

APPENDIX E

**First Quarter 2018 Analytical Laboratory
Reports and Validation Reports**

APPENDIX E

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DATA VALIDATION REPORT

Boeing SSFL Arroyo Simi

SAMPLE DELIVERY GROUP: 440-206645-2

Prepared for
Haley & Aldrich

April 25, 2018

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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL Arroyo Simi

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-206645-2

Project Manager: K. Miller

Matrix: Water

QC Level: IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica - Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
Arroyo_Simi_20180322_Grab	440-206645-1	Water	3/22/2018 8:15:00 AM	Calc, E1613
	440-206645-2			E608, EPA100.2, E525.2



II. SAMPLE MANAGEMENT

According to the case narrative, sample condition upon receipt form and the chain-of-custody (COC) provided by the laboratory for sample delivery group (SDG) 440-206645-2:

- The laboratory received the sample in this sample delivery group (SDG) on ice and within the temperature limits of less than 6 degrees Celsius ($^{\circ}\text{C}$) and greater than 0°C .
- The laboratory received the sample containers intact and properly preserved, as applicable.
- Field and laboratory personnel signed and dated the COC.
- According to the sample receipt form, custody seals were absent; however, there was no evidence of tampering.
- The PCB analysis was subcontracted to Eurofins/Lancaster Laboratories. The case narrative and preparation bench sheet noted the sample was received in a plastic bottle rather than glass. Per client instruction, the laboratory proceeded with the analysis.
- Asbestos analysis was subcontracted to L.A. Testing.
- COC documentation from LA Testing for asbestos analysis was not included in the SDG.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	Not applicable.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.



Reason Code	Organic	Inorganic
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHOD 1613B — DIOXIN/FURANS

E. Wessling of MEC^x reviewed the SDG on April 25, 2018

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Dioxins and Furans* (DVP-19, Rev. 0), *USEPA Method 1613B*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (2011).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.

III.2. INSTRUMENT PERFORMANCE

Instrument performance criteria were met. Following are findings associated with instrument performance:

III.2.1. GC COLUMN PERFORMANCE

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

III.2.2. MASS SPECTROMETER PERFORMANCE

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.

III.3. CALIBRATION

Calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613B control limits for all standards.

Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of the analytical sequence. The VER was acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613B. The ion abundance ratios and relative retention times were within the method control limits.

III.4. QUALITY CONTROL SAMPLES

III.4.1. METHOD BLANKS

The method blank had detects above the EDL and below the reporting limit for all isomers and all totals. Isomer results for the method blank contaminants detected below the reporting limit were qualified as nondetects (U) at the level of contamination based upon professional judgement and the guidance for blank qualification in the National Functional Guidelines for Dioxin Review. The method blank concentration of OCDD was $>10\times$ the sample result above the reporting limit; therefore, the sample result for OCDD was also qualified as a nondetect. The reviewer verified that peaks comprising total detects for PeCDC in the method blank were the same peaks comprising the total in sample Arroyo_Simi_20180322_Grab at similar



concentrations. The total result for PeCDD was qualified as nondetect (U) at the level of contamination. The remaining totals were qualified as estimated (J).

III.4.2. LABORATORY CONTROL SAMPLES

Recoveries were within the acceptance criteria listed in Table 6 of Method 1613B, and RPDs were within the laboratory control limit of $\leq 50\%$.

III.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

III.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

III.6. INTERNAL STANDARDS PERFORMANCE

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613B.

III.7. COMPOUND IDENTIFICATION

Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613B. Isomer 2,3,7,8-TCDF was not detected in the initial analysis of the sample, therefore, confirmation analysis was not required.

III.8. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified by recalculating a representative number of sample and LCS results. The laboratory calculated and reported compound-specific detection limits. Detects between the EDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit; however, after qualification for method blank contamination, no isomer detects remained. Nondetects are valid to the EDL. Per client request, results below the EDL meeting retention time and signal to noise (S/N) criteria were to be reported; however, this sample had no reported detects below the EDL.

Following qualification for method blank contamination, isomers reported as estimated maximum possible concentrations (EMPCs) were not detected in the sample of this SDG. Total results for HpCDD, HpCDF, HxCDD, HxCDF, and PeCDF each included an EMPC peak in addition to the non-2,3,7,8 substituted peaks. These totals were qualified as estimated (J).

IV. EPA METHOD 608 – PCB AROCLORS

L. Calvin of MEC^X reviewed the SDG on April 25, 2018

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 1)*, *EPA Method 608*, and the *National Functional Guidelines for Superfund Organic Methods Data Review (2014)*.



IV.1. HOLDING TIMES

Extraction and analytical holding times were met. The sample was extracted within seven days of collection and analyzed within 40 days of extraction.

IV.2. CALIBRATION

The initial calibration %RSDs were within the control limits of $\leq 10\%$ or $r^2 \geq 0.990$. The initial calibration verification (ICV) and continuing calibration verification (CCV) %Ds were within the control limit of $\leq 15\%$.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. *METHOD BLANKS*

Target Aroclors were not detected in method blank.

IV.3.2. *LABORATORY CONTROL SAMPLES*

LCS/LCSD recoveries and RPDs were within the laboratory control limits.

IV.3.3. *SURROGATE RECOVERY*

The surrogate recoveries for TCMX and DCB on both columns were within the laboratory control limits of 33-137% and 10-148%, respectively, in the site sample.

IV.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were not performed on the sample in this SDG. MEC^x evaluated method accuracy and precision based on the LCS/LCSD results.

IV.4. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

IV.4.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

IV.4.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

IV.5. COMPOUND IDENTIFICATION

Compound identification was verified. Review of the sample chromatograms and retention times indicated no issues with target compound identification. The laboratory analyzed for seven Aroclors by Method 608. PCBs were not detected in sample Arroyo_Simi_20180322_Grab.

IV.6. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit. The sample did not require dilution.

IV.7. SYSTEM PERFORMANCE

Review of the raw data indicated no issues with system performance.

V. EPA METHODS 525.2— SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)

L. Calvin of MEC^x reviewed the SDG on April 25, 2018

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for Semivolatile Organics* (DVP-3, Rev. 1), *EPA Method 525.2*, and the *National Functional Guidelines for Superfund Organic Methods Data Review* (2014).

V.1. HOLDING TIMES

The analytical holding time was met; however, the sample was extracted approximately one and a half hours past the holding time of within 24 hours of collection. The nondetect result for diazinon was qualified as estimated (UJ). The sample was analyzed within 30 days of extraction.

V.2. GC/MS TUNING AND CALIBRATION

The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.

Calibration criteria were met. The initial calibration average RRFs were ≥ 0.05 and r^2 for applicable target compounds were $\geq 0.990\%$. The continuing calibration RRFs were ≥ 0.05 and recoveries were within the method control limits of 70-130%.

V.3. QUALITY CONTROL SAMPLES

V.3.1. METHOD BLANKS

Target compounds were not detected in the method blank.

V.3.2. LABORATORY CONTROL SAMPLES

LCS recoveries were within the control limits of 70-130%.

V.3.3. SURROGATE RECOVERY

Surrogate recoveries were within laboratory control limits of 70-130%.

V.3.4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample in this SDG. MEC^x evaluated method accuracy based on the LCS results.

V.4. FIELD QC SAMPLES

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

V.4.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.



V.4.2. **FIELD DUPLICATES**

Field duplicate samples were not identified in this SDG.

V.5. **INTERNAL STANDARDS PERFORMANCE**

The internal standard area counts were within the method control limits established by the continuing calibration standards of $\pm 30\%$ for areas and ± 10 seconds for retention times.

V.6. **COMPOUND IDENTIFICATION**

Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. Review of the sample chromatogram, retention times, ion chromatograms, and spectra indicated no problems with target compound identification.

V.7. **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.

The preparation bench sheet noted the sample was dirty. A reduced sample volume of 100 milliliters (rather than 500) was extracted, resulting in an effective 5 \times dilution. Reporting limits were adjusted accordingly.

V.8. **TENTATIVELY IDENTIFIED COMPOUNDS (TICs)**

The laboratory did not report TICs for this SDG.

V.9. **SYSTEM PERFORMANCE**

Review of the raw data indicated no problems with system performance.

VI. **METHOD 100.2 - ASBESTOS**

Marcia Hilchey of MEC^x reviewed the SDG on April 25, 2018.

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 1)*, *EPA Method 100.2*, and *National Functional Guidelines for Inorganic Superfund Data Review (2014)*.

VI.1. **HOLDING TIMES**

The analytical holding time for asbestos, 48 hours, was not met. The sample was analyzed 7 days after collection. The laboratory subjected the sample to UV and ozonation to minimize bacteriological growth. The reviewer qualified the nondetect result as an estimated nondetect (UJ) as a conservative measure based on professional judgment and the QAPP holding time.

VI.2. **CALIBRATION**

Summaries indicated that asbestos analytical instrument calibrations met requirements.

VI.3. **QUALITY CONTROL SAMPLES**



VI.3.1. *METHOD BLANKS*

The method blank for asbestos had no detects.

VI.3.2. *LABORATORY CONTROL SAMPLES*

Laboratory control samples are not applicable to this method.

VI.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analysis was not performed on the sample in this SDG.

VI.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses are not applicable to this method.

VI.4. *SAMPLE RESULT VERIFICATION*

The sample result reported on the summary report was verified against the raw data. No transcription errors or calculation errors were noted.

The required 0.2 MFL analytical sensitivity was not reached for asbestos due to excessive particulates. The reported analytical sensitivity for asbestos was 1.0 MFL.

VI.5. *FIELD QC SAMPLES*

MEC^x evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

VI.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

VI.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 4402066452

Analysis Method E1613B

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	N	39001-02-0	0.000016	0.00010	0.00000051	ug/L	J,DXMB	U	B
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	N	3268-87-9	0.00019	0.00010	0.00000053	ug/L	MB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	N	67562-39-4	0.0000083	0.000051	0.00000054	ug/L	J,DXqMB	U	B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	N	35822-46-9	0.000023	0.000051	0.00000055	ug/L	J,DXMB	U	B
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	N	55673-89-7	0.0000014	0.000051	0.00000069	ug/L	J,DXqMB	U	B
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	N	70648-26-9		0.000051	0.0000011	ug/L	U	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	39227-28-6	0.0000020	0.000051	0.00000055	ug/L	J,DXqMB	U	B
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	57117-44-9		0.000051	0.0000011	ug/L	U	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	N	57653-85-7	0.0000018	0.000051	0.00000053	ug/L	J,DXMB	U	B
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	N	72918-21-9	0.0000013	0.000051	0.00000063	ug/L	J,DXqMB	U	B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	N	19408-74-3	0.0000019	0.000051	0.00000050	ug/L	J,DXMB	U	B
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-41-6		0.000051	0.00000052	ug/L	U	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	N	40321-76-4	0.00000099	0.000051	0.00000049	ug/L	J,DXqMB	U	B
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	N	60851-34-5		0.000051	0.00000076	ug/L	U	U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	N	57117-31-4		0.000051	0.00000057	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	N	51207-31-9		0.000010	0.00000044	ug/L	U	U	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	N	1746-01-6		0.000010	0.00000043	ug/L	U	U	
Total Heptachlorodibenzofuran (HpCDF)	N	38998-75-3	0.000016	0.000051	0.00000062	ug/L	J,DXqMB	J	B,*III, DNQ
Total Heptachlorodibenzo-p-dioxin (HpCDD)	N	37871-00-4	0.000046	0.000051	0.00000055	ug/L	J,DXMB	J	B,*III, DNQ
Total Hexachlorodibenzofuran (HxCDF)	N	55684-94-1	0.0000050	0.000051	0.00000089	ug/L	J,DXqMB	J	B,*III, DNQ
Total Hexachlorodibenzo-p-dioxin (HxCDD), Mixture	N	34465-46-8	0.0000077	0.000051	0.00000053	ug/L	J,DXqMB	J	B,*III, DNQ

Analysis Method E1613B

Total Pentachlorodibenzofuran (PeCDF)	N	30402-15-4	0.0000072	0.000051	0.00000055	ug/L	J,DXqMB	J	B,*III, DNQ
Total Pentachlorodibenzo-p-dioxin (PeCDD)	N	36088-22-9	0.00000099	0.000051	0.00000049	ug/L	J,DXqMB	U	B
Total Tetrachlorodibenzofuran (TCDF)	N	55722-27-5		0.000010	0.00000044	ug/L	U	U	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	N	41903-57-5		0.000010	0.00000043	ug/L	U	U	

Analysis Method E525.2

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	N	2921-88-2		34		ng/L	U	U	
Diazinon	N	333-41-5		26		ng/L	U	UJ	H

Analysis Method E608

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016 (PCB-1016)	N	12674-11-2		0.45		ug/L	U	U	
Aroclor-1221 (PCB-1221)	N	11104-28-2		0.45		ug/L	U	U	
Aroclor-1232 (PCB-1232)	N	11141-16-5		0.45		ug/L	U	U	
Aroclor-1242 (PCB-1242)	N	53469-21-9		0.45		ug/L	U	U	
Aroclor-1248 (PCB-1248)	N	12672-29-6		0.45		ug/L	U	U	
Aroclor-1254 (PCB-1254)	N	11097-69-1		0.09		ug/L	U	U	
Aroclor-1260 (PCB-1260)	N	11096-82-5		0.13		ug/L	U	U	

Analysis Method EPA100.2

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Asbestos	N	1332-21-4		5.00		MFL	U	UJ	H

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-206645-2

Client Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

For:

Haley & Aldrich, Inc.

400 E Van Buren St.

Suite 545

Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:

4/24/2018 12:57:38 PM

Urvashi Patel, Manager of Project Management

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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

- 1
- 2
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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.



Urvashi Patel
Manager of Project Management
4/24/2018 12:57:38 PM



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-206645-1	Arroyo_Simi_20180322_Grab	Water	03/22/18 08:15	03/22/18 15:15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Job ID: 440-206645-2

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-206645-2

Comments

The PCB was analyzed from a 1L plastic container. Client was notified on 3/29.

Receipt

The samples were received on 3/22/2018 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.2° C, 2.6° C and 3.3° C.

Dioxin

Method(s) 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: Arroyo_Simi_20180322_Grab (440-206645-1), (CCV 320-215705/2), (LCS 320-215317/2-A), (LCSD 320-215317/3-A) and (MB 320-215317/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method(s) 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD associated with the following samples run on instrument 11D2 exceeded this criteria: (CCV 320-215889/2) and (MB 320-215317/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method PCB-LL- Lancaster Labs: This method was subcontracted to Eurofins Lancaster Laboratories Env LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.

Method Asbestos 100.2: This method was subcontracted to LA Testing. The subcontract laboratory certification is different from that of the facility issuing the final report.

Method Weck-525.2-Diazinon and Chlorpyrifos: This method was subcontracted to Weck Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Client Sample ID: Arroyo_Simi_20180322_Grab

Lab Sample ID: 440-206645-1

Date Collected: 03/22/18 08:15

Matrix: Water

Date Received: 03/22/18 15:15

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
2,3,7,8-TCDF	ND		0.000010	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,7,8-PeCDD	0.0000099	J,DX q MB	0.000051	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,7,8-PeCDF	ND		0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
2,3,4,7,8-PeCDF	ND		0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,4,7,8-HxCDD	0.0000020	J,DX q MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,6,7,8-HxCDD	0.0000018	J,DX MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,7,8,9-HxCDD	0.0000019	J,DX MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,4,7,8-HxCDF	ND		0.000051	0.0000011	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,6,7,8-HxCDF	ND		0.000051	0.0000011	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,7,8,9-HxCDF	0.0000013	J,DX q MB	0.000051	0.0000006	ug/L		03/29/18 07:29	03/30/18 18:48	1
2,3,4,6,7,8-HxCDF	ND		0.000051	0.0000007	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,4,6,7,8-HpCDD	0.0000023	J,DX MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,4,6,7,8-HpCDF	0.0000083	J,DX q MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
1,2,3,4,7,8,9-HpCDF	0.0000014	J,DX q MB	0.000051	0.0000006	ug/L		03/29/18 07:29	03/30/18 18:48	1
OCDD	0.00019	MB	0.00010	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
OCDF	0.000016	J,DX MB	0.00010	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total TCDD	ND		0.000010	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total TCDF	ND		0.000010	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total PeCDD	0.0000099	J,DX q MB	0.000051	0.0000004	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total PeCDF	0.0000072	J,DX q MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total HxCDD	0.0000077	J,DX q MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total HxCDF	0.0000050	J,DX q MB	0.000051	0.0000008	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total HpCDD	0.000046	J,DX MB	0.000051	0.0000005	ug/L		03/29/18 07:29	03/30/18 18:48	1
Total HpCDF	0.000016	J,DX q MB	0.000051	0.0000006	ug/L		03/29/18 07:29	03/30/18 18:48	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		25 - 164				03/29/18 07:29	03/30/18 18:48	1
13C-2,3,7,8-TCDF	79		24 - 169				03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,7,8-PeCDD	76		25 - 181				03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,7,8-PeCDF	78		24 - 185				03/29/18 07:29	03/30/18 18:48	1
13C-2,3,4,7,8-PeCDF	78		21 - 178				03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,4,7,8-HxCDD	76		32 - 141				03/29/18 07:29	03/30/18 18:48	1

TestAmerica Irvine

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Client Sample ID: Arroyo_Simi_20180322_Grab

Lab Sample ID: 440-206645-1

Date Collected: 03/22/18 08:15

Matrix: Water

Date Received: 03/22/18 15:15

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-1,2,3,6,7,8-HxCDD	78		28 - 130	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,4,7,8-HxCDF	72		26 - 152	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,6,7,8-HxCDF	72		26 - 123	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,7,8,9-HxCDF	73		29 - 147	03/29/18 07:29	03/30/18 18:48	1
13C-2,3,4,6,7,8-HxCDF	70		28 - 136	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,4,6,7,8-HpCDD	72		23 - 140	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,4,6,7,8-HpCDF	74		28 - 143	03/29/18 07:29	03/30/18 18:48	1
13C-1,2,3,4,7,8,9-HpCDF	72		26 - 138	03/29/18 07:29	03/30/18 18:48	1
13C-OCDD	64		17 - 157	03/29/18 07:29	03/30/18 18:48	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	107		35 - 197	03/29/18 07:29	03/30/18 18:48	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	40CFR136A	TAL SAC
100.2	EPA 100.2 Asbestos in Drinking Water	EPA	LA Testing
Subcontract	PCB-LL- Lancaster Labs	None	SC0103
Subcontract	Weck-525.2-Diazinon and Chlorpyrifos	None	Weck Lab
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

None = None

Laboratory References:

LA Testing = LA Testing, 520 Mission Street, South Pasadena, CA 91030

SC0103 = Eurofins Lancaster Laboratories Env LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Weck Lab = Weck Laboratories, Inc., 14859 East Clark Avenue, City of Industry, CA 917451396

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Client Sample ID: Arroyo_Simi_20180322_Grab

Lab Sample ID: 440-206645-1

Date Collected: 03/22/18 08:15

Matrix: Water

Date Received: 03/22/18 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			986.4 mL	20.0 uL	215317	03/29/18 07:29	KQT	TAL SAC
Total/NA	Analysis	1613B		1			215705	03/30/18 18:48	ALM	TAL SAC

Laboratory References:

LA Testing = LA Testing, 520 Mission Street, South Pasadena, CA 91030

SC0103 = Eurofins Lancaster Laboratories Env LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Weck Lab = Weck Laboratories, Inc., 14859 East Clark Avenue, City of Industry, CA 917451396

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-215317/1-A
Matrix: Water
Analysis Batch: 215705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 215317

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,4,7,8-PeCDF	81		21 - 178	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,4,7,8-HxCDD	80		32 - 141	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,6,7,8-HxCDD	85		28 - 130	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,4,7,8-HxCDF	73		26 - 152	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,6,7,8-HxCDF	76		26 - 123	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,7,8,9-HxCDF	75		29 - 147	03/29/18 07:29	03/30/18 15:44	1
13C-2,3,4,6,7,8-HxCDF	73		28 - 136	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,4,6,7,8-HpCDD	72		23 - 140	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,4,6,7,8-HpCDF	74		28 - 143	03/29/18 07:29	03/30/18 15:44	1
13C-1,2,3,4,7,8,9-HpCDF	72		26 - 138	03/29/18 07:29	03/30/18 15:44	1
13C-OCDD	65		17 - 157	03/29/18 07:29	03/30/18 15:44	1
Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier					
37Cl4-2,3,7,8-TCDD	104		35 - 197	03/29/18 07:29	03/30/18 15:44	1

Lab Sample ID: LCS 320-215317/2-A
Matrix: Water
Analysis Batch: 215705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 215317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF	0.000200	0.000191	MB	ug/L		95	75 - 158
1,2,3,7,8-PeCDD	0.00100	0.00106	MB	ug/L		106	70 - 142
1,2,3,7,8-PeCDF	0.00100	0.000966	MB	ug/L		97	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.000971	MB	ug/L		97	68 - 160
1,2,3,4,7,8-HxCDD	0.00100	0.000953	MB	ug/L		95	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.000888	MB	ug/L		89	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.000942	MB	ug/L		94	64 - 162
1,2,3,4,7,8-HxCDF	0.00100	0.000962	MB	ug/L		96	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.000970	MB	ug/L		97	84 - 130
1,2,3,7,8,9-HxCDF	0.00100	0.000961	MB	ug/L		96	78 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.000983	MB	ug/L		98	70 - 156
1,2,3,4,6,7,8-HpCDD	0.00100	0.00102	MB	ug/L		102	70 - 140
1,2,3,4,6,7,8-HpCDF	0.00100	0.000935	MB	ug/L		94	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.000920	MB	ug/L		92	78 - 138
OCDD	0.00200	0.00185	MB	ug/L		92	78 - 144
OCDF	0.00200	0.00181	MB	ug/L		91	63 - 170
Isotope Dilution	LCS LCS		Limits				
%Recovery	Qualifier						
13C-2,3,7,8-TCDD	81		20 - 175				
13C-2,3,7,8-TCDF	80		22 - 152				
13C-1,2,3,7,8-PeCDD	78		21 - 227				
13C-1,2,3,7,8-PeCDF	79		21 - 192				
13C-2,3,4,7,8-PeCDF	81		13 - 328				
13C-1,2,3,4,7,8-HxCDD	80		21 - 193				
13C-1,2,3,6,7,8-HxCDD	85		25 - 163				
13C-1,2,3,4,7,8-HxCDF	75		19 - 202				
13C-1,2,3,6,7,8-HxCDF	76		21 - 159				

TestAmerica Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-215317/2-A
Matrix: Water
Analysis Batch: 215705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 215317

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
13C-1,2,3,7,8,9-HxCDF	77		17 - 205
13C-2,3,4,6,7,8-HxCDF	74		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	73		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	78		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	74		20 - 186
13C-OCDD	67		13 - 199

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
37Cl4-2,3,7,8-TCDD	104		31 - 191

Lab Sample ID: LCSD 320-215317/3-A
Matrix: Water
Analysis Batch: 215705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 215317

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
2,3,7,8-TCDD	0.000200	0.000197	MB	ug/L		99	67 - 158	0	50
2,3,7,8-TCDF	0.000200	0.000188	MB	ug/L		94	75 - 158	1	50
1,2,3,7,8-PeCDD	0.00100	0.00108	MB	ug/L		108	70 - 142	1	50
1,2,3,7,8-PeCDF	0.00100	0.000964	MB	ug/L		96	80 - 134	0	50
2,3,4,7,8-PeCDF	0.00100	0.000972	MB	ug/L		97	68 - 160	0	50
1,2,3,4,7,8-HxCDD	0.00100	0.000967	MB	ug/L		97	70 - 164	1	50
1,2,3,6,7,8-HxCDD	0.00100	0.000905	MB	ug/L		91	76 - 134	2	50
1,2,3,7,8,9-HxCDD	0.00100	0.000831	MB	ug/L		83	64 - 162	13	50
1,2,3,4,7,8-HxCDF	0.00100	0.000969	MB	ug/L		97	72 - 134	1	50
1,2,3,6,7,8-HxCDF	0.00100	0.000982	MB	ug/L		98	84 - 130	1	50
1,2,3,7,8,9-HxCDF	0.00100	0.000954	MB	ug/L		95	78 - 130	1	50
2,3,4,6,7,8-HxCDF	0.00100	0.000976	MB	ug/L		98	70 - 156	1	50
1,2,3,4,6,7,8-HpCDD	0.00100	0.00102	MB	ug/L		102	70 - 140	0	50
1,2,3,4,6,7,8-HpCDF	0.00100	0.000965	MB	ug/L		97	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	0.00100	0.000912	MB	ug/L		91	78 - 138	1	50
OCDD	0.00200	0.00195	MB	ug/L		98	78 - 144	5	50
OCDF	0.00200	0.00168	MB	ug/L		84	63 - 170	8	50

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDD	81		20 - 175
13C-2,3,7,8-TCDF	79		22 - 152
13C-1,2,3,7,8-PeCDD	78		21 - 227
13C-1,2,3,7,8-PeCDF	79		21 - 192
13C-2,3,4,7,8-PeCDF	81		13 - 328
13C-1,2,3,4,7,8-HxCDD	95		21 - 193
13C-1,2,3,6,7,8-HxCDD	98		25 - 163
13C-1,2,3,4,7,8-HxCDF	92		19 - 202
13C-1,2,3,6,7,8-HxCDF	95		21 - 159
13C-1,2,3,7,8,9-HxCDF	65		17 - 205
13C-2,3,4,6,7,8-HxCDF	90		22 - 176
13C-1,2,3,4,6,7,8-HpCDD	78		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	61		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	76		20 - 186

TestAmerica Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-215317/3-A
Matrix: Water
Analysis Batch: 215705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 215317

	<i>LCSD</i>	<i>LCSD</i>	
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C-OCDD	78		13 - 199

	<i>LCSD</i>	<i>LCSD</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
37Cl4-2,3,7,8-TCDD	104		31 - 191

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: MB 320-215317/1-A
Matrix: Water
Analysis Batch: 215889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 215317

<i>Analyte</i>	<i>MB</i>	<i>MB</i>								
	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>EDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>	
2,3,7,8-TCDF - RA	0.00000285	J,DX	0.000010	0.0000004	ug/L	-	03/29/18 07:29	04/02/18 12:53	1	
				8						

	<i>MB</i>	<i>MB</i>			
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>
13C-2,3,7,8-TCDF - RA	74		24 - 169	03/29/18 07:29	04/02/18 12:53

	<i>MB</i>	<i>MB</i>			
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>
37Cl4-2,3,7,8-TCDD - RA	92		35 - 197	03/29/18 07:29	04/02/18 12:53

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Specialty Organics

Prep Batch: 215317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-206645-1	Arroyo_Simi_20180322_Grab	Total/NA	Water	1613B	
MB 320-215317/1-A	Method Blank	Total/NA	Water	1613B	
MB 320-215317/1-A - RA	Method Blank	Total/NA	Water	1613B	
LCS 320-215317/2-A	Lab Control Sample	Total/NA	Water	1613B	
LCSD 320-215317/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	

Analysis Batch: 215705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-206645-1	Arroyo_Simi_20180322_Grab	Total/NA	Water	1613B	215317
MB 320-215317/1-A	Method Blank	Total/NA	Water	1613B	215317
LCS 320-215317/2-A	Lab Control Sample	Total/NA	Water	1613B	215317
LCSD 320-215317/3-A	Lab Control Sample Dup	Total/NA	Water	1613B	215317

Analysis Batch: 215889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-215317/1-A - RA	Method Blank	Total/NA	Water	1613B	215317

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Laboratory: TestAmerica Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-18

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
Arizona	State Program	9	AZ0708	08-11-18
Arkansas DEQ	State Program	6	88-0691	06-17-18
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
L-A-B	DoD ELAP		L2468	01-20-21
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-18 *
New Jersey	NELAP	2	CA005	06-30-18
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-18
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Work Orders: 8C22097

Project: 440-206645-1

Attn: Urvashi Patel

Client: TestAmerica - Irvine CA
17461 Derian Ave, Suite 100
Irvine, CA 92614

Report Date: 4/05/2018
Received Date: 3/22/2018
Turnaround Time: 7 workdays
Phones: (949) 261-1022
Fax: (949) 260-3297
P.O. #:
Billing Code:

Dear Urvashi Patel,

Enclosed are the results of analyses for samples received 3/22/18 with the Chain-of-Custody document. The samples were received in good condition, at 2.7 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: Arroyo_Simi_20180322_Grab (440-206645-1) Sampled: 03/22/18 8:15 by Client
8C22097-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 525.2M						Analyst: EFC	
Batch ID: W8C1385							
Instr: GCMS13							
Prepared: 03/23/18 09:40							
Chlorpyrifos	ND	34	50	ng/l	1	03/30/18 22:26	M-02
Diazinon	ND	26	50	ng/l	1	03/30/18 22:26	M-02
<i>Surrogate(s)</i>							
1,3-Dimethyl-2-nitrobenzene	114%		76-128	Conc: 2850		03/30/18 22:26	M-02
Triphenyl phosphate	141%		40-163	Conc: 3520		03/30/18 22:26	M-02



WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Quality Control Results

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Blank (W8C1385-BLK1)					Prepared: 03/23/18 Analyzed: 03/30/18						
Chlorpyrifos	ND	6.9	10	ng/l							
Diazinon	ND	5.2	10	ng/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			339	ng/l	500		68	76-128			S-11
Triphenyl phosphate			506	ng/l	500		101	40-163			
LCS (W8C1385-BS1)					Prepared: 03/23/18 Analyzed: 03/30/18						
Chlorpyrifos	41.0	6.9	10	ng/l	50.0		82	37-169			
Diazinon	30.9	5.2	10	ng/l	50.0		62	43-152			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			357	ng/l	500		71	76-128			S-11
Triphenyl phosphate			499	ng/l	500		100	40-163			
Matrix Spike (W8C1385-MS1)					Source: 8C22030-01		Prepared: 03/23/18 Analyzed: 03/30/18				
Chlorpyrifos	62.2	6.9	10	ng/l	50.0	ND	124	37-168			
Diazinon	55.2	5.2	10	ng/l	50.0	ND	110	36-153			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			467	ng/l	500		93	76-128			
Triphenyl phosphate			600	ng/l	500		120	40-163			
Matrix Spike (W8C1385-MS2)					Source: 8C23035-01		Prepared: 03/23/18 Analyzed: 03/30/18				
Chlorpyrifos	72.3	6.9	10	ng/l	50.0	ND	145	37-168			
Diazinon	70.3	5.2	10	ng/l	50.0	ND	141	36-153			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			463	ng/l	500		93	76-128			S-11
Triphenyl phosphate			760	ng/l	500		152	40-163			
Matrix Spike Dup (W8C1385-MSD1)					Source: 8C22030-01		Prepared: 03/23/18 Analyzed: 03/30/18				
Chlorpyrifos	75.9	6.9	10	ng/l	50.0	ND	152	37-168	20	30	
Diazinon	61.1	5.2	10	ng/l	50.0	ND	122	36-153	10	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			458	ng/l	500		92	76-128			
Triphenyl phosphate			777	ng/l	500		155	40-163			S-11
Matrix Spike Dup (W8C1385-MSD2)					Source: 8C23035-01		Prepared: 03/23/18 Analyzed: 03/30/18				
Chlorpyrifos	71.9	6.9	10	ng/l	50.0	ND	144	37-168	0.6	30	
Diazinon	56.9	5.2	10	ng/l	50.0	ND	114	36-153	21	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene			496	ng/l	500		99	76-128			
Triphenyl phosphate			759	ng/l	500		152	40-163			



WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Notes and Definitions

Item	Definition
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ) and Detection Limit for Reporting (DLR)
MDA	Minimum Detectable Activity
NR	Not Reportable
TIC	Tentatively Identified Compound (TIC) using mass spectrometry. The reported concentration is relative concentration based on the nearest internal standard. If the library search produces no matches at, or above 85%, the compound is reported as unknown.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.
 An Absence of Total Coliform meets the drinking water standards as established by the California State Water Resources Control Board (SWRCB)
 All results are expressed on wet weight basis unless otherwise specified.
 All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS 002.

Reviewed by:



Regina Giancola
Project Manager



DoD-ELAP #L2457 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • ISO 17025 #L2457.01 • LACSD #10143 • NJ-DEP #CA015

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.



LA Testing

520 Mission Street South Pasadena, CA 91030
Phone/Fax: (323) 254-9960 / (323) 254-9982
<http://www.LATesting.com> / pasadenalab@latestesting.com

LA Testing Order ID: 321807334
Customer ID: TEST72
Customer PO:
Project ID:

Attn: Urvashi Patel
TestAmerica - Irvine, CA
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Collected: 03/22/2018
Received: 03/29/2018
Analyzed: 04/11/2018
Proj: 440-206645-1/ 440-120606.1/ 44009879

Test Report: Determination of Asbestos Structures >10µm in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm ²)	Area Analyzed (mm ²)	ASBESTOS				
					Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration MFL (million fibers per liter)	Confidence Limits
Arroyo_Simi_201803 22_Grab (440-206645-1) 321807334-0001	4/9/2018 04:35 PM	1	1288	0.2580	None Detected	ND	5.00	<5.00	0.00 - 18.00
Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.									
Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time.									

Analyst(s)
Feng Liang (1)

Jerry Drapala Ph.D, Laboratory Manager
or Other Approved Signatory

Any questions please contact Jerry Drapala.

Initial report from: 04/11/2018 21:38:45

Sample collection and containers provided by the client, acceptable bottle blank level is defined as ≤0.01MFL>10µm. ND=None Detected. This report relates only to those items tested. This report may not be reproduced, except in full, without written permission by LA Testing. Samples received in good condition unless otherwise noted.

Samples analyzed by LA Testing South Pasadena, CA CA ELAP 2283



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Test America
17461 Derian Ave
Suite #100
Irvine CA 92614

Report Date: April 24, 2018 10:23

Project: Boeing NPDES SSFL Outfalls

Account #: 41440
Group Number: 1923910
SDG: SSF07
PO Number: 44009879
State of Sample Origin: CA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Test America

Attn: Urvashi Patel

Respectfully Submitted,



Kay Hower

(717) 556-7364



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SAMPLE INFORMATION

Client Sample Description

Sample Collection
Date/Time

ELLE#

Arroyo_Simi_20180322_Grab Water

03/22/2018 08:15

9524879

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: Arroyo_Simi_20180322_Grab Water
440-206645-1
Boeing NPDES SSFL Outfalls

Test America
ELLE Sample #: WW 9524879
ELLE Group #: 1923910
Matrix: Water

Project Name: Boeing NPDES SSFL Outfalls

Submittal Date/Time: 03/27/2018 10:10
Collection Date/Time: 03/22/2018 08:15
SDG#: SSF07-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		EPA 608	ug/l	ug/l	ug/l	
06030	PCB-1016	12674-11-2	N.D. D1	0.45	0.45	1
06030	PCB-1221	11104-28-2	N.D. D1	0.45	0.45	1
06030	PCB-1232	11141-16-5	N.D. D1	0.45	0.45	1
06030	PCB-1242	53469-21-9	N.D. D1	0.45	0.45	1
06030	PCB-1248	12672-29-6	N.D. D1	0.45	0.45	1
06030	PCB-1254	11097-69-1	N.D. D1	0.090	0.45	1
06030	PCB-1260	11096-82-5	N.D. D1	0.13	0.45	1
06030	Total PCBs	1336-36-3	N.D.	0.090	0.45	1

Sample Comments

CA ELAP Lab Certification No. 2792
The sample was submitted in a plastic bottle for PCBs. The client was contacted and the laboratory was instructed to proceed.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06030	PCBs in Water by 608	EPA 608	1	180870009A	04/15/2018 23:36	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608	1	180870009A	03/29/2018 02:00	Sherry L Morrow	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Test America
Reported: 04/24/2018 10:23

Group Number: 1923910

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL** ug/l	LOQ ug/l
Batch number: 180870009A	Sample number(s): 9524879		
PCB-1016	N.D.	0.50	0.50
PCB-1221	N.D.	0.50	0.50
PCB-1232	N.D.	0.50	0.50
PCB-1242	N.D.	0.50	0.50
PCB-1248	N.D.	0.50	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Total PCBs	N.D.	0.10	0.50

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 180870009A	Sample number(s): 9524879								
PCB-1016	5.01	4.59	5.01	4.53	92	90	60-117	1	30
PCB-1260	5.01	4.99	5.01	4.93	100	98	57-134	1	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs in Water by 608
Batch number: 180870009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9524879	92	86	91	82
Blank	83	38	82	38
LCS	84	40	83	38
LCSD	85	98	85	96
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

41440 / 1923910 / 9524879
Chain of Custody Record



Client Information (Sub Contract Lab)		Lab P.M.: Patel, Urvashti	Carrier Tracking No(s): 440-120503.1
Client Contact: Shipping/Receiving		E-Mail: urvashti.patel@testamericainc.com	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): State Program - California	Job #: 440-206845-1
Address: 2425 New Holland Pike, Lancaster, PA, 17601		Analysis Requested	
Phone: 717-656-2300(Tel)		Preservation Codes: M - Hexane N - None O - AsNiO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Project Name: Boeing NPDES SSFL outfalls		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA Other:	
Site:		Total Number of containers	
Due Date Requested: 3/28/2018		X	
TAT Requested (days):		1	
PO #:		Field Filtered Sample (Yes or No) X	
WO #:		Perform M/MSD (Yes or No) X	
Project #: 44009879		SUB (PCB-LL, Lancaster Labs) PCB-LL- Lancaster	
SSON#:		Lbs	
Sample Date: 3/22/18		Matrix (In-water, Sealed, On-water, BTL-Base, AVAL)	
Sample Time: 08:15 Pacific		Sample Type (C=Comp, G=grab)	
Sample Date: 3/22/18		Preservation Code: Water	
Sample Time: 08:15 Pacific		Special Instructions/Note:	
Sample Identification - Client ID (Lab ID)		Arroyo_Simi_20180322_Grab (440-206845-1)	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.			
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2		Method of Shipment:	
Relinquished by: [Signature]		Received by: [Signature]	
Date/Time: [Signature]		Date/Time: [Signature]	
Relinquished by: [Signature]		Received by: [Signature]	
Date/Time: [Signature]		Date/Time: [Signature]	
Relinquished by: [Signature]		Received by: [Signature]	
Date/Time: [Signature]		Date/Time: [Signature]	
Custody Seals Intact: (A) Yes (B) No		Cooler Temperature(s) °C and Other Remarks: [Signature]	





Client: Test America

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 03/27/2018 10:10
 Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 12:13 on 03/27/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	0.7	IR	Wet	Y	Bagged	N

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



Patel, Urvashi

From: Miller, Katherine <KMiller@haleyaldrich.com>
Sent: Friday, March 30, 2018 3:31 PM
To: Patel, Urvashi
Subject: RE: 206645

-External Email-

Move to -2. Thanks.

Katherine Miller
HALEY & ALDRICH
Tel: 520.289.8606

From: Patel, Urvashi <Urvashi.Patel@testamericainc.com>
Sent: Friday, March 30, 2018 3:11 PM
To: Miller, Katherine <KMiller@haleyaldrich.com>
Subject: 206645

Hi

All the analysis for TA is complete except for the subcontract work. Would you like me to move subcontract to job-2 with the 1613 or create another SDG for the subcontract only?

URVASHI PATEL
Manager of Project Management

Test America
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Ave, Suite #100
Irvine, CA 92614
TEL 949-261-1022 | FAX 949-260-3297
DIRECT 949-260-3269
CELL 949-333-9055

www.testamericainc.com

Please check with your PM before submitting short hold samples after 5pm or on Saturday.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at : **Project Feedback** <https://www.surveymonkey.com/s/TAProjectFeedback>

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Patel, Urvashi

Subject: FW: 206645- PCBs

From: Patel, Urvashi
Sent: Thursday, March 29, 2018 8:07 AM
To: Miller, Katherine (KMiller@haleyaldrich.com)
Subject: 206645- PCBs

Hi Katherine

Incorrect container was sent for job 440-206645 to Eurofins for PCBs. Eurofins didn't notify me that the incorrect one was sent otherwise we could have sent the correct one out but since hold time is up today, I've instructed them to proceed with the analysis. See email thread below.

I've brought this issue up to TA's LD as it was our Sample receiving error initially.

URVASHI PATEL
Manager of Project Management

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 17461 Derian Ave Suite 100
 Irvine, CA 92614-5817
 Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record



TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact: Shipping/Receiving		Phone:		Patel, Urvashi		State of Origin: California		440-120429.1	
Company: TestAmerica Laboratories, Inc.		Address: 880 Riverside Parkway, West Sacramento State, Zip: CA, 95605		E-Mail: urvashi.patel@testamericainc.com		Accreditations Required (See note): State Program - California		Page: Page 1 of 1	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		Email:		Due Date Requested: 4/3/2018		Analysis Requested		Job #: 440-206645-1	
Project Name: Boeing NPDES SSFL outfalls		Site:		TAT Requested (days):		Preservation Codes:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=on-site, BT=Tissue, A=Air)	
Arroyo_Siml_20180322_Grab (440-206645-1)		3/22/18		08:15 Pacific		Water		Water	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		1613B/1613B_Sox_Sep_P_Standard List w/ Totals		Total Number of Containers		Special Instructions/Note:	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		2		See OAS, Boeing_wlu to zero, Use Boeing glassware.	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>									
Possible Hazard Identification									
<input type="checkbox"/> Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2									
Empty Kit Requisitioned by: _____ Requisitioned by: _____ Requisitioned by: _____ Requisitioned by: _____									
Date/Time: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____									
Date/Time: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____									
Cooler Temperature(s) °C and Other Remarks: <i>2/c</i>									



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-206645-2

Login Number: 206645

List Number: 1

Creator: Soderblom, Tim

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-206645-2

Login Number: 206645

List Number: 2

Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento

List Creation: 03/24/18 04:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
440-206645-1	Arroyo_Simi_20180322_Grab	83	79	76	78	78	76	78	72
MB 320-215317/1-A	Method Blank	78	78	79	78	81	80	85	73
MB 320-215317/1-A - RA	Method Blank		74						

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
440-206645-1	Arroyo_Simi_20180322_Grab	72	73	70	72	74	72	64
MB 320-215317/1-A	Method Blank	76	75	73	72	74	72	65
MB 320-215317/1-A - RA	Method Blank							

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-215317/2-A	Lab Control Sample	81	80	78	79	81	80	85	75
LCSD 320-215317/3-A	Lab Control Sample Dup	81	79	78	79	81	95	98	92

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-215317/2-A	Lab Control Sample	76	77	74	73	78	74	67
LCSD 320-215317/3-A	Lab Control Sample Dup	95	65	90	78	61	76	78

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD

TestAmerica Irvine

Isotope Dilution Summary

Client: Haley & Aldrich, Inc.

Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-2

HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

DATA VALIDATION REPORT

Boeing SSFL Arroyo Simi

SAMPLE DELIVERY GROUP: 440-206645-1

Prepared for
Haley & Aldrich

April 3, 2018

MEC^x, Inc.
8864 Interchange Drive
Houston, Texas 77054

www.mecx.net





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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL Arroyo Simi

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-206645-1

Project Manager: K. Miller

Matrix: Water

QC Level: IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica - Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
Arroyo_Simi_20180322_Grab	440-206645-1	Water	3/22/2018 8:15:00 AM	200.8, 218.6, 245.1, 608, SM2340B, SM9221F, SM2540D



II. SAMPLE MANAGEMENT

According to the case narrative, sample condition upon receipt form and the chain-of-custody (COC) provided by the laboratory for sample delivery group (SDG) 440-206645-1:

- The laboratory received the sample in this sample delivery group (SDG) on ice and within the temperature limits of less than 6 degrees Celsius ($^{\circ}\text{C}$) and greater than 0°C .
- The laboratory received the sample containers intact and properly preserved, as applicable.
- Field and laboratory personnel signed and dated the COC.
- According to the sample receipt form, custody seals were absent.
- Methods 245.1 and 218.6 were added to the requested analyses per client request. These analyses, while not listed on the original COC, were reported in SDG 440-206645-4 and were reviewed for this report.
- Per client request, Method 608 for full-list pesticides was added to this revision of the original data validation report.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	Not applicable.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.



Reason Code	Organic	Inorganic
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. EPA METHODS 200.8, 245.1 AND 2340B — METALS, MERCURY AND HARDNESS

Marcia Hilchey of MECX reviewed the SDG on April 3 and April 18, 2018.

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MECX Data Validation Procedure for Metals (DVP-5, Rev. 2)*, *EPA Methods 200.8, 245.1, Standard Methods for the Examination of Water and Wastewater 2340B*, and the *National Functional Guidelines for Inorganic Data Review (2014)*.

III.1. HOLDING TIMES

The analytical holding times, 28 days for mercury and six months for the metals, were met.

III.2. MS TUNING AND CALIBRATION

ICPMS mass calibrations were within 0.1 atomic mass units of the true value and the %RSDs were $\leq 5\%$.

QAPP calibration criteria were met. A blank and one standard were used for calibration of all ICP-AES target analytes. A blank and 4 standards were used for calibration of all ICP-MS target analytes. A blank and 5 standards were used for calibration of mercury. The initial calibration r values for ICPMS and CVAA were ≥ 0.995 . CRQL recoveries were within the laboratory control limits of 50-150%. ICV and CCV recoveries were within NFG control limits of 90-110%.

III.3. QUALITY CONTROL SAMPLES

III.3.1. METHOD BLANKS

There were no target analyte detections in the calibration blanks or method blanks with the following exceptions. Mercury was reported in the initial calibration blank (-0.159 $\mu\text{g/L}$), bracketing continuing calibration blank (-0.135 $\mu\text{g/L}$) and method blank (-0.134 $\mu\text{g/L}$) at negative concentrations greater than the absolute value of the MDL. The sample result for mercury was nondetect and was qualified as estimated (UJ).

III.3.2. INTERFERENCE CHECK SAMPLES:

ICP-MS ICSAB recoveries were within the control limits of 80-120% or $\pm 2x$ the reporting limit, whichever is greater. All of the interferents were present in the site samples at concentrations less than half that of the ICSA, therefore, the sample was not assessed for matrix interference.

III.3.3. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries were within the method control limits of 85-115%.

III.3.4. LABORATORY DUPLICATES:

Laboratory duplicate analyses were not performed on the sample in this SDG.

III.3.5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on the sample in this SDG for Methods 200.7 (supporting Method 2340B) and 245.1. Results were not assessed when the parent sample concentration exceeded the spike amount by $4x$. Recoveries and RPDs were within the method control limits of 70-130% and $\leq 20\%$, respectively. MS/MSD analyses were not performed on the sample in this SDG for Method 200.8.



III.4. SERIAL DILUTION

No serial dilution analyses were reported.

III.1. INTERNAL STANDARDS PERFORMANCE

Sample internal standard recoveries for ICPMS were within 60-125% of the calibration blank.

III.2. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Calculations were verified and the reported sample results were verified against the raw data. No transcription errors or calculation errors were noted. Detects between the MDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Nondetects are valid to the MDL.

III.3. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

III.3.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

III.3.2. FIELD DUPLICATES

There were no field duplicate samples identified for this SDG.

IV. EPA METHOD 608 – PESTICIDES

L. Calvin of MEC^X reviewed the SDG on April 18, 2018

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 1)*, *EPA Method 608*, and the *National Functional Guidelines for Superfund Organic Methods Data Review (2014)*.

IV.1. HOLDING TIMES

Extraction and analytical holding times were met. The sample was extracted within seven days of collection and analyzed within 40 days of extraction.

IV.2. CALIBRATION

The initial calibration %RSDs were within the control limits of $\leq 10\%$ or $r^2 \geq 0.990$. The initial calibration verification (ICV) and continuing calibration verification (CCV) %Ds were within the control limit of $\leq 15\%$.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. METHOD BLANKS

Target compounds were not detected in method blank.

IV.3.2. LABORATORY CONTROL SAMPLES

LCS/LCSD recoveries and RPDs were within the laboratory control limits.



IV.3.3. **SURROGATE RECOVERY**

The surrogate recovery for TCMX was within the laboratory control limits of 10-150% in the site sample.

IV.3.4. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

MS/MSD analyses were not performed on the sample in this SDG. MEC^x evaluated method accuracy and precision based on the LCS/LCSD results.

IV.4. **FIELD QC SAMPLES**

MEC^x evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

IV.4.1. **FIELD BLANKS AND EQUIPMENT BLANKS**

Field blank or equipment blank samples were not identified for this SDG.

IV.4.2. **FIELD DUPLICATES**

Field duplicate samples were not identified in this SDG.

IV.5. **COMPOUND IDENTIFICATION**

Compound identification was verified. Review of the sample chromatograms and retention times indicated no issues with target compound identification. The laboratory analyzed for 20 pesticides by Method 608.

IV.6. **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit. The intercolumn RPD for the Endosulfan I detect in the sample was <40%. The sample did not require dilution.

IV.7. **SYSTEM PERFORMANCE**

Review of the raw data indicated no issues with system performance.

V. **METHODS SM 2540D, E218.6 AND SM 9221F— TOTAL SUSPENDED SOLIDS (TSS), HEXAVALENT CHROMIUM AND E. COLI**

Marcia Hilchey of MEC^x reviewed the SDG on April 3 and April 18, 2018.

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for General Minerals (DVP-6, Rev. 1)*, EPA Method 218.6, *Standard Methods for the Examination of Water and Wastewater 2540D and 9221F*, and the *National Functional Guidelines for Inorganic Superfund Data Review* (2014).

V.1. **HOLDING TIMES**

The analytical holding times, 7 days for TSS and 30 hours for E. Coli by Method 9221F as stated in the QAPP and 8 hours as requested on the CoC, were met. The analytical holding time for hexavalent chromium, 24 hours from collection, was not met. The analysis was added to the COC past the HT



requirement, and the sample was analyzed 23 days after collection. The result for hexavalent chromium was qualified as estimated with a potential negative bias (J-).

V.2. CALIBRATION

The analytical balance was properly calibrated. Biological controls were acceptable. Initial calibration requirements were met for hexavalent chromium. Initial and continuing calibration (CCV) and low level CCV recoveries for hexavalent chromium were within laboratory control limits.

V.3. QUALITY CONTROL SAMPLES

V.3.1. METHOD BLANKS

The TSS and hexavalent chromium method blanks had no detects. The negative biological control sample was acceptable. The calibration blanks for hexavalent chromium had no detects.

V.3.2. LABORATORY CONTROL SAMPLES

Laboratory control sample recoveries for TSS and hexavalent chromium were within the laboratory control limits. The presumptive test was analyzed with the positive detects for the target bacteria.

V.3.3. LABORATORY DUPLICATES

Laboratory duplicate analyses were not performed on the sample in this SDG.

V.3.4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample in this SDG.

V.4. SAMPLE RESULT VERIFICATION

Calculations were verified and the reported sample results were verified against the raw data. No transcription errors or calculation errors were noted.

V.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

V.5.1. FIELD BLANKS AND EQUIPMENT BLANKS

Field blank or equipment blank samples were not identified for this SDG.

V.5.2. FIELD DUPLICATES

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 4402066451

Analysis Method E200.8

Sample Name Arroyo_Simi_20180322_Grab Matrix Type: WS Result Type: TRG

Sample Date: 3/22/2018 8:15:00 AM Validation Level: 8

Lab Sample Name: 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	T	7440-36-0	0.95	2.0	0.50	ug/L	J,DX	J	DNQ
Arsenic	T	7440-38-2	2.0	1.0	0.50	ug/L			
Beryllium	T	7440-41-7		0.50	0.25	ug/L	U	U	
Cadmium	T	7440-43-9	0.29	1.0	0.25	ug/L	J,DX	J	DNQ
Chromium	T	7440-47-3	5.8	2.0	0.50	ug/L			
Copper	T	7440-50-8	9.9	2.0	0.50	ug/L			
Lead	T	7439-92-1	1.7	1.0	0.50	ug/L			
Nickel	T	7440-02-0	5.7	2.0	0.50	ug/L			
Selenium	T	7782-49-2	1.5	2.0	0.50	ug/L	J,DX	J	DNQ
Silver	T	7440-22-4		1.0	0.50	ug/L	U	U	
Thallium	T	7440-28-0		1.0	0.50	ug/L	U	U	
Zinc	T	7440-66-6	45	20	2.5	ug/L			

Analysis Method E608

Sample Name Arroyo_Simi_20180322_Grab Matrix Type: WS Result Type: TRG

Sample Date: 3/22/2018 8:15:00 AM Validation Level: 8

Lab Sample Name: 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
4,4'-DDD	N	72-54-8		0.0051	0.0041	ug/L	U	U	
4,4'-DDE	N	72-55-9		0.0051	0.0031	ug/L	U	U	
4,4'-DDT	N	50-29-3		0.010	0.0041	ug/L	U	U	
Aldrin	N	309-00-2		0.0051	0.0015	ug/L	U	U	
alpha-BHC	N	319-84-6		0.0051	0.0026	ug/L	U	U	
beta-BHC	N	319-85-7		0.010	0.0041	ug/L	U	U	
Chlordane	N	57-74-9		0.10	0.082	ug/L	U	U	
delta-BHC	N	319-86-8		0.0051	0.0036	ug/L	U	U	
Dieldrin	N	60-57-1		0.0051	0.0020	ug/L	U	U	
Endosulfan I	N	959-98-8	0.042	0.0051	0.0031	ug/L			
Endosulfan II	N	33213-65-9		0.0051	0.0020	ug/L	U	U	
Endosulfan sulfate	N	1031-07-8		0.010	0.0031	ug/L	U	U	
Endrin	N	72-20-8		0.0051	0.0020	ug/L	U	U	
Endrin aldehyde	N	7421-93-4		0.010	0.0020	ug/L	U	U	
Endrin ketone	N	53494-70-5		0.010	0.0071	ug/L	U	U	
gamma-BHC (Lindane)	N	58-89-9		0.010	0.0031	ug/L	U	U	

Analysis Method E608

Heptachlor	N	76-44-8	0.010	0.0031	ug/L	U	U
Heptachlor epoxide	N	1024-57-3	0.0051	0.0026	ug/L	U	U
Methoxychlor	N	72-43-5	0.0051	0.0036	ug/L	U	U
Toxaphene	N	8001-35-2	0.51	0.26	ug/L	U	U

Analysis Method SM2340**Sample Name** Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG**Sample Date:** 3/22/2018 8:15:00 AM **Validation Level:** 8**Lab Sample Name:** 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	T	HARDNESSCA CO3	120	0.33	0.17	mg/L			

Analysis Method SM2540D**Sample Name** Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG**Sample Date:** 3/22/2018 8:15:00 AM **Validation Level:** 8**Lab Sample Name:** 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids (TSS)	N	TSS	63	5.0	2.5	mg/L			

Analysis Method SM9221F**Sample Name** Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG**Sample Date:** 3/22/2018 8:15:00 AM **Validation Level:** 8**Lab Sample Name:** 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Escherichia coli	N	ECOLI	11000	1.8	1.8	mpn/100			

Validated Sample Result Forms: 4402066454

Analysis Method E218.6

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chromium VI (Hexavalent)	T	18540-29-9	0.62	1.0	0.25	ug/L	J,DXBU	J-	H

Analysis Method E245.1

Sample Name Arroyo_Simi_20180322_Grab **Matrix Type:** WS **Result Type:** TRG

Sample Date: 3/22/2018 8:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-206645-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6		0.20	0.10	ug/L	U	UJ	B

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-206645-4

Client Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

For:

Haley & Aldrich, Inc.

400 E Van Buren St.

Suite 545

Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:

4/16/2018 1:46:02 PM

Urvashi Patel, Manager of Project Management

(949)261-1022

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.



Urvashi Patel
Manager of Project Management
4/16/2018 1:46:03 PM



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-206645-1	Arroyo_Simi_20180322_Grab	Water	03/22/18 08:15	03/22/18 15:15

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Job ID: 440-206645-4

Laboratory: TestAmerica Irvine

Narrative

**Job Narrative
440-206645-4**

Comments

Mercury and CrVI added on 4/13 per client request on a Rush TAT.

Receipt

The samples were received on 3/22/2018 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.2° C, 2.6° C and 3.3° C.

HPLC/IC

Method(s) 218.6: The following sample was added in outside of holding time: Arroyo_Simi_20180322_Grab (440-206645-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Client Sample ID: Arroyo_Simi_20180322_Grab

Lab Sample ID: 440-206645-1

Date Collected: 03/22/18 08:15

Matrix: Water

Date Received: 03/22/18 15:15

Method: 218.6 - Chromium, Hexavalent (Ion Chromatography)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	0.62	J,DX BU	1.0	0.25	ug/L			04/13/18 19:46	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/13/18 13:20	04/13/18 16:57	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Method	Method Description	Protocol	Laboratory
218.6	Chromium, Hexavalent (Ion Chromatography)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Client Sample ID: Arroyo_Simi_20180322_Grab

Lab Sample ID: 440-206645-1

Date Collected: 03/22/18 08:15

Matrix: Water

Date Received: 03/22/18 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.6		1			469971	04/13/18 19:46	RW	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	470080	04/13/18 13:20	DB	TAL IRV
Total/NA	Analysis	245.1		1			470164	04/13/18 16:57	DB	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Method: 218.6 - Chromium, Hexavalent (Ion Chromatography)

Lab Sample ID: MB 440-469971/6
Matrix: Water
Analysis Batch: 469971

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		1.0	0.25	ug/L			04/13/18 12:50	1

Lab Sample ID: LCS 440-469971/5
Matrix: Water
Analysis Batch: 469971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	50.0	50.9		ug/L		102	90 - 110

Lab Sample ID: MRL 440-469971/4
Matrix: Water
Analysis Batch: 469971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	1.00	1.20		ug/L		120	50 - 150

Lab Sample ID: 440-208815-D-5 MS
Matrix: Water
Analysis Batch: 469971

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.40	J,DX	50.0	53.7		ug/L		106	90 - 110

Lab Sample ID: 440-208815-D-5 MSD
Matrix: Water
Analysis Batch: 469971

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chromium, hexavalent	0.40	J,DX	50.0	49.9		ug/L		99	90 - 110	7	10

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-470080/1-A
Matrix: Water
Analysis Batch: 470164

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		04/13/18 13:20	04/13/18 16:52	1

Lab Sample ID: LCS 440-470080/2-A
Matrix: Water
Analysis Batch: 470164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	8.00	7.01		ug/L		88	85 - 115

TestAmerica Irvine

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 440-206645-1 MS
Matrix: Water
Analysis Batch: 470164

Client Sample ID: Arroyo_Simi_20180322_Grab
Prep Type: Total/NA
Prep Batch: 470080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		8.00	7.14		ug/L		89	70 - 130

Lab Sample ID: 440-206645-1 MSD
Matrix: Water
Analysis Batch: 470164

Client Sample ID: Arroyo_Simi_20180322_Grab
Prep Type: Total/NA
Prep Batch: 470080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	ND		8.00	7.04		ug/L		88	70 - 130	2	20



QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

HPLC/IC

Analysis Batch: 469971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-206645-1	Arroyo_Simi_20180322_Grab	Total/NA	Water	218.6	
MB 440-469971/6	Method Blank	Total/NA	Water	218.6	
LCS 440-469971/5	Lab Control Sample	Total/NA	Water	218.6	
MRL 440-469971/4	Lab Control Sample	Total/NA	Water	218.6	
440-208815-D-5 MS	Matrix Spike	Total/NA	Water	218.6	
440-208815-D-5 MSD	Matrix Spike Duplicate	Total/NA	Water	218.6	

Metals

Prep Batch: 470080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-206645-1	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	
MB 440-470080/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-470080/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-206645-1 MS	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	
440-206645-1 MSD	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	

Analysis Batch: 470164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-206645-1	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	470080
MB 440-470080/1-A	Method Blank	Total/NA	Water	245.1	470080
LCS 440-470080/2-A	Lab Control Sample	Total/NA	Water	245.1	470080
440-206645-1 MS	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	470080
440-206645-1 MSD	Arroyo_Simi_20180322_Grab	Total/NA	Water	245.1	470080

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
BU	Analyzed out of holding time
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual 5 Year Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-206645-4

Laboratory: TestAmerica Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-18

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Patel, Urvashi

From: Miller, Katherine <KMiller@haleyaldrich.com>
Sent: Friday, April 13, 2018 12:07 PM
To: Patel, Urvashi
Cc: Nguyen, Jocelyn
Subject: RE: 206645 RUSH request

-External Email-

Yes, those are the correct list below. We were sampling the 5 year Arroyo Simi requirements, not annual hence the additions.

Katherine Miller
HALEY & ALDRICH
Tel: 520.289.8606

From: Patel, Urvashi <Urvashi.Patel@testamericainc.com>
Sent: Friday, April 13, 2018 12:05 PM
To: Miller, Katherine <KMiller@haleyaldrich.com>
Cc: Nguyen, Jocelyn <Jocelyn.Nguyen@testamericainc.com>
Subject: RE: 206645 RUSH request

Hi Katherine

Does the PP list include the analytes below? Please confirm and I'll ask if we can report from the original run. I had not made any changes to the project and the 608Pest for Arroyo only listed the short list.

Aldrin	309-00-2
alpha-BHC	319-84-6
beta-BHC	319-85-7
Chlordane (technical)	12789-03-6
delta-BHC	319-86-8
Dieldrin	60-57-1
Endosulfan I	959-98-8
Endosulfan II	33213-65-9
Endosulfan sulfate	1031-07-8
Endrin	72-20-8
Endrin aldehyde	7421-93-4
Endrin ketone	53494-70-5
gamma-BHC (Lindane)	58-89-9
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Methoxychlor	72-43-5
Toxaphene	8001-35-2
4,4'-DDD	72-54-8
4,4'-DDE	72-55-9
4,4'-DDT	50-29-3
Chlordane (n.o.s.)	57-74-9
Tetrachloro-m-xylene	877-09-8
DCB Decachlorobiphenyl (Surr)	2051-24-3

I'll add the CrVI (218.6) Mercury (245.1) to this job.

Thank you,

URVASHI PATEL
 Manager of Project Management

Test America
 THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Ave, Suite #100
 Irvine, CA 92614
 TEL 949-261-1022 | FAX 949-260-3297
 DIRECT 949-260-3269
 CELL 949-333-9055

www.testamericainc.com

From: Miller, Katherine [<mailto:KMiller@haleyaldrich.com>]
Sent: Friday, April 13, 2018 11:44 AM
To: Patel, Urvasi
Cc: Nguyen, Jocelyn
Subject: 206645 RUSH request
Importance: High

-External Email-

Urvashi,

The lab report for Arroyo Simi didn't include the full priority pollutant list requested on the COC. Please add aldrin, alpha-BHC, endrin, etc

PP PCBs/Pesticides (606)

Also, could the lab analyze hexavalent chromium and mercury with the remaining volume? Please put on rush.

Katherine

Katherine Miller
Project Manager

Haley Aldrich, Inc.
600 South Meyer Ave. | Suite 100
Tucson, AZ 85701

T: (520) 289.8606
C: (520) 904.6944

www.haleyaldrich.com

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-206645-4

Login Number: 206645

List Number: 1

Creator: Soderblom, Tim

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



DATA VALIDATION REPORT

Boeing SSFL Arroyo Simi

SAMPLE DELIVERY GROUP: 440-207707-1

Prepared for
Haley & Aldrich

April 5, 2018

MEC^x, Inc.
8864 Interchange Drive
Houston, Texas 77054

www.mecx.net





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TABLES

- 1 – Sample Identification
- 2 – Data Qualifier Reference
- 3 - Reason Code Reference



I. INTRODUCTION

Task Order Title: Boeing SSFL Arroyo Simi

Contract: 40458-078 and 40458-083

MEC^x Project No.: 1272.003D.01 002

Sample Delivery Group: 440-207707-1

Project Manager: K. Miller

Matrix: Water

QC Level: IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica - Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
ArroyoSimi_20180330	440-207707-1	Water	3/30/2018 8:45:00 AM	SM9221F



II. SAMPLE MANAGEMENT

According to the case narrative, sample condition upon receipt form and the chain-of-custody (COC) provided by the laboratory for sample delivery group (SDG) 440-207707-1:

- The laboratory received the sample in this sample delivery group (SDG) on ice and within the temperature limits of less than 6 degrees Celsius ($^{\circ}\text{C}$) and greater than 0°C .
- The laboratory received the sample containers intact and properly preserved, as applicable.
- Field and laboratory personnel signed and dated the COC.
- According to the sample receipt form, custody seals were absent; however, the laboratory noted that there was no evidence of tampering.



TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.



TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	Not applicable.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.



Reason Code	Organic	Inorganic
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
§	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



III. STANDARD METHODS 9221F — *E. COLI*

Marcia Hilchey of MEC^x reviewed the SDG on April 5, 2018.

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 1)*, *Standard Methods for the Examination of Water and Wastewater 9221F*, and the *National Functional Guidelines for Inorganic Superfund Data Review (2014)*.

III.1. HOLDING TIMES

The analytical holding time, 30 hours as stated in the QAPP for Method 9221F and 8 hours as requested on the CoC, was met.

III.2. CALIBRATION

Calibration criteria were met. Biological controls were acceptable.

III.3. QUALITY CONTROL SAMPLES

III.3.1. *METHOD BLANKS*

The method blank is not applicable to the biological method. The negative control sample was acceptable.

III.3.2. *LABORATORY CONTROL SAMPLES*

The presumptive test was analyzed with the positive detects for the target bacteria.

III.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analyses were not performed on the sample in this SDG

III.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analysis is not applicable to this method.

III.4. SAMPLE RESULT VERIFICATION

Calculations were verified and the sample result reported on the sample results summary was verified against the raw data. No transcription errors or calculation errors were noted.

III.5. FIELD QC SAMPLES

MEC^x evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^x used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

III.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

III.5.2. *FIELD DUPLICATES*

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402077071

Analysis Method *SM9221F*

Sample Name ArroyoSimi_20180330

Matrix Type: WS

Result Type: TRG

Sample Date: 3/30/2018 8:45:00 AM

Validation Level: 8

Lab Sample Name: 440-207707-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Escherichia coli	N	ECOLI	110	1.8	1.8	mpn/100			

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-207707-1

Client Project/Site: Annual Arroyo Simi-Frontier Park

For:

Haley & Aldrich, Inc.

400 E Van Buren St.

Suite 545

Phoenix, Arizona 85004

Attn: Katherine Miller



Authorized for release by:

4/4/2018 4:45:57 PM

Urvashi Patel, Manager of Project Management

(949)261-1022

urvashi.patel@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.



Urvashi Patel
Manager of Project Management
4/4/2018 4:45:57 PM



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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-207707-1	ArroyoSimi_20180330	Water	03/30/18 08:45	03/30/18 15:30

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Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Job ID: 440-207707-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-207707-1

Comments

No additional comments.

Receipt

The sample was received on 3/30/2018 3:30 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

Biology

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Client Sample ID: ArroyoSimi_20180330

Lab Sample ID: 440-207707-1

Date Collected: 03/30/18 08:45

Matrix: Water

Date Received: 03/30/18 15:30

Method: SM 9221F - E.Coli (Multiple-Tube Fermentation; EC-MUG)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	110		1.8	1.8	MPN/100mL			03/30/18 16:07	1

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Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Method	Method Description	Protocol	Laboratory
SM 9221F	E.Coli (Multiple-Tube Fermentation; EC-MUG)	SM	TAL IRV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Client Sample ID: ArroyoSimi_20180330

Lab Sample ID: 440-207707-1

Date Collected: 03/30/18 08:45

Matrix: Water

Date Received: 03/30/18 15:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 9221F		1	100 mL	100 mL	467544	(Start) 03/30/18 16:07 (End) 04/02/18 13:18	ST	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Biology

Analysis Batch: 467544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207707-1	ArroyoSimi_20180330	Total/NA	Water	SM 9221F	

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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Annual Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-207707-1

Laboratory: TestAmerica Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-18

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Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-207707-1

Login Number: 207707

List Number: 1

Creator: Avila, Stephanie 1

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

