SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
Organic Data Review Checklist - Standard Validation

Project: Harley-Davidson

SDG No: 180-45088-1

Analysis: See Attached

Method: See Attached

Laboratory: TestAmerica Pittsburgh

Matrix: Water

The above data package has been reviewed and the analytical quality control/quality assurance performance data have been summarized. The general criteria used to assess the analytical integrityof the data were based on an examination of the following:

Case Narrative
Analytical Holding Times
Sample Preservation

Project Blanks

Project Specific QA/QC or contract requirements may take priority over validation criteria in this procedure.

Overall Remarks: N. date hold time, MS/MSD issues and other qualifiers.

Definition of Qualifiers:

"U", not detected at the associated level
"UJ", not detected and associated value estimated
"J", associated value estimated
"R", associated value unusable or analyte identity unfounded
"=", compound properly identified and value positive

Reviewed by: Alan C. Miller Jr. Date: 11/6/15

QA Reviewed by: CABue Date: 1-25-16

FR Abm 12/8/15

11/20/15

I. Case Narrative

Verify direct statements made within the Laboratory Case Narrative (note discrepancies).

Remarks: MS/MSD BS/LCS also hold Time issues for Nitrate

II. Re-analysis and Secondary Dilutions

Verify that re-analysis and secondary dilutions were performed and reported as necessary. Determine appropriate results to report.

Remarks:

III. Holding Times

VOC - Waters - unpreserved: aromatic within 7 days, non-aromatic within 14 days of sample collection
VOC - Waters - preserved: aromatic and non-aromatic within 14 days of sample collection
VOC - Soils - preserve or analyze within 48 hours of sample collection; analyze within 14 days of preservation

SVOC, Pest., PCB - Waters - extract within 7 days of sample collection, analyze within 40 days of extraction
SVOC, Pest., PCB - Soils - extract within 14 days of sample collection, analyze within 40 days of extraction

Deviations:

Sample #	VOC		SVOC			Pest/PCB		
	Date Collected	Date Analyzed	Date Collected	Date Extracted	Date Analyzed	Date Collected	Date Extracted	Date Analyzed
[redacted]	Nitrate		hold	135 hrs				
5	6/15/15	6/17/15	2 hrs	37 min				
8	↓	↓	2 hrs	45 min				
3			~~8 hrs 45 min~~		3 hrs			
10			2 hrs	32 min				
11			2 hrs	10 min				
12			3 hrs	38 min				
16	↓	↓	6 hrs	6 min				

Actions:
1. If holding times are exceeded, all results are qualified as estimated (J/UJ)
2. If holding times are exceeded by more than 2X, reviewer may qualify non-detected results as unusable (R)

Remarks: hold issue for Nitrate

VI. Blanks

All blanks were reported per matrix per concentration level for each 12 hour period on each GC/MS system used to analyze VOCs and SVOCs Yes ☐ No ☐

Review associated laboratory and project blank samples. List documented contamination below:

Laboratory Method Blanks:

Date:	Lab ID #	Fraction	Compound	Conc. (ppb)

Associated Project Blanks (e.g., equipment rinsates, trip blanks, etc.)

Date	Lab ID #	Fraction	Compound	Conc. (ppb)
6/15/15	18	VOC	chloroform	0.17

Remarks: Methods and chloroform detects

VI. Blanks (continued)

Calculate action levels based on 10X the highest blank concentration of "common laboratory solvents", VOCs (methylene chloride, acetone, toluene, 2-butanone, cyclohexane) or SVOCs (phthalates), and 5X the highest blank concentration for all other VOC, SVOC, Pesticides, and PCB compounds. Sample weights, volumes, and dilution factors must be taken into account when applying the 5X and 10X criteria. This allows the total amount of contaminant present to be considered.

Deviations:

Compound	Maximum Conc. Detected, (ppb)	Action Level (ppb)	Samples Affected
chloroform	0.17	0.85	6, 9, 11, 14, 17, 18 = ut

code 7

Actions:

1. If compound results exceed the action levels, the data are not qualified
2. If compound results are below the required reporting level, report results as non-detect (U) at the reporting level
3. If the compound is detected above the reporting level, but below the action level, qualify as not-detected (U)
4. If gross contamination exists in blanks (i.e.,, saturated peaks by GC/ MS), all affected compounds in the associated samles should be qualifed as unusable (R) due to interference.
5. If blanks were not analyzed per matrix per concentration level for each 12 hour period on each GC/MS system used to analyze VOCs and SVOCs use professional judgement to qualifty data. Data may be rejected (R).

Remarks: see above.

Hold Time Summary

SDG 180-45088-1

Sample Number	Sample Name	Method	Date Collected	Analysis Date	Date Extracted	Days to Analysis
180-45088-1	HD-COD-SW-6-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-10	HD-COD-SW-16-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-11	HD-COD-SW-17-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-12	HD-COD-SW-20-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-13	HD-COD-SW-26-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-14	HD-COD-SW-27-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-15	HD-COD-SW-28-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-16	HD-COD-SW-29-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-17	HD-QC1-0/1-1	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-2	HD-COD-SW-7-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-3	HD-COD-SW-8-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-4	HD-COD-SW-9-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-5	HD-COD-SW-10-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-6	HD-COD-SW-11-0/1-0	MCAWW 300.0	6/15/2015	6/16/2015		1
180-45088-7	HD-COD-SW-12-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-8	HD-COD-SW-13-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-9	HD-COD-SW-15-0/1-0	MCAWW 300.0	6/15/2015	6/17/2015		2
180-45088-1	HD-COD-SW-6-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-10	HD-COD-SW-16-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-11	HD-COD-SW-17-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-12	HD-COD-SW-20-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-13	HD-COD-SW-26-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-14	HD-COD-SW-27-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-15	HD-COD-SW-28-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-16	HD-COD-SW-29-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-17	HD-QC1-0/1-1	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-2	HD-COD-SW-7-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-3	HD-COD-SW-8-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-4	HD-COD-SW-9-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-5	HD-COD-SW-10-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-6	HD-COD-SW-11-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-7	HD-COD-SW-12-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-8	HD-COD-SW-13-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-9	HD-COD-SW-15-0/1-0	SM SM 2320B	6/15/2015	6/26/2015		11
180-45088-1	HD-COD-SW-6-0/1-0	SW846 6020A	6/15/2015	6/25/2015	6/18/2015	10
180-45088-10	HD-COD-SW-16-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-11	HD-COD-SW-17-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-12	HD-COD-SW-20-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-13	HD-COD-SW-26-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-14	HD-COD-SW-27-0/1-0	SW846 6020A	6/15/2015	6/25/2015	6/18/2015	

Sample Number	Sample Name	Method	Date Collected	Analysis Date	Date Extracted	Days to Analysis
180-45088-15	HD-COD-SW-28-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-16	HD-COD-SW-29-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-17	HD-QC1-0/1-1	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-2	HD-COD-SW-7-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-3	HD-COD-SW-8-0/1-0	SW846 6020A	6/15/2015	6/25/2015	6/18/2015	10
180-45088-4	HD-COD-SW-9-0/1-0	SW846 6020A	6/15/2015	6/25/2015	6/18/2015	10
180-45088-5	HD-COD-SW-10-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-6	HD-COD-SW-11-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-7	HD-COD-SW-12-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-8	HD-COD-SW-13-0/1-0	SW846 6020A	6/15/2015	6/19/2015	6/17/2015	4
180-45088-9	HD-COD-SW-15-0/1-0	SW846 6020A	6/15/2015	6/25/2015	6/18/2015	10
180-45088-1	HD-COD-SW-6-0/1-0	SW846 8260C	6/15/2015	6/18/2015		3
180-45088-10	HD-COD-SW-16-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-11	HD-COD-SW-17-0/1-0	SW846 8260C	6/15/2015	6/22/2015		7
180-45088-12	HD-COD-SW-20-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-13	HD-COD-SW-26-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-14	HD-COD-SW-27-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-15	HD-COD-SW-28-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-16	HD-COD-SW-29-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-17	HD-QC1-0/1-1	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-18	HD-QC1-0/1-2	SW846 8260C	6/15/2015	6/22/2015		7
180-45088-2	HD-COD-SW-7-0/1-0	SW846 8260C	6/15/2015	6/18/2015		3
180-45088-3	HD-COD-SW-8-0/1-0	SW846 8260C	6/15/2015	6/18/2015		3
180-45088-4	HD-COD-SW-9-0/1-0	SW846 8260C	6/15/2015	6/18/2015		3
180-45088-5	HD-COD-SW-10-0/1-0	SW846 8260C	6/15/2015	6/18/2015		3
180-45088-6	HD-COD-SW-11-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-7	HD-COD-SW-12-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-8	HD-COD-SW-13-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4
180-45088-9	HD-COD-SW-15-0/1-0	SW846 8260C	6/15/2015	6/19/2015		4

Blank Detections

SDG 180-45088-1

Sample ID	Sample	Analyte	Result	Method	Units	Qual
180-45088-18	HD-QC1-0/1-2	Chloroform	0.17	SW846 8260C	ug/L	J
MB 180-145252/1-A	MB 180-145252/1-A	Calcium	11.6	SW846 6020A	ug/L	J
MB 180-145252/1-A	MB 180-145252/1-A	Magnesium	1.87	SW846 6020A	ug/L	J
MB 180-145252/1-A	MB 180-145252/1-A	Sodium	4.58	SW846 6020A	ug/L	J
MB 180-145430/1-A	MB 180-145430/1-A	Calcium	6.11	SW846 6020A	ug/L	J

Qualifier Check

SDG 180-45088-1

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-5	HD-COD-SW-10-0/1-0	Chloride	130	650	1300	MCAWW 300.0	mg/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Chloride	73	365	730	MCAWW 300.0	mg/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Chloride	140	700	1400	MCAWW 300.0	mg/L	B
180-45088-14	HD-COD-SW-27-0/1-0	Chloride	56	280	560	MCAWW 300.0	mg/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Chloride	90	450	900	MCAWW 300.0	mg/L	B
180-45088-1	HD-COD-SW-6-0/1-0	Chloride	110	550	1100	MCAWW 300.0	mg/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Chloride	43	215	430	MCAWW 300.0	mg/L	B
180-45088-3	HD-COD-SW-8-0/1-0	Chloride	51	255	510	MCAWW 300.0	mg/L	B
180-45088-4	HD-COD-SW-9-0/1-0	Chloride	78	390	780	MCAWW 300.0	mg/L	B
180-45088-17	HD-QC1-0/1-1	Chloride	140	700	1400	MCAWW 300.0	mg/L	B
MB 180-145170/6	MB 180-145170/6	Chloride	0.257	1.285	2.57	MCAWW 300.0	mg/L	J
MB 180-145223/6	MB 180-145223/6	Chloride	0.280	1.4	2.8	MCAWW 300.0	mg/L	J
180-45088-6	HD-COD-SW-11-0/1-0	Nitrate as N	4.4	22	44	MCAWW 300.0	mg/L	B
180-45088-14	HD-COD-SW-27-0/1-0	Nitrate as N	2.9	14.5	29	MCAWW 300.0	mg/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Nitrate as N	5.8	29	58	MCAWW 300.0	mg/L	B
180-45088-1	HD-COD-SW-6-0/1-0	Nitrate as N	2.3	11.5	23	MCAWW 300.0	mg/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Nitrate as N	2.9	14.5	29	MCAWW 300.0	mg/L	B
180-45088-4	HD-COD-SW-9-0/1-0	Nitrate as N	5.1	25.5	51	MCAWW 300.0	mg/L	B
180-45088-17	HD-QC1-0/1-1	Nitrate as N	3.5	17.5	35	MCAWW 300.0	mg/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Nitrate as N	2.8	14	28	MCAWW 300.0	mg/L	H
180-45088-10	HD-COD-SW-16-0/1-0	Nitrate as N	2.8	14	28	MCAWW 300.0	mg/L	H
180-45088-12	HD-COD-SW-20-0/1-0	Nitrate as N	2.2	11	22	MCAWW 300.0	mg/L	H
180-45088-16	HD-COD-SW-29-0/1-0	Nitrate as N	3.0	15	30	MCAWW 300.0	mg/L	H

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-5	HD-COD-SW-10-0/1-0	Nitrate as N	2.8	14	28	MCAWW 300.0	mg/L	H B
180-45088-11	HD-COD-SW-17-0/1-0	Nitrate as N	3.5	17.5	35	MCAWW 300.0	mg/L	H B
180-45088-3	HD-COD-SW-8-0/1-0	Nitrate as N	2.9	14.5	29	MCAWW 300.0	mg/L	H B
MB 180-145170/6	MB 180-145170/6	Nitrate as N	0.0136	0.068	0.136	MCAWW 300.0	mg/L	J
MB 180-145223/6	MB 180-145223/6	Nitrate as N	0.0142	0.071	0.142	MCAWW 300.0	mg/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Bicarbonate Alkalinity as CaCO3	220	1100	2200	SM SM 2320B	mg/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Bicarbonate Alkalinity as CaCO3	210	1050	2100	SM SM 2320B	mg/L	B
180-45088-7	HD-COD-SW-12-0/1-0	Bicarbonate Alkalinity as CaCO3	150	750	1500	SM SM 2320B	mg/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Bicarbonate Alkalinity as CaCO3	110	550	1100	SM SM 2320B	mg/L	B
180-45088-9	HD-COD-SW-15-0/1-0	Bicarbonate Alkalinity as CaCO3	230	1150	2300	SM SM 2320B	mg/L	B
180-45088-10	HD-COD-SW-16-0/1-0	Bicarbonate Alkalinity as CaCO3	100	500	1000	SM SM 2320B	mg/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Bicarbonate Alkalinity as CaCO3	230	1150	2300	SM SM 2320B	mg/L	B
180-45088-12	HD-COD-SW-20-0/1-0	Bicarbonate Alkalinity as CaCO3	130	650	1300	SM SM 2320B	mg/L	B
180-45088-13	HD-COD-SW-26-0/1-0	Bicarbonate Alkalinity as CaCO3	130	650	1300	SM SM 2320B	mg/L	B
180-45088-14	HD-COD-SW-27-0/1-0	Bicarbonate Alkalinity as CaCO3	120	600	1200	SM SM 2320B	mg/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Bicarbonate Alkalinity as CaCO3	150	750	1500	SM SM 2320B	mg/L	B
180-45088-16	HD-COD-SW-29-0/1-0	Bicarbonate Alkalinity as CaCO3	110	550	1100	SM SM 2320B	mg/L	B
180-45088-1	HD-COD-SW-6-0/1-0	Bicarbonate Alkalinity as CaCO3	130	650	1300	SM SM 2320B	mg/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Bicarbonate Alkalinity as CaCO3	110	550	1100	SM SM 2320B	mg/L	B
180-45088-3	HD-COD-SW-8-0/1-0	Bicarbonate Alkalinity as CaCO3	110	550	1100	SM SM 2320B	mg/L	B
180-45088-4	HD-COD-SW-9-0/1-0	Bicarbonate Alkalinity as CaCO3	130	650	1300	SM SM 2320B	mg/L	B
180-45088-17	HD-QC1-0/1-1	Bicarbonate Alkalinity as CaCO3	230	1150	2300	SM SM 2320B	mg/L	B
MB 180-146209/2	MB 180-146209/2	Bicarbonate Alkalinity as CaCO3	1.98	9.9	19.8	SM SM 2320B	mg/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-7	HD-COD-SW-12-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-10	HD-COD-SW-16-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-12	HD-COD-SW-20-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-13	HD-COD-SW-26-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-14	HD-COD-SW-27-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-15	HD-COD-SW-28-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-1	HD-COD-SW-6-0/1-0	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-17	HD-QC1-0/1-1	Carbonate Alkalinity as CaCO3	4.0	20	40	SM SM 2320B	mg/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	230	1150	2300	SM SM 2320B	mg/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	230	1150	2300	SM SM 2320B	mg/L	B
180-45088-7	HD-COD-SW-12-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	160	800	1600	SM SM 2320B	mg/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	110	550	1100	SM SM 2320B	mg/L	B
180-45088-9	HD-COD-SW-15-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	240	1200	2400	SM SM 2320B	mg/L	B
180-45088-10	HD-COD-SW-16-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	110	550	1100	SM SM 2320B	mg/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	240	1200	2400	SM SM 2320B	mg/L	B
180-45088-12	HD-COD-SW-20-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	130	650	1300	SM SM 2320B	mg/L	B
180-45088-13	HD-COD-SW-26-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	130	650	1300	SM SM 2320B	mg/L	B
180-45088-14	HD-COD-SW-27-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	130	650	1300	SM SM 2320B	mg/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	160	800	1600	SM SM 2320B	mg/L	B
180-45088-16	HD-COD-SW-29-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	110	550	1100	SM SM 2320B	mg/L	B
180-45088-1	HD-COD-SW-6-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	140	700	1400	SM SM 2320B	mg/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	110	550	1100	SM SM 2320B	mg/L	B
180-45088-3	HD-COD-SW-8-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	110	550	1100	SM SM 2320B	mg/L	B
180-45088-4	HD-COD-SW-9-0/1-0	Total Alkalinity as CaCO3 to pH 4.5	140	700	1400	SM SM 2320B	mg/L	B
180-45088-17	HD-QC1-0/1-1	Total Alkalinity as CaCO3 to pH 4.5	240	1200	2400	SM SM 2320B	mg/L	B
MB 180-146209/2	MB 180-146209/2	Total Alkalinity as CaCO3 to pH 4.5	1.98	9.9	19.8	SM SM 2320B	mg/L	J

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-5	HD-COD-SW-10-0/1-0	Calcium	100000	500000	1000000	SW846 6020A	ug/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Calcium	83000	415000	830000	SW846 6020A	ug/L	B
180-45088-7	HD-COD-SW-12-0/1-0	Calcium	72000	360000	720000	SW846 6020A	ug/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Calcium	47000	235000	470000	SW846 6020A	ug/L	B
180-45088-9	HD-COD-SW-15-0/1-0	Calcium	91000	455000	910000	SW846 6020A	ug/L	B
180-45088-10	HD-COD-SW-16-0/1-0	Calcium	44000	220000	440000	SW846 6020A	ug/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Calcium	100000	500000	1000000	SW846 6020A	ug/L	B
180-45088-12	HD-COD-SW-20-0/1-0	Calcium	65000	325000	650000	SW846 6020A	ug/L	B
180-45088-13	HD-COD-SW-26-0/1-0	Calcium	46000	230000	460000	SW846 6020A	ug/L	B
180-45088-14	HD-COD-SW-27-0/1-0	Calcium	45000	225000	450000	SW846 6020A	ug/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Calcium	69000	345000	690000	SW846 6020A	ug/L	B
180-45088-16	HD-COD-SW-29-0/1-0	Calcium	44000	220000	440000	SW846 6020A	ug/L	B
180-45088-1	HD-COD-SW-6-0/1-0	Calcium	56000	280000	560000	SW846 6020A	ug/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Calcium	40000	200000	400000	SW846 6020A	ug/L	B
180-45088-3	HD-COD-SW-8-0/1-0	Calcium	40000	200000	400000	SW846 6020A	ug/L	B
180-45088-4	HD-COD-SW-9-0/1-0	Calcium	53000	265000	530000	SW846 6020A	ug/L	B
180-45088-17	HD-QC1-0/1-1	Calcium	100000	500000	1000000	SW846 6020A	ug/L	B
MB 180-145252/1-A	MB 180-145252/1-A	Calcium	11.6	58	116	SW846 6020A	ug/L	J
MB 180-145430/1-A	MB 180-145430/1-A	Calcium	6.11	30.55	61.1	SW846 6020A	ug/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Magnesium	17000	85000	170000	SW846 6020A	ug/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Magnesium	17000	85000	170000	SW846 6020A	ug/L	B
180-45088-7	HD-COD-SW-12-0/1-0	Magnesium	12000	60000	120000	SW846 6020A	ug/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Magnesium	8700	43500	87000	SW846 6020A	ug/L	B
180-45088-10	HD-COD-SW-16-0/1-0	Magnesium	8400	42000	84000	SW846 6020A	ug/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Magnesium	19000	95000	190000	SW846 6020A	ug/L	B
180-45088-12	HD-COD-SW-20-0/1-0	Magnesium	11000	55000	110000	SW846 6020A	ug/L	B
180-45088-13	HD-COD-SW-26-0/1-0	Magnesium	8700	43500	87000	SW846 6020A	ug/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Magnesium	13000	65000	130000	SW846 6020A	ug/L	B
180-45088-16	HD-COD-SW-29-0/1-0	Magnesium	8600	43000	86000	SW846 6020A	ug/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Magnesium	8700	43500	87000	SW846 6020A	ug/L	B
180-45088-17	HD-QC1-0/1-1	Magnesium	17000	85000	170000	SW846 6020A	ug/L	B
MB 180-145252/1-A	MB 180-145252/1-A	Magnesium	1.87	9.35	18.7	SW846 6020A	ug/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Sodium	50000	250000	500000	SW846 6020A	ug/L	B
180-45088-6	HD-COD-SW-11-0/1-0	Sodium	29000	145000	290000	SW846 6020A	ug/L	B
180-45088-7	HD-COD-SW-12-0/1-0	Sodium	56000	280000	560000	SW846 6020A	ug/L	B
180-45088-8	HD-COD-SW-13-0/1-0	Sodium	28000	140000	280000	SW846 6020A	ug/L	B
180-45088-10	HD-COD-SW-16-0/1-0	Sodium	28000	140000	280000	SW846 6020A	ug/L	B
180-45088-11	HD-COD-SW-17-0/1-0	Sodium	60000	300000	600000	SW846 6020A	ug/L	B
180-45088-12	HD-COD-SW-20-0/1-0	Sodium	49000	245000	490000	SW846 6020A	ug/L	B

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-13	HD-COD-SW-26-0/1-0	Sodium	29000	145000	290000	SW846 6020A	ug/L	B
180-45088-15	HD-COD-SW-28-0/1-0	Sodium	45000	225000	450000	SW846 6020A	ug/L	B
180-45088-16	HD-COD-SW-29-0/1-0	Sodium	28000	140000	280000	SW846 6020A	ug/L	B
180-45088-2	HD-COD-SW-7-0/1-0	Sodium	27000	135000	270000	SW846 6020A	ug/L	B
180-45088-17	HD-QC1-0/1-1	Sodium	60000	300000	600000	SW846 6020A	ug/L	B
MB 180-145252/1-A	MB 180-145252/1-A	Sodium	4.58	22.9	45.8	SW846 6020A	ug/L	J
180-45088-9	HD-COD-SW-15-0/1-0	1,1,1-Trichloroethane	0.47	2.35	4.7	SW846 8260C	ug/L	J
180-45088-17	HD-QC1-0/1-1	1,1,1-Trichloroethane	0.53	2.65	5.3	SW846 8260C	ug/L	J
180-45088-11	HD-COD-SW-17-0/1-0	1,1-Dichloroethane	0.26	1.3	2.6	SW846 8260C	ug/L	J
180-45088-9	HD-COD-SW-15-0/1-0	1,1-Dichloroethene	0.50	2.5	5	SW846 8260C	ug/L	J
180-45088-17	HD-QC1-0/1-1	1,1-Dichloroethene	0.49	2.45	4.9	SW846 8260C	ug/L	J
180-45088-6	HD-COD-SW-11-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-7	HD-COD-SW-12-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-8	HD-COD-SW-13-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-9	HD-COD-SW-15-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-10	HD-COD-SW-16-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-12	HD-COD-SW-20-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-13	HD-COD-SW-26-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-14	HD-COD-SW-27-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-15	HD-COD-SW-28-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-16	HD-COD-SW-29-0/1-0	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-17	HD-QC1-0/1-1	2-Hexanone				SW846 8260C	ug/L	^c
180-45088-11	HD-COD-SW-17-0/1-0	4-Methyl-2-pentanone (MIBK)				SW846 8260C	ug/L	^c
180-45088-18	HD-QC1-0/1-2	4-Methyl-2-pentanone (MIBK)				SW846 8260C	ug/L	^c
180-45088-7	HD-COD-SW-12-0/1-0	Acetone	3.3	16.5	33	SW846 8260C	ug/L	J
180-45088-10	HD-COD-SW-16-0/1-0	Acetone	3.0	15	30	SW846 8260C	ug/L	J
180-45088-12	HD-COD-SW-20-0/1-0	Acetone	4.3	21.5	43	SW846 8260C	ug/L	J
180-45088-13	HD-COD-SW-26-0/1-0	Acetone	2.7	13.5	27	SW846 8260C	ug/L	J
180-45088-14	HD-COD-SW-27-0/1-0	Acetone	3.0	15	30	SW846 8260C	ug/L	J
180-45088-1	HD-COD-SW-6-0/1-0	Acetone	2.7	13.5	27	SW846 8260C	ug/L	J
180-45088-2	HD-COD-SW-7-0/1-0	Acetone	3.6	18	36	SW846 8260C	ug/L	J
180-45088-4	HD-COD-SW-9-0/1-0	Acetone	2.7	13.5	27	SW846 8260C	ug/L	J
180-45088-6	HD-COD-SW-11-0/1-0	Chloroform	0.23	1.15	2.3	SW846 8260C	ug/L	J
180-45088-9	HD-COD-SW-15-0/1-0	Chloroform	0.26	1.3	2.6	SW846 8260C	ug/L	J
180-45088-11	HD-COD-SW-17-0/1-0	Chloroform	0.17	0.85	1.7	SW846 8260C	ug/L	J
180-45088-14	HD-COD-SW-27-0/1-0	Chloroform	0.54	2.7	5.4	SW846 8260C	ug/L	J
180-45088-17	HD-QC1-0/1-1	Chloroform	0.25	1.25	2.5	SW846 8260C	ug/L	J
180-45088-18	HD-QC1-0/1-2	Chloroform	0.17	0.85	1.7	SW846 8260C	ug/L	J

Sample ID	Sample	Analyte	Result	5x	10x	Method	Units	Qual
180-45088-11	HD-COD-SW-17-0/1-0	cis-1,2-Dichloroethene	8.3	41.5	83	SW846 8260C	ug/L	F1
180-45088-5	HD-COD-SW-10-0/1-0	cis-1,2-Dichloroethene	0.31	1.55	3.1	SW846 8260C	ug/L	J
180-45088-8	HD-COD-SW-13-0/1-0	cis-1,2-Dichloroethene	0.33	1.65	3.3	SW846 8260C	ug/L	J
180-45088-10	HD-COD-SW-16-0/1-0	cis-1,2-Dichloroethene	0.31	1.55	3.1	SW846 8260C	ug/L	J
180-45088-15	HD-COD-SW-28-0/1-0	cis-1,2-Dichloroethene	0.25	1.25	2.5	SW846 8260C	ug/L	J
180-45088-3	HD-COD-SW-8-0/1-0	cis-1,2-Dichloroethene	0.25	1.25	2.5	SW846 8260C	ug/L	J
180-45088-4	HD-COD-SW-9-0/1-0	cis-1,2-Dichloroethene	0.31	1.55	3.1	SW846 8260C	ug/L	J
180-45088-5	HD-COD-SW-10-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-11	HD-COD-SW-17-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-1	HD-COD-SW-6-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-2	HD-COD-SW-7-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-3	HD-COD-SW-8-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-4	HD-COD-SW-9-0/1-0	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-18	HD-QC1-0/1-2	Methylene Chloride				SW846 8260C	ug/L	^c
180-45088-11	HD-COD-SW-17-0/1-0	Tetrachloroethene	20	100	200	SW846 8260C	ug/L	F1
180-45088-8	HD-COD-SW-13-0/1-0	Tetrachloroethene	0.30	1.5	3	SW846 8260C	ug/L	J
180-45088-10	HD-COD-SW-16-0/1-0	Tetrachloroethene	0.42	2.1	4.2	SW846 8260C	ug/L	J
180-45088-13	HD-COD-SW-26-0/1-0	Tetrachloroethene	0.30	1.5	3	SW846 8260C	ug/L	J
180-45088-14	HD-COD-SW-27-0/1-0	Tetrachloroethene	0.49	2.45	4.9	SW846 8260C	ug/L	J
180-45088-15	HD-COD-SW-28-0/1-0	Tetrachloroethene	0.16	0.8	1.6	SW846 8260C	ug/L	J
180-45088-3	HD-COD-SW-8-0/1-0	Tetrachloroethene	0.17	0.85	1.7	SW846 8260C	ug/L	J
180-45088-4	HD-COD-SW-9-0/1-0	Tetrachloroethene	0.15	0.75	1.5	SW846 8260C	ug/L	J
180-45088-11	HD-COD-SW-17-0/1-0	Trichloroethene	9.3	46.5	93	SW846 8260C	ug/L	F1
180-45088-8	HD-COD-SW-13-0/1-0	Trichloroethene	0.33	1.65	3.3	SW846 8260C	ug/L	J
180-45088-10	HD-COD-SW-16-0/1-0	Trichloroethene	0.36	1.8	3.6	SW846 8260C	ug/L	J
180-45088-13	HD-COD-SW-26-0/1-0	Trichloroethene	0.24	1.2	2.4	SW846 8260C	ug/L	J
180-45088-14	HD-COD-SW-27-0/1-0	Trichloroethene	0.94	4.7	9.4	SW846 8260C	ug/L	J
180-45088-15	HD-COD-SW-28-0/1-0	Trichloroethene	0.27	1.35	2.7	SW846 8260C	ug/L	J
180-45088-16	HD-COD-SW-29-0/1-0	Trichloroethene	0.21	1.05	2.1	SW846 8260C	ug/L	J
180-45088-2	HD-COD-SW-7-0/1-0	Trichloroethene	0.30	1.5	3	SW846 8260C	ug/L	J
180-45088-3	HD-COD-SW-8-0/1-0	Trichloroethene	0.30	1.5	3	SW846 8260C	ug/L	J
180-45088-4	HD-COD-SW-9-0/1-0	Trichloroethene	0.24	1.2	2.4	SW846 8260C	ug/L	J