17.50		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 17.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	69-133	09.20.13 17.50	
1,2-Dichloroethane-D4	17060-07-0	101	%	66-139	09.20.13 17.50	
Toluene-D8	2037-26-5	100	%	70-130	09.20.13 17.50	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.20.13 17.50	

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0101-10112** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-006 Date Collected: 09.18.13 13.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 18.16		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 18.16		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 18.16		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 18.16		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 18.16		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 18.16		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 18.16		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 18.16		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 18.16		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 18.16		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 18.16		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 18.16		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 18.16		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 18.16		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 18.16		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 18.16		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 18.16		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 18.16		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 18.16		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 18.16		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 18.16		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 18.16		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 18.16		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 18.16		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 18.16		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 18.16		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 18.16		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 18.16		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 18.16		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 18.16		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 18.16		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 18.16		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 18.16		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 18.16		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 18.16		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 18.16		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 18.16		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 18.16		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 18.16		1

CR 09/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0101-10112** Matrix: Water Date Received:09.18.13 15.30

Lab Sample Id: 470483-006 Date Collected: 09.18.13 13.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 18.16		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 18.16		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 18.16		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 18.16		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 18.16		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 18.16		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 18.16		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 18.16		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 18.16		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 18.16		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 18.16		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 18.16		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 18.16		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 18.16		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 18.16		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 18.16		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 18.16		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 18.16		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 18.16		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 18.16		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 18.16		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 18.16		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 18.16		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 18.16		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 18.16		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 18.16		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 18.16		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 18.16		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 18.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	69-133	09.20.13 18.16	
1,2-Dichloroethane-D4	17060-07-0	101	%	66-139	09.20.13 18.16	
Toluene-D8	2037-26-5	98	%	70-130	09.20.13 18.16	
4-Bromofluorobenzene	460-00-4	94	%	70-135	09.20.13 18.16	

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0104-1000** Matrix: Water Date Received:09.18.13 15.30
Lab Sample Id: 470483-007 Date Collected: 09.18.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 18.41		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 18.41		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 18.41		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 18.41		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 18.41		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 18.41		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 18.41		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 18.41		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 18.41		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 18.41		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 18.41		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 18.41		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 18.41		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 18.41		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 18.41		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 18.41		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 18.41		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 18.41		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 18.41		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 18.41		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 18.41		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 18.41		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 18.41		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 18.41		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 18.41		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 18.41		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 18.41		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 18.41		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 18.41		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 18.41		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 18.41		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 18.41		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 18.41		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 18.41		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 18.41		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 18.41		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 18.41		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 18.41		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 18.41		1

CLO 10/30/13

 Final 1.000

Certificate of Analytical Results 470483

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB140-0104-1000** Matrix: Water Date Received:09.18.13 15.30

Lab Sample Id: 470483-007 Date Collected: 09.18.13 13.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 18.41		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 18.41		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 18.41		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 18.41		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 18.41		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 18.41		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 18.41		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 18.41		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 18.41		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 18.41		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 18.41		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 18.41		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 18.41		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 18.41		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 18.41		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 18.41		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 18.41		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 18.41		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 18.41		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 18.41		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 18.41		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 18.41		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 18.41		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 18.41		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 18.41		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 18.41		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 18.41		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 18.41		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 18.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	113	%	69-133	09.20.13 18.41	
1,2-Dichloroethane-D4	17060-07-0	103	%	66-139	09.20.13 18.41	
Toluene-D8	2037-26-5	100	%	70-130	09.20.13 18.41	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.20.13 18.41	

Final 1.000

OL 10/30/13

LDC #: 30552H1a

SDG #: 470483

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 5, 6
XVII.	Field blanks	ND	TB = 1 EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	PS-9-0102-1000	11	664126-1-BLK	21		31	
2	PS-9	12	644193-1-BLK	22		32	
3	AVB135-0100-13130	13		23		33	
4	AVB71-0100-26134	14		24		34	
5	AVB140-0100-10112 D	15		25		35	
6	AVB140-0101-10112 D	16		26		36	
7	AVB140-0104-1000	17		27		37	
8	AVB135-0100-13130MS	18		28		38	
9	AVB135-0100-13130MSD	19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552 #1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: M
2nd Reviewer: CL

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		~~M 8+9~~	~~F~~	( )	(M)	~~27 (20~~)		
		M		( )	( )	( )		
				( )	( )	( )		
		8+9	B	( )	142 (53-141)	( )	3	J/A dit
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 19, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470619

Sample Identification

AVB75-0100-20128
AVB74-0100-34088
AVB91-0100-22135
AVB92-0100-20139
AVB112-0500-13160
AVB112-0504-1000
AVB75-0100-20128F
AVB74-0100-34088F
AVB91-0100-22135F
AVB92-0100-20139F
AVB112-0500-13160F
AVB112-0504-1000F
AVB112-0504-1000MS
AVB112-0504-1000MSD

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 14 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB112-0504-1000 and AVB112-0504-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB75-0100-20128** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-002 Date Collected: 09.19.13 08.15

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.24.13 08.00

Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**15.9**	0.0100	mg/L	09.25.13 20.09		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.24.13 08.00

Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0257**	0.0100	mg/L	09.25.13 20.50		1

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB74-0100-34088** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-003 Date Collected: 09.19.13 09.00

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**3.15**	0.0100	mg/L	09.25.13 20.15		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0153**	0.0100	mg/L	09.25.13 20.56		1

 Final 1.000

CLW 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0100-22135** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-004 Date Collected: 09.19.13 09.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.24.13 08.00

Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.160**	0.0100	mg/L	09.25.13 20.33		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A

Tech: MLI % Moisture:

Analyst: MKO Date Prep: 09.24.13 08.00

Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0174**	0.0100	mg/L	09.25.13 21.02		1

09/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB92-0100-20139** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-005 Date Collected: 09.19.13 10.25

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.137**	0.0100	mg/L	09.25.13 20.38		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0108**	0.0100	mg/L	09.25.13 21.08		1

0210/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0500-13160** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-006 Date Collected: 09.19.13 11.35

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0488**	0.0100	mg/L	09.25.13 20.44		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.25.13 21.13		1

Final 1.000

C2 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0504-1000** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-007 Date Collected: 09.19.13 12.08

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.25.13 19.40		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.24.13 08.00
Seq Number: 923658 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.25.13 21.19		1

02/10/30/13

LDC #: 30552I4

SDG #: 470619

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/10/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/19/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	ND	TB = 6, 12

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	AVB75-0100-20128	11	AVB112-0500-13160F	21	MB	11	
2	AVB74-0100-34088	12	AVB112-0504-1000F	22		12	
3	AVB91-0100-22135	13	AVB112-0504-1000MS	23		13	
4	AVB92-0100-20139	14	AVB112-0504-1000MSD	24		14	
5	AVB112-0500-13160	15		25		15	
6	AVB112-0504-1000	16		26		16	
7	AVB75-0100-20128F	17		27		17	
8	AVB74-0100-34088F	18		28		18	
9	AVB91-0100-22135F	19		29		19	
10	AVB92-0100-20139F	20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 19, 2013
LDC Report Date:	October 22, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470619

Sample Identification

AVB75-0102-1000
AVB75-0100-20128
AVB74-0100-34088
AVB91-0100-22135
AVB92-0100-20139
AVB112-0500-13160
AVB112-0504-1000

Introduction

This data review covers 7 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB75-0102-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB112-0504-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470619

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB75-0102-1000** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-001 Date Collected: 09.19.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 19.56		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 19.56		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 19.56		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 19.56		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 19.56		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 19.56		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 19.56		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 19.56		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 19.56		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 19.56		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 19.56		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 19.56		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 19.56		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 19.56		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 19.56		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 19.56		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 19.56		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 19.56		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 19.56		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 19.56		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 19.56		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 19.56		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 19.56		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 19.56		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 19.56		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 19.56		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 19.56		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 19.56		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 19.56		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 19.56		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 19.56		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 19.56		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 19.56		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 19.56		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 19.56		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 19.56		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 19.56		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 19.56		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 19.56		1

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB75-0102-1000** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-001 Date Collected: 09.19.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 19.56		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 19.56		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 19.56		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 19.56		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 19.56		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 19.56		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 19.56		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 19.56		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 19.56		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 19.56		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 19.56		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 19.56		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 19.56		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 19.56		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 19.56		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 19.56		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 19.56		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 19.56		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 19.56		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 19.56		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 19.56		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 19.56		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 19.56		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 19.56		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 19.56		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 19.56		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 19.56		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 19.56		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 19.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.20.13 19.56	
1,2-Dichloroethane-D4	17060-07-0	101	%	66-139	09.20.13 19.56	
Toluene-D8	2037-26-5	99	%	70-130	09.20.13 19.56	
4-Bromofluorobenzene	460-00-4	92	%	70-135	09.20.13 19.56	

Final 1.000

CLO 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB75-0100-20128** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-002 Date Collected: 09.19.13 08.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 20.21		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 20.21		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 20.21		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 20.21		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 20.21		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 20.21		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 20.21		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 20.21		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 20.21		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 20.21		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 20.21		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 20.21		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 20.21		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 20.21		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 20.21		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 20.21		1
Chloroform	67-66-3	**1.00**	0.500	ug/L	09.20.13 20.21		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 20.21		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 20.21		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 20.21		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 20.21		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 20.21		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 20.21		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 20.21		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 20.21		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 20.21		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 20.21		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 20.21		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 20.21		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 20.21		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 20.21		1
1,1-Dichloroethene	75-35-4	**1.95**	0.500	ug/L	09.20.13 20.21		1
cis-1,2-Dichloroethene	156-59-2	**1.77**	0.500	ug/L	09.20.13 20.21		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 20.21		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 20.21		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 20.21		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 20.21		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 20.21		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 20.21		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB75-0100-20128** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-002 Date Collected: 09.19.13 08.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 20.21		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 20.21		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 20.21		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 20.21		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 20.21		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 20.21		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 20.21		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 20.21		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 20.21		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 20.21		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 20.21		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 20.21		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 20.21		1
Tetrachloroethylene	127-18-4	**17.8**	0.500	ug/L	09.20.13 20.21		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 20.21		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 20.21		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 20.21		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 20.21		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 20.21		1
Trichloroethene	79-01-6	**3.84**	0.500	ug/L	09.20.13 20.21		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 20.21		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 20.21		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 20.21		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 20.21		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 20.21		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 20.21		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 20.21		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 20.21		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 20.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	69-133	09.20.13 20.21	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.20.13 20.21	
Toluene-D8	2037-26-5	98	%	70-130	09.20.13 20.21	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.20.13 20.21	

Final 1.000

C2 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB74-0100-34088** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-003 Date Collected: 09.19.13 09.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 20.46		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 20.46		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 20.46		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 20.46		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 20.46		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 20.46		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 20.46		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 20.46		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 20.46		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 20.46		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 20.46		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 20.46		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 20.46		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 20.46		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 20.46		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 20.46		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 20.46		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 20.46		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 20.46		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 20.46		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 20.46		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 20.46		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 20.46		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 20.46		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 20.46		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 20.46		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 20.46		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 20.46		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 20.46		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 20.46		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 20.46		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 20.46		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 20.46		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 20.46		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 20.46		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 20.46		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 20.46		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 20.46		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 20.46		1

Final 1.000

02/10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB74-0100-34088** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-003 Date Collected: 09.19.13 09.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 20.46		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 20.46		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 20.46		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 20.46		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 20.46		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 20.46		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 20.46		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 20.46		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 20.46		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 20.46		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 20.46		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 20.46		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 20.46		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 20.46		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 20.46		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 20.46		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 20.46		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 20.46		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 20.46		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 20.46		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 20.46		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 20.46		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 20.46		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 20.46		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 20.46		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 20.46		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 20.46		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 20.46		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 20.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	114	%	69-133	09.20.13 20.46	
1,2-Dichloroethane-D4	17060-07-0	100	%	66-139	09.20.13 20.46	
Toluene-D8	2037-26-5	97	%	70-130	09.20.13 20.46	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.20.13 20.46	

Final 1.000

CRL 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0100-22135** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-004 Date Collected: 09.19.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 21.11		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 21.11		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 21.11		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 21.11		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 21.11		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 21.11		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 21.11		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 21.11		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 21.11		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 21.11		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 21.11		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 21.11		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 21.11		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 21.11		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 21.11		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 21.11		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 21.11		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 21.11		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 21.11		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 21.11		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 21.11		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 21.11		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 21.11		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 21.11		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 21.11		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 21.11		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 21.11		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 21.11		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 21.11		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 21.11		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 21.11		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 21.11		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 21.11		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 21.11		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 21.11		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 21.11		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 21.11		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 21.11		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 21.11		1

Final 1.000

02/10/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0100-22135** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-004 Date Collected: 09.19.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 21.11		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 21.11		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 21.11		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 21.11		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 21.11		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 21.11		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 21.11		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 21.11		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 21.11		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 21.11		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 21.11		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 21.11		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 21.11		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 21.11		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 21.11		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 21.11		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 21.11		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 21.11		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 21.11		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 21.11		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 21.11		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 21.11		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 21.11		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 21.11		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 21.11		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 21.11		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 21.11		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 21.11		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 21.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	69-133	09.20.13 21.11	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.20.13 21.11	
Toluene-D8	2037-26-5	100	%	70-130	09.20.13 21.11	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.20.13 21.11	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB92-0100-20139** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-005 Date Collected: 09.19.13 10.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 21.36		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 21.36		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 21.36		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 21.36		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 21.36		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 21.36		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 21.36		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 21.36		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 21.36		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 21.36		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 21.36		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 21.36		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 21.36		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 21.36		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 21.36		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 21.36		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 21.36		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 21.36		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 21.36		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 21.36		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 21.36		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 21.36		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 21.36		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 21.36		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 21.36		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 21.36		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 21.36		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 21.36		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 21.36		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 21.36		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 21.36		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 21.36		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 21.36		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 21.36		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 21.36		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 21.36		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 21.36		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 21.36		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 21.36		1

Final 1.000

09/10/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB92-0100-20139** Matrix: Water Date Received:09.19.13 12.50

Lab Sample Id: 470619-005 Date Collected: 09.19.13 10.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.20.13 12.58

Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 21.36		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 21.36		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 21.36		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 21.36		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 21.36		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 21.36		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 21.36		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 21.36		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 21.36		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 21.36		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 21.36		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 21.36		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 21.36		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 21.36		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 21.36		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 21.36		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 21.36		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 21.36		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 21.36		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 21.36		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 21.36		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 21.36		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 21.36		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 21.36		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 21.36		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 21.36		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 21.36		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 21.36		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 21.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	120	%	69-133	09.20.13 21.36	
1,2-Dichloroethane-D4	17060-07-0	118	%	66-139	09.20.13 21.36	
Toluene-D8	2037-26-5	96	%	70-130	09.20.13 21.36	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.20.13 21.36	

Final 1.000

CLOB013

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0500-13160** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-006 Date Collected: 09.19.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 22.00		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 22.00		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 22.00		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 22.00		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 22.00		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 22.00		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 22.00		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 22.00		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 22.00		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 22.00		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 22.00		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 22.00		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 22.00		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 22.00		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 22.00		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 22.00		1
Chloroform	67-66-3	**0.610**	0.500	ug/L	09.20.13 22.00		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 22.00		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 22.00		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 22.00		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 22.00		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 22.00		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 22.00		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 22.00		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 22.00		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 22.00		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 22.00		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 22.00		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 22.00		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 22.00		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 22.00		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 22.00		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 22.00		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 22.00		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 22.00		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 22.00		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 22.00		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 22.00		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 22.00		1

Final 1.000

OCT 03 13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0500-13160** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-006 Date Collected: 09.19.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 22.00		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 22.00		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 22.00		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 22.00		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 22.00		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 22.00		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 22.00		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 22.00		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 22.00		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 22.00		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 22.00		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 22.00		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 22.00		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 22.00		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 22.00		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 22.00		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 22.00		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 22.00		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 22.00		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 22.00		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 22.00		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 22.00		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 22.00		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 22.00		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 22.00		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 22.00		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 22.00		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 22.00		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 22.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	112	%	69-133	09.20.13 22.00	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.20.13 22.00	
Toluene-D8	2037-26-5	98	%	70-130	09.20.13 22.00	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.20.13 22.00	

Final 1.000

OC 10/30/13

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0504-1000** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-007 Date Collected: 09.19.13 12.08

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.20.13 22.25		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.20.13 22.25		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.20.13 22.25		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.20.13 22.25		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.20.13 22.25		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.20.13 22.25		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.20.13 22.25		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.20.13 22.25		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.20.13 22.25		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.20.13 22.25		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.20.13 22.25		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.20.13 22.25		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.20.13 22.25		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.20.13 22.25		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.20.13 22.25		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.20.13 22.25		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.20.13 22.25		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.20.13 22.25		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.20.13 22.25		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.20.13 22.25		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.20.13 22.25		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.20.13 22.25		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.20.13 22.25		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.20.13 22.25		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.20.13 22.25		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.20.13 22.25		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.20.13 22.25		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.20.13 22.25		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.20.13 22.25		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.20.13 22.25		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.20.13 22.25		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.20.13 22.25		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.20.13 22.25		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.20.13 22.25		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.20.13 22.25		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.20.13 22.25		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.20.13 22.25		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.20.13 22.25		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.20.13 22.25		1

Final 1.000

09/20/2013

Certificate of Analytical Results 470619

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB112-0504-1000** Matrix: Water Date Received:09.19.13 12.50
Lab Sample Id: 470619-007 Date Collected: 09.19.13 12.08

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.20.13 12.58
Seq Number: 923608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.20.13 22.25		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.20.13 22.25		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.20.13 22.25		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.20.13 22.25		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.20.13 22.25		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.20.13 22.25		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.20.13 22.25		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.20.13 22.25		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.20.13 22.25		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.20.13 22.25		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.20.13 22.25		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.20.13 22.25		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.20.13 22.25		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.20.13 22.25		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.20.13 22.25		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.20.13 22.25		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.20.13 22.25		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.20.13 22.25		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.20.13 22.25		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.20.13 22.25		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.20.13 22.25		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.20.13 22.25		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.20.13 22.25		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.20.13 22.25		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.20.13 22.25		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.20.13 22.25		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.20.13 22.25		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.20.13 22.25		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.20.13 22.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	69-133	09.20.13 22.25	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	09.20.13 22.25	
Toluene-D8	2037-26-5	94	%	70-130	09.20.13 22.25	
4-Bromofluorobenzene	460-00-4	89	%	70-135	09.20.13 22.25	

09/30/13

LDC #: 30552I1a

SDG #: 470619

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/11

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/19/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	470483-003 MS/D no Ass. sample
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1 EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	AVB75-0102-1000	11		21		31	
2	AVB75-0100-20128	12		22		32	
3	AVB74-0100-34088	13		23		33	
4	AVB91-0100-22135	14		24		34	
5	AVB92-0100-20139	15		25		35	
6	AVB112-0500-13160	16		26		36	
7	AVB112-0504-1000	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 20, 2013
LDC Report Date:	October 11, 2013
Matrix:	Water
Parameters:	Chromium
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470623

Sample Identification

AVB108-0100-19144
AVB108-0104-1000
AVB108-0100-19144F
AVB108-0104-1000F

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

Samples AVB108-0104-1000 and AVB108-0104-1000F were identified as equipment blanks. No chromium was found.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470623

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470623

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470623

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0100-19144** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470623-002 Date Collected: 09.20.13 08.30

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	**0.0496**	0.0100	mg/L	09.26.13 21.44		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 22.36		1

02/10/30/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0104-1000** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470623-004 Date Collected: 09.20.13 10.50

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 22.01		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 22.42		1

02/03/13

LDC #: 30552J4
SDG #: 470623
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/20/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	MS/MSD from SDG 470674
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	ND	TB = 2, 4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	AVB108-0100-19144	11	MB	21		11	
2	AVB108-0104-1000	12		22		12	
3	AVB108-0100-19144F	13		23		13	
4	AVB108-0104-1000F	14		24		14	
5		15		25		15	
6		16		26		16	
7		17		27		17	
8		18		28		18	
9		19		29		19	
10		20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 20, 2013
LDC Report Date:	October 30, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470623

Sample Identification

AVB108-0102-1000
AVB108-0100-19144
AVB108-0200-19225
AVB108-0104-1000
AVB108-0100-19144MS
AVB108-0100-19144MSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB108-0102-1000 was identified as a trip blank. No volatile contaminants were found.

Sample AVB108-0104-1000 was identified as an equipment blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB108-0100-19144MS/MSD (AVB108-0100-19144)	Bromomethane	162 (53-141)	162 (53-141)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644382-LCS/D (All samples from SDG 470623)	Bromomethane	144 (58-138)	150 (58-138)	-	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470623

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470623	AVB108-0100-19144	Bromomethane	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (M1)
470623	AVB108-0102-1000 AVB108-0100-19144 AVB108-0200-19225 AVB108-0104-1000	Bromomethane	J (all detects)	P	Laboratory control samples (%R) (L1)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470623

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470623

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0102-1000** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470623-001 Date Collected: 09.20.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.24.13 11.06
Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 16.10		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 16.10		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 16.10		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 16.10		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 16.10		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 16.10		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 16.10	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 16.10		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 16.10		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 16.10		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 16.10		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 16.10		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 16.10		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 16.10		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 16.10		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 16.10		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.24.13 16.10		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 16.10		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 16.10		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 16.10		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 16.10		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 16.10		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 16.10		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 16.10		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 16.10		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 16.10		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 16.10		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 16.10		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 16.10		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.24.13 16.10		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 16.10		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.24.13 16.10		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.24.13 16.10		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 16.10		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 16.10		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 16.10		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 16.10		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 16.10		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 16.10		1

Final 1.000

CRL 10/30/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0102-1000** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470623-001 Date Collected: 09.20.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 16.10		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 16.10		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 16.10		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 16.10		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 16.10		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 16.10		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 16.10		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 16.10		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 16.10		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 16.10		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 16.10		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 16.10		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 16.10		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.24.13 16.10		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 16.10		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 16.10		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 16.10		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 16.10		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 16.10		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.24.13 16.10		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 16.10		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 16.10		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 16.10		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 16.10		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 16.10		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 16.10		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 16.10		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 16.10		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 16.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	69-133	09.24.13 16.10	
1,2-Dichloroethane-D4	17060-07-0	89	%	66-139	09.24.13 16.10	
Toluene-D8	2037-26-5	94	%	70-130	09.24.13 16.10	
4-Bromofluorobenzene	460-00-4	89	%	70-135	09.24.13 16.10	

Final 1.000

CU 10/30/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0100-19144** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470623-002 Date Collected: 09.20.13 08.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 16.36		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 16.36		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 16.36		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 16.36		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 16.36		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 16.36		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 16.36	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 16.36		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 16.36		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 16.36		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 16.36		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 16.36		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 16.36		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 16.36		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 16.36		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 16.36		1
Chloroform	67-66-3	**3.72**	0.500	ug/L	09.24.13 16.36		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 16.36		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 16.36		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 16.36		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 16.36		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 16.36		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 16.36		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 16.36		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 16.36		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 16.36		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 16.36		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 16.36		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 16.36		1
1,1-Dichloroethane	75-34-3	**0.510**	0.500	ug/L	09.24.13 16.36		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 16.36		1
1,1-Dichloroethene	75-35-4	**0.820**	0.500	ug/L	09.24.13 16.36		1
cis-1,2-Dichloroethene	156-59-2	**0.610**	0.500	ug/L	09.24.13 16.36		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 16.36		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 16.36		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 16.36		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 16.36		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 16.36		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 16.36		1

Final 1.000

09/30/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0100-19144** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470623-002 Date Collected: 09.20.13 08.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 16.36		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 16.36		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 16.36		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 16.36		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 16.36		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 16.36		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 16.36		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 16.36		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 16.36		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 16.36		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 16.36		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 16.36		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 16.36		1
Tetrachloroethylene	127-18-4	**4.31**	0.500	ug/L	09.24.13 16.36		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 16.36		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 16.36		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 16.36		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 16.36		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 16.36		1
Trichloroethene	79-01-6	**9.83**	0.500	ug/L	09.24.13 16.36		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 16.36		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 16.36		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 16.36		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 16.36		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 16.36		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 16.36		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 16.36		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 16.36		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 16.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	69-133	09.24.13 16.36	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	09.24.13 16.36	
Toluene-D8	2037-26-5	97	%	70-130	09.24.13 16.36	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.24.13 16.36	

Final 1.000

0210130/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0200-19225** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470623-003 Date Collected: 09.20.13 08.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 17.01		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 17.01		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 17.01		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 17.01		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 17.01		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 17.01		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 17.01	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 17.01		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 17.01		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 17.01		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 17.01		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 17.01		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 17.01		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 17.01		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 17.01		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 17.01		1
Chloroform	67-66-3	7.43	0.500	ug/L	09.24.13 17.01		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 17.01		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 17.01		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 17.01		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 17.01		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 17.01		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 17.01		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 17.01		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 17.01		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 17.01		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 17.01		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 17.01		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 17.01		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.24.13 17.01		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 17.01		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.24.13 17.01		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.24.13 17.01		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 17.01		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 17.01		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 17.01		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 17.01		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 17.01		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 17.01		1

Final 1.000

02/03/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0200-19225** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470623-003 Date Collected: 09.20.13 08.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.24.13 11.06
Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 17.01		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 17.01		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 17.01		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 17.01		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 17.01		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 17.01		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 17.01		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 17.01		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 17.01		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 17.01		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 17.01		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 17.01		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 17.01		1
Tetrachloroethylene	127-18-4	**3.04**	0.500	ug/L	09.24.13 17.01		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 17.01		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 17.01		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 17.01		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 17.01		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 17.01		1
Trichloroethene	79-01-6	**2.61**	0.500	ug/L	09.24.13 17.01		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 17.01		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 17.01		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 17.01		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 17.01		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 17.01		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 17.01		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 17.01		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 17.01		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 17.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	69-133	09.24.13 17.01	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	09.24.13 17.01	
Toluene-D8	2037-26-5	95	%	70-130	09.24.13 17.01	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.24.13 17.01	

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0104-1000** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470623-004 Date Collected: 09.20.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.24.13 11.06
Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 17.27		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 17.27		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 17.27		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 17.27		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 17.27		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 17.27		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 17.27	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 17.27		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 17.27		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 17.27		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 17.27		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 17.27		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 17.27		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 17.27		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 17.27		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 17.27		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.24.13 17.27		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 17.27		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 17.27		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 17.27		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 17.27		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 17.27		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 17.27		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 17.27		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 17.27		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 17.27		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 17.27		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 17.27		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 17.27		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.24.13 17.27		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 17.27		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.24.13 17.27		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.24.13 17.27		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 17.27		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 17.27		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 17.27		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 17.27		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 17.27		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 17.27		1

02/10/20/13

Final 1.000

Certificate of Analytical Results 470623

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB108-0104-1000** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470623-004 Date Collected: 09.20.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 17.27		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 17.27		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 17.27		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 17.27		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 17.27		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 17.27		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 17.27		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 17.27		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 17.27		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 17.27		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 17.27		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 17.27		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 17.27		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.24.13 17.27		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 17.27		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 17.27		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 17.27		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 17.27		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 17.27		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.24.13 17.27		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 17.27		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 17.27		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 17.27		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 17.27		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 17.27		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 17.27		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 17.27		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 17.27		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 17.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.24.13 17.27	
1,2-Dichloroethane-D4	17060-07-0	99	%	66-139	09.24.13 17.27	
Toluene-D8	2037-26-5	98	%	70-130	09.24.13 17.27	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.24.13 17.27	

Final 1.000

01/10/30/13

LDC #: 30552J1a

SDG #: 470623

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/20/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/P
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB=1 EB=4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	AVB108-0102-1000	11	644382-1-BLK	21		31	
2	AVB108-0100-19144	12		22		32	
3	AVB108-0200-19225	13		23		33	
4	AVB108-0104-1000	14		24		34	
5	AVB108-0100-19144MS	15		25		35	
6	AVB108-0100-19144MSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552J1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		5 + 6	B	162 (53-141)	162 (53-141)	( )	2	J/A det
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 30552J1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		644382-LCS/D	B	144 (58-138)	150 (58-138)		All	J/Pdet

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 20, 2013

LDC Report Date: October 11, 2013

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470624

Sample Identification

AVB20-0300-20XXX
AVB20-0301-20XXX
AVB20-0300-20XXXF
AVB20-0301-20XXXF
AVB20-0300-20XXXMS
AVB20-0300-20XXXMSD

Sample IDs appended with "F" were analyzed for dissolved chromium.

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Chromium.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in this SDG.

III. Calibration

Calibration data were not reviewed for Level III.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No chromium was found in the preparation blanks.

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

ICP interference check data were not reviewed for Level III.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

ICP-MS was not utilized in this SDG.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XII. Sample Result Verification

Raw data was not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples AVB20-0300-20XXX and AVB20-0301-20XXX and samples AVB20-0300-20XXXF and AVB20-0301-20XXXF were identified as field duplicates. No chromium was detected in any of the samples.

West Van Buren Area
Chromium - Data Qualification Summary - SDG 470624

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Laboratory Blank Data Qualification Summary - SDG 470624

No Sample Data Qualified in this SDG

West Van Buren Area
Chromium - Field Blank Data Qualification Summary - SDG 470624

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0300-20XXX** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470624-001 Date Collected: 09.20.13 09.55

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 21.09		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 22.48		1

CL 10/30/13

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0301-20XXX** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470624-002 Date Collected: 09.20.13 10.00

Analytical Method: Total Metals by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 21.38		1

Analytical Method: Metals, Dissolved, by EPA 6010B Prep Method: SW3010A
Tech: MLI % Moisture:
Analyst: MKO Date Prep: 09.26.13 09.00
Seq Number: 923754 SUB: AZ0765

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0100	0.0100	mg/L	09.26.13 22.54		1

02/10/30/13

LDC #: 30552K4
SDG #: 470624
Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 10/10/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Chromium (EPA SW846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/20/13
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/D
VIII.	Internal Standard (ICP-MS)	N	
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	ND	(1,2) (3,4)
XIV.	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: [illegible]

1	AVB20-0300-20XXX	11	MB	21		11	
2	AVB20-0301-20XXX	12		22		12	
3	AVB20-0300-20XXXF	13		23		13	
4	AVB20-0301-20XXXF	14		24		14	
5	AVB20-0300-20XXXMS	15		25		15	
6	AVB20-0300-20XXXMSD	16		26		16	
7		17		27		17	
8		18		28		18	
9		19		29		19	
10		20		30		20	

Notes: Samples appended with "F" were analyzed for dissolved chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 20, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470624

Sample Identification

AVB20-0300-20XXX
AVB20-0301-20XXX

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644382-LCS/D (All samples from SDG 470624)	Bromomethane	144 (58-138)	150 (58-138)	-	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB20-0300-20XXX and AVB20-0301-20XXX were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	AVB20-0300-20XXX	AVB20-0301-20XXX			
Chloroform	4.70	4.63	2 (≤20)	-	-
1,1-Dichloroethane	1.56	1.47	6 (≤20)	-	-
1,1-Dichloroethene	1.86	1.81	3 (≤20)	-	-
cis-1,2-Dichloroethene	5.72	5.40	6 (≤20)	-	-
Tetrachloroethene	7.87	7.56	4 (≤20)	-	-

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	AVB20-0300-20XXX	AVB20-0301-20XXX			
Trichloroethene	53.3	50.6	50 (≤20)	-	-

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470624

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470624	AVB20-0300-20XXX AVB20-0301-20XXX	Bromomethane	J (all detects)	P	Laboratory control samples (%R) (L1)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470624

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470624

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0300-20XXX** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470624-001 Date Collected: 09.20.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 17.53		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 17.53		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 17.53		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 17.53		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 17.53		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 17.53		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 17.53	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 17.53		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 17.53		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 17.53		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 17.53		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 17.53		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 17.53		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 17.53		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 17.53		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 17.53		1
Chloroform	67-66-3	**4.70**	0.500	ug/L	09.24.13 17.53		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 17.53		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 17.53		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 17.53		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 17.53		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 17.53		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 17.53		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 17.53		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 17.53		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 17.53		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 17.53		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 17.53		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 17.53		1
1,1-Dichloroethane	75-34-3	**1.56**	0.500	ug/L	09.24.13 17.53		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 17.53		1
1,1-Dichloroethene	75-35-4	**1.86**	0.500	ug/L	09.24.13 17.53		1
cis-1,2-Dichloroethene	156-59-2	**5.72**	0.500	ug/L	09.24.13 17.53		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 17.53		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 17.53		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 17.53		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 17.53		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 17.53		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 17.53		1

Final 1.000

02/03/13

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0300-20XXX** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470624-001 Date Collected: 09.20.13 09.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 17.53		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 17.53		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 17.53		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 17.53		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 17.53		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 17.53		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 17.53		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 17.53		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 17.53		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 17.53		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 17.53		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 17.53		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 17.53		1
Tetrachloroethylene	127-18-4	**7.87**	0.500	ug/L	09.24.13 17.53		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 17.53		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 17.53		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 17.53		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 17.53		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 17.53		1
Trichloroethene	79-01-6	**53.3**	0.500	ug/L	09.24.13 17.53		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 17.53		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 17.53		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 17.53		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 17.53		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 17.53		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 17.53		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 17.53		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 17.53		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 17.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	69-133	09.24.13 17.53	
1,2-Dichloroethane-D4	17060-07-0	103	%	66-139	09.24.13 17.53	
Toluene-D8	2037-26-5	98	%	70-130	09.24.13 17.53	
4-Bromofluorobenzene	460-00-4	93	%	70-135	09.24.13 17.53	

Final 1.000

OW 10/30/13

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0301-20XXX** Matrix: Water Date Received:09.20.13 11.50

Lab Sample Id: 470624-002 Date Collected: 09.20.13 10.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: OEM % Moisture:

Analyst: OEM Date Prep: 09.24.13 11.06

Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.24.13 18.19		1
Benzene	71-43-2	<0.500	0.500	ug/L	09.24.13 18.19		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.24.13 18.19		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.24.13 18.19		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.24.13 18.19		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.24.13 18.19		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.24.13 18.19	N1	1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.24.13 18.19		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.24.13 18.19		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.24.13 18.19		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.24.13 18.19		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.24.13 18.19		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.24.13 18.19		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.24.13 18.19		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.24.13 18.19		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.24.13 18.19		1
Chloroform	67-66-3	**4.63**	0.500	ug/L	09.24.13 18.19		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.24.13 18.19		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.24.13 18.19		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.24.13 18.19		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.24.13 18.19		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.24.13 18.19		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.24.13 18.19		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.24.13 18.19		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.24.13 18.19		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.24.13 18.19		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.24.13 18.19		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.24.13 18.19		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.24.13 18.19		1
1,1-Dichloroethane	75-34-3	**1.47**	0.500	ug/L	09.24.13 18.19		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.24.13 18.19		1
1,1-Dichloroethene	75-35-4	**1.81**	0.500	ug/L	09.24.13 18.19		1
cis-1,2-Dichloroethene	156-59-2	**5.40**	0.500	ug/L	09.24.13 18.19		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.24.13 18.19		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.24.13 18.19		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.24.13 18.19		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.24.13 18.19		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.24.13 18.19		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.24.13 18.19		1

02/10/30/13

Certificate of Analytical Results 470624

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB20-0301-20XXX** Matrix: Water Date Received:09.20.13 11.50
Lab Sample Id: 470624-002 Date Collected: 09.20.13 10.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: OEM % Moisture:
Analyst: OEM Date Prep: 09.24.13 11.06
Seq Number: 924000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.24.13 18.19		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.24.13 18.19		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.24.13 18.19		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.24.13 18.19		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.24.13 18.19		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.24.13 18.19		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.24.13 18.19		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.24.13 18.19		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.24.13 18.19		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.24.13 18.19		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.24.13 18.19		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.24.13 18.19		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.24.13 18.19		1
Tetrachloroethylene	127-18-4	**7.56**	0.500	ug/L	09.24.13 18.19		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.24.13 18.19		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.24.13 18.19		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.24.13 18.19		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.24.13 18.19		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.24.13 18.19		1
Trichloroethene	79-01-6	**50.6**	0.500	ug/L	09.24.13 18.19		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.24.13 18.19		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.24.13 18.19		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.24.13 18.19		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.24.13 18.19		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.24.13 18.19		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.24.13 18.19		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.24.13 18.19		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.24.13 18.19		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.24.13 18.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	112	%	69-133	09.24.13 18.19	
1,2-Dichloroethane-D4	17060-07-0	104	%	66-139	09.24.13 18.19	
Toluene-D8	2037-26-5	99	%	70-130	09.24.13 18.19	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.24.13 18.19	

Final 1.000

02/03/13

LDC #: 30552K1a

SDG #: 470624

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/20/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	470623-002 MS/D no Ass sample
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 1,2
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated ~~Samples~~ waters:

1	AVB20-0300-20XXX	11	644382-1-BLK	21		31	
2	AVB20-0301-20XXX	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552 K/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		644382-LCS/D	B	144 (58-138	150 (58-138)		All	J/Pdet

LDC #: 30552K1a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method 8260)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		≤ 20 RPD
	1	2	
K	4.70	4.63	2 no qual
I	1.56	1.47	6
H	1.86	1.81	3
QQQ	5.72	5.40	6
AA	7.87	7.56	4
S	53.3	50.6	5

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	West Van Buren Area
Collection Date:	September 23, 2013
LDC Report Date:	October 21, 2013
Matrix:	Water
Parameters:	Volatiles
Validation Level:	EPA Level III
Laboratory:	Xenco Laboratories
Sample Delivery Group (SDG):	470854

Sample Identification

AVB129-0102-1000
AVB129-0100-18152
AVB129-0101-18152
AVB60-0100-32473
AVB129-0100-18152MS
AVB129-0100-18152MSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB129-0102-1000 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
644791-1-BLK	1,2-Dichloroethane-d4	65 (66-139)	All TCL compounds	J (all detects) UJ (all non-detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644791-LCS/D (All samples in SDG 470854)	2-Butanone 2-Hexanone Acetone	- - 42 (55-165)	53 (58-146) 64 (65-129) 31 (55-165)	- - 32 (≤28)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB129-0100-18152 and AVB129-0101-18152 were identified as field duplicates. No volatiles were detected in any of the samples.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470854

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470854	AVB129-0102-1000 AVB129-0100-18152 AVB129-0101-18152 AVB60-0100-32473	2-Butanone 2-Hexanone	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)
470854	AVB129-0102-1000 AVB129-0100-18152 AVB129-0101-18152 AVB60-0100-32473	Acetone	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R)(RPD) (L2,R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470854

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470854

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0102-1000** Matrix: Water Date Received:09.23.13 15.30
Lab Sample Id: 470854-001 Date Collected: 09.23.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.01.13 16.54
Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.01.13 23.30	N1 UJ(L2,R2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.01.13 23.30		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.01.13 23.30		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.01.13 23.30		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.01.13 23.30		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.01.13 23.30		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.01.13 23.30		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.01.13 23.30	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.01.13 23.30		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.01.13 23.30		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.01.13 23.30		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.01.13 23.30		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.01.13 23.30		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.01.13 23.30		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.01.13 23.30		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.01.13 23.30		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.01.13 23.30		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.01.13 23.30		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.01.13 23.30		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.01.13 23.30		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.01.13 23.30		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.01.13 23.30		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.01.13 23.30		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.01.13 23.30		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.01.13 23.30		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.01.13 23.30		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.01.13 23.30		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.01.13 23.30		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.01.13 23.30		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.01.13 23.30		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.01.13 23.30		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.01.13 23.30		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.01.13 23.30		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.01.13 23.30		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.01.13 23.30		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.01.13 23.30		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.01.13 23.30		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.01.13 23.30		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.01.13 23.30		1

 Final 1.000

02/03/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0102-1000** Matrix: Water Date Received:09.23.13 15.30
Lab Sample Id: 470854-001 Date Collected: 09.23.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.01.13 16.54
Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.01.13 23.30		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.01.13 23.30		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.01.13 23.30		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.01.13 23.30	L2V1 U5 L2	
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.01.13 23.30		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.01.13 23.30		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.01.13 23.30		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.01.13 23.30	V1	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.01.13 23.30		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.01.13 23.30		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.01.13 23.30		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.01.13 23.30		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.01.13 23.30		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.01.13 23.30		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.01.13 23.30		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.01.13 23.30		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.01.13 23.30		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.01.13 23.30		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.01.13 23.30		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.01.13 23.30		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.01.13 23.30		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.01.13 23.30		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.01.13 23.30		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.01.13 23.30		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.01.13 23.30		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.01.13 23.30		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.01.13 23.30		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.01.13 23.30		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.01.13 23.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	69-133	10.01.13 23.30	
1,2-Dichloroethane-D4	17060-07-0	108	%	66-139	10.01.13 23.30	
Toluene-D8	2037-26-5	99	%	70-130	10.01.13 23.30	
4-Bromofluorobenzene	460-00-4	102	%	70-135	10.01.13 23.30	

Final 1.000

10/30/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0100-18152** Matrix: Water Date Received:09.23.13 15.30

Lab Sample Id: 470854-002 Date Collected: 09.23.13 13.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.01.13 16.54

Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.01.13 23.55	N1U5(L2,R2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.01.13 23.55		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.01.13 23.55		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.01.13 23.55		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.01.13 23.55		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.01.13 23.55		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.01.13 23.55		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.01.13 23.55	L2U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.01.13 23.55		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.01.13 23.55		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.01.13 23.55		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.01.13 23.55		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.01.13 23.55		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.01.13 23.55		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.01.13 23.55		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.01.13 23.55		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.01.13 23.55		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.01.13 23.55		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.01.13 23.55		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.01.13 23.55		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.01.13 23.55		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.01.13 23.55		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.01.13 23.55		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.01.13 23.55		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.01.13 23.55		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.01.13 23.55		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.01.13 23.55		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.01.13 23.55		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.01.13 23.55		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.01.13 23.55		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.01.13 23.55		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.01.13 23.55		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.01.13 23.55		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.01.13 23.55		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.01.13 23.55		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.01.13 23.55		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.01.13 23.55		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.01.13 23.55		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.01.13 23.55		1

Final 1.000

OC 10/30/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0100-18152** Matrix: Water Date Received:09.23.13 15.30
Lab Sample Id: 470854-002 Date Collected: 09.23.13 13.55

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.01.13 16.54
Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.01.13 23.55		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.01.13 23.55		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.01.13 23.55		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.01.13 23.55	L2V1 UJ(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.01.13 23.55		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.01.13 23.55		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.01.13 23.55		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.01.13 23.55	V1	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.01.13 23.55		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.01.13 23.55		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.01.13 23.55		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.01.13 23.55		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.01.13 23.55		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.01.13 23.55		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.01.13 23.55		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.01.13 23.55		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.01.13 23.55		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.01.13 23.55		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.01.13 23.55		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.01.13 23.55		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.01.13 23.55		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.01.13 23.55		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.01.13 23.55		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.01.13 23.55		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.01.13 23.55		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.01.13 23.55		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.01.13 23.55		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.01.13 23.55		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.01.13 23.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	10.01.13 23.55	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	10.01.13 23.55	
Toluene-D8	2037-26-5	95	%	70-130	10.01.13 23.55	
4-Bromofluorobenzene	460-00-4	94	%	70-135	10.01.13 23.55	

Final 1.000

10/30/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0101-18152** Matrix: Water Date Received:09.23.13 15.30
Lab Sample Id: 470854-003 Date Collected: 09.23.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 10.01.13 16.54
Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 01.10	N1 vs(L2,R2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 01.10		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 01.10		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 01.10		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 01.10		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 01.10		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 01.10		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 01.10	L2 vs(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 01.10		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 01.10		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 01.10		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 01.10		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 01.10		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 01.10		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 01.10		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 01.10		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 01.10		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 01.10		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 01.10		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 01.10		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 01.10		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 01.10		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 01.10		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 01.10		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 01.10		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 01.10		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 01.10		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 01.10		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 01.10		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 01.10		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 01.10		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 01.10		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 01.10		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 01.10		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 01.10		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 01.10		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 01.10		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 01.10		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 01.10		1

Final 1.000

OCT 30 13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB129-0101-18152** Matrix: Water Date Received:09.23.13 15.30

Lab Sample Id: 470854-003 Date Collected: 09.23.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.01.13 16.54

Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 01.10		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 01.10		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 01.10		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 01.10	L2V1U5(L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 01.10		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 01.10		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 01.10		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 01.10	V1	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 01.10		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 01.10		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 01.10		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 01.10		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 01.10		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	10.02.13 01.10		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 01.10		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 01.10		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 01.10		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 01.10		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 01.10		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 01.10		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 01.10		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 01.10		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 01.10		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 01.10		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 01.10		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 01.10		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 01.10		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 01.10		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 01.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	94	%	69-133	10.02.13 01.10	
1,2-Dichloroethane-D4	17060-07-0	96	%	66-139	10.02.13 01.10	
Toluene-D8	2037-26-5	94	%	70-130	10.02.13 01.10	
4-Bromofluorobenzene	460-00-4	98	%	70-135	10.02.13 01.10	

02/03/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB60-0100-32473**
Lab Sample Id: 470854-004

Matrix: Water
Date Collected: 09.23.13 14.30

Date Received:09.23.13 15.30

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 924288

Date Prep: 10.01.13 16.54

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	10.02.13 01.35	N1 U5(L2,R2)	
Benzene	71-43-2	<0.500	0.500	ug/L	10.02.13 01.35		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	10.02.13 01.35		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	10.02.13 01.35		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	10.02.13 01.35		1
Bromoform	75-25-2	<1.00	1.00	ug/L	10.02.13 01.35		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	10.02.13 01.35		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	10.02.13 01.35	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	10.02.13 01.35		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	10.02.13 01.35		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	10.02.13 01.35		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	10.02.13 01.35		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	10.02.13 01.35		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	10.02.13 01.35		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	10.02.13 01.35		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	10.02.13 01.35		1
Chloroform	67-66-3	<0.500	0.500	ug/L	10.02.13 01.35		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	10.02.13 01.35		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	10.02.13 01.35		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	10.02.13 01.35		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	10.02.13 01.35		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	10.02.13 01.35		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	10.02.13 01.35		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	10.02.13 01.35		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	10.02.13 01.35		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	10.02.13 01.35		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	10.02.13 01.35		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	10.02.13 01.35		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	10.02.13 01.35		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	10.02.13 01.35		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	10.02.13 01.35		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	10.02.13 01.35		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	10.02.13 01.35		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	10.02.13 01.35		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	10.02.13 01.35		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	10.02.13 01.35		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	10.02.13 01.35		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	10.02.13 01.35		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	10.02.13 01.35		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470854

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB60-0100-32473** Matrix: Water Date Received:09.23.13 15.30

Lab Sample Id: 470854-004 Date Collected: 09.23.13 14.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 10.01.13 16.54

Seq Number: 924288

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag*	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	10.02.13 01.35		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	10.02.13 01.35		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	10.02.13 01.35		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	10.02.13 01.35	L2V1 05 (L2)	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	10.02.13 01.35		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	10.02.13 01.35		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	10.02.13 01.35		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	10.02.13 01.35	V1	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	10.02.13 01.35		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	10.02.13 01.35		1
Styrene	100-42-5	<1.00	1.00	ug/L	10.02.13 01.35		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	10.02.13 01.35		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	10.02.13 01.35		1
Tetrachloroethylene	127-18-4	**0.820**	0.500	ug/L	10.02.13 01.35		1
Toluene	108-88-3	<2.00	2.00	ug/L	10.02.13 01.35		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	10.02.13 01.35		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	10.02.13 01.35		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	10.02.13 01.35		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	10.02.13 01.35		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	10.02.13 01.35		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	10.02.13 01.35		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	10.02.13 01.35		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	10.02.13 01.35		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	10.02.13 01.35		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	10.02.13 01.35		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	10.02.13 01.35		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	10.02.13 01.35		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	10.02.13 01.35		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	10.02.13 01.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	93	%	69-133	10.02.13 01.35	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	10.02.13 01.35	
Toluene-D8	2037-26-5	91	%	70-130	10.02.13 01.35	
4-Bromofluorobenzene	460-00-4	96	%	70-135	10.02.13 01.35	

Final 1.000

10/30/13

LDC #: 30552L1a

SDG #: 470854

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/18/1

Page: 1 of 1

Reviewer: D

2nd Reviewer: SV

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/23/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 2, 3
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	AVB129-0102-1000	11	644791-1-BLK	21		31	
2	AVB129-0100-18152 D	12		22		32	
3	AVB129-0101-18152 D	13		23		33	
4	AVB60-0100-32473	14		24		34	
5	AVB129-0100-18152MS	15		25		35	
6	AVB129-0100-18152MSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552L

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Page: 1 of 1
Reviewer: FT
2nd Reviewer: a

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all surrogate %R within QC limits?

Y N N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		644791-1-BLK	DCE	65 (66-139)	J/UJ/P
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(TOL) = Toluene-d8 (DCE) = 1,2-Dichloroethane-d4
(BFB) = Bromofluorobenzene (DFM) = Dibromofluoromethane

SUR.1SB

LDC #: 30552 4a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
10/1		644791-LCS/D	M		53 (58-146)		All	J / UJ / P
			Z		64 (65-129)		↓	↓
			F	42 (55-165)	31 (55-165)	32 (28)		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 24, 2013

LDC Report Date: October 21, 2013

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470871

Sample Identification

AVB91-0202-1000
AVB91-0200-22291
AVB98-0100-22287
AVB81-0100-24295
AVB81-0200-23118
AVB96-0200-22332
AVB96-0100-21121
AVB122-0100-20152
AVB122-0200-20245
AVB92-0200-XXX
AVB121-0100-20132
AVB120-0300-09325
AVB120-0200-20245
AVB117-0100-20149
AVB91-0200-22291MS
AVB91-0200-22291MSD

Introduction

This data review covers 16 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB91-0202-1000 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
64455-1-BLK	Dibromofluoromethane 1,2-Dichloroethane-d4	157 (69-133) 157 (66-139)	All TCL compounds	J (all detects) UJ (all non-detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB91-0200-22291MS/MSD (AVB91-0200-22291)	Bromochloromethane	134 (63-119)	153 (63-119)	-	J (all detects)	A
	Bromodichloromethane	-	135 (70-130)	-	J (all detects)	
	Bromoform	134 (57-121)	146 (57-121)	-	J (all detects)	
	MTBE	145 (65-127)	175 (65-127)	-	J (all detects)	
	Chloroform	-	135 (65-123)	-	J (all detects)	
	Dibromochloromethane	-	131 (70-130)	-	J (all detects)	
	1,2-Dibromo-3-Chloropropane	137 (50-117)	160 (50-117)	-	J (all detects)	
	1,2-Dibromoethane	133 (67-117)	147 (67-117)	-	J (all detects)	
	Dibromomethane	130 (66-115)	147 (66-115)	-	J (all detects)	
	1,2-Dichloroethane	134 (64-126)	157 (64-126)	-	J (all detects)	
	cis-1,2-Dichloroethene	-	132 (66-126)	-	J (all detects)	
	1,3-Dichloropropane	128 (67-115)	141 (67-115)	-	J (all detects)	
	cis-1,3-Dichloropropene	127 (67-122)	138 (67-122)	-	J (all detects)	
	trans-1,3-Dichloropropene	132 (70-130)	144 (70-130)	-	J (all detects)	
	2-Hexanone	-	123 (51-122)	-	J (all detects)	
	Methylene Chloride	125 (59-121)	139 (59-121)	-	J (all detects)	
	4-Methyl-2-Pentanone	150 (53-125)	176 (53-125)	-	J (all detects)	
	Naphthalene	132 (54-129)	152 (54-129)	-	J (all detects)	
	1,1,2,2,-Tetrachloroethane	134 (64-122)	151 (64-122)	-	J (all detects)	
	1,2,3-Trichlorobenzene	-	127 (61-126)	-	J (all detects)	
	1,1,2-Trichloroethane	137 (65-112)	151 (65-112)	-	J (all detects)	
	1,2,3-Trichloropropane	136 (58-116)	154 (58-116)	-	J (all detects)	
	Vinyl Acetate	152 (43-133)	186 (43-133)	-	J (all detects)	

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644555-LCS/D (All samples from SDG 470871)	Acetone	48 (55-165)	48 (55-165)	-	J (all detects) UJ (all non-detects)	P
	Iodomethane	-	-	29 (≤22)	J (all detects) UJ (all non-detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470871

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470871	AVB91-0200-22291	Bromochloromethane Bromodichloromethane Bromoform MTBE Chloroform Dibromochloromethane 1,2-Dibromo-3-Chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichloroethane cis-1,2-Dichloroethene 1,3-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene 2-Hexanone Methylene Chloride 4-Methyl-2-Pentanone Naphthalene 1,1,2,2,-Tetrachloroethane 1,2,3-Trichlorobenzene 1,1,2-Trichloroethane 1,2,3-Trichloropropane Vinyl Acetate	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (M1)
470871	AVB91-0202-1000 AVB91-0200-22291 AVB98-0100-22287 AVB81-0100-24295 AVB81-0200-23118 AVB96-0200-22332 AVB96-0100-21121 AVB122-0100-20152 AVB122-0200-20245 AVB92-0200-XXX AVB121-0100-20132 AVB120-0300-09325 AVB120-0200-20245 AVB117-0100-20149	Acetone	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)
470871	AVB91-0202-1000 AVB91-0200-22291 AVB98-0100-22287 AVB81-0100-24295 AVB81-0200-23118 AVB96-0200-22332 AVB96-0100-21121 AVB122-0100-20152 AVB122-0200-20245 AVB92-0200-XXX AVB121-0100-20132 AVB120-0300-09325 AVB120-0200-20245 AVB117-0100-20149	Iodomethane	J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (R2)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470871

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470871

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0202-1000** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-001 Date Collected: 09.24.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 11.24	L2 U5(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 11.24		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 11.24		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 11.24		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 11.24		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 11.24		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 11.24		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 11.24		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 11.24		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 11.24		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 11.24		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 11.24		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 11.24		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 11.24		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 11.24		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 11.24		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 11.24		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 11.24		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 11.24		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 11.24		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 11.24		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 11.24		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 11.24		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 11.24		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 11.24		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 11.24		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 11.24		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 11.24		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 11.24		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 11.24		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 11.24		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 11.24		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 11.24		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 11.24		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 11.24		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 11.24		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 11.24		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 11.24		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 11.24		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0202-1000** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-001 Date Collected: 09.24.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 11.24		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 11.24		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 11.24		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 11.24		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 11.24		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 11.24		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 11.24	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 11.24		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 11.24		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 11.24		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 11.24		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 11.24		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 11.24		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.28.13 11.24		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 11.24		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 11.24		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 11.24		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 11.24		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 11.24		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 11.24		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 11.24		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 11.24		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 11.24		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 11.24		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 11.24		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 11.24		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 11.24		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 11.24		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 11.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	69-133	09.28.13 11.24	
1,2-Dichloroethane-D4	17060-07-0	108	%	66-139	09.28.13 11.24	
Toluene-D8	2037-26-5	96	%	70-130	09.28.13 11.24	
4-Bromofluorobenzene	460-00-4	104	%	70-135	09.28.13 11.24	

Final 1.000

OKO 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0200-22291** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-002 Date Collected: 09.24.13 08.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 11.50	L2 VJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 11.50		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 11.50		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 11.50	M1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 11.50		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 11.50		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 11.50	M1	1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 11.50		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 11.50		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 11.50		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 11.50		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 11.50		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 11.50		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 11.50		1
Chloroform	67-66-3	**0.560**	0.500	ug/L	09.28.13 11.50	M1 J(M1)	1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 11.50		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 11.50		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 11.50		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 11.50		1
Dibromochloromethane	124-48-1	**1.33**	0.500	ug/L	09.28.13 11.50	M1 J(M1)	1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 11.50	M1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 11.50		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 11.50		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 11.50		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 11.50		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 11.50		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
1,1-Dichloroethene	75-35-4	**0.730**	0.500	ug/L	09.28.13 11.50		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 11.50		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 11.50		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 11.50	M1	1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 11.50		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 11.50		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 11.50	M1	1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB91-0200-22291** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-002 Date Collected: 09.24.13 08.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 11.50		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 11.50		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 11.50	M1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 11.50		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 11.50	M1	1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 11.50	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 11.50	M1	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 11.50	M1	1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 11.50		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 11.50		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 11.50		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Tetrachloroethylene	127-18-4	**4.12**	0.500	ug/L	09.28.13 11.50		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 11.50		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 11.50	M1	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 11.50		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 11.50		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 11.50	M1	1
Trichloroethene	79-01-6	**1.59**	0.500	ug/L	09.28.13 11.50		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 11.50		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 11.50	M1	1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 11.50		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 11.50		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 11.50		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 11.50		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 11.50	M1	1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 11.50		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 11.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	84	%	69-133	09.28.13 11.50	
1,2-Dichloroethane-D4	17060-07-0	80	%	66-139	09.28.13 11.50	
Toluene-D8	2037-26-5	94	%	70-130	09.28.13 11.50	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.28.13 11.50	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB98-0100-22287**
Lab Sample Id: 470871-003

Matrix: Water
Date Collected: 09.24.13 08.45

Date Received:09.24.13 14.55

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923861

Date Prep: 09.28.13 10.37

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 13.06	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 13.06		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 13.06		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 13.06		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 13.06		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 13.06		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 13.06		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 13.06		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 13.06		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 13.06		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 13.06		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 13.06		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 13.06		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 13.06		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 13.06		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 13.06		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 13.06		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 13.06		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 13.06		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 13.06		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 13.06		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 13.06		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 13.06		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 13.06		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 13.06		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 13.06		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 13.06		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 13.06		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 13.06		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 13.06		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 13.06		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 13.06		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 13.06		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 13.06		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 13.06		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 13.06		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 13.06		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 13.06		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 13.06		1

Final 1.000

CRW 30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB98-0100-22287** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-003 Date Collected: 09.24.13 08.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 13.06		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 13.06		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 13.06		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 13.06		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 13.06		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 13.06		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 13.06	UJ (R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 13.06		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 13.06		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 13.06		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 13.06		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 13.06		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 13.06		1
Tetrachloroethylene	127-18-4	**0.760**	0.500	ug/L	09.28.13 13.06		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 13.06		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 13.06		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 13.06		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 13.06		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 13.06		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 13.06		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 13.06		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 13.06		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 13.06		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 13.06		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 13.06		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 13.06		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 13.06		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 13.06		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 13.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	69-133	09.28.13 13.06	
1,2-Dichloroethane-D4	17060-07-0	106	%	66-139	09.28.13 13.06	
Toluene-D8	2037-26-5	104	%	70-130	09.28.13 13.06	
4-Bromofluorobenzene	460-00-4	109	%	70-135	09.28.13 13.06	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB81-0100-24295** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-004 Date Collected: 09.24.13 09.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 13.31	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 13.31		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 13.31		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 13.31		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 13.31		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 13.31		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 13.31		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 13.31		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 13.31		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 13.31		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 13.31		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 13.31		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 13.31		1
Carbon Tetrachloride	56-23-5	**2.50**	0.500	ug/L	09.28.13 13.31		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 13.31		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 13.31		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 13.31		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 13.31		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 13.31		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 13.31		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 13.31		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 13.31		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 13.31		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 13.31		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 13.31		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 13.31		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 13.31		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 13.31		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 13.31		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 13.31		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 13.31		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 13.31		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 13.31		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 13.31		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 13.31		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 13.31		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 13.31		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 13.31		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 13.31		1

Final 1.000

09/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB81-0100-24295** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-004 Date Collected: 09.24.13 09.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 13.31		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 13.31		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 13.31		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 13.31		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 13.31		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 13.31		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 13.31	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 13.31		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 13.31		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 13.31		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 13.31		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 13.31		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 13.31		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.28.13 13.31		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 13.31		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 13.31		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 13.31		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 13.31		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 13.31		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 13.31		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 13.31		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 13.31		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 13.31		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 13.31		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 13.31		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 13.31		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 13.31		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 13.31		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 13.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	87	%	69-133	09.28.13 13.31	
1,2-Dichloroethane-D4	17060-07-0	84	%	66-139	09.28.13 13.31	
Toluene-D8	2037-26-5	96	%	70-130	09.28.13 13.31	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.28.13 13.31	

Final 1.000

09/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB81-0200-23118** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-005 Date Collected: 09.24.13 09.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 13.56	L2 US(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 13.56		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 13.56		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 13.56		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 13.56		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 13.56		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 13.56		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 13.56		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 13.56		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 13.56		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 13.56		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 13.56		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 13.56		1
Carbon Tetrachloride	56-23-5	**2.49**	0.500	ug/L	09.28.13 13.56		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 13.56		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 13.56		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 13.56		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 13.56		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 13.56		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 13.56		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 13.56		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 13.56		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 13.56		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 13.56		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 13.56		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 13.56		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 13.56		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 13.56		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 13.56		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 13.56		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 13.56		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 13.56		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 13.56		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 13.56		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 13.56		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 13.56		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 13.56		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 13.56		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 13.56		1

Final 1.000

CZ 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB81-0200-23118** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-005 Date Collected: 09.24.13 09.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 13.56		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 13.56		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 13.56		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 13.56		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 13.56		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 13.56		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 13.56	US (R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 13.56		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 13.56		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 13.56		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 13.56		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 13.56		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 13.56		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.28.13 13.56		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 13.56		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 13.56		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 13.56		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 13.56		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 13.56		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 13.56		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 13.56		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 13.56		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 13.56		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 13.56		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 13.56		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 13.56		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 13.56		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 13.56		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 13.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	84	%	69-133	09.28.13 13.56	
1,2-Dichloroethane-D4	17060-07-0	79	%	66-139	09.28.13 13.56	
Toluene-D8	2037-26-5	94	%	70-130	09.28.13 13.56	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.28.13 13.56	

09/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB96-0200-22332**
Lab Sample Id: 470871-006

Matrix: Water
Date Collected: 09.24.13 10.00

Date Received: 09.24.13 14.55

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923861

Date Prep: 09.28.13 10.37

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 14.21	L2 05(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 14.21		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 14.21		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 14.21		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 14.21		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 14.21		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 14.21		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 14.21		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 14.21		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 14.21		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 14.21		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 14.21		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 14.21		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 14.21		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 14.21		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 14.21		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 14.21		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 14.21		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 14.21		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 14.21		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 14.21		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 14.21		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 14.21		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 14.21		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 14.21		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 14.21		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 14.21		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 14.21		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 14.21		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 14.21		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 14.21		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 14.21		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 14.21		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 14.21		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 14.21		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 14.21		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 14.21		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 14.21		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 14.21		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB96-0200-22332** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-006 Date Collected: 09.24.13 10.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 14.21		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 14.21		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 14.21		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 14.21		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 14.21		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 14.21		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 14.21	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 14.21		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 14.21		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 14.21		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 14.21		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 14.21		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 14.21		1
Tetrachloroethylene	127-18-4	**0.580**	0.500	ug/L	09.28.13 14.21		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 14.21		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 14.21		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 14.21		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 14.21		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 14.21		1
Trichloroethene	79-01-6	**3.35**	0.500	ug/L	09.28.13 14.21		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 14.21		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 14.21		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 14.21		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 14.21		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 14.21		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 14.21		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 14.21		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 14.21		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 14.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	85	%	69-133	09.28.13 14.21	
1,2-Dichloroethane-D4	17060-07-0	82	%	66-139	09.28.13 14.21	
Toluene-D8	2037-26-5	91	%	70-130	09.28.13 14.21	
4-Bromofluorobenzene	460-00-4	97	%	70-135	09.28.13 14.21	

OK 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB96-0100-21121** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-007 Date Collected: 09.24.13 10.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 14.46	L2 US(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 14.46		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 14.46		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 14.46		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 14.46		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 14.46		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 14.46		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 14.46		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 14.46		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 14.46		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 14.46		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 14.46		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 14.46		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 14.46		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 14.46		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 14.46		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 14.46		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 14.46		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 14.46		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 14.46		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 14.46		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 14.46		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 14.46		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 14.46		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 14.46		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 14.46		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 14.46		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 14.46		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 14.46		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 14.46		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 14.46		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 14.46		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 14.46		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 14.46		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 14.46		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 14.46		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 14.46		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 14.46		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 14.46		1

0210130B

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB96-0100-21121** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-007 Date Collected: 09.24.13 10.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 14.46		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 14.46		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 14.46		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 14.46		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 14.46		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 14.46		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 14.46	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 14.46		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 14.46		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 14.46		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 14.46		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 14.46		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 14.46		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.28.13 14.46		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 14.46		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 14.46		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 14.46		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 14.46		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 14.46		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 14.46		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 14.46		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 14.46		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 14.46		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 14.46		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 14.46		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 14.46		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 14.46		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 14.46		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 14.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	82	%	69-133	09.28.13 14.46	
1,2-Dichloroethane-D4	17060-07-0	79	%	66-139	09.28.13 14.46	
Toluene-D8	2037-26-5	92	%	70-130	09.28.13 14.46	
4-Bromofluorobenzene	460-00-4	95	%	70-135	09.28.13 14.46	

CLO 10/3/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0100-20152**
Lab Sample Id: 470871-008

Matrix: Water
Date Collected: 09.24.13 10.40

Date Received:09.24.13 14.55

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923861

Date Prep: 09.28.13 10.37

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 15.11	L2 U(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 15.11		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 15.11		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 15.11		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 15.11		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 15.11		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 15.11		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 15.11		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 15.11		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 15.11		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 15.11		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 15.11		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 15.11		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 15.11		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 15.11		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 15.11		1
Chloroform	67-66-3	**5.61**	0.500	ug/L	09.28.13 15.11		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 15.11		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 15.11		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 15.11		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 15.11		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 15.11		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 15.11		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 15.11		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 15.11		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 15.11		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 15.11		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 15.11		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 15.11		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 15.11		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 15.11		1
1,1-Dichloroethene	75-35-4	**1.80**	0.500	ug/L	09.28.13 15.11		1
cis-1,2-Dichloroethene	156-59-2	**0.900**	0.500	ug/L	09.28.13 15.11		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 15.11		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 15.11		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 15.11		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 15.11		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 15.11		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 15.11		1

Final 1.000

CRL 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0100-20152** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-008 Date Collected: 09.24.13 10.40

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 15.11		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 15.11		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 15.11		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 15.11		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 15.11		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 15.11		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 15.11	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 15.11		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 15.11		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 15.11		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 15.11		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 15.11		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 15.11		1
Tetrachloroethylene	127-18-4	**16.9**	0.500	ug/L	09.28.13 15.11		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 15.11		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 15.11		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 15.11		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 15.11		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 15.11		1
Trichloroethene	79-01-6	**10.8**	0.500	ug/L	09.28.13 15.11		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 15.11		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 15.11		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 15.11		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 15.11		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 15.11		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 15.11		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 15.11		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 15.11		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 15.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	09.28.13 15.11	
1,2-Dichloroethane-D4	17060-07-0	85	%	66-139	09.28.13 15.11	
Toluene-D8	2037-26-5	95	%	70-130	09.28.13 15.11	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.28.13 15.11	

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0200-20245** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-009 Date Collected: 09.24.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 15.37	L2 U (L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 15.37		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 15.37		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 15.37		1
Bromodichloromethane	75-27-4	**0.940**	0.500	ug/L	09.28.13 15.37		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 15.37		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 15.37		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 15.37		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 15.37		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 15.37		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 15.37		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 15.37		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 15.37		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 15.37		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 15.37		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 15.37		1
Chloroform	67-66-3	**2.28**	0.500	ug/L	09.28.13 15.37		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 15.37		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 15.37		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 15.37		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 15.37		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 15.37		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 15.37		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 15.37		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 15.37		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 15.37		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 15.37		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 15.37		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 15.37		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 15.37		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 15.37		1
1,1-Dichloroethene	75-35-4	**1.19**	0.500	ug/L	09.28.13 15.37		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 15.37		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 15.37		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 15.37		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 15.37		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 15.37		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 15.37		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 15.37		1

Final 1.000

CRL 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB122-0200-20245** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-009 Date Collected: 09.24.13 10.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 15.37		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 15.37		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 15.37		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 15.37		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 15.37		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 15.37		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 15.37	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 15.37		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 15.37		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 15.37		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 15.37		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 15.37		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 15.37		1
Tetrachloroethylene	127-18-4	**8.38**	0.500	ug/L	09.28.13 15.37		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 15.37		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 15.37		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 15.37		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 15.37		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 15.37		1
Trichloroethene	79-01-6	**5.23**	0.500	ug/L	09.28.13 15.37		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 15.37		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 15.37		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 15.37		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 15.37		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 15.37		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 15.37		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 15.37		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 15.37		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 15.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	09.28.13 15.37	
1,2-Dichloroethane-D4	17060-07-0	84	%	66-139	09.28.13 15.37	
Toluene-D8	2037-26-5	95	%	70-130	09.28.13 15.37	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.28.13 15.37	

Final 1.000

CL 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB92-0200-XXX** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-010 Date Collected: 09.24.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 16.02	L2 U5(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 16.02		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 16.02		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 16.02		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 16.02		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 16.02		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 16.02		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 16.02		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 16.02		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 16.02		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 16.02		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 16.02		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 16.02		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 16.02		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 16.02		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 16.02		1
Chloroform	67-66-3	**0.610**	0.500	ug/L	09.28.13 16.02		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 16.02		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 16.02		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 16.02		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 16.02		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 16.02		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 16.02		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 16.02		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 16.02		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 16.02		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 16.02		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 16.02		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 16.02		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 16.02		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 16.02		1
1,1-Dichloroethene	75-35-4	**0.570**	0.500	ug/L	09.28.13 16.02		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 16.02		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 16.02		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 16.02		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 16.02		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 16.02		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 16.02		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 16.02		1

Final 1.000

CR 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB92-0200-XXX** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-010 Date Collected: 09.24.13 11.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 16.02		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 16.02		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 16.02		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 16.02		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 16.02		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 16.02		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 16.02	UJ (R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 16.02		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 16.02		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 16.02		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 16.02		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 16.02		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 16.02		1
Tetrachloroethylene	127-18-4	**1.25**	0.500	ug/L	09.28.13 16.02		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 16.02		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 16.02		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 16.02		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 16.02		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 16.02		1
Trichloroethene	79-01-6	**16.0**	0.500	ug/L	09.28.13 16.02		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 16.02		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 16.02		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 16.02		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 16.02		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 16.02		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 16.02		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 16.02		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 16.02		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 16.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	09.28.13 16.02	
1,2-Dichloroethane-D4	17060-07-0	87	%	66-139	09.28.13 16.02	
Toluene-D8	2037-26-5	94	%	70-130	09.28.13 16.02	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.28.13 16.02	

Final 1.000

CSL 10/28/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB121-0100-20132** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-011 Date Collected: 09.24.13 12.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 16.27	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 16.27		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 16.27		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 16.27		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 16.27		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 16.27		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 16.27		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 16.27		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 16.27		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 16.27		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 16.27		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 16.27		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 16.27		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 16.27		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 16.27		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 16.27		1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.28.13 16.27		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 16.27		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 16.27		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 16.27		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 16.27		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 16.27		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 16.27		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 16.27		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 16.27		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 16.27		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 16.27		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 16.27		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 16.27		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 16.27		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 16.27		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 16.27		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 16.27		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 16.27		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 16.27		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 16.27		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 16.27		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 16.27		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 16.27		1

Final 1.000

09/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB121-0100-20132** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-011 Date Collected: 09.24.13 12.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 16.27		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 16.27		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 16.27		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 16.27		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 16.27		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 16.27		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 16.27	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 16.27		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 16.27		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 16.27		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 16.27		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 16.27		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 16.27		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.28.13 16.27		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 16.27		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 16.27		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 16.27		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 16.27		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 16.27		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.28.13 16.27		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 16.27		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 16.27		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 16.27		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 16.27		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 16.27		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 16.27		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 16.27		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 16.27		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 16.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	86	%	69-133	09.28.13 16.27	
1,2-Dichloroethane-D4	17060-07-0	83	%	66-139	09.28.13 16.27	
Toluene-D8	2037-26-5	92	%	70-130	09.28.13 16.27	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.28.13 16.27	

02/10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB120-0300-09325** Matrix: Water Date Received:09.24.13 14.55

Lab Sample Id: 470871-012 Date Collected: 09.24.13 12.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.28.13 10.37

Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 16.52	L2 U5(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 16.52		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 16.52		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 16.52		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 16.52		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 16.52		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 16.52		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 16.52		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 16.52		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 16.52		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 16.52		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 16.52		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 16.52		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 16.52		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 16.52		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 16.52		1
Chloroform	67-66-3	**6.40**	0.500	ug/L	09.28.13 16.52		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 16.52		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 16.52		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 16.52		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 16.52		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 16.52		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 16.52		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 16.52		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 16.52		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 16.52		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 16.52		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 16.52		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 16.52		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 16.52		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 16.52		1
1,1-Dichloroethene	75-35-4	**0.710**	0.500	ug/L	09.28.13 16.52		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 16.52		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 16.52		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 16.52		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 16.52		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 16.52		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 16.52		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 16.52		1

10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB120-0300-09325** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-012 Date Collected: 09.24.13 12.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 16.52		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 16.52		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 16.52		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 16.52		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 16.52		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 16.52		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 16.52	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 16.52		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 16.52		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 16.52		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 16.52		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 16.52		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 16.52		1
Tetrachloroethylene	127-18-4	**14.9**	0.500	ug/L	09.28.13 16.52		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 16.52		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 16.52		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 16.52		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 16.52		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 16.52		1
Trichloroethene	79-01-6	**32.3**	0.500	ug/L	09.28.13 16.52		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 16.52		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 16.52		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 16.52		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 16.52		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 16.52		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 16.52		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 16.52		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 16.52		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 16.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	09.28.13 16.52	
1,2-Dichloroethane-D4	17060-07-0	87	%	66-139	09.28.13 16.52	
Toluene-D8	2037-26-5	97	%	70-130	09.28.13 16.52	
4-Bromofluorobenzene	460-00-4	103	%	70-135	09.28.13 16.52	

Final 1.000

CLD 10/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB120-0200-20245** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-013 Date Collected: 09.24.13 13.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Dilution Analysis:
Seq#: 923861 Date Analyzed: 09/30/13 22:47 Date Prep: 09/28/13 10:37

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 17.17	L2 US(L2)	
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 17.17		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 17.17		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 17.17		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 17.17		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 17.17		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 17.17		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 17.17		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 17.17		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 17.17		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 17.17		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 17.17		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 17.17		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 17.17		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 17.17		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 17.17		1
Chloroform	67-66-3	**1.46**	0.500	ug/L	09.28.13 17.17		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 17.17		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 17.17		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 17.17		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 17.17		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 17.17		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 17.17		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 17.17		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 17.17		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 17.17		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 17.17		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 17.17		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 17.17		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 17.17		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 17.17		1
1,1-Dichloroethene	75-35-4	**1.44**	0.500	ug/L	09.28.13 17.17		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 17.17		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 17.17		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 17.17		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 17.17		1

10/30/13

 Final 1.000

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB120-0200-20245** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-013 Date Collected: 09.24.13 13.10

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 17.17		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 17.17		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 17.17		1
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 17.17		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 17.17		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 17.17		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 17.17		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 17.17		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 17.17		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 17.17	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 17.17		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 17.17		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 17.17		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 17.17		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 17.17		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 17.17		1
Tetrachloroethylene	127-18-4	**33.8**	0.500	ug/L	09.28.13 17.17		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 17.17		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 17.17		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 17.17		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 17.17		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 17.17		1
Trichloroethene	79-01-6	**189**	5.00	ug/L	09.30.13 22.47	D2	10
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 17.17		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 17.17		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 17.17		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 17.17		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 17.17		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 17.17		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 17.17		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 17.17		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 17.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	09.28.13 17.17	
1,2-Dichloroethane-D4	17060-07-0	86	%	66-139	09.28.13 17.17	
Toluene-D8	2037-26-5	97	%	70-130	09.28.13 17.17	
4-Bromofluorobenzene	460-00-4	104	%	70-135	09.28.13 17.17	

CR 10/30/13

Final 1.000

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB117-0100-20149**
Lab Sample Id: 470871-014

Matrix: Water
Date Collected: 09.24.13 14.05

Date Received:09.24.13 14.55

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923861

Date Prep: 09.28.13 10.37

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.28.13 17.42	L2 U3(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.28.13 17.42		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.28.13 17.42		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.28.13 17.42		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.28.13 17.42		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.28.13 17.42		1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.28.13 17.42		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.28.13 17.42		1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.28.13 17.42		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.28.13 17.42		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.28.13 17.42		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.28.13 17.42		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.28.13 17.42		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.28.13 17.42		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.28.13 17.42		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.28.13 17.42		1
Chloroform	67-66-3	**1.57**	0.500	ug/L	09.28.13 17.42		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.28.13 17.42		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.28.13 17.42		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.28.13 17.42		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.28.13 17.42		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.28.13 17.42		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.28.13 17.42		1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.28.13 17.42		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.28.13 17.42		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.28.13 17.42		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.28.13 17.42		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.28.13 17.42		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.28.13 17.42		1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.28.13 17.42		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.28.13 17.42		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.28.13 17.42		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.28.13 17.42		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.28.13 17.42		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.28.13 17.42		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.28.13 17.42		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.28.13 17.42		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.28.13 17.42		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.28.13 17.42		1

Final 1.000

01/01/30/13

Certificate of Analytical Results 470871

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB117-0100-20149** Matrix: Water Date Received:09.24.13 14.55
Lab Sample Id: 470871-014 Date Collected: 09.24.13 14.05

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.28.13 10.37
Seq Number: 923861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.28.13 17.42		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.28.13 17.42		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.28.13 17.42		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.28.13 17.42		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.28.13 17.42		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.28.13 17.42		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.28.13 17.42	UJ (RL)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.28.13 17.42		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.28.13 17.42		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.28.13 17.42		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.28.13 17.42		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.28.13 17.42		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.28.13 17.42		1
Tetrachloroethylene	127-18-4	**1.67**	0.500	ug/L	09.28.13 17.42		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.28.13 17.42		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.28.13 17.42		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.28.13 17.42		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.28.13 17.42		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.28.13 17.42		1
Trichloroethene	79-01-6	**0.590**	0.500	ug/L	09.28.13 17.42		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.28.13 17.42		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.28.13 17.42		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.28.13 17.42		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.28.13 17.42		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.28.13 17.42		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.28.13 17.42		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.28.13 17.42		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.28.13 17.42		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.28.13 17.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	85	%	69-133	09.28.13 17.42	
1,2-Dichloroethane-D4	17060-07-0	84	%	66-139	09.28.13 17.42	
Toluene-D8	2037-26-5	90	%	70-130	09.28.13 17.42	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.28.13 17.42	

02/01/30/13

LDC #: 30552M1a

SDG #: 470871

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/21/1

Page: 1 of 1

Reviewer: EJ

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/24/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	AVB91-0202-1000	11	AVB121-0100-20132	21	64455-1-13/14	31	
2	AVB91-0200-22291	12	AVB120-0300-09325	22		32	
3	AVB98-0100-22287	13	AVB120-0200-20245	23		33	
4	AVB81-0100-24295	14	AVB117-0100-20149	24		34	
5	AVB81-0200-23118	15	AVB91-0200-22291MS	25		35	
6	AVB96-0200-22332	16	AVB91-0200-22291MSD	26		36	
7	AVB96-~~000~~ 0100-21121	17		27		37	
8	AVB122-0100-20152	18		28		38	
9	AVB122-0200-20245	19		29		39	
10	AVB92-0200-XXX	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552 M/a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: JS
2nd Reviewer: CR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		64455-1-BLK	DFM	157 (69-133)	J/UJ/P
			DCE	157 (66-139)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(TOL) = Toluene-d8
(BFB) = Bromofluorobenzene
(DCE) = 1,2-Dichloroethane-d4
(DFM) = Dibromofluoromethane

LDC #: 30552M1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		15 + 16	all	following ( )	pages ( )	( )	2	all J/A det
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

QC Summary 470871

TRANS WEST ANALYTICAL
Xenco Laboratories

Terranext
WVBA

Analytical Method: **VOCs by EPA 8260B** Prep Method: SW5030C
Seq Number: 923861 Matrix: Water Date Prep: 09.28.13
Parent Sample Id: 470871-002 MS Sample Id: 470871-002 S MSD Sample Id: 470871-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acetone	<20.0	40.0	27.1	68	32.5	81	35-160	18	20	ug/L	09.28.13 12:15	
Benzene	<0.500	20.0	22.8	114	23.5	118	69-130	3	20	ug/L	09.28.13 12:15	
Bromobenzene	<1.50	20.0	22.7	114	23.3	117	70-130	3	20	ug/L	09.28.13 12:15	
Bromochloromethane	<0.500	20.0	26.7	134	30.6	153	63-119	14	22	ug/L	09.28.13 12:15	M1
Bromodichloromethane	<0.500	20.0	24.8	124	26.9	135	70-130	8	20	ug/L	09.28.13 12:15	M1
Bromoform	<1.00	20.0	26.7	134	29.2	146	57-121	9	20	ug/L	09.28.13 12:15	M1
Bromomethane	<5.00	20.0	15.9	80	17.0	85	53-141	7	22	ug/L	09.28.13 12:15	
2-Butanone	<5.00	40.0	35.8	90	44.0	110	46-136	21	22	ug/L	09.28.13 12:15	
MTBE	<2.00	20.0	29.0	145	35.0	175	65-127	19	20	ug/L	09.28.13 12:15	M1
n-Butylbenzene	<2.50	20.0	20.6	103	17.5	88	65-127	16	20	ug/L	09.28.13 12:15	
Sec-Butylbenzene	<1.50	20.0	20.7	104	18.3	92	70-130	12	20	ug/L	09.28.13 12:15	
tert-Butylbenzene	<2.50	20.0	21.1	106	19.3	97	70-130	9	20	ug/L	09.28.13 12:15	
Carbon Disulfide	<0.500	20.0	21.1	106	21.1	106	58-145	0	28	ug/L	09.28.13 12:15	
Carbon Tetrachloride	<0.500	20.0	20.4	102	18.9	95	60-152	8	20	ug/L	09.28.13 12:15	
Chlorobenzene	<0.500	20.0	22.5	113	22.5	113	70-130	0	20	ug/L	09.28.13 12:15	
Chloroethane	<4.00	20.0	24.6	123	21.7	109	59-153	13	20	ug/L	09.28.13 12:15	
Chloroform	0.560	20.0	25.1	123	27.5	135	65-123	9	22	ug/L	09.28.13 12:15	M1
Chloromethane	<5.00	20.0	22.9	115	24.4	122	47-148	6	22	ug/L	09.28.13 12:15	
2-Chlorotoluene	<1.50	20.0	21.4	107	20.5	103	70-130	4	20	ug/L	09.28.13 12:15	
4-Chlorotoluene	<2.00	20.0	21.9	110	20.9	105	70-130	5	20	ug/L	09.28.13 12:15	
p-Cymene (p-Isopropyltoluene)	<1.50	20.0	21.1	106	18.6	93	70-130	13	20	ug/L	09.28.13 12:15	
Dibromochloromethane	1.33	20.0	25.6	121	27.5	131	70-130	7	20	ug/L	09.28.13 12:15	M1
1,2-Dibromo-3-Chloropropane	<2.00	20.0	27.3	137	31.9	160	50-117	16	22	ug/L	09.28.13 12:15	M1
1,2-Dibromoethane	<0.500	20.0	26.5	133	29.4	147	67-117	10	20	ug/L	09.28.13 12:15	M1
Dibromomethane	<0.500	20.0	26.0	130	29.4	147	66-115	12	20	ug/L	09.28.13 12:15	M1
1,2-Dichlorobenzene	<1.50	20.0	22.9	115	23.4	117	70-130	2	20	ug/L	09.28.13 12:15	
1,3-Dichlorobenzene	<1.50	20.0	21.9	110	21.6	108	70-130	1	20	ug/L	09.28.13 12:15	
1,4-Dichlorobenzene	<1.50	20.0	22.3	112	21.9	110	70-130	2	20	ug/L	09.28.13 12:15	
Dichlorodifluoromethane	<2.00	20.0	16.2	81	15.7	79	16-151	3	33	ug/L	09.28.13 12:15	
1,1-Dichloroethane	<0.500	20.0	23.9	120	25.5	128	66-129	6	20	ug/L	09.28.13 12:15	
1,2-Dichloroethane	<0.500	20.0	26.8	134	31.4	157	64-126	16	20	ug/L	09.28.13 12:15	M1
1,1-Dichloroethene	0.730	20.0	23.1	112	23.6	114	65-152	2	20	ug/L	09.28.13 12:15	
cis-1,2-Dichloroethene	<0.500	20.0	24.3	122	26.4	132	66-126	8	20	ug/L	09.28.13 12:15	M1
trans-1,2-dichloroethene	<0.500	20.0	22.5	113	23.3	117	66-135	3	20	ug/L	09.28.13 12:15	
1,2-Dichloropropane	<0.500	20.0	23.6	118	25.6	128	70-130	8	20	ug/L	09.28.13 12:15	
1,3-Dichloropropane	<1.00	20.0	25.5	128	28.2	141	67-115	10	20	ug/L	09.28.13 12:15	M1
2,2-Dichloropropane	<0.500	20.0	23.1	116	23.6	118	62-145	2	20	ug/L	09.28.13 12:15	
1,1-Dichloropropene	<1.00	20.0	21.7	109	21.3	107	72-140	2	20	ug/L	09.28.13 12:15	
cis-1,3-Dichloropropene	<1.00	20.0	25.3	127	27.5	138	67-122	8	20	ug/L	09.28.13 12:15	M1
trans-1,3-dichloropropene	<0.500	20.0	26.3	132	28.7	144	70-130	9	20	ug/L	09.28.13 12:15	M1
Ethylbenzene	<2.00	20.0	21.7	109	20.8	104	70-130	4	20	ug/L	09.28.13 12:15	
Hexachlorobutadiene	<5.00	20.0	20.1	101	16.6	83	68-143	19	20	ug/L	09.28.13 12:15	
2-Hexanone	<5.00	40.0	42.1	105	49.1	123	52-122	15	33	ug/L	09.28.13 12:15	M1
isopropylbenzene	<2.50	20.0	20.7	104	19.6	98	70-130	5	20	ug/L	09.28.13 12:15	
Methylene Chloride	<3.00	20.0	24.9	125	27.8	139	59-121	11	20	ug/L	09.28.13 12:15	M1
Iodomethane (Methyl Iodide)	<2.00	20.0	17.9	90	21.7	109	66-127	19	20	ug/L	09.28.13 12:15	
4-Methyl-2-Pentanone	<5.00	40.0	60.1	150	70.3	176	53-125	16	20	ug/L	09.28.13 12:15	M1
Naphthalene	<5.00	20.0	26.4	132	30.3	152	54-129	14	26	ug/L	09.28.13 12:15	M1
n-Propylbenzene	<2.00	20.0	21.0	105	19.1	96	69-126	9	20	ug/L	09.28.13 12:15	
Styrene	<1.00	20.0	23.2	116	23.0	115	49-142	1	37	ug/L	09.28.13 12:15	
1,1,1,2-Tetrachloroethane	<0.500	20.0	23.6	118	24.1	121	70-130	2	20	ug/L	09.28.13 12:15	
1,1,2,2-Tetrachloroethane	<0.500	20.0	26.8	134	30.1	151	64-122	12	20	ug/L	09.28.13 12:15	M1

QC Summary 470871

Terranext
WVBA

Analytical Method: **VOCs by EPA 8260B** Prep Method: SW5030C
Seq Number: 923861 Matrix: Water Date Prep: 09.28.13
Parent Sample Id: 470871-002 MS Sample Id: 470871-002 S MSD Sample Id: 470871-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Tetrachloroethylene	4.12	20.0	26.0	109	24.9	104	69-130	4	20	ug/L	09.28.13 12:15	
Toluene	<2.00	20.0	21.9	110	21.9	110	70-130	0	20	ug/L	09.28.13 12:15	
1,2,3-Trichlorobenzene	<5.00	20.0	23.9	120	25.4	127	61-126	6	24	ug/L	09.28.13 12:15	M1
1,2,4-Trichlorobenzene	<5.00	20.0	23.4	117	24.2	121	64-123	3	20	ug/L	09.28.13 12:15	
1,1,1-Trichloroethane	<0.500	20.0	22.9	115	23.5	118	68-136	3	20	ug/L	09.28.13 12:15	
1,1,2-Trichloroethane	<0.500	20.0	27.3	137	30.2	151	65-112	10	20	ug/L	09.28.13 12:15	M1
Trichloroethene	1.59	20.0	24.1	113	23.8	111	70-130	1	20	ug/L	09.28.13 12:15	
Trichlorofluoromethane	<2.00	20.0	21.5	108	21.1	106	53-171	2	20	ug/L	09.28.13 12:15	
1,2,3-Trichloropropane	<1.00	20.0	27.2	136	30.7	154	58-116	12	20	ug/L	09.28.13 12:15	M1
1,2,4-Trimethylbenzene	<2.00	20.0	21.8	109	20.4	102	67-128	7	22	ug/L	09.28.13 12:15	
1,3,5-Trimethylbenzene	<1.50	20.0	21.5	108	20.0	100	70-130	7	20	ug/L	09.28.13 12:15	
o-Xylene	<1.00	20.0	22.1	111	21.5	108	70-130	3	20	ug/L	09.28.13 12:15	
m,p-Xylenes	<2.00	40.0	44.0	110	41.7	104	70-130	5	20	ug/L	09.28.13 12:15	
Vinyl Acetate	<5.00	20.0	30.4	152	37.1	186	43-133	20	23	ug/L	09.28.13 12:15	M1
Vinyl Chloride	<0.500	20.0	19.4	97	19.5	98	46-132	1	21	ug/L	09.28.13 12:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		129		69-133	%	09.28.13 12:15
1,2-Dichloroethane-D4	112		143	S10	66-139	%	09.28.13 12:15
Toluene-D8	88		102		70-130	%	09.28.13 12:15
4-Bromofluorobenzene	94		109		70-135	%	09.28.13 12:15

LDC #: 30552 M/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: F
2nd Reviewer: G

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		644555-LCS/D	F	48 (55-165)	48 (55-165)		All	J/UJ/P
			Iodomethane			29 (22)	↓	↓

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: West Van Buren Area

Collection Date: September 25, 2013

LDC Report Date: October 21, 2013

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Xenco Laboratories

Sample Delivery Group (SDG): 470874

Sample Identification

AVB130-0102-1000
AVB130-0100-18159
AVB94-0200-22260
AVB95-0100-22138
AVB95-0200-X230
AVB95-0201-X230
AVB127-0100-17140
AVB134-0200-13230
AVB84-0100-XXX
AVB132-0100-14210
AVB132-0101-14210
AVB124-0100-18215
AVB123-0100-18148
AVB116-0200-18205
AVB116-0100-20134
AVB85-0100-24112
AVB85-0100-24112MS
AVB85-0100-24112MSD

Introduction

This data review covers 18 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level III.

III. Initial Calibration

Initial calibration data were not reviewed for Level III.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level III.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample AVB130-0102-1000 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
644791-1-BLK	1,2-Dichloroethane-d4	65 (66-139)	All TCL compounds	J (all detects) UJ (all non-detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
AVB85-0100-24112MS/MSD (AVB85-0100-24112)	Bromobenzene	-	136 (70-130)	-	J (all detects)	A
	Bromochloromethane	-	133 (63-119)	-	J (all detects)	
	Bromoform	131 (57-121)	156 (57-121)	-	J (all detects)	
	MTBE	-	152 (65-127)	-	J (all detects)	
	Carbon Tetrachloride	-	161 (60-152)	-	J (all detects)	
	Chlorobenzene	-	136 (70-130)	-	J (all detects)	
	Chloromethane	-	154 (47-148)	-	J (all detects)	
	Dibromochloromethane	-	149 (70-130)	-	J (all detects)	
	1,2-Dibromo-3-Chloropropane	125 (50-117)	164 (50-117)	27 (≤22)	J (all detects)	
	1,2-Dibromoethane	129 (67-117)	157 (67-117)	-	J (all detects)	
	Dibromomethane	129 (66-115)	153 (66-115)	-	J (all detects)	
	1,2-Dichlorobenzene	-	131 (70-130)	-	J (all detects)	
	Dichlorodifluoromethane	-	173 (16-151)	-	J (all detects)	
	cis-1,2-Dichloroethane	-	130 (66-126)	-	J (all detects)	
	1,3-Dichloropropane	124 (67-115)	148 (67-115)	-	J (all detects)	
	cis-Dichloropropene	-	129 (67-122)	-	J (all detects)	
	trans1,3-dichloropropene	-	133 (70-130)	-	J (all detects)	
	Ethylbenzene	-	131 (70-130)	-	J (all detects)	
	2-Hexanone	-	146 (52-122)	-	J (all detects)	
	Methylene Chloride	-	128 (59-121)	-	J (all detects)	
	Iodomethane (Methyl Iodide)	-	-	28 (≤20)	J (all detects)	
	4-Methyl-2-Pentanone	-	132 (53-125)	-	J (all detects)	
	Naphthalene	-	147 (54-129)	-	J (all detects)	
	1,1,1,2-Tetrachloroethane	132 (70-130)	153 (70-130)	-	J (all detects)	
	1,1,2,2-Tetrachloroethane	-	151 (64-122)	23 (≤20)	J (all detects)	
	Toluene	-	137 (70-130)	-	J (all detects)	
	1,2,3-Trichlorobenzene	-	133 (61-126)	-	J (all detects)	
	1,2,4-Trichlorobenzene	-	128 (64-123)	-	J (all detects)	
	1,1,2-Trichloroethane	116 (65-112)	138 (65-112)	-	J (all detects)	
	Trichloroethene	-	134 (70-130)	-	J (all detects)	
	1,2,3-Trichloropropane	119 (58-116)	153 (58-116)	25 (≤20)	J (all detects)	
	Vinyl Acetate	-	142 (43-133)	-	J (all detects)	
	Vinyl Chloride	-	138 (46-132)	-	J (all detects)	

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
644623-LCS/D (All samples from SDG 470874)	Acetone	47 (55-165)	38 (55-165)	-	J (all detects)	P
	2-Butanone	-	53 (58-146)	-	UJ (all non-detects)	
	Chloroethane	29 (60-146)	34 (60-146)	-		
	4-Methyl-2-pentanone	-	-	22 (≤21)		
644623-LCS/D (All samples from SDG 470874)	Bromoform	135 (69-130)	-	-	J (all detects)	P
	1,2-Dibromo-3-chloropropane	132 (60-128)	-	-	J (all detects)	
	Dichlorodifluoromethane	142 (9-134)	139 (9-134)	-	J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples AVB95-0200-X230 and AVB95-0201-X230 and samples AVB132-0100-14210 and AVB132-0101-14210 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	AVB132-0100-14210	AVB132-0101-14210			
Chloroform	2.32	2.21	5 (≤20)	-	-
1,1-Dichloroethane	9.61	9.07	6 (≤20)	-	-
1,1-Dichloroethene	20.0	18.8	6 (≤20)	-	-
cis-1,2-Dichloroethene	33.0	31.4	5 (≤20)	-	-
Tetrachloroethene	10.6	10.2	4 (≤20)	-	-
Trichloroethene	252	278	10 (≤20)	-	-

West Van Buren Area
Volatiles - Data Qualification Summary - SDG 470874

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470874	AVB85-0100-24112	Bromobenzene Bromochloromethane Bromoform MTBE Carbon Tetrachloride Chlorobenzene Chloromethane Dibromochloromethane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene Dichlorodifluoromethane cis-1,2-Dichloroethane 1,3-Dichloropropane cis-Dichloropropene trans1,3-dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-Pentanone Naphthalene 1,1,1,2-Tetrachloroethane Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,1,2-Trichloroethane Trichloroethene Vinyl Acetate Vinyl Chloride	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (M1)
470874	AVB85-0100-24112	1,2-Dibromo-3-Chloropropane 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (M1,R2)
470874	AVB85-0100-24112	Iodomethane (Methyl Iodide)	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (R2)
470874	AVB130-0102-1000 AVB130-0100-18159 AVB94-0200-22260 AVB95-0100-22138 AVB95-0200-X230 AVB95-0201-X230 AVB127-0100-17140 AVB134-0200-13230 AVB84-0100-XXX AVB132-0100-14210 AVB132-0101-14210 AVB124-0100-18215 AVB123-0100-18148 AVB116-0200-18205 AVB116-0100-20134 AVB85-0100-24112	Acetone 2-Butanone Chloroethane	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L2)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
470874	AVB130-0102-1000 AVB130-0100-18159 AVB94-0200-22260 AVB95-0100-22138 AVB95-0200-X230 AVB95-0201-X230 AVB127-0100-17140 AVB134-0200-13230 AVB84-0100-XXX AVB132-0100-14210 AVB132-0101-14210 AVB124-0100-18215 AVB123-0100-18148 AVB116-0200-18205 AVB116-0100-20134 AVB85-0100-24112	4-Methyl-2-pentanone	J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (R2)
470874	AVB130-0102-1000 AVB130-0100-18159 AVB94-0200-22260 AVB95-0100-22138 AVB95-0200-X230 AVB95-0201-X230 AVB127-0100-17140 AVB134-0200-13230 AVB84-0100-XXX AVB132-0100-14210 AVB132-0101-14210 AVB124-0100-18215 AVB123-0100-18148 AVB116-0200-18205 AVB116-0100-20134 AVB85-0100-24112	Bromoform 1,2-Dibromo-3-chloropropane Dichlorodifluoromethane	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L1)

West Van Buren Area
Volatiles - Laboratory Blank Data Qualification Summary - SDG 470874

No Sample Data Qualified in this SDG

West Van Buren Area
Volatiles - Field Blank Data Qualification Summary - SDG 470874

No Sample Data Qualified in this SDG

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB130-0102-1000**
Lab Sample Id: 470874-001

Matrix: Water
Date Collected: 09.25.13 08.00

Date Received:09.25.13 15.20

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923981

Date Prep: 09.30.13 08.00

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 14.51	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 14.51		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 14.51		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 14.51		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 14.51		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 14.51	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 14.51		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 14.51	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 14.51		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 14.51		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 14.51		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 14.51		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 14.51		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 14.51		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 14.51		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 14.51	L2 UJ(L2)	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.30.13 14.51		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 14.51		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 14.51		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 14.51		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 14.51		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 14.51		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 14.51	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 14.51		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 14.51		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 14.51		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 14.51		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 14.51		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 14.51	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 14.51		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 14.51		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 14.51		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 14.51		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 14.51		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 14.51		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 14.51		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 14.51		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 14.51		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 14.51		1

CL 10/30/13

Final 1.000

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB130-0102-1000** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-001 Date Collected: 09.25.13 08.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 14.51		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 14.51		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 14.51		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 14.51		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 14.51		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 14.51		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 14.51		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 14.51	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 14.51		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 14.51		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 14.51		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 14.51		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 14.51		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.30.13 14.51		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 14.51		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 14.51		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 14.51		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 14.51		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 14.51		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.30.13 14.51		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 14.51		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 14.51		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 14.51		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 14.51		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 14.51		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 14.51		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 14.51		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 14.51		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 14.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	97	%	69-133	09.30.13 14.51	
1,2-Dichloroethane-D4	17060-07-0	93	%	66-139	09.30.13 14.51	
Toluene-D8	2037-26-5	96	%	70-130	09.30.13 14.51	
4-Bromofluorobenzene	460-00-4	97	%	70-135	09.30.13 14.51	

Final 1.000

02/10/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB130-0100-18159** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-002 Date Collected: 09.25.13 08.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 15.16	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 15.16		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 15.16		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 15.16		1
Bromodichloromethane	75-27-4	**1.39**	0.500	ug/L	09.30.13 15.16		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 15.16	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 15.16		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 15.16	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 15.16		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 15.16		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 15.16		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 15.16		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 15.16		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 15.16		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 15.16		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 15.16	L2 UJ(L2)	1
Chloroform	67-66-3	**3.05**	0.500	ug/L	09.30.13 15.16		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 15.16		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 15.16		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 15.16		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 15.16		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 15.16		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 15.16	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 15.16		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 15.16		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 15.16		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 15.16		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 15.16		1
Dichlorodifluoromethane	75-71-8	**58.5**	2.00	ug/L	09.30.13 15.16	N1 J(L1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 15.16		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 15.16		1
1,1-Dichloroethene	75-35-4	**2.72**	0.500	ug/L	09.30.13 15.16		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 15.16		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 15.16		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 15.16		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 15.16		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 15.16		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 15.16		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 15.16		1

Final 1.000

0246/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB130-0100-18159** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-002 Date Collected: 09.25.13 08.35

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 15.16		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 15.16		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 15.16		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 15.16		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 15.16		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 15.16		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 15.16		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 15.16	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 15.16		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 15.16		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 15.16		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 15.16		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 15.16		1
Tetrachloroethylene	127-18-4	**0.570**	0.500	ug/L	09.30.13 15.16		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 15.16		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 15.16		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 15.16		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 15.16		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 15.16		1
Trichloroethene	79-01-6	**28.4**	0.500	ug/L	09.30.13 15.16		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 15.16		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 15.16		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 15.16		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 15.16		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 15.16		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 15.16		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 15.16		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 15.16		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 15.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	95	%	69-133	09.30.13 15.16	
1,2-Dichloroethane-D4	17060-07-0	89	%	66-139	09.30.13 15.16	
Toluene-D8	2037-26-5	98	%	70-130	09.30.13 15.16	
4-Bromofluorobenzene	460-00-4	97	%	70-135	09.30.13 15.16	

Final 1.000

09/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB94-0200-22260** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-003 Date Collected: 09.25.13 09.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 16.57	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 16.57		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 16.57		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 16.57		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 16.57		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 16.57	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 16.57		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 16.57	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 16.57		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 16.57		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 16.57		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 16.57		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 16.57		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 16.57		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 16.57		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 16.57	L2 UJ(L2)	1
Chloroform	67-66-3	**1.79**	0.500	ug/L	09.30.13 16.57		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 16.57		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 16.57		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 16.57		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 16.57		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 16.57		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 16.57	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 16.57		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 16.57		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 16.57		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 16.57		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 16.57		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 16.57	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 16.57		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 16.57		1
1,1-Dichloroethene	75-35-4	**1.07**	0.500	ug/L	09.30.13 16.57		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 16.57		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 16.57		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 16.57		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 16.57		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 16.57		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 16.57		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 16.57		1

 Final 1.000

OL 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB94-0200-22260** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-003 Date Collected: 09.25.13 09.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 16.57		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 16.57		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 16.57		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 16.57		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 16.57		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 16.57		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 16.57		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 16.57	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 16.57		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 16.57		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 16.57		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 16.57		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 16.57		1
Tetrachloroethylene	127-18-4	**3.51**	0.500	ug/L	09.30.13 16.57		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 16.57		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 16.57		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 16.57		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 16.57		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 16.57		1
Trichloroethene	79-01-6	**4.70**	0.500	ug/L	09.30.13 16.57		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 16.57		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 16.57		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 16.57		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 16.57		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 16.57		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 16.57		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 16.57		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 16.57		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 16.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	97	%	69-133	09.30.13 16.57	
1,2-Dichloroethane-D4	17060-07-0	95	%	66-139	09.30.13 16.57	
Toluene-D8	2037-26-5	99	%	70-130	09.30.13 16.57	
4-Bromofluorobenzene	460-00-4	101	%	70-135	09.30.13 16.57	

Final 1.000

OZ10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0100-22138** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-004 Date Collected: 09.25.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 17.22	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 17.22		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 17.22		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 17.22		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 17.22		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 17.22	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 17.22		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 17.22	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 17.22		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 17.22		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 17.22		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 17.22		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 17.22		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 17.22		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 17.22		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 17.22	L2UJ(L2)	1
Chloroform	67-66-3	**2.01**	0.500	ug/L	09.30.13 17.22		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 17.22		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 17.22		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 17.22		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 17.22		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 17.22		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 17.22	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 17.22		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 17.22		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 17.22		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 17.22		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 17.22		1
Dichlorodifluoromethane	75-71-8	**2.31**	2.00	ug/L	09.30.13 17.22	N1UJ(L1)	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 17.22		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 17.22		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 17.22		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 17.22		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 17.22		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 17.22		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 17.22		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 17.22		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 17.22		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 17.22		1

Final 1.000

02/10/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0100-22138** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-004 Date Collected: 09.25.13 09.50

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 17.22		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 17.22		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 17.22		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 17.22		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 17.22		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 17.22		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 17.22		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 17.22	UJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 17.22		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 17.22		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 17.22		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 17.22		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 17.22		1
Tetrachloroethylene	127-18-4	**1.52**	0.500	ug/L	09.30.13 17.22		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 17.22		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 17.22		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 17.22		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 17.22		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 17.22		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.30.13 17.22		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 17.22		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 17.22		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 17.22		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 17.22		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 17.22		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 17.22		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 17.22		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 17.22		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 17.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	09.30.13 17.22	
1,2-Dichloroethane-D4	17060-07-0	89	%	66-139	09.30.13 17.22	
Toluene-D8	2037-26-5	96	%	70-130	09.30.13 17.22	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.30.13 17.22	

Final 1.000

OCT 30 13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0200-X230**
Lab Sample Id: 470874-005

Matrix: Water
Date Collected: 09.25.13 10.15

Date Received:09.25.13 15.20

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923981

Date Prep: 09.30.13 08.00

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 17.47	L2 U3(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 17.47		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 17.47		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 17.47		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 17.47		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 17.47	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 17.47		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 17.47	L2 U3(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 17.47		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 17.47		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 17.47		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 17.47		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 17.47		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 17.47		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 17.47		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 17.47	L2 U3(L2)	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.30.13 17.47		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 17.47		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 17.47		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 17.47		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 17.47		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 17.47		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 17.47	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 17.47		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 17.47		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 17.47		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 17.47		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 17.47		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 17.47	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 17.47		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 17.47		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 17.47		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 17.47		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 17.47		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 17.47		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 17.47		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 17.47		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 17.47		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 17.47		1

Final 1.000

OC 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0200-X230** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-005 Date Collected: 09.25.13 10.15

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 17.47		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 17.47		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 17.47		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 17.47		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 17.47		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 17.47		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 17.47		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 17.47	UJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 17.47		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 17.47		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 17.47		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 17.47		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 17.47		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.30.13 17.47		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 17.47		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 17.47		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 17.47		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 17.47		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 17.47		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.30.13 17.47		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 17.47		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 17.47		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 17.47		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 17.47		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 17.47		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 17.47		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 17.47		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 17.47		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 17.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	95	%	69-133	09.30.13 17.47	
1,2-Dichloroethane-D4	17060-07-0	94	%	66-139	09.30.13 17.47	
Toluene-D8	2037-26-5	100	%	70-130	09.30.13 17.47	
4-Bromofluorobenzene	460-00-4	102	%	70-135	09.30.13 17.47	

01/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0201-X230**
Lab Sample Id: 470874-006

Matrix: Water
Date Collected: 09.25.13 10.20

Date Received:09.25.13 15.20

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923981

Date Prep: 09.30.13 08.00

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 18.12	L2 VJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 18.12		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 18.12		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 18.12		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 18.12		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 18.12	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 18.12		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 18.12	L2 VJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 18.12		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 18.12		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 18.12		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 18.12		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 18.12		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 18.12		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 18.12		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 18.12	L2 VJ(L2)	1
Chloroform	67-66-3	<0.500	0.500	ug/L	09.30.13 18.12		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 18.12		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 18.12		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 18.12		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 18.12		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 18.12		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 18.12	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 18.12		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 18.12		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 18.12		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 18.12		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 18.12		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 18.12	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 18.12		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 18.12		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 18.12		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 18.12		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 18.12		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 18.12		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 18.12		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 18.12		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 18.12		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 18.12		1

Final 1.000

OL 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB95-0201-X230** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-006 Date Collected: 09.25.13 10.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 18.12		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 18.12		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 18.12		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 18.12		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 18.12		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 18.12		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 18.12		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 18.12	UJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 18.12		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 18.12		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 18.12		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 18.12		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 18.12		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.30.13 18.12		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 18.12		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 18.12		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 18.12		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 18.12		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 18.12		1
Trichloroethene	79-01-6	<0.500	0.500	ug/L	09.30.13 18.12		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 18.12		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 18.12		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 18.12		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 18.12		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 18.12		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 18.12		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 18.12		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 18.12		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 18.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	83	%	69-133	09.30.13 18.12	
1,2-Dichloroethane-D4	17060-07-0	82	%	66-139	09.30.13 18.12	
Toluene-D8	2037-26-5	88	%	70-130	09.30.13 18.12	
4-Bromofluorobenzene	460-00-4	91	%	70-135	09.30.13 18.12	

Final 1.000

OZ 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB127-0100-17140** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-007 Date Collected: 09.25.13 10.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 18.37	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 18.37		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 18.37		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 18.37		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 18.37		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 18.37	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 18.37		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 18.37	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 18.37		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 18.37		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 18.37		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 18.37		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 18.37		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 18.37		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 18.37		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 18.37	L2 U5(L2)	1
Chloroform	67-66-3	**2.40**	0.500	ug/L	09.30.13 18.37		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 18.37		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 18.37		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 18.37		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 18.37		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 18.37		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 18.37	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 18.37		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 18.37		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 18.37		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 18.37		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 18.37		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 18.37	N1	1
1,1-Dichloroethane	75-34-3	**0.880**	0.500	ug/L	09.30.13 18.37		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 18.37		1
1,1-Dichloroethene	75-35-4	**1.45**	0.500	ug/L	09.30.13 18.37		1
cis-1,2-Dichloroethene	156-59-2	**4.34**	0.500	ug/L	09.30.13 18.37		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 18.37		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 18.37		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 18.37		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 18.37		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 18.37		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 18.37		1

Final 1.000

10/3/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB127-0100-17140**
Lab Sample Id: 470874-007

Matrix: Water
Date Collected: 09.25.13 10.45

Date Received: 09.25.13 15.20

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923981

Date Prep: 09.30.13 08.00

Prep Method: SW5030C
% Moisture:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 18.37		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 18.37		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 18.37		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 18.37		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 18.37		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 18.37		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 18.37	UJ(R2)	1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 18.37		1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 18.37		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 18.37		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 18.37		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 18.37		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 18.37		1
Tetrachloroethylene	127-18-4	**4.42**	0.500	ug/L	09.30.13 18.37		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 18.37		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 18.37		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 18.37		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 18.37		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 18.37		1
Trichloroethene	79-01-6	**29.0**	0.500	ug/L	09.30.13 18.37		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 18.37		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 18.37		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 18.37		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 18.37		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 18.37		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 18.37		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 18.37		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 18.37		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 18.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	09.30.13 18.37	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	09.30.13 18.37	
Toluene-D8	2037-26-5	98	%	70-130	09.30.13 18.37	
4-Bromofluorobenzene	460-00-4	99	%	70-135	09.30.13 18.37	

Final 1.000

09/10/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB134-0200-13230** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-008 Date Collected: 09.25.13 11.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Dilution Analysis:
Seq#: 924288 Date Analyzed: 10/01/13 20:10 Date Prep: 10/01/13 16:54

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 19.02	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 19.02		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 19.02		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 19.02		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 19.02		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 19.02	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 19.02		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 19.02	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 19.02		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 19.02		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 19.02		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 19.02		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 19.02		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 19.02		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 19.02		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 19.02	L2 UJ(L2)	1
Chloroform	67-66-3	**2.31**	0.500	ug/L	09.30.13 19.02		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 19.02		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 19.02		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 19.02		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 19.02		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 19.02		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 19.02	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 19.02		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 19.02		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 19.02		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 19.02		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 19.02		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 19.02	N1	1
1,1-Dichloroethane	75-34-3	**9.35**	0.500	ug/L	09.30.13 19.02		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 19.02		1
1,1-Dichloroethene	75-35-4	**21.5**	0.500	ug/L	09.30.13 19.02		1
cis-1,2-Dichloroethene	156-59-2	**26.8**	0.500	ug/L	09.30.13 19.02		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 19.02		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 19.02		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 19.02		1

 Final 1.000

02/10/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB134-0200-13230** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-008 Date Collected: 09.25.13 11.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 19.02		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 19.02		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 19.02		1
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 19.02		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 19.02		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 19.02		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 19.02		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 19.02		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 19.02		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 19.02		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 19.02	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 19.02		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 19.02		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 19.02		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 19.02		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 19.02		1
Tetrachloroethylene	127-18-4	**10.1**	0.500	ug/L	09.30.13 19.02		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 19.02		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 19.02		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 19.02		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 19.02		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 19.02		1
Trichloroethene	79-01-6	**227**	5.00	ug/L	10.01.13 20.10	D2	10
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 19.02		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 19.02		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 19.02		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 19.02		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 19.02		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 19.02		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 19.02		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 19.02		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 19.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	09.30.13 19.02	
1,2-Dichloroethane-D4	17060-07-0	89	%	66-139	09.30.13 19.02	
Toluene-D8	2037-26-5	98	%	70-130	09.30.13 19.02	
4-Bromofluorobenzene	460-00-4	102	%	70-135	09.30.13 19.02	

10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB84-0100-XXX** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-009 Date Collected: 09.25.13 12.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 19.27	L2 U3(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 19.27		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 19.27		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 19.27		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 19.27		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 19.27	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 19.27		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 19.27	L2 U3(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 19.27		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 19.27		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 19.27		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 19.27		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 19.27		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 19.27		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 19.27		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 19.27	L2 U3(L2)	1
Chloroform	67-66-3	**0.730**	0.500	ug/L	09.30.13 19.27		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 19.27		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 19.27		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 19.27		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 19.27		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 19.27		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 19.27	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 19.27		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 19.27		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 19.27		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 19.27		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 19.27		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 19.27	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 19.27		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 19.27		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 19.27		1
cis-1,2-Dichloroethene	156-59-2	<0.500	0.500	ug/L	09.30.13 19.27		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 19.27		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 19.27		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 19.27		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 19.27		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 19.27		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 19.27		1

Final 1.000

CS 10/3/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB84-0100-XXX** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-009 Date Collected: 09.25.13 12.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 19.27		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 19.27		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 19.27		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 19.27		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 19.27		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 19.27		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 19.27		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 19.27	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 19.27		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 19.27		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 19.27		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 19.27		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 19.27		1
Tetrachloroethylene	127-18-4	<0.500	0.500	ug/L	09.30.13 19.27		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 19.27		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 19.27		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 19.27		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 19.27		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 19.27		1
Trichloroethene	79-01-6	**0.510**	0.500	ug/L	09.30.13 19.27		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 19.27		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 19.27		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 19.27		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 19.27		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 19.27		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 19.27		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 19.27		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 19.27		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 19.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	91	%	69-133	09.30.13 19.27	
1,2-Dichloroethane-D4	17060-07-0	90	%	66-139	09.30.13 19.27	
Toluene-D8	2037-26-5	95	%	70-130	09.30.13 19.27	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.30.13 19.27	

Final 1.000

01/03/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0100-14210** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-010 Date Collected: 09.25.13 12.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Dilution Analysis:
Seq#: 924288 Date Analyzed: 10/01/13 21:00 Date Prep: 10/01/13 16:54

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 19.52	L2 VJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 19.52		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 19.52		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 19.52		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 19.52		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 19.52	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 19.52		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 19.52	L2 VJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 19.52		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 19.52		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 19.52		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 19.52		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 19.52		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 19.52		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 19.52		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 19.52	L2 VJ(L2)	1
Chloroform	67-66-3	**2.32**	0.500	ug/L	09.30.13 19.52		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 19.52		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 19.52		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 19.52		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 19.52		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 19.52		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 19.52	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 19.52		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 19.52		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 19.52		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 19.52		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 19.52		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 19.52	N1	1
1,1-Dichloroethane	75-34-3	**9.61**	0.500	ug/L	09.30.13 19.52		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 19.52		1
1,1-Dichloroethene	75-35-4	**20.0**	0.500	ug/L	09.30.13 19.52		1
cis-1,2-Dichloroethene	156-59-2	**33.0**	0.500	ug/L	09.30.13 19.52		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 19.52		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 19.52		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 19.52		1

0410/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0100-14210** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-010 Date Collected: 09.25.13 12.25

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 19.52		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 19.52		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 19.52		1
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 19.52		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 19.52		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 19.52		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 19.52		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 19.52		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 19.52		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 19.52		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 19.52	VJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 19.52		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 19.52		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 19.52		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 19.52		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 19.52		1
Tetrachloroethylene	127-18-4	**10.6**	0.500	ug/L	09.30.13 19.52		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 19.52		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 19.52		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 19.52		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 19.52		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 19.52		1
Trichloroethene	79-01-6	**252**	5.00	ug/L	10.01.13 21.00	D2	10
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 19.52		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 19.52		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 19.52		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 19.52		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 19.52		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 19.52		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 19.52		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 19.52		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 19.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	09.30.13 19.52	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	09.30.13 19.52	
Toluene-D8	2037-26-5	95	%	70-130	09.30.13 19.52	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.30.13 19.52	

0110/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0101-14210**
Lab Sample Id: 470874-011

Matrix: Water
Date Collected: 09.25.13 12.30

Date Received:09.25.13 15.20

Analytical Method: VOCs by EPA 8260B
Tech: BLK
Analyst: BLK
Seq Number: 923981

Date Prep: 09.30.13 08.00

Prep Method: SW5030C
% Moisture:

Dilution Analysis:
Seq#: 924288 Date Analyzed: 10/01/13 21:25 Date Prep: 10/01/13 16:54

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 20.17	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 20.17		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 20.17		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 20.17		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 20.17		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 20.17	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 20.17		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 20.17	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 20.17		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 20.17		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 20.17		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 20.17		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 20.17		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 20.17		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 20.17		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 20.17	L2 U5(L2)	1
Chloroform	67-66-3	**2.21**	0.500	ug/L	09.30.13 20.17		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 20.17		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 20.17		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 20.17		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 20.17		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 20.17		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 20.17	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 20.17		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 20.17		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 20.17		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 20.17		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 20.17		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 20.17	N1	1
1,1-Dichloroethane	75-34-3	**9.07**	0.500	ug/L	09.30.13 20.17		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 20.17		1
1,1-Dichloroethene	75-35-4	**18.8**	0.500	ug/L	09.30.13 20.17		1
cis-1,2-Dichloroethene	156-59-2	**31.4**	0.500	ug/L	09.30.13 20.17		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 20.17		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 20.17		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 20.17		1

Final 1.000

10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB132-0101-14210** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-011 Date Collected: 09.25.13 12.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 20.17		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 20.17		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 20.17		1
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 20.17		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 20.17		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 20.17		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 20.17		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 20.17		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 20.17		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 20.17		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 20.17	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 20.17		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 20.17		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 20.17		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 20.17		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 20.17		1
Tetrachloroethylene	127-18-4	**10.2**	0.500	ug/L	09.30.13 20.17		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 20.17		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 20.17		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 20.17		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 20.17		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 20.17		1
Trichloroethene	79-01-6	**278**	5.00	ug/L	10.01.13 21.25	D2	10
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 20.17		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 20.17		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 20.17		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 20.17		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 20.17		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 20.17		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 20.17		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 20.17		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 20.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	09.30.13 20.17	
1,2-Dichloroethane-D4	17060-07-0	86	%	66-139	09.30.13 20.17	
Toluene-D8	2037-26-5	98	%	70-130	09.30.13 20.17	
4-Bromofluorobenzene	460-00-4	99	%	70-135	09.30.13 20.17	

CL 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0100-18215** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-012 Date Collected: 09.25.13 13.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Dilution Analysis:
Seq#: 924288 Date Analyzed: 10/01/13 21:50 Date Prep: 10/01/13 16:54

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 20.42	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 20.42		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 20.42		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 20.42		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 20.42		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 20.42	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 20.42		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 20.42	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 20.42		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 20.42		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 20.42		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 20.42		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 20.42		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 20.42		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 20.42		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 20.42	L2 UJ(L2)	1
Chloroform	67-66-3	**1.16**	0.500	ug/L	09.30.13 20.42		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 20.42		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 20.42		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 20.42		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 20.42		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 20.42		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 20.42	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 20.42		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 20.42		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 20.42		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 20.42		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 20.42		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 20.42	N1	1
1,1-Dichloroethane	75-34-3	**3.73**	0.500	ug/L	09.30.13 20.42		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 20.42		1
1,1-Dichloroethene	75-35-4	**12.8**	0.500	ug/L	09.30.13 20.42		1
cis-1,2-Dichloroethene	156-59-2	**17.6**	0.500	ug/L	09.30.13 20.42		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 20.42		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 20.42		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 20.42		1

OC 10/3/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB124-0100-18215** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-012 Date Collected: 09.25.13 13.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 20.42		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 20.42		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 20.42		1
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 20.42		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 20.42		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 20.42		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 20.42		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 20.42		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 20.42		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 20.42		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 20.42	VJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 20.42		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 20.42		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 20.42		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 20.42		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 20.42		1
Tetrachloroethylene	127-18-4	**8.49**	0.500	ug/L	09.30.13 20.42		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 20.42		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 20.42		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 20.42		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 20.42		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 20.42		1
Trichloroethene	79-01-6	**184**	5.00	ug/L	10.01.13 21.50	D2	10
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 20.42		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 20.42		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 20.42		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 20.42		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 20.42		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 20.42		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 20.42		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 20.42		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 20.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	88	%	69-133	09.30.13 20.42	
1,2-Dichloroethane-D4	17060-07-0	86	%	66-139	09.30.13 20.42	
Toluene-D8	2037-26-5	97	%	70-130	09.30.13 20.42	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.30.13 20.42	

10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB123-0100-18148** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-013 Date Collected: 09.25.13 13.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 21.07	L2 U5(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 21.07		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 21.07		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 21.07		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 21.07		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 21.07	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 21.07		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 21.07	L2 U5(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 21.07		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 21.07		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 21.07		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 21.07		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 21.07		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 21.07		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 21.07		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 21.07	L2 U5(L2)	1
Chloroform	67-66-3	**1.33**	0.500	ug/L	09.30.13 21.07		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 21.07		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 21.07		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 21.07		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 21.07		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 21.07		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 21.07	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 21.07		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 21.07		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 21.07		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 21.07		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 21.07		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 21.07	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 21.07		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 21.07		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 21.07		1
cis-1,2-Dichloroethene	156-59-2	**0.650**	0.500	ug/L	09.30.13 21.07		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 21.07		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 21.07		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 21.07		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 21.07		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 21.07		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 21.07		1

 Final 1.000

C2 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB123-0100-18148** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-013 Date Collected: 09.25.13 13.30

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 21.07		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 21.07		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 21.07		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 21.07		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 21.07		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 21.07		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 21.07		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 21.07	J5 (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 21.07		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 21.07		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 21.07		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 21.07		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 21.07		1
Tetrachloroethylene	127-18-4	**0.980**	0.500	ug/L	09.30.13 21.07		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 21.07		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 21.07		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 21.07		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 21.07		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 21.07		1
Trichloroethene	79-01-6	**5.37**	0.500	ug/L	09.30.13 21.07		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 21.07		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 21.07		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 21.07		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 21.07		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 21.07		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 21.07		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 21.07		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 21.07		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 21.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	90	%	69-133	09.30.13 21.07	
1,2-Dichloroethane-D4	17060-07-0	86	%	66-139	09.30.13 21.07	
Toluene-D8	2037-26-5	98	%	70-130	09.30.13 21.07	
4-Bromofluorobenzene	460-00-4	99	%	70-135	09.30.13 21.07	

10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB116-0200-18205** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-014 Date Collected: 09.25.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 21.32	L2 US(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 21.32		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 21.32		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 21.32		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 21.32		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 21.32	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 21.32		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 21.32	L2 US(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 21.32		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 21.32		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 21.32		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 21.32		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 21.32		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 21.32		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 21.32		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 21.32	L2 US(L2)	1
Chloroform	67-66-3	**1.20**	0.500	ug/L	09.30.13 21.32		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 21.32		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 21.32		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 21.32		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 21.32		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 21.32		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 21.32	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 21.32		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 21.32		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 21.32		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 21.32		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 21.32		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 21.32	N1	1
1,1-Dichloroethane	75-34-3	**2.11**	0.500	ug/L	09.30.13 21.32		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 21.32		1
1,1-Dichloroethene	75-35-4	**3.68**	0.500	ug/L	09.30.13 21.32		1
cis-1,2-Dichloroethene	156-59-2	**2.40**	0.500	ug/L	09.30.13 21.32		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 21.32		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 21.32		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 21.32		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 21.32		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 21.32		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 21.32		1

 Final 1.000

10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB116-0200-18205** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-014 Date Collected: 09.25.13 14.00

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 21.32		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 21.32		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 21.32		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 21.32		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 21.32		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 21.32		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 21.32		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 21.32	UJ (R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 21.32		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 21.32		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 21.32		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 21.32		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 21.32		1
Tetrachloroethylene	127-18-4	**1.37**	0.500	ug/L	09.30.13 21.32		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 21.32		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 21.32		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 21.32		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 21.32		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 21.32		1
Trichloroethene	79-01-6	**12.2**	0.500	ug/L	09.30.13 21.32		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 21.32		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 21.32		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 21.32		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 21.32		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 21.32		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 21.32		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 21.32		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 21.32		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 21.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	09.30.13 21.32	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	09.30.13 21.32	
Toluene-D8	2037-26-5	95	%	70-130	09.30.13 21.32	
4-Bromofluorobenzene	460-00-4	100	%	70-135	09.30.13 21.32	

02/10/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB116-0100-20134** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-015 Date Collected: 09.25.13 14.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 21.57	L2 VJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 21.57		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 21.57		1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 21.57		1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 21.57		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 21.57	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 21.57		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 21.57	L2 VJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 21.57		1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 21.57		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 21.57		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 21.57		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 21.57		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 21.57		1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 21.57		1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 21.57	L2 VJ(L2)	1
Chloroform	67-66-3	**1.45**	0.500	ug/L	09.30.13 21.57		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 21.57		1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 21.57		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 21.57		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 21.57		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 21.57		1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 21.57	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 21.57		1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 21.57		1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 21.57		1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 21.57		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 21.57		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 21.57	N1	1
1,1-Dichloroethane	75-34-3	**1.18**	0.500	ug/L	09.30.13 21.57		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 21.57		1
1,1-Dichloroethene	75-35-4	**1.91**	0.500	ug/L	09.30.13 21.57		1
cis-1,2-Dichloroethene	156-59-2	**1.28**	0.500	ug/L	09.30.13 21.57		1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 21.57		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 21.57		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 21.57		1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 21.57		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 21.57		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 21.57		1

OLG BUB

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB116-0100-20134** Matrix: Water Date Received:09.25.13 15.20

Lab Sample Id: 470874-015 Date Collected: 09.25.13 14.20

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C

Tech: BLK % Moisture:

Analyst: BLK Date Prep: 09.30.13 08.00

Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 21.57		1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 21.57		1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 21.57		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 21.57		1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 21.57		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 21.57		1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 21.57		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 21.57	UJ(R2)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 21.57		1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 21.57		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 21.57		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 21.57		1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 21.57		1
Tetrachloroethylene	127-18-4	**0.990**	0.500	ug/L	09.30.13 21.57		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 21.57		1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 21.57		1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 21.57		1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 21.57		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 21.57		1
Trichloroethene	79-01-6	**6.48**	0.500	ug/L	09.30.13 21.57		1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 21.57		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 21.57		1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 21.57		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 21.57		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 21.57		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 21.57		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 21.57		1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 21.57		1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 21.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	92	%	69-133	09.30.13 21.57	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	09.30.13 21.57	
Toluene-D8	2037-26-5	101	%	70-130	09.30.13 21.57	
4-Bromofluorobenzene	460-00-4	102	%	70-135	09.30.13 21.57	

Final 1.000

C2 10/30/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB85-0100-24112** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-016 Date Collected: 09.25.13 14.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acetone	67-64-1	<20.0	20.0	ug/L	09.30.13 22.22	L2 UJ(L2)	1
Benzene	71-43-2	<0.500	0.500	ug/L	09.30.13 22.22		1
Bromobenzene	108-86-1	<1.50	1.50	ug/L	09.30.13 22.22	M1	1
Bromochloromethane	74-97-5	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Bromodichloromethane	75-27-4	<0.500	0.500	ug/L	09.30.13 22.22		1
Bromoform	75-25-2	<1.00	1.00	ug/L	09.30.13 22.22	N1	1
Bromomethane	74-83-9	<5.00	5.00	ug/L	09.30.13 22.22		1
2-Butanone	78-93-3	<5.00	5.00	ug/L	09.30.13 22.22	L2 UJ(L2)	1
MTBE	1634-04-4	<2.00	2.00	ug/L	09.30.13 22.22	M1	1
n-Butylbenzene	104-51-8	<2.50	2.50	ug/L	09.30.13 22.22		1
Sec-Butylbenzene	135-98-8	<1.50	1.50	ug/L	09.30.13 22.22		1
tert-Butylbenzene	98-06-6	<2.50	2.50	ug/L	09.30.13 22.22		1
Carbon Disulfide	75-15-0	<0.500	0.500	ug/L	09.30.13 22.22		1
Carbon Tetrachloride	56-23-5	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Chlorobenzene	108-90-7	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Chloroethane	75-00-3	<4.00	4.00	ug/L	09.30.13 22.22	L2 UJ(L2)	1
Chloroform	67-66-3	**0.570**	0.500	ug/L	09.30.13 22.22		1
Chloromethane	74-87-3	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
2-Chlorotoluene	95-49-8	<1.50	1.50	ug/L	09.30.13 22.22		1
4-Chlorotoluene	106-43-4	<2.00	2.00	ug/L	09.30.13 22.22		1
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.50	1.50	ug/L	09.30.13 22.22		1
Dibromochloromethane	124-48-1	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
1,2-Dibromo-3-Chloropropane	96-12-8	<2.00	2.00	ug/L	09.30.13 22.22	N1	1
1,2-Dibromoethane	106-93-4	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Dibromomethane	74-95-3	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
1,2-Dichlorobenzene	95-50-1	<1.50	1.50	ug/L	09.30.13 22.22	M1	1
1,3-Dichlorobenzene	541-73-1	<1.50	1.50	ug/L	09.30.13 22.22		1
1,4-Dichlorobenzene	106-46-7	<1.50	1.50	ug/L	09.30.13 22.22		1
Dichlorodifluoromethane	75-71-8	<2.00	2.00	ug/L	09.30.13 22.22	N1	1
1,1-Dichloroethane	75-34-3	<0.500	0.500	ug/L	09.30.13 22.22		1
1,2-Dichloroethane	107-06-2	<0.500	0.500	ug/L	09.30.13 22.22		1
1,1-Dichloroethene	75-35-4	<0.500	0.500	ug/L	09.30.13 22.22		1
cis-1,2-Dichloroethene	156-59-2	**1.72**	0.500	ug/L	09.30.13 22.22	M1 J(M1)	1
trans-1,2-dichloroethene	156-60-5	<0.500	0.500	ug/L	09.30.13 22.22		1
1,2-Dichloropropane	78-87-5	<0.500	0.500	ug/L	09.30.13 22.22		1
1,3-Dichloropropane	142-28-9	<1.00	1.00	ug/L	09.30.13 22.22	M1	1
2,2-Dichloropropane	594-20-7	<0.500	0.500	ug/L	09.30.13 22.22		1
1,1-Dichloropropene	563-58-6	<1.00	1.00	ug/L	09.30.13 22.22		1
cis-1,3-Dichloropropene	10061-01-5	<1.00	1.00	ug/L	09.30.13 22.22	M1	1

02/03/13

Certificate of Analytical Results 470874

Terranext, Phoenix, AZ

WVBA

Sample Id: **AVB85-0100-24112** Matrix: Water Date Received:09.25.13 15.20
Lab Sample Id: 470874-016 Date Collected: 09.25.13 14.45

Analytical Method: VOCs by EPA 8260B Prep Method: SW5030C
Tech: BLK % Moisture:
Analyst: BLK Date Prep: 09.30.13 08.00
Seq Number: 923981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
trans-1,3-dichloropropene	10061-02-6	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Ethylbenzene	100-41-4	<2.00	2.00	ug/L	09.30.13 22.22	M1	1
Hexachlorobutadiene	87-68-3	<5.00	5.00	ug/L	09.30.13 22.22		1
2-Hexanone	591-78-6	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
isopropylbenzene	98-82-8	<2.50	2.50	ug/L	09.30.13 22.22		1
Methylene Chloride	75-09-2	<3.00	3.00	ug/L	09.30.13 22.22	M1	1
Iodomethane (Methyl Iodide)	74-88-4	<2.00	2.00	ug/L	09.30.13 22.22		1
4-Methyl-2-Pentanone	108-10-1	<5.00	5.00	ug/L	09.30.13 22.22	M1 UJ(RZ)	1
Naphthalene	91-20-3	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
n-Propylbenzene	103-65-1	<2.00	2.00	ug/L	09.30.13 22.22		1
Styrene	100-42-5	<1.00	1.00	ug/L	09.30.13 22.22		1
1,1,1,2-Tetrachloroethane	630-20-6	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Tetrachloroethylene	127-18-4	**5.99**	0.500	ug/L	09.30.13 22.22		1
Toluene	108-88-3	<2.00	2.00	ug/L	09.30.13 22.22	M1	1
1,2,3-Trichlorobenzene	87-61-6	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
1,2,4-Trichlorobenzene	120-82-1	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
1,1,1-Trichloroethane	71-55-6	<0.500	0.500	ug/L	09.30.13 22.22		1
1,1,2-Trichloroethane	79-00-5	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Trichloroethene	79-01-6	**2.56**	0.500	ug/L	09.30.13 22.22	M1 J(M1)	1
Trichlorofluoromethane	75-69-4	<2.00	2.00	ug/L	09.30.13 22.22		1
1,2,3-Trichloropropane	96-18-4	<1.00	1.00	ug/L	09.30.13 22.22	M1	1
1,2,4-Trimethylbenzene	95-63-6	<2.00	2.00	ug/L	09.30.13 22.22		1
1,3,5-Trimethylbenzene	108-67-8	<1.50	1.50	ug/L	09.30.13 22.22		1
o-Xylene	95-47-6	<1.00	1.00	ug/L	09.30.13 22.22		1
m,p-Xylenes	179601-23-1	<2.00	2.00	ug/L	09.30.13 22.22		1
Vinyl Acetate	108-05-4	<5.00	5.00	ug/L	09.30.13 22.22	M1	1
Vinyl Chloride	75-01-4	<0.500	0.500	ug/L	09.30.13 22.22	M1	1
Total Xylenes	1330-20-7	<1.00	1.00	ug/L	09.30.13 22.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	89	%	69-133	09.30.13 22.22	
1,2-Dichloroethane-D4	17060-07-0	88	%	66-139	09.30.13 22.22	
Toluene-D8	2037-26-5	93	%	70-130	09.30.13 22.22	
4-Bromofluorobenzene	460-00-4	96	%	70-135	09.30.13 22.22	

Final 1.000

CL 10/30/13

LDC #: 30552N1a

SDG #: 470874

Laboratory: Xenco Laboratories

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 10/21/13

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/25/13
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration/ICV	N	
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	*D = 5, 6 10, 11
XVII.	Field blanks	ND	TB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	AVB130-0102-1000 TB	11	AVB132-0101-14210	21	644623-1B1K	31	
2	AVB130-0100-18159	12	AVB124-0100-18215	22	644791-B1K	32	
3	AVB94-0200-22260	13	AVB123-0100-18148	23		33	
4	AVB95-0100-22138	14	AVB116-0200-18205	24		34	
5	AVB95-0200-X230 1	15	AVB116-0100-20134	25		35	
6	AVB95-0201-X230	16	AVB85-0100-24112	26		36	
7	AVB127-0100-17140	17	AVB85-0100-24112MS	27		37	
8	AVB134-0200-13230	18	AVB85-0100-24112MSD	28		38	
9	AVB84-0100-XXX	19		29		39	
10	AVB132-0100-14210	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 30552N/a

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: 5
2nd Reviewer: 2

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all surrogate %R within QC limits?

Y (N) N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		644791-1-BLK	DCE	65 (66-139)	J/UJ/P
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(TOL) = Toluene-d8
(BFB) = Bromofluorobenzene
(DCE) = 1,2-Dichloroethane-d4
(DFM) = Dibromofluoromethane

LDC #: 30552 N/a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		17 + 18	all	following	pages)	( )	16	all J/A det
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

QC Summary 470874

Terranext
WVBA

Analytical Method: **VOCs by EPA 8260B** Prep Method: SW5030C
Seq Number: 923981 Matrix: Water Date Prep: 09.30.13
Parent Sample Id: 470874-016 MS Sample Id: 470874-016 S MSD Sample Id: 470874-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acetone	<20.0	40.0	19.4	49	23.9	60	35-160	20	20	ug/L	09.30.13 23:12	
Benzene	<0.500	20.0	22.8	114	25.8	129	69-130	12	20	ug/L	09.30.13 23:12	
Bromobenzene	<1.50	20.0	23.3	117	27.2	136	70-130	15	20	ug/L	09.30.13 23:12	M1
Bromochloromethane	<0.500	20.0	22.2	111	26.6	133	63-119	18	22	ug/L	09.30.13 23:12	M1
Bromodichloromethane	<0.500	20.0	22.2	111	25.6	128	70-130	14	20	ug/L	09.30.13 23:12	
Bromoform	<1.00	20.0	26.2	131	31.1	156	57-121	17	20	ug/L	09.30.13 23:12	N1
Bromomethane	<5.00	20.0	16.9	85	19.0	95	53-141	12	22	ug/L	09.30.13 23:12	
2-Butanone	<5.00	40.0	24.9	62	30.9	77	46-136	22	22	ug/L	09.30.13 23:12	
MTBE	<2.00	20.0	24.7	124	30.3	152	65-127	20	20	ug/L	09.30.13 23:12	M1
n-Butylbenzene	<2.50	20.0	20.3	102	21.4	107	65-127	5	20	ug/L	09.30.13 23:12	
Sec-Butylbenzene	<1.50	20.0	21.0	105	22.9	115	70-130	9	20	ug/L	09.30.13 23:12	
tert-Butylbenzene	<2.50	20.0	21.7	109	24.2	121	70-130	11	20	ug/L	09.30.13 23:12	
Carbon Disulfide	<0.500	20.0	22.3	112	25.5	128	58-145	13	28	ug/L	09.30.13 23:12	
Carbon Tetrachloride	<0.500	20.0	28.6	143	32.2	161	60-152	12	20	ug/L	09.30.13 23:12	M1
Chlorobenzene	<0.500	20.0	24.3	122	27.2	136	70-130	11	20	ug/L	09.30.13 23:12	M1
Chloroethane	<4.00	20.0	21.6	108	25.5	128	59-153	17	20	ug/L	09.30.13 23:12	
Chloroform	0.570	20.0	21.5	105	25.2	123	65-123	16	22	ug/L	09.30.13 23:12	
Chloromethane	<5.00	20.0	25.2	126	30.8	154	47-148	20	22	ug/L	09.30.13 23:12	M1
2-Chlorotoluene	<1.50	20.0	21.2	106	23.8	119	70-130	12	20	ug/L	09.30.13 23:12	
4-Chlorotoluene	<2.00	20.0	20.7	104	23.2	116	70-130	11	20	ug/L	09.30.13 23:12	
p-Cymene (p-Isopropyltoluene)	<1.50	20.0	21.2	106	22.9	115	70-130	8	20	ug/L	09.30.13 23:12	
Dibromochloromethane	<0.500	20.0	24.9	125	29.7	149	70-130	18	20	ug/L	09.30.13 23:12	M1
1,2-Dibromo-3-Chloropropane	<2.00	20.0	24.9	125	32.8	164	50-117	27	22	ug/L	09.30.13 23:12	N1R2
1,2-Dibromoethane	<0.500	20.0	25.7	129	31.3	157	67-117	20	20	ug/L	09.30.13 23:12	M1
Dibromomethane	<0.500	20.0	25.7	129	30.5	153	66-115	17	20	ug/L	09.30.13 23:12	M1
1,2-Dichlorobenzene	<1.50	20.0	23.0	115	26.1	131	70-130	13	20	ug/L	09.30.13 23:12	M1
1,3-Dichlorobenzene	<1.50	20.0	22.3	112	24.9	125	70-130	11	20	ug/L	09.30.13 23:12	
1,4-Dichlorobenzene	<1.50	20.0	22.3	112	24.6	123	70-130	10	20	ug/L	09.30.13 23:12	
Dichlorodifluoromethane	<2.00	20.0	28.4	142	34.5	173	16-151	19	33	ug/L	09.30.13 23:12	N1
1,1-Dichloroethane	<0.500	20.0	21.3	107	25.0	125	66-129	16	20	ug/L	09.30.13 23:12	
1,2-Dichloroethane	<0.500	20.0	20.5	103	24.0	120	64-126	16	20	ug/L	09.30.13 23:12	
1,1-Dichloroethene	<0.500	20.0	20.7	104	24.8	124	65-152	18	20	ug/L	09.30.13 23:12	
cis-1,2-Dichloroethene	1.72	20.0	23.8	110	27.8	130	66-126	16	20	ug/L	09.30.13 23:12	M1
trans-1,2-dichloroethene	<0.500	20.0	22.4	112	26.3	132	66-135	16	20	ug/L	09.30.13 23:12	
1,2-Dichloropropane	<0.500	20.0	22.3	112	25.5	128	70-130	13	20	ug/L	09.30.13 23:12	
1,3-Dichloropropane	<1.00	20.0	24.8	124	29.6	148	67-115	18	20	ug/L	09.30.13 23:12	M1
2,2-Dichloropropane	<0.500	20.0	19.7	99	23.2	116	62-145	16	20	ug/L	09.30.13 23:12	
1,1-Dichloropropene	<1.00	20.0	22.3	112	25.3	127	72-140	13	20	ug/L	09.30.13 23:12	
cis-1,3-Dichloropropene	<1.00	20.0	22.5	113	25.8	129	67-122	14	20	ug/L	09.30.13 23:12	M1
trans-1,3-dichloropropene	<0.500	20.0	22.9	115	26.5	133	70-130	15	20	ug/L	09.30.13 23:12	M1
Ethylbenzene	<2.00	20.0	23.8	119	26.2	131	70-130	10	20	ug/L	09.30.13 23:12	M1
Hexachlorobutadiene	<5.00	20.0	21.0	105	22.7	114	68-143	8	20	ug/L	09.30.13 23:12	
2-Hexanone	<5.00	40.0	45.4	114	58.3	146	52-122	25	33	ug/L	09.30.13 23:12	M1
isopropylbenzene	<2.50	20.0	21.6	108	24.2	121	70-130	11	20	ug/L	09.30.13 23:12	
Methylene Chloride	<3.00	20.0	21.6	108	25.6	128	59-121	17	20	ug/L	09.30.13 23:12	M1
Iodomethane (Methyl Iodide)	<2.00	20.0	16.6	83	22.1	111	66-127	28	20	ug/L	09.30.13 23:12	R5
4-Methyl-2-Pentanone	<5.00	40.0	43.1	108	52.6	132	53-125	20	20	ug/L	09.30.13 23:12	M1
Naphthalene	<5.00	20.0	23.5	118	29.3	147	54-129	22	26	ug/L	09.30.13 23:12	M1
n-Propylbenzene	<2.00	20.0	20.6	103	22.9	115	69-126	11	20	ug/L	09.30.13 23:12	
Styrene	<1.00	20.0	25.0	125	27.5	138	49-142	10	37	ug/L	09.30.13 23:12	
1,1,1,2-Tetrachloroethane	<0.500	20.0	26.3	132	30.6	153	70-130	15	20	ug/L	09.30.13 23:12	M1
1,1,2,2-Tetrachloroethane	<0.500	20.0	23.9	120	30.1	151	64-122	23	20	ug/L	09.30.13 23:12	M1R2

QC Summary 470874

Terranext
WVBA

Analytical Method: **VOCs by EPA 8260B** Prep Method: SW5030C
Seq Number: 923981 Matrix: Water Date Prep: 09.30.13
Parent Sample Id: 470874-016 MS Sample Id: 470874-016 S MSD Sample Id: 470874-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Tetrachloroethylene	5.99	20.0	27.7	109	30.5	123	69-130	10	20	ug/L	09.30.13 23:12	
Toluene	<2.00	20.0	23.9	120	27.4	137	70-130	14	20	ug/L	09.30.13 23:12	M1
1,2,3-Trichlorobenzene	<5.00	20.0	22.9	115	26.5	133	61-126	15	24	ug/L	09.30.13 23:12	M1
1,2,4-Trichlorobenzene	<5.00	20.0	22.2	111	25.5	128	64-123	14	20	ug/L	09.30.13 23:12	M1
1,1,1-Trichloroethane	<0.500	20.0	22.5	113	26.0	130	68-136	14	20	ug/L	09.30.13 23:12	
1,1,2-Trichloroethane	<0.500	20.0	23.1	116	27.5	138	65-112	17	20	ug/L	09.30.13 23:12	M1
Trichloroethene	2.56	20.0	25.8	116	29.3	134	70-130	13	20	ug/L	09.30.13 23:12	M1
Trichlorofluoromethane	<2.00	20.0	22.4	112	26.5	133	53-171	17	20	ug/L	09.30.13 23:12	
1,2,3-Trichloropropane	<1.00	20.0	23.8	119	30.6	153	58-116	25	20	ug/L	09.30.13 23:12	M1R2
1,2,4-Trimethylbenzene	<2.00	20.0	21.2	106	23.7	119	67-128	11	22	ug/L	09.30.13 23:12	
1,3,5-Trimethylbenzene	<1.50	20.0	21.3	107	24.0	120	70-130	12	20	ug/L	09.30.13 23:12	
o-Xylene	<1.00	20.0	23.1	116	25.6	128	70-130	10	20	ug/L	09.30.13 23:12	
m,p-Xylenes	<2.00	40.0	46.7	117	50.9	127	70-130	9	20	ug/L	09.30.13 23:12	
Vinyl Acetate	<5.00	20.0	22.8	114	28.3	142	43-133	22	23	ug/L	09.30.13 23:12	M1
Vinyl Chloride	<0.500	20.0	22.9	115	27.5	138	46-132	18	21	ug/L	09.30.13 23:12	M1

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		109		69-133	%	09.30.13 23:12
1,2-Dichloroethane-D4	95		109		66-139	%	09.30.13 23:12
Toluene-D8	103		105		70-130	%	09.30.13 23:12
4-Bromofluorobenzene	99		106		70-135	%	09.30.13 23:12

Analytical Method: **VOCs by EPA 8260B** Prep Method: SW5030C
Seq Number: 924288 Matrix: Water Date Prep: 10.01.13
Parent Sample Id: 470854-002 MS Sample Id: 470854-002 S MSD Sample Id: 470854-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Trichloroethene	<0.500	20.0	20.0	100	20.1	101	70-130	0	20	ug/L	10.02.13 00:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	95		92		69-133	%	10.02.13 00:20
1,2-Dichloroethane-D4	94		90		66-139	%	10.02.13 00:20
Toluene-D8	94		93		70-130	%	10.02.13 00:20
4-Bromofluorobenzene	96		93		70-135	%	10.02.13 00:20

LDC #: 3055 2N/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: PS
2nd Reviewer: OR

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		644623-LCS/D	F	47 (55-165)	38 (55-165)		64462 3-1-BIK,	J/UJ/P
			X	135 (69-130)			+ All samples	J/Pdet
			M		53 (58-146)			J/UJ/P
			D	29 (60-146)	34 (60-146)			↓
			MM	132 (60-128)				J/Pdet
			JJ	142 (9-134)	139 (9-134)			↓
			Y			22 (21)	↓	J/UJ/P

LCS/LCSD

LDC#: 30552N1a **VALIDATION FINDINGS WORKSHEET**

Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/L)		≤ 20	
	10	11	RPD	
K	2.32	2.21	5	
I	9.61	9.07	6	
H	20.0	18.8	6	
QQQ	33.0	31.4	5	
AA	10.6	10.2	4	
S	252	278	10	

V:\FIELD DUPLICATES\templates\30552N1a.wpd