LABORATORY REPORT #P1703866 (Air)
SAMPLE DATE: AUGUST 7-9, 2017

MHS Building D (100/200, Mako Shark)
MHS Building H (Cafeteria/Auditorium)
MHS Building J (700, Old Gymnasium)
JCES Building A
JCES Building B
JCES Building C
JCES Building D

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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www.alsglobal.com

LABORATORY REPORT

August 23, 2017

Yi Tian
Ramboll Environ US Corporation
18100 Von Karman Avenue, Suite 600
Irvine, CA 92612

RE: SMMUSD-Malibu, CA / 04-33980Z

Dear Yi:

Enclosed are the results of the samples submitted to our laboratory on August 9, 2017. For your reference, these analyses have been assigned our service request number P1703866.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 4:42 pm, 08/23/17

Kate Kaneko
Project Manager

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Client: Ramboll Environ US Corporation
Project: SMMUSD-Malibu, CA / 04-33980Z

Service Request No: P1703866

CASE NARRATIVE

The samples were received intact under chain of custody on August 9, 2017 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Aroclors Analysis

The samples were extracted and analyzed for aroclors in accordance with EPA Method TO-10A. An aliquot of each extract was injected into a gas chromatograph with dual electron capture detectors (GC/ECD). This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP accreditation.

Sample extraction was performed at the laboratory's off-site extraction facility located at 2360 Shasta Way, Suite G, Simi Valley, CA 93065.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Ramboll Environ US Corporation Service Request: P1703866
Project ID: SMMUSD-Malibu, CA / 04-33980Z

Date Received: 8/9/2017
Time Received: 14:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	TO-10A - PCB Low Vol
080717-JCES-BA-RTL-A1	P1703866-001	Air	8/8/2017	08:41	X
080717-JCES-AOD	P1703866-002	Air	8/8/2017	08:56	X
080717-JCES-BB-R5-A1	P1703866-003	Air	8/8/2017	09:12	X
080717-JCES-BC-R11-A1	P1703866-004	Air	8/8/2017	09:40	X
080717-JCES-BD-R14-A1	P1703866-005	Air	8/8/2017	10:06	X
080717-JCES-BD-R14-A2	P1703866-006	Air	8/8/2017	10:06	X
080717-JCES-AFB	P1703866-007	Air	8/7/2017	10:30	X
080817-MHS-BH-R605A-A1	P1703866-008	Air	8/9/2017	09:26	X
080817-MHS-B200-R212-A1	P1703866-009	Air	8/9/2017	09:37	X
080817-MHS-AOD	P1703866-010	Air	8/9/2017	09:59	X
080817-MHS-B700-R705-A1	P1703866-011	Air	8/9/2017	10:45	X
080817-MHS-B700-R704-A1	P1703866-012	Air	8/9/2017	10:48	X
080817-MHS-AFB	P1703866-013	Air	8/8/2017	10:55	X

RAMBOLL ENVIRON

CHAIN-OF-CUSTODY FORM

№ 13135

P1703866

UST PROJECT OR IS EDF REQUIRED? YES (NO) IF YES, GLOBAL ID# _____ MSA # _____ WORK ORDER # _____

PROJECT NAME/FACILITY ID: SMMUSD

PROJECT LOCATION: Malibu, CA

PROJECT NUMBER: 04-339807

SAMPLER: Dishon M. Raposo

DATE: 8/8/17 - 8/9/17

YEAR: 2017

FIELD PERSON#: Dishon M. Raposo

PROJECT MANAGER: Tian, T. Bolcie

LABORATORY: ALS - Simi Valley

SIGNATURE:

SAMPLE ID NUMBER	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH (F)	AIR SAMPLE VOLUME (L)	MATRIX: (A)IR; (G)AS; (W)ATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED	EPA TO-10A	COMMENTS
080717-SCES-BA-RTL-A1	8/7-8/8	0841	—	7275	A	1	—	NO		X	-001
080717-SCES-AOD		0856	—	7150		1	—			X	-002
080717-SCES-BB-R25-A1		0912	—	7361		1	—			X	-003
080717-SCES-BC-R11-A1		0940	—	7389		1	—			X	-004
080717-SCES-BD-R14-A1		1006	—	7433		1	—			X	-005
080717-SCES-BD-R14-A2		1006	—	7174		1	—			X	-006
080717-SCES-AFB	8/7/17	1030	—	—		1	—	—		X	-007
080817-MHS-BH-R405A-A1	8/8-8/9	0926	—	7180	A	1	—	NO		X	-008
080817-MHS-B200-R212-A1		0937	—	7215		1	—			X	-009
080817-MHS-AOD		0859	—	7109		1	—			X	-010
080817-MHS-B700-R705-A1		1045	—	7306		1	—			X	-011
080817-MHS-B700-R704-A1	—	1048	—	7304		1	—			X	-012
TOTAL				—		12	—				

92 Jobs

H = HCL; N = HNO; S = H_2SO_4; U = UNKNOWN; NO = NONE; O = OTHER; V = VARIOUS

RELINQUISHED BY	TIME/DATE	RECEIVED BY COMPANY	TIME/DATE	TURNAROUND TIME (CIRCLE ONE)	
	1315 8/9/17	Marco DCS	8-9-17		SAME DAY 72 HOURS
RELINQUISHED BY: Marco	8/9/17	Harry Reyes 1400	8-9-17		24 HOURS 5 DAYS
					48 HOURS (NORMAL)
RELINQUISHED BY	TIME/DATE	RECEIVED BY COMPANY	TIME/DATE	SAMPLE INTEGRITY	SAMPLE INTEGRITY
				INTACT Y N TEMP_____	INTACT Y N

2°C KK

SWBU Office Locations:
- ☐ 18100 Von Karman Avenue, Suite 600, Irvine, CA 92612 — +1 949 261 5151 — +1 949 261 6202
- ☐ 707 Wilshire Boulevard, Suite 4950, Los Angeles, CA 90017 — +1 213 943 6300 — +1 213 943 6301
- ☐ 2111 East Highland Avenue, Suite 402, Phoenix, AZ 85016 — +1 602 734 7700 — +1 602 734-7701
- ☐ 501 West Broadway, Suite 800, San Diego, CA 92101 — +1 619 400 4934

RAMBOLL ENVIRON

CHAIN-OF-CUSTODY FORM

№ 13136

UST PROJECT OR IS EDF REQUIRED? YES (NO) IF YES, GLOBAL ID# MSA # WORK ORDER #

PROJECT NAME/FACILITY ID: SMMUSD

PROJECT LOCATION: Malibu, CA

PROJECT NUMBER: 04-339807

SAMPLER: J. Dishon

DATE: 8/8/17 - 8/9/17

YEAR: 2017

FIELD PERSON#: J. Dishon, M. Raposo

PROJECT MANAGER: J. Tian, T. Bond

LABORATORY: ALS - Simi Valley

SIGNATURE:

SAMPLE ID NUMBER	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH (F)	AIR SAMPLE VOLUME (L)	MATRIX: (A)IR; (G)AS; (W)ATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED	EPA TO-10A	COMMENTS
080817-MHS-AFB	8/8/17	1055	-	-	A	1	-	No		X	-013
TOTAL											

H = HCL; N = HNO; S = H_2SO; U = UNKNOWN; NO = NONE; O = OTHER; V = VARIOUS

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RELINQUISHED BY	TIME/DATE 1315 8/9/17	RECEIVED BY COMPANY Marco DCS	TIME/DATE 8-9-17	TURNAROUND TIME (CIRCLE ONE)	SAME DAY 72 HOURS
RELINQUISHED BY Marco	TIME/DATE 8-9-17	RECEIVED BY COMPANY Hong Peng 1400	TIME/DATE 8-9-17		24 HOURS 5 DAYS
RELINQUISHED BY	TIME/DATE	RECEIVED BY COMPANY	TIME/DATE		48 HOURS (NORMAL)
				SAMPLE INTEGRITY INTACT Y N TEMP___	SAMPLE INTEGRITY INTACT Y N

2°C ICE

SWBU Office Locations:
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☐ 707 Wilshire Boulevard, Suite 4950, Los Angeles, CA 90017 +1 213 943 6300 +1 213 943 6301
☐ 2111 East Highland Avenue, Suite 402, Phoenix, AZ 85016 +1 602 734 7700 +1 602 734-7701
☐ 501 West Broadway, Suite 800, San Diego, CA 92101 +1 619 400 4934

ALS Environmental
Sample Acceptance Check Form

Client: Ramboll Environ US Corporation Work order: P1703866

Project: SMMUSD-Malibu, CA / 04-33980Z

Sample(s) received on: 8/9/17 Date opened: 8/9/17 by: KATE.KANEKO

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Wet Ice			
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☒	☐	☐
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1703866-001.01	PUF (Low Vol)					
P1703866-002.01	PUF (Low Vol)					
P1703866-003.01	PUF (Low Vol)					
P1703866-004.01	PUF (Low Vol)					
P1703866-005.01	PUF (Low Vol)					
P1703866-006.01	PUF (Low Vol)					
P1703866-007.01	PUF (Low Vol)					
P1703866-008.01	PUF (Low Vol)					
P1703866-009.01	PUF (Low Vol)					
P1703866-010.01	PUF (Low Vol)					
P1703866-011.01	PUF (Low Vol)					
P1703866-012.01	PUF (Low Vol)					
P1703866-013.01	PUF (Low Vol)					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-BA-RTL-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-001

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.275 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.069	
11104-28-2	Aroclor 1221	ND	500	ND	0.069	
11141-16-5	Aroclor 1232	ND	500	ND	0.069	
53469-21-9	Aroclor 1242	ND	500	ND	0.069	
12672-29-6	Aroclor 1248	ND	500	ND	0.069	
11097-69-1	Aroclor 1254	ND	500	ND	0.069	
11096-82-5	Aroclor 1260	ND	500	ND	0.069	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-AOD**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-002

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.150 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.070	
11104-28-2	Aroclor 1221	ND	500	ND	0.070	
11141-16-5	Aroclor 1232	ND	500	ND	0.070	
53469-21-9	Aroclor 1242	ND	500	ND	0.070	
12672-29-6	Aroclor 1248	ND	500	ND	0.070	
11097-69-1	Aroclor 1254	ND	500	ND	0.070	
11096-82-5	Aroclor 1260	ND	500	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-BB-R5-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-003

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.4 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	**Result ng/Cartridge**	MRL ng/Cartridge	**Result µg/m³**	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.068	
11104-28-2	Aroclor 1221	ND	500	ND	0.068	
11141-16-5	Aroclor 1232	ND	500	ND	0.068	
53469-21-9	Aroclor 1242	ND	500	ND	0.068	
12672-29-6	Aroclor 1248	ND	500	ND	0.068	
11097-69-1	Aroclor 1254	ND	500	ND	0.068	
11096-82-5	Aroclor 1260	ND	500	ND	0.068	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-BC-R11-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-004

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.4 m^3
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	**Result ng/Cartridge**	MRL ng/Cartridge	**Result µg/m³**	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.068	
11104-28-2	Aroclor 1221	ND	500	ND	0.068	
11141-16-5	Aroclor 1232	ND	500	ND	0.068	
53469-21-9	Aroclor 1242	ND	500	ND	0.068	
12672-29-6	Aroclor 1248	ND	500	ND	0.068	
11097-69-1	Aroclor 1254	ND	500	ND	0.068	
11096-82-5	Aroclor 1260	ND	500	ND	0.068	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-BD-R14-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-005

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.4 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.067	
11104-28-2	Aroclor 1221	ND	500	ND	0.067	
11141-16-5	Aroclor 1232	ND	500	ND	0.067	
53469-21-9	Aroclor 1242	ND	500	ND	0.067	
12672-29-6	Aroclor 1248	ND	500	ND	0.067	
11097-69-1	Aroclor 1254	ND	500	ND	0.067	
11096-82-5	Aroclor 1260	ND	500	ND	0.067	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-BD-R14-A2**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-006

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.2 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.070	
11104-28-2	Aroclor 1221	ND	500	ND	0.070	
11141-16-5	Aroclor 1232	ND	500	ND	0.070	
53469-21-9	Aroclor 1242	ND	500	ND	0.070	
12672-29-6	Aroclor 1248	ND	500	ND	0.070	
11097-69-1	Aroclor 1254	ND	500	ND	0.070	
11096-82-5	Aroclor 1260	ND	500	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080717-JCES-AFB**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-007

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/7/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: NA m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	NA	NA	
11104-28-2	Aroclor 1221	ND	500	NA	NA	
11141-16-5	Aroclor 1232	ND	500	NA	NA	
53469-21-9	Aroclor 1242	ND	500	NA	NA	
12672-29-6	Aroclor 1248	ND	500	NA	NA	
11097-69-1	Aroclor 1254	ND	500	NA	NA	
11096-82-5	Aroclor 1260	ND	500	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-BH-R605A-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-008

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/9/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.180 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.070	
11104-28-2	Aroclor 1221	ND	500	ND	0.070	
11141-16-5	Aroclor 1232	ND	500	ND	0.070	
53469-21-9	Aroclor 1242	ND	500	ND	0.070	
12672-29-6	Aroclor 1248	ND	500	ND	0.070	
11097-69-1	Aroclor 1254	ND	500	ND	0.070	
11096-82-5	Aroclor 1260	ND	500	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-B200-R212-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-009

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/9/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.2 m^3
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m^3	MRL µg/m^3	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.069	
11104-28-2	Aroclor 1221	ND	500	ND	0.069	
11141-16-5	Aroclor 1232	ND	500	ND	0.069	
53469-21-9	Aroclor 1242	ND	500	ND	0.069	
12672-29-6	Aroclor 1248	ND	500	ND	0.069	
11097-69-1	Aroclor 1254	ND	500	ND	0.069	
11096-82-5	Aroclor 1260	ND	500	ND	0.069	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-AOD**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-010

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/9/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.1 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	**Result ng/Cartridge**	MRL ng/Cartridge	**Result µg/m³**	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.070	
11104-28-2	Aroclor 1221	ND	500	ND	0.070	
11141-16-5	Aroclor 1232	ND	500	ND	0.070	
53469-21-9	Aroclor 1242	ND	500	ND	0.070	
12672-29-6	Aroclor 1248	ND	500	ND	0.070	
11097-69-1	Aroclor 1254	ND	500	ND	0.070	
11096-82-5	Aroclor 1260	ND	500	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-B700-R705-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-011

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/9/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: 7.3 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.068	
11104-28-2	Aroclor 1221	ND	500	ND	0.068	
11141-16-5	Aroclor 1232	ND	500	ND	0.068	
53469-21-9	Aroclor 1242	ND	500	ND	0.068	
12672-29-6	Aroclor 1248	ND	500	ND	0.068	
11097-69-1	Aroclor 1254	ND	500	ND	0.068	
11096-82-5	Aroclor 1260	ND	500	ND	0.068	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-B700-R704-A1**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

ALS Project ID: P1703866
ALS Sample ID: P1703866-012

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/9/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/16/17
Volume Sampled: 7.3 m³
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m³	MRL µg/m³	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	ND	0.068	
11104-28-2	Aroclor 1221	ND	500	ND	0.068	
11141-16-5	Aroclor 1232	ND	500	ND	0.068	
53469-21-9	Aroclor 1242	ND	500	ND	0.068	
12672-29-6	Aroclor 1248	ND	500	ND	0.068	
11097-69-1	Aroclor 1254	**770**	500	**0.10**	0.068	
11096-82-5	Aroclor 1260	ND	500	ND	0.068	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **080817-MHS-AFB** ALS Project ID: P1703866
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z** ALS Sample ID: P1703866-013

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: 8/8/17
Date Received: 8/9/17
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: NA m^3
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m^3	MRL µg/m^3	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	NA	NA	
11104-28-2	Aroclor 1221	ND	500	NA	NA	
11141-16-5	Aroclor 1232	ND	500	NA	NA	
53469-21-9	Aroclor 1242	ND	500	NA	NA	
12672-29-6	Aroclor 1248	ND	500	NA	NA	
11097-69-1	Aroclor 1254	ND	500	NA	NA	
11096-82-5	Aroclor 1260	ND	500	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Method Blank** ALS Project ID: P1703866
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z** ALS Sample ID: P170810-MB

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge
Test Notes:

Date Collected: NA
Date Received: NA
Date Extracted: 8/10/17
Date Analyzed: 8/14/17
Volume Sampled: NA m^3
Final Extract Volume: 10 ml

Dilution Factor: 1.00

CAS #	Compound	Result ng/Cartridge	MRL ng/Cartridge	Result µg/m^3	MRL µg/m^3	Data Qualifier
12674-11-2	Aroclor 1016	ND	500	NA	NA	
11104-28-2	Aroclor 1221	ND	500	NA	NA	
11141-16-5	Aroclor 1232	ND	500	NA	NA	
53469-21-9	Aroclor 1242	ND	500	NA	NA	
12672-29-6	Aroclor 1248	ND	500	NA	NA	
11097-69-1	Aroclor 1254	ND	500	NA	NA	
11096-82-5	Aroclor 1260	ND	500	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
NA = Not applicable.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1703866
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z** ALS Sample ID: P170810-DLCS

Test Code: EPA TO-10A Date Collected: NA
Instrument ID: HP6890/GC6/ECD/ECD Date Received: NA
Analyst: Zheng Wang/Evelyn Alvarez Date Extracted: 8/10/17
Sampling Media: PUF (Low Volume) Cartridge Date Analyzed: 8/14/17
Test Notes: Volume(s) Analyzed: NA m^3

CAS #	Compound	Spike Amount LCS / DLCS ng/ml	Result LCS ng/ml	Result DLCS ng/ml	% Recovery LCS	% Recovery DLCS	Project Acceptance Limits	RPD	RPD Limit	Data Qualifier
12674-11-2	Aroclor 1016	500	461	428	**92**	**86**	70-130	7	15	
11096-82-5	Aroclor 1260	500	516	488	**103**	**98**	70-130	5	15	

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Ramboll Environ US Corporation**
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z** ALS Project ID: P1703866

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD
Analyst: Zheng Wang/Evelyn Alvarez
Sampling Media: PUF (Low Volume) Cartridge(s)
Test Notes:

Date(s) Collected: 8/7 - 8/9/17
Date(s) Received: 8/9/17
Date(s) Extracted: 8/10/17
Date(s) Analyzed: 8/14 - 8/16/17

Client Sample ID	ALS Sample ID	2,4,5,6-Tetrachloro-m-Xylene % Recovered	Acceptance Limits	Decachlorobiphenyl % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P170810-MB	**76**	60-120	**89**	60-120	
Lab Control Sample	P170810-LCS	**85**	60-120	**99**	60-120	
Duplicate Lab Control Sample	P170810-DLCS	**79**	60-120	**93**	60-120	
080717-JCES-BA-RTL-A1	P1703866-001	**74**	60-120	**89**	60-120	
080717-JCES-AOD	P1703866-002	**76**	60-120	**89**	60-120	
080717-JCES-BB-R5-A1	P1703866-003	**73**	60-120	**88**	60-120	
080717-JCES-BC-R11-A1	P1703866-004	**72**	60-120	**90**	60-120	
080717-JCES-BD-R14-A1	P1703866-005	**75**	60-120	**90**	60-120	
080717-JCES-BD-R14-A2	P1703866-006	**75**	60-120	**88**	60-120	
080717-JCES-AFB	P1703866-007	**76**	60-120	**90**	60-120	
080817-MHS-BH-R605A-A1	P1703866-008	**71**	60-120	**87**	60-120	
080817-MHS-B200-R212-A1	P1703866-009	**76**	60-120	**84**	60-120	
080817-MHS-AOD	P1703866-010	**77**	60-120	**87**	60-120	
080817-MHS-B700-R705-A1	P1703866-011	**74**	60-120	**84**	60-120	
080817-MHS-B700-R704-A1	P1703866-012	**84**	60-120	**96**	60-120	
080817-MHS-AFB	P1703866-013	**79**	60-120	**86**	60-120	

Client: **Ramboll Environ US Corporation** ALS Project ID: P1703866
Client Project ID: **SMMUSD-Malibu, CA / 04-33980Z**

Method Blank Summary

Test Code: EPA TO-10A
Instrument ID: HP6890/GC6/ECD/ECD Lab File ID: 08141721.D
Analyst: Zheng Wang/Evelyn Alvarez Date Analyzed: 8/14/17
Sample Type: PUF (Low Volume) Cartridge(s) Time Analyzed: 13:50
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P170810-LCS	08141719.D	13:35
Duplicate Lab Control Sample	P170810-DLCS	08141720.D	13:42
080717-JCES-BA-RTL-A1	P1703866-001	08141724.D	14:13
080717-JCES-AOD	P1703866-002	08141725.D	14:21
080717-JCES-BB-R5-A1	P1703866-003	08141726.D	14:28
080717-JCES-BC-R11-A1	P1703866-004	08141727.D	14:36
080717-JCES-BD-R14-A1	P1703866-005	08141728.D	14:44
080717-JCES-BD-R14-A2	P1703866-006	08141730.D	14:59
080717-JCES-AFB	P1703866-007	08141731.D	15:07
080817-MHS-BH-R605A-A1	P1703866-008	08141732.D	15:14
080817-MHS-B200-R212-A1	P1703866-009	08141733.D	15:22

Response Factor Report HP G1530A

Method Path : J:\GC06\METHODS\
Method File : AA081417.M
Title : AROCLOR 1016---1260
Last Update : Mon Aug 14 13:06:34 2017
Response Via : Initial Calibration

Calibration Files
50 =08141704.D 100 =08141705.D 250 =08141706.D
500 =08141707.D 750 =08141708.D 1000 =08141709.D

<20%

		Compound	50	100	250	500	750	1000	Avg		%RSD
1)	S	TCmX (SS1)	1.093	1.056	1.043	0.925	0.894	0.874	0.981	E5	9.59
2)	L1	Aroclor-1016{1}	2.389	2.037	1.925	1.664	1.567	1.634	1.869	E3	16.76
3)	L1	Aroclor-1016{2}	4.292	3.956	3.792	3.328	3.166	3.073	3.601	E3	13.51
4)	L1	Aroclor-1016{3}	2.974	2.825	2.691	2.352	2.233	2.150	2.538	E3	13.36
5)	L1	Aroclor-1016{4}	3.104	3.043	2.886	2.542	2.402	2.319	2.716	E3	12.46
6)	L1	Aroclor-1016{5}	3.373	3.161	3.065	2.674	2.535	2.444	2.875	E3	13.09
7)	L7	Aroclor-1260{1}	6.781	6.303	6.046	5.315	5.067	4.870	5.730	E3	13.25
8)	L7	Aroclor-1260{2}	8.894	8.394	7.961	7.004	6.733	6.497	7.580	E3	12.86
9)	L7	Aroclor-1260{3}	6.936	6.533	6.364	4.856	4.780	4.454	5.654	E3	18.98
10)	L7	Aroclor-1260{4}	7.130	6.968	6.625	5.825	5.609	5.403	6.260	E3	11.82
11)	L7	Aroclor-1260{5}	1.488	1.484	1.387	1.229	1.183	1.134	1.318	E4	11.80
12)	S	DCBP (SS2)	1.551	1.476	1.381	1.205	1.181	1.117	1.318	E5	13.34

Signal #2 Calibration Files
50 =08141704.D 100 =08141705.D 250 =08141706.D
500 =08141707.D 750 =08141708.D 1000 =08141709.D

<25%

		Compound	50	100	250	500	750	1000	Avg		%RSD
1)	S	TCmX (SS1)	1.607	1.561	1.560	1.400	1.356	1.306	1.465	E5	8.61
2)	L1	Aroclor-1016{1}	3.237	3.211	3.149	2.850	2.786	2.696	2.988	E3	7.96
3)	L1	Aroclor-1016{2}	3.999	3.951	3.970	3.637	3.535	3.452	3.757	E3	6.50
4)	L1	Aroclor-1016{3}	3.717	3.578	3.523	3.165	3.053	2.952	3.331	E3	9.45
5)	L1	Aroclor-1016{4}	3.792	3.722	3.669	3.303	3.207	3.101	3.466	E3	8.56
6)	L1	Aroclor-1016{5}	4.900	4.548	4.591	4.036	3.928	3.805	4.301	E3	10.18
7)	L7	Aroclor-1260{1}	9.861	9.467	9.353	8.346	8.058	7.781	8.811	E3	9.72
8)	L7	Aroclor-1260{2}	1.804	1.716	1.678	1.505	1.446	1.391	1.590	E4	10.42
9)	L7	Aroclor-1260{3}	9.905	9.543	9.323	8.415	8.143	7.771	8.850	E3	9.68
10)	L7	Aroclor-1260{4}	1.063	1.023	0.984	0.885	0.797	0.815	0.928	E4	12.03
11)	L7	Aroclor-1260{5}	3.248	2.576	2.466	2.219	2.215	2.062	2.464	E4	17.33
12)	S	DCBP (SS2)	2.154	2.072	2.035	1.797	1.757	1.689	1.917	E5	10.05

(#) = Out of Range

Method : Modified TO-10A
Client: Ramboll Environ US Corporation
Job #: P1703866
Analyst : EA/ZW

Printed : 8/16/2017
Instrument : GC#6, ECD#6, #7
Date Acquired : 8/14/2017
Matrix: Low Vol PUF
Date Extracted: 8/10/2017

ZW
8/16/17

SAMPLE RESULT SUMMARIES

Compounds	MDL	Opening CCV	%Diff.	Opening CCV	%Diff.	Mid CCV	%Diff.	Mid CCV	%Diff.	Closing CCV	%Diff.	Closing CCV	%Diff.	ng/mL		ng/mL			ng/mL
Sample Information	ng/sample													LCS	% Rec	LCSdup	% Rec	% RPD	MB
MRL																			50
Dilution Factor	1													1		1			1
Final Extract Vol. (ml)	1													10		10			10
Aroclor 1016		460.7	7.87%			452.1	9.58%			473.1	5.39%			460.9	92.2%	427.8	85.6%	7.5%	ND
Aroclor 1221																			ND
Aroclor 1232																			ND
Aroclor 1242																			ND
Aroclor 1248																			ND
Aroclor 1254				481.7	3.67%			466.5	6.70%			472.1	5.59%						ND
Aroclor 1260		457.4	8.53%			447.4	10.52%			458.4	8.32%			515.9	103.2%	488.2	97.6%	5.5%	ND
TCmX (SS1)		94.3		99.5		94.5		95.2		98.4		100.8		85.066		78.648			76.077
% Recoverage		94.3%		99.5%		94.5%		95.2%		98.4%		100.8%		85.1%		78.6%			76.1%
Decachlorobiphenyl (SS2)		91.4		95.2		89.7		93.5		91.4		93.6		98.81		93.424			89.286
% Recoverage		91.4%		95.2%		89.7%		93.5%		91.4%		93.6%		98.8%		93.4%			89.3%

Compounds																			ng/sample
Sample Information	ng/sample																		MB
MRL																			500
Aroclor 1016																			ND
Aroclor 1221																			ND
Aroclor 1232																			ND
Aroclor 1242																			ND
Aroclor 1248																			ND
Aroclor 1254																			ND
Aroclor 1260																			ND

DATA VALIDATION REPORT #39422A (Air)
SAMPLE DATE: AUGUST 7-9, 2017

MHS Building D (100/200, Mako Shark)
MHS Building H (Cafeteria/Auditorium)
MHS Building J (700, Old Gymnasium)
JCES Building A
JCES Building B
JCES Building C
JCES Building D

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

Ramboll Environ
18100 Von Karman Avenue Ste. 600
Irvine, CA 92612
Attn: Ms. Yi Tian

September 25, 2017

SUBJECT: SMMUSD, 04-33980Z, Data Validation

Dear Ms. Tian

Enclosed is the final validation report for the fraction listed below. This SDG was received on September 11, 2017. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #39422:

SDG #	Fraction
P1703866	Polychlorinated Biphenyls

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

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008

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

Sincerely,

Pei Geng
Project Manager/Senior Chemist

462 pages-DL

Attachment 1

Level III

LDC #39422 (Ramboll Environ-Irvine / SMMUSD, 04-33980Z)

LDC	SDG#	DATE REC'D	(2) DATE DUE	PCBs (8082)		PCBs (TO-10A)																															
Matrix:	Wipe/Air			W	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P1703866	09/11/17	09/25/17	-	-	13	0																														
B	1708436	09/11/17	09/25/17	16	0	-	-																														
C	1708532	09/11/17	09/25/17	16	0	-	-																														
D	1708535	09/11/17	09/25/17	4	0	-	-																														
Total	J/PG			36	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49

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

V:\LOGIN\Environ (Ramboll Environ)\SMMUSD\39422ST.wpd

LDC Report# 39422A3b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: SMMUSD

LDC Report Date: September 20, 2017

Parameters: Polychlorinated Biphenyls

Validation Level: Level III

Laboratory: ALS Environmental

Sample Delivery Group (SDG): P1703866

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
080717-JCES-BA-RTL-A1	P1703866-001	Air	08/08/17
080717-JCES-AOD	P1703866-002	Air	08/08/17
080717-JCES-BB-R5-A1	P1703866-003	Air	08/08/17
080717-JCES-BC-R11-A1	P1703866-004	Air	08/08/17
080717-JCES-BD-R14-A1	P1703866-005	Air	08/08/17
080717-JCES-BD-R14-A2	P1703866-006	Air	08/08/17
080717-JCES-AFB	P1703866-007	Air	08/07/17
080717-MHS-BH-R605A-A1	P1703866-008	Air	08/09/17
080717-MHS-B200-R212-A1	P1703866-009	Air	08/09/17
080717-MHS-AOD	P1703866-010	Air	08/09/17
080717-MHS-B700-R705-A1	P1703866-011	Air	08/09/17
080717-MHS-B700-R704-A1	P1703866-012	Air	08/09/17
080717-MHS-AFB	P1703866-013	Air	08/08/17

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) by Environmental Protection Agency (EPA) TO-10A

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

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

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 15.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 15.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

Samples 080717-JCES-BD-R14-A1 and 080717-JCES-BD-R14-A2 were identified as field duplicates. No results were detected in any of the samples.

X. Compound Quantitation

Raw data were not reviewed for Level III validation.

XI. Target Compound Identification

Raw data were not reviewed for Level III validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

SMMUSD
Polychlorinated Biphenyls - Data Qualification Summary - SDG P1703866

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG P1703866

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG P1703866

No Sample Data Qualified in this SDG

LDC #: 39422A3b
SDG #: P1703866
Laboratory: ALS Environmental

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 09/16/17
Page: 1 of 1
Reviewer: JRC
2nd Reviewer: AC

METHOD: GC Polychlorinated Biphenyls (EPA Method TO-10A)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC Instrument Performance Check	N	
III.	Initial calibration/ICV	A / A	ICAL ≤ 20% ICV ≤ 15%
IV.	Continuing calibration	A	CCV ≤ 15%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCSD
X.	Field duplicates	ND	D = 5/6
XI.	Compound quantitation/RL/LOQ/LODs	N	
XII.	Target compound identification	N	
XIII.	Overall assessment of data	A	

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

	Client ID		Lab ID	Matrix	Date
1	080717-JCES-BA-RTL-A1		P1703866-001	Air	08/08/17
2	080717-JCES-AOD		P1703866-002	Air	08/08/17
3	080717-JCES-BB-R5-A1		P1703866-003	Air	08/08/17
4	080717-JCES-BC-R11-A1		P1703866-004	Air	08/08/17
5	080717-JCES-BD-R14-A1	D	P1703866-005	Air	08/08/17
6	080717-JCES-BD-R14-A2	D	P1703866-006	Air	08/08/17
7	080717-JCES-AFB		P1703866-007	Air	08/07/17
8	080717-MHS-BH-R605A-A1		P1703866-008	Air	08/09/17
9	080717-MHS-B200-R212-A1		P1703866-009	Air	08/09/17
10	080717-MHS-AOD		P1703866-010	Air	08/09/17
11	080717-MHS-B700-R705-A1		P1703866-011	Air	08/09/17
12	080717-MHS-B700-R704-A1		P1703866-012	Air	08/09/17
13	080717-MHS-AFB		P1703866-013	Air	08/08/17
14					
15					
16	P170810-MB				

LABORATORY REPORT #1708436 (SURFACE WIPE)
SAMPLE DATE: AUGUST 7, 2017

JCES Building A
JCES Building B
JCES Building C
JCES Building D

16-Aug-2017

Yi Tian
Ramboll Environ US Corporation
18100 VonKarman Ave.
Suite 600
Irvine, CA 92612

Re: **SMMUSD (0433980Z)** Work Order: **1708436**

Dear Yi,

ALS Environmental received 16 samples on 08-Aug-2017 09:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 23.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group, USA

Date: 16-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: **1708436**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1708436-01	080717-JCES-BA-RTL-W1	Wipe		8/7/2017 13:05	8/8/2017 09:45	☐
1708436-02	080717-JCES-BA-RTL-W2	Wipe		8/7/2017 13:07	8/8/2017 09:45	☐
1708436-03	080717-JCES-BA-RTL-W3	Wipe		8/7/2017 13:08	8/8/2017 09:45	☐
1708436-04	080717-JCES-BA-RTL-W4	Wipe		8/7/2017 13:10	8/8/2017 09:45	☐
1708436-05	080717-JCES-BB-R5-W1	Wipe		8/7/2017 13:20	8/8/2017 09:45	☐
1708436-06	080717-JCES-BB-R5-W2	Wipe		8/7/2017 13:22	8/8/2017 09:45	☐
1708436-07	080717-JCES-BB-R5-W3	Wipe		8/7/2017 13:24	8/8/2017 09:45	☐
1708436-08	080717-JCES-BC-R11-W1	Wipe		8/7/2017 13:32	8/8/2017 09:45	☐
1708436-09	080717-JCES-BC-R11-W2	Wipe		8/7/2017 13:34	8/8/2017 09:45	☐
1708436-10	080717-JCES-BC-R11-W3	Wipe		8/7/2017 13:36	8/8/2017 09:45	☐
1708436-11	080717-JCES-BC-R11-W4	Wipe		8/7/2017 13:37	8/8/2017 09:45	☐
1708436-12	080717-JCES-BD-R14-W1	Wipe		8/7/2017 13:44	8/8/2017 09:45	☐
1708436-13	080717-JCES-BD-R14-W2	Wipe		8/7/2017 13:46	8/8/2017 09:45	☐
1708436-14	080717-JCES-BD-R14-W3	Wipe		8/7/2017 13:47	8/8/2017 09:45	☐
1708436-15	080717-JCES-BD-R14-W4	Wipe		8/7/2017 13:49	8/8/2017 09:45	☐
1708436-16	080717-WFB-HEX	Wipe		8/7/2017 13:55	8/8/2017 09:45	☐

ALS Group, USA

Date: 16-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
WorkOrder: **1708436**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/wipe	Micrograms per Wipe

ALS Group, USA

Date: *16-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: 1708436
Sample ID: 080717-JCES-BA-RTL-W1
Lab ID: 1708436-01
Collection Date: 8/7/2017 01:05 PM
Matrix: WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 06:47 PM
Surr: Decachlorobiphenyl	*115*		*40-140*	*%REC*	1	8/14/2017 06:47 PM
Surr: Tetrachloro-m-xylene	*95.5*		*40-140*	*%REC*	1	8/14/2017 06:47 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BA-RTL-W2 **Lab ID:** 1708436-02
Collection Date: 8/7/2017 01:07 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 07:01 PM
Surr: Decachlorobiphenyl	*109*		*40-140*	*%REC*	1	8/14/2017 07:01 PM
Surr: Tetrachloro-m-xylene	*89.8*		*40-140*	*%REC*	1	8/14/2017 07:01 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BA-RTL-W3 **Lab ID:** 1708436-03
Collection Date: 8/7/2017 01:08 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 07:15 PM
Surr: Decachlorobiphenyl	*112*		*40-140*	*%REC*	1	8/14/2017 07:15 PM
Surr: Tetrachloro-m-xylene	*92.5*		*40-140*	*%REC*	1	8/14/2017 07:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BA-RTL-W4 **Lab ID:** 1708436-04
Collection Date: 8/7/2017 01:10 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 07:30 PM
Surr: Decachlorobiphenyl	*108*		*40-140*	*%REC*	1	8/14/2017 07:30 PM
Surr: Tetrachloro-m-xylene	*92.6*		*40-140*	*%REC*	1	8/14/2017 07:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BB-R5-W1 **Lab ID:** 1708436-05
Collection Date: 8/7/2017 01:20 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 07:44 PM
Surr: Decachlorobiphenyl	*106*		*40-140*	*%REC*	1	8/14/2017 07:44 PM
Surr: Tetrachloro-m-xylene	*96.9*		*40-140*	*%REC*	1	8/14/2017 07:44 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BB-R5-W2 **Lab ID:** 1708436-06
Collection Date: 8/7/2017 01:22 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 07:58 PM
Surr: Decachlorobiphenyl	*116*		*40-140*	*%REC*	1	8/14/2017 07:58 PM
Surr: Tetrachloro-m-xylene	*94.4*		*40-140*	*%REC*	1	8/14/2017 07:58 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BB-R5-W3 **Lab ID:** 1708436-07
Collection Date: 8/7/2017 01:24 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 08:12 PM
Surr: Decachlorobiphenyl	*110*		*40-140*	*%REC*	1	8/14/2017 08:12 PM
Surr: Tetrachloro-m-xylene	*90.0*		*40-140*	*%REC*	1	8/14/2017 08:12 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BC-R11-W1 **Lab ID:** 1708436-08
Collection Date: 8/7/2017 01:32 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 08:55 PM
Surr: Decachlorobiphenyl	*105*		*40-140*	*%REC*	1	8/14/2017 08:55 PM
Surr: Tetrachloro-m-xylene	*91.4*		*40-140*	*%REC*	1	8/14/2017 08:55 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BC-R11-W2 **Lab ID:** 1708436-09
Collection Date: 8/7/2017 01:34 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 09:10 PM
Surr: Decachlorobiphenyl	*110*		*40-140*	*%REC*	1	8/14/2017 09:10 PM
Surr: Tetrachloro-m-xylene	*90.1*		*40-140*	*%REC*	1	8/14/2017 09:10 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BC-R11-W3 **Lab ID:** 1708436-10
Collection Date: 8/7/2017 01:36 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 09:24 PM
Surr: Decachlorobiphenyl	*104*		*40-140*	*%REC*	1	8/14/2017 09:24 PM
Surr: Tetrachloro-m-xylene	*85.6*		*40-140*	*%REC*	1	8/14/2017 09:24 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BC-R11-W4 **Lab ID:** 1708436-11
Collection Date: 8/7/2017 01:37 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 09:38 PM
Surr: Decachlorobiphenyl	*102*		*40-140*	*%REC*	1	8/14/2017 09:38 PM
Surr: Tetrachloro-m-xylene	*85.5*		*40-140*	*%REC*	1	8/14/2017 09:38 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *16-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BD-R14-W1 **Lab ID:** 1708436-12
Collection Date: 8/7/2017 01:44 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 09:53 PM
Surr: Decachlorobiphenyl	*105*		*40-140*	*%REC*	1	8/14/2017 09:53 PM
Surr: Tetrachloro-m-xylene	*89.3*		*40-140*	*%REC*	1	8/14/2017 09:53 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BD-R14-W2 **Lab ID:** 1708436-13
Collection Date: 8/7/2017 01:46 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 10:07 PM
Surr: Decachlorobiphenyl	*112*		*40-140*	*%REC*	1	8/14/2017 10:07 PM
Surr: Tetrachloro-m-xylene	*96.7*		*40-140*	*%REC*	1	8/14/2017 10:07 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BD-R14-W3 **Lab ID:** 1708436-14
Collection Date: 8/7/2017 01:47 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 10:21 PM
Surr: Decachlorobiphenyl	*112*		*40-140*	*%REC*	1	8/14/2017 10:21 PM
Surr: Tetrachloro-m-xylene	*93.9*		*40-140*	*%REC*	1	8/14/2017 10:21 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *16-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-JCES-BD-R14-W4 **Lab ID:** 1708436-15
Collection Date: 8/7/2017 01:49 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 10:35 PM
Surr: Decachlorobiphenyl	*104*		*40-140*	*%REC*	1	8/14/2017 10:35 PM
Surr: Tetrachloro-m-xylene	*89.6*		*40-140*	*%REC*	1	8/14/2017 10:35 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *16-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708436
Sample ID: 080717-WFB-HEX **Lab ID:** 1708436-16
Collection Date: 8/7/2017 01:55 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/14/17 16:54		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/14/2017 10:50 PM
Surr: Decachlorobiphenyl	*102*		*40-140*	*%REC*	1	8/14/2017 10:50 PM
Surr: Tetrachloro-m-xylene	*87.9*		*40-140*	*%REC*	1	8/14/2017 10:50 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 16-Aug-17

Client: Ramboll Environ US Corporation

Work Order: 1708436

Project: SMMUSD (0433980Z)

QC BATCH REPORT

Batch ID: **105835** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **MBLK-105835-105835** Units: **µg/wipe** Analysis Date: **8/14/2017 06:04 PM**

Client ID: Run ID: **GC14_170814A** SeqNo: **4582551** Prep Date: **8/14/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
PCBs, Total	ND	0.10								
Surr: Decachlorobiphenyl	*0.1262*	0	*0.1*	0	*126*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.0995*	0	*0.1*	0	*99.5*	*50-130*	0			

LCS Sample ID: **LCS-105835-105835** Units: **µg/wipe** Analysis Date: **8/14/2017 06:18 PM**

Client ID: Run ID: **GC14_170814A** SeqNo: **4582553** Prep Date: **8/14/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.074	0.10	1	0	107	50-130	0			
Aroclor 1260	1.133	0.10	1	0	113	50-130	0			
Surr: Decachlorobiphenyl	*0.1455*	0	*0.12*	0	*121*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.1172*	0	*0.12*	0	*97.6*	*50-130*	0			

LCSD Sample ID: **LCSD-105835-105835** Units: **µg/wipe** Analysis Date: **8/14/2017 06:32 PM**

Client ID: Run ID: **GC14_170814A** SeqNo: **4582554** Prep Date: **8/14/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.044	0.10	1	0	104	50-130	1.074	2.77	35	
Aroclor 1260	1.078	0.10	1	0	108	50-130	1.133	4.93	35	
Surr: Decachlorobiphenyl	*0.1374*	0	*0.12*	0	*114*	*50-130*	0.1455	*5.76*	*35*	
Surr: Tetrachloro-m-xylene	*0.1131*	0	*0.12*	0	*94.2*	*50-130*	0.1172	*3.54*	*35*	

The following samples were analyzed in this batch:

1708436-01A	1708436-02A	1708436-03A
1708436-04A	1708436-05A	1708436-06A
1708436-07A	1708436-08A	1708436-09A
1708436-10A	1708436-11A	1708436-12A
1708436-13A	1708436-14A	1708436-15A
1708436-16A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

☐ ALS Environmental
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Houston, Texas 77099
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Chain of Custody Form

Page 1 of 2

☑ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: 1708436

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	SMMUSD	A	EPA 8082 for Aroclors
Work Order		Project Number	0433980Z	B	N/A
Company Name	Ramboll ENVIRON	Bill To Company	Ramboll ENVIRON	C	N/A
Send Report To	Yi Tian	Invoice Attn.	Yi Tian	D	N/A
Address	18100 Von Karman Ave. Suite 600	Address	18100 Von Karman Ave. Suite 600	E	N/A
				F	N/A
City/State/Zip	Irvine, CA 92612	City/State/Zip	Irvine, CA 92612	G	N/A
Phone	949.798.3624	Phone	949.798.3624	H	N/A
Fax	949.261.6202	Fax	949.261.6202	I	N/A
e-Mail Address	ytian@ramboll.com			J	N/A

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	080717-JCES-BA-RTL-W1	8/7/17	1305	Wipe	8	1	PCBs										
2	080717-JCES-BA-RTL-W2	"	1307	Wipe	8	1	PCBs										
3	080717-JCES-BA-RTL-W3	"	1308	Wipe	8	1	PCBs										
4	080717-JCES-BA-RTL-W4	"	1310	Wipe	8	1	PCBs										
5	080717-JCES-BB-R5-W1	"	1320	Wipe	8	1	PCBs										
6	080717-JCES-BB-R5-W2	"	1322	Wipe	8	1	PCBs										
7	080717-JCES-BB-R5-W3	"	1324	Wipe	8	1	PCBs										
8	080717-JCES-BC-R11-W1	"	1332	Wipe	8	1	PCBs										
9	080717-JCES-BC-R11-W2	"	1334	Wipe	8	1	PCBs										
10	080717-JCES-BC-R11-W3	"	1336	Wipe	8	1	PCBs										

Sampler(s): Please Print & Sign: S Dishop

Shipment Method: FedEx

Turnaround Time in Business Days (BD): ☒ 10 BD ☑ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	8/7/17	1545	FedEx		
Relinquished by: FED EX	Date: 8/8/17	Time: 0945	Received by (Laboratory):	Date:	Time:
Logged by (Laboratory): DFS	Date: 8/8/17	Time: 1245	Checked by (Laboratory):		

Notes:

ALS Cooler ID	Cooler Temp
SP2	3.8°C

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☐ TRRP Level IV
☑ Level IV: SW846 Methods/CLP like
☐ Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-None/4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

☐ ALS Environmental
10450 Stancliff Rd. #210
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Chain of Custody Form

Page 2 of 2

☑ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
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(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: 1208436

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	SMMUSD	A	EPA 8082 for Aroclors
Work Order		Project Number	0433980Z	B	N/A
Company Name	Ramboll ENVIRON	Bill To Company	Ramboll ENVIRON	C	N/A
Send Report To	YI Tian	Invoice Attn.	YI Tian	D	N/A
Address	18100 Von Karman Ave. Suite 600	Address	18100 Von Karman Ave. Suite 600	E	N/A
				F	N/A
City/State/Zip	Irvine, CA 92612	City/State/Zip	Irvine, CA 92612	G	N/A
Phone	949.798.3824	Phone	949.798.3824	H	N/A
Fax	949.261.6202	Fax	949.261.6202	I	N/A
e-Mail Address	ytian@ramboll.com			J	N/A

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	080717-JCES-BC-R11-W4	8/7/17	1337	Wipe	8	1	PCBs										
2	080717-JCES-BD-R14-W1		1344	Wipe	8	1	PCBs										
3	080717-JCES-BD-R14-W2		1346	Wipe	8	1	PCBs										
4	080717-JCES-BD-R14-W3		1347	Wipe	8	1	PCBs										
5	080717-JCES-BD-R14-W4		1349	Wipe	8	1	PCBs										
6	080717-WFB-HEX		1355	Wipe	8	1	PCBs										
7				Wipe	8	1	PCBs										
8				Wipe	8	1	PCBs										
9				Wipe	8	1	PCBs										
10				Wipe	8	1	PCBs										

Sampler(s): Please Print & Sign: S. Dishon

Shipment Method: Fed Ex

Turnaround Time in Business Days (BD): ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
	8/7/17	1545	Fed Ex			
Relinquished by: FED EX	Date: 8/8/17	Time: 0945	Received by (Laboratory):	Date:	Time:	
Logged by (Laboratory): DFS	Date: 8/8/17	Time: 1245	Checked by (Laboratory):			

ALS Cooler ID	Cooler Temp	QC Package: (Check Box Below)	
		☐ Level II: Standard QC	☐ Level III: Raw Data
SR2	3.8c	☐ TRRP LRC	☐ TRRP Level IV
		☑ Level IV: SW846 Methods/CLP like	
		☐ Other:	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-None/4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ENVIRONINT - CA** Date/Time Received: **08-Aug-17 09:45**

Work Order: **1708436** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 08-Aug-17 (Date) Reviewed by: Chad Whelton (eSignature) 09-Aug-17 (Date)

Matrices: Wipe
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.8/3.8 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/8/2017 12:58:00 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

DATA VALIDATION REPORT #39422B (SURFACE WIPE)
SAMPLE DATE: AUGUST 7, 2017

JCES Building A
JCES Building B
JCES Building C
JCES Building D

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

Ramboll Environ
18100 Von Karman Avenue Ste. 600
Irvine, CA 92612
Attn: Ms. Yi Tian

September 25, 2017

SUBJECT: SMMUSD, 04-33980Z, Data Validation

Dear Ms. Tian

Enclosed is the final validation report for the fraction listed below. This SDG was received on September 11, 2017. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #39422:

SDG #	Fraction
1708436	Polychlorinated Biphenyls

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

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

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

Sincerely,

Pei Geng
Project Manager/Senior Chemist

462 pages-DL

Attachment 1

Level III

LDC #39422 (Ramboll Environ-Irvine / SMMUSD, 04-33980Z)

LDC	SDG#	DATE REC'D	(2) DATE DUE	PCBs (8082)		PCBs (TO-10A)																															
Matrix:	Wipe/Air			W	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P1703866	09/11/17	09/25/17	-	-	13	0																														
B	1708436	09/11/17	09/25/17	16	0	-	-																														
C	1708532	09/11/17	09/25/17	16	0	-	-																														
D	1708535	09/11/17	09/25/17	4	0	-	-																														
Total	J/PG			36	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49

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

V:\LOGIN\Environ (Ramboll Environ)\SMMUSD\39422ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: SMMUSD

LDC Report Date: September 20, 2017

Parameters: Polychlorinated Biphenyls

Validation Level: Level III

Laboratory: ALS Environmental

Sample Delivery Group (SDG): 1708436

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
080717-JCES-BA-RTL-W1	1708436-01	Wipe	08/07/17
080717-JCES-BA-RTL-W2	1708436-02	Wipe	08/07/17
080717-JCES-BA-RTL-W3	1708436-03	Wipe	08/07/17
080717-JCES-BA-RTL-W4	1708436-04	Wipe	08/07/17
080717-JCES-BB-R5-W1	1708436-05	Wipe	08/07/17
080717-JCES-BB-R5-W2	1708436-06	Wipe	08/07/17
080717-JCES-BB-R5-W3	1708436-07	Wipe	08/07/17
080717-JCES-BC-R11-W1	1708436-08	Wipe	08/07/17
080717-JCES-BC-R11-W2	1708436-09	Wipe	08/07/17
080717-JCES-BC-R11-W3	1708436-10	Wipe	08/07/17
080717-JCES-BC-R11-W4	1708436-11	Wipe	08/07/17
080717-JCES-BD-R14-W1	1708436-12	Wipe	08/07/17
080717-JCES-BD-R14-W2	1708436-13	Wipe	08/07/17
080717-JCES-BD-R14-W3	1708436-14	Wipe	08/07/17
080717-JCES-BD-R14-W4	1708436-15	Wipe	08/07/17
080717-WFB-HEX	1708436-16	Wipe	08/07/17

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) by Environmental Protection Agency (EPA) SW 846 Method 8082

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

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

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample 080717-WFB-HEX was identified as a field blank. No contaminants were found.

VI. Surrogates

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level III validation.

XI. Target Compound Identification

Raw data were not reviewed for Level III validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

SMMUSD
Polychlorinated Biphenyls - Data Qualification Summary - SDG 1708436

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 1708436

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 1708436

No Sample Data Qualified in this SDG

LDC #: 39422B3b
SDG #: 1708436
Laboratory: ALS Environmental

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 09/16/17
Page: 1 of 1
Reviewer: SW
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC Instrument Performance Check	N	
III.	Initial calibration/ICV	A / A	ICAL ≤ 20% ICV ≤ 20%
IV.	Continuing calibration	A	CCV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = 16
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Compound quantitation/RL/LOQ/LODs	N	
XII.	Target compound identification	N	
XIII	Overall assessment of data	A	

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

	Client ID	Lab ID	Matrix	Date
1	080717-JCES-BA-RTL-W1	1708436-01	Wipe	08/07/17
2	080717-JCES-BA-RTL-W2	1708436-02	Wipe	08/07/17
3	080717-JCES-BA-RTL-W3	1708436-03	Wipe	08/07/17
4	080717-JCES-BA-RTL-W4	1708436-04	Wipe	08/07/17
5	080717-JCES-BB-R5-W1	1708436-05	Wipe	08/07/17
6	080717-JCES-BB-R5-W2	1708436-06	Wipe	08/07/17
7	080717-JCES-BB-R5-W3	1708436-07	Wipe	08/07/17
8	080717-JCES-BC-R11-W1	1708436-08	Wipe	08/07/17
9	080717-JCES-BC-R11-W2	1708436-09	Wipe	08/07/17
10	080717-JCES-BC-R11-W3	1708436-10	Wipe	08/07/17
11	080717-JCES-BC-R11-W4	1708436-11	Wipe	08/07/17
12	080717-JCES-BD-R14-W1	1708436-12	Wipe	08/07/17
13	080717-JCES-BD-R14-W2	1708436-13	Wipe	08/07/17
14	080717-JCES-BD-R14-W3	1708436-14	Wipe	08/07/17
15	080717-JCES-BD-R14-W4	1708436-15	Wipe	08/07/17
16	080717-WFB-HEX	1708436-16	Wipe	08/07/17

- MBlk- 105835

LABORATORY REPORT #1708532 (SURFACE WIPE)
SAMPLE DATE: AUGUST 8, 2017

MHS Building D (100/200, Mako Shark)
MHS Building H (Cafeteria/Auditorium)
MHS Building J (700, Old Gymnasium)

17-Aug-2017

Yi Tian
Ramboll Environ US Corporation
18100 VonKarman Ave.
Suite 600
Irvine, CA 92612

Re: **SMMUSD (0433980Z)** Work Order: **1708532**

Dear Yi,

ALS Environmental received 16 samples on 09-Aug-2017 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 23.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: **1708532**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1708532-01	080817-MHS-BH-R605A-W1	Wipe		8/8/2017 07:54	8/9/2017 09:30	☐
1708532-02	080817-MHS-BH-R605A-W2	Wipe		8/8/2017 07:56	8/9/2017 09:30	☐
1708532-03	080817-MHS-BH-R605A-W3	Wipe		8/8/2017 07:57	8/9/2017 09:30	☐
1708532-04	080817-MHS-BH-R605A-W4	Wipe		8/8/2017 07:59	8/9/2017 09:30	☐
1708532-05	080817-MHS-B200-R212-W1	Wipe		8/8/2017 08:15	8/9/2017 09:30	☐
1708532-06	080817-MHS-B200-R212-W2	Wipe		8/8/2017 08:16	8/9/2017 09:30	☐
1708532-07	080817-MHS-B200-R212-W3	Wipe		8/8/2017 08:18	8/9/2017 09:30	☐
1708532-08	080817-MHS-B200-R212-W4	Wipe		8/8/2017 08:20	8/9/2017 09:30	☐
1708532-09	080817-MHS-B700-R704-W1	Wipe		8/8/2017 11:00	8/9/2017 09:30	☐
1708532-10	080817-MHS-B700-R704-W2	Wipe		8/8/2017 11:02	8/9/2017 09:30	☐
1708532-11	080817-MHS-B700-R704-W3	Wipe		8/8/2017 11:04	8/9/2017 09:30	☐
1708532-12	080817-MHS-B700-R705-W1	Wipe		8/8/2017 11:10	8/9/2017 09:30	☐
1708532-13	080817-MHS-B700-R705-W2	Wipe		8/8/2017 11:12	8/9/2017 09:30	☐
1708532-14	080817-MHS-B700-R705-W3	Wipe		8/8/2017 11:13	8/9/2017 09:30	☐
1708532-15	080817-MHS-B700-R705-W4	Wipe		8/8/2017 11:15	8/9/2017 09:30	☐
1708532-16	080817-WFB-HEX	Wipe		8/8/2017 12:00	8/9/2017 09:30	☐

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
WorkOrder: **1708532**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/wipe	Micrograms per Wipe

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-BH-R605A-W1 **Lab ID:** 1708532-01
Collection Date: 8/8/2017 07:54 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 06:10 PM
Surr: Decachlorobiphenyl	*92.2*		*40-140*	*%REC*	1	8/16/2017 06:10 PM
Surr: Tetrachloro-m-xylene	*81.6*		*40-140*	*%REC*	1	8/16/2017 06:10 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-BH-R605A-W2 **Lab ID:** 1708532-02
Collection Date: 8/8/2017 07:56 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 06:25 PM
Surr: Decachlorobiphenyl	*95.2*		*40-140*	*%REC*	1	8/16/2017 06:25 PM
Surr: Tetrachloro-m-xylene	*85.8*		*40-140*	*%REC*	1	8/16/2017 06:25 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-BH-R605A-W3 **Lab ID:** 1708532-03
Collection Date: 8/8/2017 07:57 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 06:39 PM
Surr: Decachlorobiphenyl	*97.6*		*40-140*	*%REC*	1	8/16/2017 06:39 PM
Surr: Tetrachloro-m-xylene	*88.9*		*40-140*	*%REC*	1	8/16/2017 06:39 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-BH-R605A-W4 **Lab ID:** 1708532-04
Collection Date: 8/8/2017 07:59 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 06:53 PM
Surr: Decachlorobiphenyl	*92.0*		*40-140*	*%REC*	1	8/16/2017 06:53 PM
Surr: Tetrachloro-m-xylene	*84.2*		*40-140*	*%REC*	1	8/16/2017 06:53 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B200-R212-W1 **Lab ID:** 1708532-05
Collection Date: 8/8/2017 08:15 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 07:08 PM
Surr: Decachlorobiphenyl	*90.7*		*40-140*	*%REC*	1	8/16/2017 07:08 PM
Surr: Tetrachloro-m-xylene	*88.8*		*40-140*	*%REC*	1	8/16/2017 07:08 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B200-R212-W2 **Lab ID:** 1708532-06
Collection Date: 8/8/2017 08:16 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 07:22 PM
Surr: Decachlorobiphenyl	*92.9*		*40-140*	*%REC*	1	8/16/2017 07:22 PM
Surr: Tetrachloro-m-xylene	*86.6*		*40-140*	*%REC*	1	8/16/2017 07:22 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B200-R212-W3 **Lab ID:** 1708532-07
Collection Date: 8/8/2017 08:18 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 07:36 PM
Surr: Decachlorobiphenyl	*96.4*		*40-140*	*%REC*	1	8/16/2017 07:36 PM
Surr: Tetrachloro-m-xylene	*84.8*		*40-140*	*%REC*	1	8/16/2017 07:36 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B200-R212-W4 **Lab ID:** 1708532-08
Collection Date: 8/8/2017 08:20 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 08:19 PM
Surr: Decachlorobiphenyl	*96.5*		*40-140*	*%REC*	1	8/16/2017 08:19 PM
Surr: Tetrachloro-m-xylene	*86.1*		*40-140*	*%REC*	1	8/16/2017 08:19 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B700-R704-W1 **Lab ID:** 1708532-09
Collection Date: 8/8/2017 11:00 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 08:33 PM
Surr: Decachlorobiphenyl	*91.5*		*40-140*	*%REC*	1	8/16/2017 08:33 PM
Surr: Tetrachloro-m-xylene	*86.7*		*40-140*	*%REC*	1	8/16/2017 08:33 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B700-R704-W2 **Lab ID:** 1708532-10
Collection Date: 8/8/2017 11:02 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 08:48 PM
Surr: Decachlorobiphenyl	*101*		*40-140*	*%REC*	1	8/16/2017 08:48 PM
Surr: Tetrachloro-m-xylene	*92.0*		*40-140*	*%REC*	1	8/16/2017 08:48 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B700-R704-W3 **Lab ID:** 1708532-11
Collection Date: 8/8/2017 11:04 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 09:03 PM
Surr: Decachlorobiphenyl	*99.1*		*40-140*	*%REC*	1	8/16/2017 09:03 PM
Surr: Tetrachloro-m-xylene	*85.4*		*40-140*	*%REC*	1	8/16/2017 09:03 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-MHS-B700-R705-W1 **Lab ID:** 1708532-12
Collection Date: 8/8/2017 11:10 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 09:17 PM
Surr: Decachlorobiphenyl	*91.6*		*40-140*	*%REC*	1	8/16/2017 09:17 PM
Surr: Tetrachloro-m-xylene	*86.9*		*40-140*	*%REC*	1	8/16/2017 09:17 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: 1708532
Sample ID: 080817-MHS-B700-R705-W2
Lab ID: 1708532-13
Collection Date: 8/8/2017 11:12 AM
Matrix: WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 09:31 PM
Surr: Decachlorobiphenyl	*102*		*40-140*	*%REC*	1	8/16/2017 09:31 PM
Surr: Tetrachloro-m-xylene	*86.0*		*40-140*	*%REC*	1	8/16/2017 09:31 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: 1708532
Sample ID: 080817-MHS-B700-R705-W3
Lab ID: 1708532-14
Collection Date: 8/8/2017 11:13 AM
Matrix: WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 09:45 PM
Surr: Decachlorobiphenyl	*102*		*40-140*	*%REC*	1	8/16/2017 09:45 PM
Surr: Tetrachloro-m-xylene	*85.3*		*40-140*	*%REC*	1	8/16/2017 09:45 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: 1708532
Sample ID: 080817-MHS-B700-R705-W4
Lab ID: 1708532-15
Collection Date: 8/8/2017 11:15 AM
Matrix: WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 10:00 PM
Surr: Decachlorobiphenyl	*94.7*		*40-140*	*%REC*	1	8/16/2017 10:00 PM
Surr: Tetrachloro-m-xylene	*89.6*		*40-140*	*%REC*	1	8/16/2017 10:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708532
Sample ID: 080817-WFB-HEX **Lab ID:** 1708532-16
Collection Date: 8/8/2017 12:00 PM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 10:14 PM
Surr: Decachlorobiphenyl	*90.6*		*40-140*	*%REC*	1	8/16/2017 10:14 PM
Surr: Tetrachloro-m-xylene	*90.8*		*40-140*	*%REC*	1	8/16/2017 10:14 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation

Work Order: 1708532

Project: SMMUSD (0433980Z)

QC BATCH REPORT

Batch ID: **105836** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **MBLK-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:27 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587766** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
PCBs, Total	ND	0.10								
Surr: Decachlorobiphenyl	*0.1052*	0	*0.1*	0	*105*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.09263*	0	*0.1*	0	*92.6*	*50-130*	0			

LCS Sample ID: **LCS-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:42 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587767** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	0.9816	0.10	1	0	98.2	50-130	0			
Aroclor 1260	0.9661	0.10	1	0	96.6	50-130	0			
Surr: Decachlorobiphenyl	*0.1254*	0	*0.12*	0	*104*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.1112*	0	*0.12*	0	*92.7*	*50-130*	0			

LCSD Sample ID: **LCSD-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:56 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587768** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	0.8888	0.10	1	0	88.9	50-130	0.9816	9.92	35	
Aroclor 1260	0.861	0.10	1	0	86.1	50-130	0.9661	11.5	35	
Surr: Decachlorobiphenyl	*0.1035*	0	*0.12*	0	*86.2*	*50-130*	0.1254	*19.1*	*35*	
Surr: Tetrachloro-m-xylene	*0.09555*	0	*0.12*	0	*79.6*	*50-130*	0.1112	*15.2*	*35*	

The following samples were analyzed in this batch:

1708532-01A	1708532-02A	1708532-03A
1708532-04A	1708532-05A	1708532-06A
1708532-07A	1708532-08A	1708532-09A
1708532-10A	1708532-11A	1708532-12A
1708532-13A	1708532-14A	1708532-15A
1708532-16A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

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Chain of Custody Form

Page 1 of 2

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ALS Project Manager: | ALS Work Order #: 1708532

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	SMMUSD	A	EPA 8082 for Aroclors
Work Order		Project Number	0433980Z	B	N/A
Company Name	Ramboll ENVIRON	Bill To Company	Ramboll ENVIRON	C	N/A
Send Report To	Yi Tian	Invoice Attn.	Yi Tian	D	N/A
Address	18100 Von Karman Ave. Suite 600	Address	18100 Von Karman Ave. Suite 600	E	N/A
				F	N/A
City/State/Zip	Irvine, CA 92612	City/State/Zip	Irvine, CA 92612	G	N/A
Phone	949.798.3624	Phone	949.798.3624	H	N/A
Fax	949.261.6202	Fax	949.261.6202	I	N/A
e-Mail Address	ytian@ramboll.com			J	N/A

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	080817-MHS-BH-R605A-W1	8/8/17	0754	Wipe	8	1	PCBs										
2	080817-MHS-BH-R605A-W2		0756	Wipe	8	1	PCBs										
3	080817-MHS-BH-R605A-W3		0757	Wipe	8	1	PCBs										
4	080817-MHS-BH-R605A-W4		0759	Wipe	8	1	PCBs										
5	080817-MHS-B200-R212-W1		0815	Wipe	8	1	PCBs										
6	080817-MHS-B200-R212-W2		0816	Wipe	8	1	PCBs										
7	080817-MHS-B200-R212-W3		0818	Wipe	8	1	PCBs										
8	080817-MHS-B200-R212-W4		0820	Wipe	8	1	PCBs										
9	080817-MHS-B700-R704-W1		1100	Wipe	8	1	PCBs										
10	080817-MHS-B700-R704-W2		1102	Wipe	8	1	PCBs										

Sampler(s): Please Print & Sign: DHO

Shipment Method: Fed Ex

Turnaround Time in Business Days (BD): ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
	8/8/17	1515	Fed Ex			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Date:	Time:	
Fed Ex	8/9/17	0930				
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			
DES	8/9/17	1330				

ALS Cooler ID	Cooler Temp
SR2	3.6°C

QC Package: (Check Box Below)
- ☐ Level II: Standard QC
- ☐ Level III: Raw Data
- ☐ TRRP LRC
- ☐ TRRP Level IV
- ☑ Level IV: SW846 Methods/CLP like
- ☐ Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-None/4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

☐ ALS Environmental
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 2 of 2

☑ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager:		ALS Work Order #:	1708532

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	SMMUSD	A	EPA 8082 for Aroclors
Work Order		Project Number	0433980Z	B	N/A
Company Name	Ramboll ENVIRON	Bill To Company	Ramboll ENVIRON	C	N/A
Send Report To	Yi Tian	Invoice Attn.	Yi Tian	D	N/A
Address	18100 Von Karman Ave. Suite 600	Address	18100 Von Karman Ave. Suite 600	E	N/A
				F	N/A
City/State/Zip	Irvine, CA 92612	City/State/Zip	Irvine, CA 92612	G	N/A
Phone	949.798.3624	Phone	949.798.3624	H	N/A
Fax	949.261.6202	Fax	949.261.6202	I	N/A
e-Mail Address	ytian@ramboll.com			J	N/A

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	080817-MHS-B700-R704-W3	8/8/17	1104	Wipe	8	1	PCBs										
2	080817-MHS-B700-R705-W1	"	1110	Wipe	8	1	PCBs										
3	080817-MHS-B700-R705-W2	"	1112	Wipe	8	1	PCBs										
4	080817-MHS-B700-R705-W3	"	1113	Wipe	8	1	PCBs										
5	080817-MHS-B700-R705-W4	"	1115	Wipe	8	1	PCBs										
6	~~080817-MHS~~ 080817-WFB-HEX	"	1200	Wipe	8	1	PCBs										
7				Wipe	8	1	PCBs										
8				Wipe	8	1	PCBs										
9				Wipe	8	1	PCBs										
10				Wipe	8	1	PCBs										

Sampler(s): Please Print & Sign: DSTOLL

Shipment Method: FedEx

Turnaround Time in Business Days (BD): ☒ 10 BD ☑ ~~5 BD~~ ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
	8/8/17	1515	FedEx			
Relinquished by: FEDEX	Date: 8/9/17	Time: 0930	Received by (Laboratory):	Date:	Time:	
Logged by (Laboratory): DFS	Date: 8/9/17	Time: 1330	Checked by (Laboratory):			

ALS Cooler ID	Cooler Temp	QC Package: (Check Box Below)	
		☐ Level II: Standard QC	☐ Level III: Raw Data
SD2	3.6°C	☐ TRRP LRC	☐ TRRP Level IV
		☑ Level IV: SW846 Methods/CLP like	
		☐ Other:	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-None/4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ENVIRONINT - CA** Date/Time Received: **09-Aug-17 09:30**

Work Order: **1708532** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 09-Aug-17 (Date) Reviewed by: Chad Whelton (eSignature) 10-Aug-17 (Date)

Matrices: Wipe
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.6/3.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/9/2017 1:47:39 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

DATA VALIDATION REPORT #39422C (SURFACE WIPE)
SAMPLE DATE: AUGUST 8, 2017

MHS Building D (100/200, Mako Shark)
MHS Building H (Cafeteria/Auditorium)
MHS Building J (700, Old Gymnasium)

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

Ramboll Environ
18100 Von Karman Avenue Ste. 600
Irvine, CA 92612
Attn: Ms. Yi Tian

September 25, 2017

SUBJECT: SMMUSD, 04-33980Z, Data Validation

Dear Ms. Tian

Enclosed is the final validation report for the fraction listed below. This SDG was received on September 11, 2017. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #39422:

SDG #	Fraction
1708532	Polychlorinated Biphenyls

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

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

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

Sincerely,

Pei Geng
Project Manager/Senior Chemist

462 pages-DL

Attachment 1

Level III

LDC #39422 (Ramboll Environ-Irvine / SMMUSD, 04-33980Z)

LDC	SDG#	DATE REC'D	(2) DATE DUE	PCBs (8082)		PCBs (TO-10A)																															
Matrix:	Wipe/Air			W	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P1703866	09/11/17	09/25/17	-	-	13	0																														
B	1708436	09/11/17	09/25/17	16	0	-	-																														
C	1708532	09/11/17	09/25/17	16	0	-	-																														
D	1708535	09/11/17	09/25/17	4	0	-	-																														
Total	J/PG			36	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49

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

V:\LOGIN\Environ (Ramboll Environ)\SMMUSD\39422ST.wpd

LDC Report# 39422C3b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: SMMUSD

LDC Report Date: September 20, 2017

Parameters: Polychlorinated Biphenyls

Validation Level: Level III

Laboratory: ALS Environmental

Sample Delivery Group (SDG): 1708532

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
080817-MHS-BH-R605A-W1	1708532-01	Wipe	08/08/17
080817-MHS-BH-R605A-W2	1708532-02	Wipe	08/08/17
080817-MHS-BH-R605A-W3	1708532-03	Wipe	08/08/17
080817-MHS-BH-R605A-W4	1708532-04	Wipe	08/08/17
080817-MHS-B200-R212-W1	1708532-05	Wipe	08/08/17
080817-MHS-B200-R212-W2	1708532-06	Wipe	08/08/17
080817-MHS-B200-R212-W3	1708532-07	Wipe	08/08/17
080817-MHS-B200-R212-W4	1708532-08	Wipe	08/08/17
080817-MHS-B700-R704-W1	1708532-09	Wipe	08/08/17
080817-MHS-B700-R704-W2	1708532-10	Wipe	08/08/17
080817-MHS-B700-R704-W3	1708532-11	Wipe	08/08/17
080817-MHS-B700-R705-W1	1708532-12	Wipe	08/08/17
080817-MHS-B700-R705-W2	1708532-13	Wipe	08/08/17
080817-MHS-B700-R705-W3	1708532-14	Wipe	08/08/17
080817-MHS-B700-R705-W4	1708532-15	Wipe	08/08/17
080817-WFB-HEX	1708532-16	Wipe	08/08/17

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) by Environmental Protection Agency (EPA) SW 846 Method 8082

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

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

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

Sample 080817-WFB-HEX was identified as a field blank. No contaminants were found.

VI. Surrogates

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level III validation.

XI. Target Compound Identification

Raw data were not reviewed for Level III validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

SMMUSD
Polychlorinated Biphenyls - Data Qualification Summary - SDG 1708532

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 1708532

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 1708532

No Sample Data Qualified in this SDG

LDC #: 39422C3b
SDG #: 1708532
Laboratory: ALS Environmental

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 09/15/17
Page: 1 of 1
Reviewer: JYG
2nd Reviewer: AF

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC Instrument Performance Check	N	
III.	Initial calibration/ICV	A/A	ICAL ≤ 20 % ICV ≤ 20 %
IV.	Continuing calibration	A	CCV ≤ 20 %
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = 16
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CS
IX.	Laboratory control samples	A	LCS / D
X.	Field duplicates	N	
XI.	Compound quantitation/RL/LOQ/LODs	N	
XII.	Target compound identification	N	
XIII	Overall assessment of data	A	

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

	Client ID	Lab ID	Matrix	Date
1	080817-MHS-BH-R605A-W1	1708532-01	Wipe	08/08/17
2	080817-MHS-BH-R605A-W2	1708532-02	Wipe	08/08/17
3	080817-MHS-BH-R605A-W3	1708532-03	Wipe	08/08/17
4	080817-MHS-BH-R605A-W4	1708532-04	Wipe	08/08/17
5	080817-MHS-B200-R212-W1	1708532-05	Wipe	08/08/17
6	080817-MHS-B200-R212-W2	1708532-06	Wipe	08/08/17
7	080817-MHS-B200-R212-W3	1708532-07	Wipe	08/08/17
8	080817-MHS-B200-R212-W4	1708532-08	Wipe	08/08/17
9	080817-MHS-B700-R704-W1	1708532-09	Wipe	08/08/17
10	080817-MHS-B700-R704-W2	1708532-10	Wipe	08/08/17
11	080817-MHS-B700-R704-W3	1708532-11	Wipe	08/08/17
12	080817-MHS-B700-R705-W1	1708532-12	Wipe	08/08/17
13	080817-MHS-B700-R705-W2	1708532-13	Wipe	08/08/17
14	080817-MHS-B700-R705-W3	1708532-14	Wipe	08/08/17
15	080817-MHS-B700-R705-W4	1708532-15	Wipe	08/08/17
16	080817-WFB-HEX	1708532-16	Wipe	08/08/17

(All ND) - MBLK-105836

LABORATORY REPORT #1708535 (SURFACE WIPE)
SAMPLE DATE: AUGUST 8, 2017

MHS Building J (700, Old Gymnasium)

17-Aug-2017

Yi Tian
Ramboll Environ US Corporation
18100 VonKarman Ave.
Suite 600
Irvine, CA 92612

Re: **SMMUSD (0433980Z)** Work Order: **1708535**

Dear Yi,

ALS Environmental received 4 samples on 09-Aug-2017 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: **1708535**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1708535-01	080817-MHS-B700-R704-PEW1	Wipe		8/8/2017 11:20	8/9/2017 09:30	☐
1708535-02	080817-MHS-B700-R704-PEW2	Wipe		8/8/2017 11:22	8/9/2017 09:30	☐
1708535-03	080817-MHS-B700-R704-PEW3	Wipe		8/8/2017 11:24	8/9/2017 09:30	☐
1708535-04	080817-MHS-B700-R705-PEW1	Wipe		8/8/2017 11:27	8/9/2017 09:30	☐

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
WorkOrder: **1708535**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/wipe	Micrograms per Wipe

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708535
Sample ID: 080817-MHS-B700-R704-PEW1 **Lab ID:** 1708535-01
Collection Date: 8/8/2017 11:20 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 10:28 PM
Surr: Decachlorobiphenyl	*93.4*		*40-140*	*%REC*	1	8/16/2017 10:28 PM
Surr: Tetrachloro-m-xylene	*85.0*		*40-140*	*%REC*	1	8/16/2017 10:28 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708535
Sample ID: 080817-MHS-B700-R704-PEW2 **Lab ID:** 1708535-02
Collection Date: 8/8/2017 11:22 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07	Analyst: **EB**	
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 11:11 PM
Surr: Decachlorobiphenyl	*94.9*		*40-140*	*%REC*	1	8/16/2017 11:11 PM
Surr: Tetrachloro-m-xylene	*90.0*		*40-140*	*%REC*	1	8/16/2017 11:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z)
Work Order: 1708535
Sample ID: 080817-MHS-B700-R704-PEW3
Lab ID: 1708535-03
Collection Date: 8/8/2017 11:24 AM
Matrix: WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1254	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
PCBs, Total	ND		0.10	µg/wipe	1	8/16/2017 11:26 PM
Surr: Decachlorobiphenyl	*93.1*		*40-140*	*%REC*	1	8/16/2017 11:26 PM
Surr: Tetrachloro-m-xylene	*87.2*		*40-140*	*%REC*	1	8/16/2017 11:26 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *17-Aug-17*

Client: Ramboll Environ US Corporation
Project: SMMUSD (0433980Z) **Work Order:** 1708535
Sample ID: 080817-MHS-B700-R705-PEW1 **Lab ID:** 1708535-04
Collection Date: 8/8/2017 11:27 AM **Matrix:** WIPE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: EPA/600/R-07 8/15/17 15:07		Analyst: **EB**
Aroclor 1016	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1221	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1232	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1242	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1248	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1254	**0.11**		**0.10**	**µg/wipe**	1	8/16/2017 11:40 PM
Aroclor 1260	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1262	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
Aroclor 1268	ND		0.10	µg/wipe	1	8/16/2017 11:40 PM
PCBs, Total	**0.11**		**0.10**	**µg/wipe**	1	8/16/2017 11:40 PM
Surr: Decachlorobiphenyl	*101*		*40-140*	*%REC*	1	8/16/2017 11:40 PM
Surr: Tetrachloro-m-xylene	*87.5*		*40-140*	*%REC*	1	8/16/2017 11:40 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 17-Aug-17

Client: Ramboll Environ US Corporation

QC BATCH REPORT

Work Order: 1708535

Project: SMMUSD (0433980Z)

Batch ID: **105836** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **MBLK-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:27 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587766** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.10								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
PCBs, Total	ND	0.10								
Surr: Decachlorobiphenyl	*0.1052*	0	*0.1*	0	*105*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.09263*	0	*0.1*	0	*92.6*	*50-130*	0			

LCS Sample ID: **LCS-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:42 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587767** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	0.9816	0.10	1	0	98.2	50-130	0			
Aroclor 1260	0.9661	0.10	1	0	96.6	50-130	0			
Surr: Decachlorobiphenyl	*0.1254*	0	*0.12*	0	*104*	*50-130*	0			
Surr: Tetrachloro-m-xylene	*0.1112*	0	*0.12*	0	*92.7*	*50-130*	0			

LCSD Sample ID: **LCSD-105836-105836** Units: **µg/wipe** Analysis Date: **8/16/2017 05:56 PM**

Client ID: Run ID: **GC14_170816A** SeqNo: **4587768** Prep Date: **8/15/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	0.8888	0.10	1	0	88.9	50-130	0.9816	9.92	35	
Aroclor 1260	0.861	0.10	1	0	86.1	50-130	0.9661	11.5	35	
Surr: Decachlorobiphenyl	*0.1035*	0	*0.12*	0	*86.2*	*50-130*	0.1254	*19.1*	*35*	
Surr: Tetrachloro-m-xylene	*0.09555*	0	*0.12*	0	*79.6*	*50-130*	0.1112	*15.2*	*35*	

The following samples were analyzed in this batch: 1708535-01A 1708535-02A 1708535-03A 1708535-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

☐ ALS Environmental
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

☑ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: 1708535

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	SMMUSD	A	EPA 8082 for Aroclors
Work Order		Project Number	0433980Z	B	N/A
Company Name	Ramboll ENVIRON	Bill To Company	Ramboll ENVIRON	C	N/A
Send Report To	Yi Tian	Invoice Attn.	Yi Tian	D	N/A
Address	18100 Von Karman Ave. Suite 600	Address	18100 Von Karman Ave. Suite 600	E	N/A
				F	N/A
City/State/Zip	Irvine, CA 92612	City/State/Zip	Irvine, CA 92612	G	N/A
Phone	949.798.3624	Phone	949.798.3624	H	N/A
Fax	949.261.6202	Fax	949.261.6202	I	N/A
e-Mail Address	ytian@ramboll.com			J	N/A

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	080817-MHS-B700-R704-PEW1	8/8/17	1120	Wipe	8	1	PCBs										
2	080817-MHS-B700-R704-PEW2		1122	Wipe	8	1	PCBs										
3	080817-MHS-B700-R704-PEW3		1124	Wipe	8	1	PCBs										
4	080817-MHS-B700-R705-PEW1	↓	1127	Wipe	8	1	PCBs										
5				Wipe	8	1	PCBs										
6				Wipe	8	1	PCBs										
7				Wipe	8	1	PCBs										
8				Wipe	8	1	PCBs										
9				Wipe	8	1	PCBs										
10				Wipe	8	1	PCBs										

Sampler(s): Please Print & Sign

Shipment Method: Fed Ex

Turnaround Time in Business Days (BD): ☒ 10 BD ☑ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
	8/8/17	1515	Fed Ex			
Relinquished by: FED EX	Date: 8/9/17	Time: 0930	Received by (Laboratory):	Date:	Time:	
Logged by (Laboratory): DES	Date: 8/9/17	Time: 1400	Checked by (Laboratory):			

ALS Cooler ID	Cooler Temp	QC Package: (Check Box Below)	
SR2	3.6°C	☐ Level II: Standard QC	☐ Level III: Raw Data
		☐ TRRP LRC	☐ TRRP Level IV
		☑ Level IV: SW846 Methods/CLP like	
		☐ Other:	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-None/4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ENVIRONINT - CA** Date/Time Received: **09-Aug-17 09:30**

Work Order: **1708535** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 09-Aug-17 (Date) Reviewed by: Chad Whelan (eSignature) 10-Aug-17 (Date)

Matrices: Wipe
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.6/3.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/9/2017 2:11:06 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

DATA VALIDATION REPORT #39422D (SURFACE WIPE)
SAMPLE DATE: AUGUST 8, 2017

MHS Building J (700, Old Gymnasium)

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

Ramboll Environ
18100 Von Karman Avenue Ste. 600
Irvine, CA 92612
Attn: Ms. Yi Tian

September 25, 2017

SUBJECT: SMMUSD, 04-33980Z, Data Validation

Dear Ms. Tian

Enclosed is the final validation report for the fraction listed below. This SDG was received on September 11, 2017. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #39422:

SDG #	Fraction
1708535	Polychlorinated Biphenyls

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

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

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

Sincerely,

Pei Geng
Project Manager/Senior Chemist

462 pages-DL

Attachment 1

Level III

LDC #39422 (Ramboll Environ-Irvine / SMMUSD, 04-33980Z)

LDC	SDG#	DATE REC'D	(2) DATE DUE	PCBs (8082)		PCBs (TO-10A)																															
Matrix:	Wipe/Air			W	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P1703866	09/11/17	09/25/17	-	-	13	0																														
B	1708436	09/11/17	09/25/17	16	0	-	-																														
C	1708532	09/11/17	09/25/17	16	0	-	-																														
D	1708535	09/11/17	09/25/17	4	0	-	-																														
Total	J/PG			36	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49

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

V:\LOGIN\Environ (Ramboll Environ)\SMMUSD\39422ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: SMMUSD

LDC Report Date: September 21, 2017

Parameters: Polychlorinated Biphenyls

Validation Level: Level III

Laboratory: ALS Environmental

Sample Delivery Group (SDG): 1708535

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
080817-MHS-B700-R704-PEW1	1708535-01	Wipe	08/08/17
080817-MHS-B700-R704-PEW2	1708535-02	Wipe	08/08/17
080817-MHS-B700-R704-PEW3	1708535-03	Wipe	08/08/17
080817-MHS-B700-R705-PEW1	1708535-04	Wipe	08/08/17

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) by Environmental Protection Agency (EPA) SW 846 Method 8082

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

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

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all compounds.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Compound Quantitation

Raw data were not reviewed for Level III validation.

XI. Target Compound Identification

Raw data were not reviewed for Level III validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

SMMUSD
Polychlorinated Biphenyls - Data Qualification Summary - SDG 1708535

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 1708535

No Sample Data Qualified in this SDG

SMMUSD
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 1708535

No Sample Data Qualified in this SDG

LDC #: 39422D3b
SDG #: 1708535
Laboratory: ALS Environmental

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 09/16/17
Page: 1 of 1
Reviewer: SM
2nd Reviewer: A

METHOD: GC Polychlorinated Biphenyls (EPA SW846 Method 8082)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC Instrument Performance Check	N	
III.	Initial calibration/ICV	A / A	ICAL ≤ 20% ICV ≤ 20%
IV.	Continuing calibration	A	CCV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	CG
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Compound quantitation/RL/LOQ/LODs	N	
XII.	Target compound identification	N	
XIII.	Overall assessment of data	A	

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

	Client ID	Lab ID	Matrix	Date
1	080817-MHS-B700-R704-PEW1	1708535-01	Wipe	08/08/17
2	080817-MHS-B700-R704-PEW2	1708535-02	Wipe	08/08/17
3	080817-MHS-B700-R704-PEW3	1708535-03	Wipe	08/08/17
4	080817-MHS-B700-R705-PEW1	1708535-04	Wipe	08/08/17
5				
6				
7				
8				
9				
10				
11				

Notes:

F	MBLK-105836						