

APPENDIX E

Soil Sampling Results



June 6, 2018

Mr. Mike Campbell
David J. Power & Associates, Inc.
1871 The Alameda, Suite 200
San Jose, CA 95126

**Re: Environmental Sampling Results, Presentation High School, 2281 Plummer Avenue,
San Jose, CA,**

Dear Mr. Campbell,

On behalf of David J. Powers & Associates, Inc., McCloskey Consultants, Inc. (MCI) has prepared this letter documenting the results of the environmental sampling activities completed at the Presentation High School located at 2281 Plummer Avenue in San Jose, California (Site). Attached are the laboratory results, summary tables, a Site map showing the soil sampling locations, and field procedures. The sampling activities were performed to evaluate the Site for residual pesticides and related metals from historical agricultural cultivation of the Site as well as the potential for lead, pesticides and arsenic around the existing older structures in shallow Site soils, as reported in a Phase I Report by MCI in a March 26, 2018 (MCI, 2018).

Review of Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment Report was performed in 2018 by MCI. MCI reviewed the available site historical documents including aerial photographs. The Site was cultivated with cherry orchards from as early as the late-1930s through the early-1960s. The original Presentation High School buildings were constructed on the eastern half of the Site in 1962, at which time the western half remained cultivated with orchards through the mid- to late-1960s. A small convent was constructed on the northwestern corner of the Site in the late-1970s/early-1980s and was removed in 2003. Expansion of Presentation High School facilities onto the western half of the Site began in the mid-1970s, and all existing school facilities were present by 2005.

The 8.7-acre (378,972-square-foot) Site currently is currently developed with seven buildings and other facilities of Presentation High School. Structures and facilities at the Site include a main office/classroom building, student union/cafeteria, theater/classroom building, gym, chapel, additional classroom building, pool equipment building with cogeneration plant, swimming pool, assorted ball fields and associated courtyards,



walkways, landscaping, and asphalt-paved parking areas and driveways. Demolition of the existing main office/classroom building, student union/cafeteria, and chapel is planned, followed by replacement of the facilities with new structures of similar use. The existing chapel was constructed in 1993 and no potential environmental concerns were identified with the structure and no sampling was performed.

Soil Sampling

Sample Collection, Analyses & Analytical Results

Standard agricultural practices utilized during historical cultivation of the Site with cherry orchards may have included the application of persistent agricultural chemicals, including organochlorine and lead-arsenate pesticides. As stated in the Phase I ESA, residual pesticides and related metals, lead and arsenic could remain in shallow Site soils at concentrations exceeding regulatory standards.

Several of the structures on the Site have been present since the early-1960s. Additionally, historical structures were documented on the northeastern corner of the Site in the 1950s and 1960s and at the convent on the northeastern corner of the Site in the late-1970s through 2003. Based on the dates of construction, the paint on the aged/historical structures may have contained lead. Flaking lead-based paint (LBP) may have impacted soil along the building walls with lead. Additionally, application of pesticides and/or herbicides (containing arsenic) may have occurred around the building perimeters of the existing main office/classroom building and the student union/cafeteria date.

To evaluate these potential environmental concerns, where surface soil borders building walls, 15 samples were collected from 0 to $\frac{1}{2}$ foot around the building perimeters and analyzed for OCPs (EPA Test Method 8081), and arsenic (EPA Test Method 6010B). Three of the samples collected below existing windows were also analyzed for lead (EPA Test Method 6010B) because the buildings were unpainted cement block. The approximate sampling locations are shown on Figure 1.

Sample collection methods are described in the field procedures summarized in the attachments.

Analytical results for all the soil samples are summarized in Table 1. Laboratory analytical reports and chain-of-custody documentation are included in the attachments.



Organochlorine pesticide results indicate that various pesticides were detected around some or the building perimeters. Concentrations of 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, chlordane, dieldrin, alpha-BHC, gamma-BHC, heptachlor, heptachlor epoxide, and hexachlorobenzene were detected in at least one of the samples collected. The pesticide concentration detected were compared to the United States Environmental Protection Agency Regional Screening Levels (USEPA RSL) or California DTSC's Office of Human and Ecological Risk ("HERO") Human Health Risk Assessment HERO Note 3 for sensitive uses. Chlordane is listed on the California HHRA HERO Note 3 compounds and the more conservative screening value was used for this compound. Most of the concentrations detected were several times less than their respective USEPA RSLs. None of concentrations detected exceed their respective USEPA RSLs.

Lead concentrations were detected in all three of the samples analyzed around the building perimeter and ranged from 13.2 milligrams per kilogram (mg/kg) to 28.4 mg/kg. Lead was compared to the HHRA HERO Note 3 Screening Level (CHHSL) guidance of 80 milligrams per kilogram (mg/kg) for sensitive uses. None of the concentrations exceeded this threshold and all appeared consistent with naturally-occurring background concentrations.

Arsenic was detected in every soil sample collected from around the building perimeters and ranged from 4.01 mg/kg to 27.9 mg/kg. All of the arsenic concentrations detected exceed the USEPA RSL for sensitive uses, however, naturally-occurring concentrations commonly exceed the RSLs State wide. Arsenic concentrations were compared to the published maximum naturally-occurring concentration of 11.0 mg/kg (Duverge, 2011). The arsenic concentrations of 12.0 mg/kg and 27.9 mg/kg collected at sampling locations BP-1 and BP-4, respectively, exceeded the published maximum naturally-occurring background concentrations but only at those two locations.

Conclusions and Recommendations

Based on these sampling results, elevated arsenic concentrations were only detected in the soil along the eastern side of the existing main office/classroom building that exceeded naturally-occurring background concentrations. Both of the samples (BP-1 and BP-4) were collected in small planter areas closest to Plummer Avenue. The planter areas were approximately two feet wide and less than 30 feet long. Concrete covered the remaining portion of the building where the elevated arsenic concentrations were detected. No



elevated lead or pesticides concentrations were detected in any of the samples. Due to the small amount of material with somewhat elevated arsenic concentrations and that they are not in areas where students congregate, the impacted material does not appear to pose a significant threat to human health during the current and/or planned redevelopment activities and therefore no further action is recommended.

We hope this provides you with the information you need at this time. Please let me know if there are any additional questions or comments.

Sincerely,

Thomas F. McCloskey, P.G., C.E.G., C.HG.
President and Principal Geologist

Copies: Addressee (e-copy only)

Attachments: Summary Tables 1
Figure 1 – Site Map – Sampling Locations
Laboratory Reports
General Field Procedures

Reference:

Cal/EPA, January 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties.*

Cal/EPA, September 2009. *Revised California Human Health Screening Levels for Lead.*

California Department of Toxic Substances Control, Human and Ecologic Risk Office (HERO), January, 2018. *Human Health Risk Assessment (HHRA), Note Number: 3, DTSC-modified Screening Levels.*

Duverge'. D.J., December 2011. *Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region.* Master of Science Thesis, San Francisco State University.



McCloskey Consultants Inc. March 28, 2018. *Phase I Environmental Site Assessment,
Presentation High School, 2281 Plummer Avenue, San Jose, California 95125.*

United States Environmental Protection Agency Regional Screening Levels, November
2017

Table 1. Summary Results for the Pesticide and Metal Sampling

(Concentrations in milligrams per kilogram [mg/kg])

Approximate Location	Sample ID	Approximate Sampling Depth	Date Sampled	Arsenic	Lead	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Chlordane	Toxaphene
Main Building - Office / Classrooms	BP-1	0-½ bgs	3/28/2018	12.0	--	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	0.00204	0.00113	<0.00277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.0277	<0.277	<0.0499
	BP-2	0-½ bgs	3/28/2018	5.62	28.4	<0.0237	<0.0237	<0.0237	<0.0237	<0.0237	0.00212	0.0147	0.00907	<0.00237	<0.0237	<0.0237	<0.0237	<0.0237	<0.0237	<0.0237	<0.0237	<0.00177	<0.0237	<0.237	<0.0426	
	BP-3	0-½ bgs	3/28/2018	7.66	--	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	0.00912	0.0257	<0.00244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.00107	0.00247	<0.0244	<0.244	<0.0439	
	BP-4	0-½ bgs	3/28/2018	27.9	--	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	0.00477	0.00463	<0.00258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.0258	<0.258	<0.0464	
	BP-5	0-½ bgs	3/28/2018	4.56	--	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.00675	0.0153	<0.00228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.000514	<0.0228	<0.228	<0.0410	
	BP-6	0-½ bgs	3/28/2018	5.52	--	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.00803	0.0066	<0.00228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.228	<0.0411	
	BP-7	0-½ bgs	3/28/2018	6.83	--	<0.0213	<0.0213	<0.0213	<0.0213	0.002	0.00145	0.0113	0.0249	0.00097	<0.0213	<0.0213	<0.0213	<0.0213	<0.0213	<0.0213	<0.0213	0.00038	<0.0213	<0.213	<0.0384	
	BP-8	0-½ bgs	3/28/2018	4.01	27.5	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.00158	0.00350	0.0133	0.000373	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.000418	<0.0228	<0.228	<0.0410	
	BP-9	0-½ bgs	3/28/2018	5.38	--	<0.0256	<0.0256	<0.0256	<0.0256	<0.0256	0.000956	0.00539	0.00589	<0.00256	<0.0256	<0.0256	<0.0256	<0.0256	<0.0256	<0.0256	<0.0256	0.0128	<0.0256	<0.256	<0.0460	
	BP-10	0-½ bgs	3/28/2018	4.54	--	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	0.00075	0.00289	0.0061	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	<0.0246	0.000774	<0.0246	<0.246	<0.0443	
	BP-11	0-½ bgs	3/28/2018	4.18	--	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0741	0.0023	<0.00231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.0231	<0.231	<0.0417	
	BP-12	0-½ bgs	3/28/2018	8.71	--	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.00387	0.00998	0.0583	0.00218	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	<0.0228	0.00137	<0.0228	0.0475	<0.0410	
	BP-13	0-½ bgs	3/28/2018	5.56	13.2	<0.0217	<0.0217	<0.0217	<0.0217	0.000274	0.00373	0.0292	0.0364	0.000533	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<0.217	<0.0391	
Student Union/ Cafeteria	BP-14	0-½ bgs	3/28/2018	4.99	--	<0.0224	0.000243	<0.0224	<0.0224	0.002	0.00431	0.0184	0.0298	0.00333	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	<0.0224	0.0969	<0.0403	
	BP-15	0-½ bgs	3/28/2018	4.5	--	<0.0225	<0.0225	<0.0225	<0.0225	<0.0225	0.0037	0.00925	0.0271	0.00261	<0.0225	<0.0225	<0.0225	<0.0225	<0.0225	<0.0225	<0.0225	0.000412	0.00174	0.000297	<0.0225	0.218
CHHSL				0.07**	80	NA	NE	NE	NE	NA	NA	NA	NA	NA	NE	NE	NA	NE	NA	NE	NA	NE	NA	NA	NA	
USEPA RSL				0.67**	400	0.039	0.086	0.3	NE	0.57	1.9	2.0	1.9	0.034	470*	470*	NE	19	NE	NE	0.13	0.07	0.21	320	1.7	0.49
HERO HHRA Note 3				0.067**	80	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.44	NE
TTLCL				500	1,000	1.4	NE	NE	NE	4.0	1.0	1.0	1.0	8.0	NE	NE	NE	0.2	NE	NE	4.7	NE	NE	100.0	2.5	5.0

<D.L. Indicates that the compound was not detected at or above stated laboratory detection limits.

NE Not established.

CHHSL California Human Health Screening Levels, Residential Land Uses, Direct Exposure, Cal/EPA, January 2005 and updates.

USEPA RSL United States Environmental Protection Agency Regional Screening Levels for Residential Uses (November 2017)

HERO HHRA Note 3 DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-Modified Screening Levels, August 2017.

TTLCL Total threshold limit concentration for hazardous waste classification.

Bold Indicates an exceedance of the regulatory threshold or calculated naturally occurring background concentration

-- Not Analyzed

* USEPA RSL for Endosulfan

** Cal/EPA does not require cleanup of soil to less than background concentrations. Natural background concentrations of arsenic often exceed the health-based goals in soil.

The maximum natural background concentration is 11.0 mg/Kg

NA Not Applicable



LEGEND:

- Approximate Site Boundaries
- ⊕ Approximate Sampling Locations – Exceeds Naturally-Occurring Background Concentrations
- ⊕ Approximate Sampling Locations – Does Not Naturally-Occurring Background Concentrations

Approximate Graphical Scale (Ft.)
0 100 200

Site Plan
Sampling Locations & Select Sampling Results
Presentation High School
2281 Plummer Avenue
San Jose, California

FIGURE 1

McCloskey
Consultants

Field Procedures

This section describes the soil sampling field methods used to evaluate the potential environmental concerns described previously. Included is a description of the sampling equipment used, the methods of sampling, and quality assurance and quality control (QA/QC) practices including equipment decontamination.

Collection of Soil Samples

Surface soil samples were collected by hand from the upper 6 inches of soil using new, disposable, and laboratory-supplied 4 or 9 ounce glass jars. After sample collection the Teflon-lined lid were securely fastened on the jar and the jar were labeled with a unique sample identification number. New gloves were worn by the sampling personnel and were changed between sampling locations and discarded. The non-dedicated sampling equipment was decontaminated to prevent cross contamination of soil particles. The samples were placed into ziplock bags and then in an insulated cooler chilled to 4 degrees +/- 2 degrees Celsius and hand delivered by MCI personnel to ESC Lab Science personnel to be shipped to the laboratory. ESC Lab Science is a California-certified analytical laboratory.

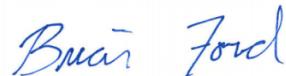
April 10, 2018

McCloskey Consulting - Danville, CA

Sample Delivery Group: L982236
Samples Received: 03/31/2018
Project Number:
Description: Presentation HS.

Report To: Tom McCloskey
420 Sycamore Valley Rd West
Danville, CA 94526

Entire Report Reviewed By:



Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



			Collected by Chris Vertin	Collected date/time 03/28/18 10:43	Received date/time 03/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:28	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 00:07	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 10:46	Received date/time 03/31/18 08:45
BP-2 L982236-02 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:41	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 00:19	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 10:50	Received date/time 03/31/18 08:45
BP-3 L982236-03 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:43	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 00:57	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 10:53	Received date/time 03/31/18 08:45
BP-4 L982236-04 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:51	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 01:10	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:00	Received date/time 03/31/18 08:45
BP-5 L982236-05 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:53	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 01:22	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:03	Received date/time 03/31/18 08:45
BP-6 L982236-06 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:56	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 01:35	ADF

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



			Collected by Chris Vertin	Collected date/time 03/28/18 11:20	Received date/time 03/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 01:58	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 01:47	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:23	Received date/time 03/31/18 08:45
BP-7 L982236-07 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:00	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 02:00	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:26	Received date/time 03/31/18 08:45
BP-9 L982236-09 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:03	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 02:12	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:30	Received date/time 03/31/18 08:45
BP-10 L982236-10 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:05	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 02:25	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:33	Received date/time 03/31/18 08:45
BP-11 L982236-11 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094318	1	04/06/18 13:59	04/06/18 14:14	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:08	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 02:38	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 12:04	Received date/time 03/31/18 08:45
BP-12 L982236-12 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:10	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 02:50	ADF



SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



			Collected by Chris Vertin	Collected date/time 03/28/18 12:07	Received date/time 03/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:13	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 03:03	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:50	Received date/time 03/31/18 08:45
BP-14 L982236-14 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:20	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 03:15	ADF
			Collected by Chris Vertin	Collected date/time 03/28/18 11:55	Received date/time 03/31/18 08:45
BP-15 L982236-15 Solid					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1094322	1	04/06/18 13:17	04/06/18 13:30	JD
Metals (ICP) by Method 6010B	WG1092834	1	04/03/18 11:04	04/04/18 02:23	TRB
Pesticides (GC) by Method 8081	WG1093064	1	04/03/18 16:57	04/04/18 03:28	ADF

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	72.2		1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	12.0		0.900	2.77	1	04/04/2018 01:28	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000323	0.0277	1	04/04/2018 00:07	WG1093064
Alpha BHC	U		0.000267	0.0277	1	04/04/2018 00:07	WG1093064
Beta BHC	U		0.000420	0.0277	1	04/04/2018 00:07	WG1093064
Delta BHC	U		0.000209	0.0277	1	04/04/2018 00:07	WG1093064
Gamma BHC	U		0.000339	0.0277	1	04/04/2018 00:07	WG1093064
4,4-DDD	U		0.000227	0.0277	1	04/04/2018 00:07	WG1093064
4,4-DDE	0.00204	<u>J</u>	0.000229	0.0277	1	04/04/2018 00:07	WG1093064
4,4-DDT	0.00113	<u>J</u>	0.000368	0.0277	1	04/04/2018 00:07	WG1093064
Dieldrin	U		0.000123	0.0277	1	04/04/2018 00:07	WG1093064
Endosulfan I	U		0.000296	0.0277	1	04/04/2018 00:07	WG1093064
Endosulfan II	U	<u>J4</u>	0.000319	0.0277	1	04/04/2018 00:07	WG1093064
Endosulfan sulfate	U		0.000235	0.0277	1	04/04/2018 00:07	WG1093064
Endrin	U		0.000303	0.0277	1	04/04/2018 00:07	WG1093064
Endrin aldehyde	U		0.000335	0.0277	1	04/04/2018 00:07	WG1093064
Endrin ketone	U		0.000220	0.0277	1	04/04/2018 00:07	WG1093064
Heptachlor	U		0.000140	0.0277	1	04/04/2018 00:07	WG1093064
Heptachlor epoxide	U		0.000523	0.0277	1	04/04/2018 00:07	WG1093064
Hexachlorobenzene	U		0.000310	0.0277	1	04/04/2018 00:07	WG1093064
Methoxychlor	U		0.000367	0.0277	1	04/04/2018 00:07	WG1093064
Chlordane	U		0.0540	0.277	1	04/04/2018 00:07	WG1093064
Toxaphene	U		0.0499	0.554	1	04/04/2018 00:07	WG1093064
(S) Decachlorobiphenyl	21.3			10.0-148		04/04/2018 00:07	WG1093064
(S) Tetrachloro-m-xylene	44.3			21.0-146		04/04/2018 00:07	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	84.6	%	1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	5.62	mg/kg	0.769	2.37	1	04/04/2018 01:41	WG1092834
Lead	28.4	mg/kg	0.225	0.591	1	04/04/2018 01:41	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000276	0.0237	1	04/04/2018 00:19	WG1093064
Alpha BHC	U		0.000228	0.0237	1	04/04/2018 00:19	WG1093064
Beta BHC	U		0.000358	0.0237	1	04/04/2018 00:19	WG1093064
Delta BHC	U	J3	0.000179	0.0237	1	04/04/2018 00:19	WG1093064
Gamma BHC	U		0.000290	0.0237	1	04/04/2018 00:19	WG1093064
4,4-DDD	0.00212	J	0.000194	0.0237	1	04/04/2018 00:19	WG1093064
4,4-DDE	0.0147	J	0.000195	0.0237	1	04/04/2018 00:19	WG1093064
4,4-DDT	0.00907	J	0.000315	0.0237	1	04/04/2018 00:19	WG1093064
Dieldrin	U		0.000105	0.0237	1	04/04/2018 00:19	WG1093064
Endosulfan I	U		0.000253	0.0237	1	04/04/2018 00:19	WG1093064
Endosulfan II	U	J4	0.000272	0.0237	1	04/04/2018 00:19	WG1093064
Endosulfan sulfate	U	J3	0.000201	0.0237	1	04/04/2018 00:19	WG1093064
Endrin	U		0.000259	0.0237	1	04/04/2018 00:19	WG1093064
Endrin aldehyde	U		0.000286	0.0237	1	04/04/2018 00:19	WG1093064
Endrin ketone	U		0.000188	0.0237	1	04/04/2018 00:19	WG1093064
Heptachlor	U		0.000119	0.0237	1	04/04/2018 00:19	WG1093064
Heptachlor epoxide	U		0.000447	0.0237	1	04/04/2018 00:19	WG1093064
Hexachlorobenzene	0.00177	J P	0.000265	0.0237	1	04/04/2018 00:19	WG1093064
Methoxychlor	U	J3	0.000313	0.0237	1	04/04/2018 00:19	WG1093064
Chlordane	U		0.0461	0.237	1	04/04/2018 00:19	WG1093064
Toxaphene	U		0.0426	0.473	1	04/04/2018 00:19	WG1093064
(S) Decachlorobiphenyl	47.0			10.0-148		04/04/2018 00:19	WG1093064
(S) Tetrachloro-m-xylene	65.1			21.0-146		04/04/2018 00:19	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	82.0	%	1	04/06/2018 14:14	WG1094318

¹ Cp

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>	
Arsenic	7.66	mg/kg		0.793	2.44	1	04/04/2018 01:43	WG1092834

² Tc

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000284	0.0244	1	04/04/2018 00:57	WG1093064
Alpha BHC	U		0.000235	0.0244	1	04/04/2018 00:57	WG1093064
Beta BHC	U		0.000369	0.0244	1	04/04/2018 00:57	WG1093064
Delta BHC	U		0.000184	0.0244	1	04/04/2018 00:57	WG1093064
Gamma BHC	U		0.000299	0.0244	1	04/04/2018 00:57	WG1093064
4,4-DDD	U		0.000200	0.0244	1	04/04/2018 00:57	WG1093064
4,4-DDE	0.00912	<u>J</u>	0.000201	0.0244	1	04/04/2018 00:57	WG1093064
4,4-DDT	0.0257		0.000324	0.0244	1	04/04/2018 00:57	WG1093064
Dieldrin	U		0.000109	0.0244	1	04/04/2018 00:57	WG1093064
Endosulfan I	U		0.000261	0.0244	1	04/04/2018 00:57	WG1093064
Endosulfan II	U	<u>J4</u>	0.000280	0.0244	1	04/04/2018 00:57	WG1093064
Endosulfan sulfate	U		0.000207	0.0244	1	04/04/2018 00:57	WG1093064
Endrin	U		0.000267	0.0244	1	04/04/2018 00:57	WG1093064
Endrin aldehyde	U		0.000295	0.0244	1	04/04/2018 00:57	WG1093064
Endrin ketone	U		0.000194	0.0244	1	04/04/2018 00:57	WG1093064
Heptachlor	U		0.000123	0.0244	1	04/04/2018 00:57	WG1093064
Heptachlor epoxide	0.00107	<u>J</u>	0.000461	0.0244	1	04/04/2018 00:57	WG1093064
Hexachlorobenzene	0.00247	<u>J</u>	0.000273	0.0244	1	04/04/2018 00:57	WG1093064
Methoxychlor	U		0.000323	0.0244	1	04/04/2018 00:57	WG1093064
Chlordane	U		0.0476	0.244	1	04/04/2018 00:57	WG1093064
Toxaphene	U		0.0439	0.488	1	04/04/2018 00:57	WG1093064
(S) Decachlorobiphenyl	50.7			10.0-148		04/04/2018 00:57	WG1093064
(S) Tetrachloro-m-xylene	73.5			21.0-146		04/04/2018 00:57	WG1093064

³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	77.7		1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	27.9		0.837	2.58	1	04/04/2018 01:51	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000300	0.0258	1	04/04/2018 01:10	WG1093064
Alpha BHC	U		0.000249	0.0258	1	04/04/2018 01:10	WG1093064
Beta BHC	U		0.000390	0.0258	1	04/04/2018 01:10	WG1093064
Delta BHC	U		0.000194	0.0258	1	04/04/2018 01:10	WG1093064
Gamma BHC	U		0.000315	0.0258	1	04/04/2018 01:10	WG1093064
4,4-DDD	U		0.000211	0.0258	1	04/04/2018 01:10	WG1093064
4,4-DDE	0.00477	<u>J P</u>	0.000212	0.0258	1	04/04/2018 01:10	WG1093064
4,4-DDT	0.00463	<u>J</u>	0.000342	0.0258	1	04/04/2018 01:10	WG1093064
Dieldrin	U		0.000115	0.0258	1	04/04/2018 01:10	WG1093064
Endosulfan I	U		0.000276	0.0258	1	04/04/2018 01:10	WG1093064
Endosulfan II	U	<u>J4</u>	0.000296	0.0258	1	04/04/2018 01:10	WG1093064
Endosulfan sulfate	U		0.000219	0.0258	1	04/04/2018 01:10	WG1093064
Endrin	U		0.000282	0.0258	1	04/04/2018 01:10	WG1093064
Endrin aldehyde	U		0.000312	0.0258	1	04/04/2018 01:10	WG1093064
Endrin ketone	U		0.000205	0.0258	1	04/04/2018 01:10	WG1093064
Heptachlor	U		0.000130	0.0258	1	04/04/2018 01:10	WG1093064
Heptachlor epoxide	U		0.000487	0.0258	1	04/04/2018 01:10	WG1093064
Hexachlorobenzene	U		0.000288	0.0258	1	04/04/2018 01:10	WG1093064
Methoxychlor	U		0.000341	0.0258	1	04/04/2018 01:10	WG1093064
Chlordane	U		0.0502	0.258	1	04/04/2018 01:10	WG1093064
Toxaphene	U		0.0464	0.515	1	04/04/2018 01:10	WG1093064
(S) Decachlorobiphenyl	48.9		10.0-148			04/04/2018 01:10	WG1093064
(S) Tetrachloro-m-xylene	72.0		21.0-146			04/04/2018 01:10	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	87.7	%	1	04/06/2018 14:14	WG1094318

¹ Cp

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>	
Arsenic	4.56	mg/kg		0.741	2.28	1	04/04/2018 01:53	WG1092834

² Tc

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000266	0.0228	1	04/04/2018 01:22	WG1093064
Alpha BHC	U		0.000220	0.0228	1	04/04/2018 01:22	WG1093064
Beta BHC	U		0.000345	0.0228	1	04/04/2018 01:22	WG1093064
Delta BHC	U		0.000172	0.0228	1	04/04/2018 01:22	WG1093064
Gamma BHC	U		0.000279	0.0228	1	04/04/2018 01:22	WG1093064
4,4-DDD	U		0.000187	0.0228	1	04/04/2018 01:22	WG1093064
4,4-DDE	0.00675	J	0.000188	0.0228	1	04/04/2018 01:22	WG1093064
4,4-DDT	0.0153	J	0.000303	0.0228	1	04/04/2018 01:22	WG1093064
Dieldrin	U		0.000101	0.0228	1	04/04/2018 01:22	WG1093064
Endosulfan I	U		0.000244	0.0228	1	04/04/2018 01:22	WG1093064
Endosulfan II	U	J4	0.000262	0.0228	1	04/04/2018 01:22	WG1093064
Endosulfan sulfate	U		0.000194	0.0228	1	04/04/2018 01:22	WG1093064
Endrin	U		0.000250	0.0228	1	04/04/2018 01:22	WG1093064
Endrin aldehyde	U		0.000276	0.0228	1	04/04/2018 01:22	WG1093064
Endrin ketone	U		0.000181	0.0228	1	04/04/2018 01:22	WG1093064
Heptachlor	U		0.000115	0.0228	1	04/04/2018 01:22	WG1093064
Heptachlor epoxide	U		0.000431	0.0228	1	04/04/2018 01:22	WG1093064
Hexachlorobenzene	0.000514	J P	0.000255	0.0228	1	04/04/2018 01:22	WG1093064
Methoxychlor	U		0.000302	0.0228	1	04/04/2018 01:22	WG1093064
Chlordane	U		0.0445	0.228	1	04/04/2018 01:22	WG1093064
Toxaphene	U		0.0410	0.456	1	04/04/2018 01:22	WG1093064
(S) Decachlorobiphenyl	49.9			10.0-148		04/04/2018 01:22	WG1093064
(S) Tetrachloro-m-xylene	72.7			21.0-146		04/04/2018 01:22	WG1093064

³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	87.6	%	1	04/06/2018 14:14	WG1094318

¹ Cp

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>	
Arsenic	5.52	mg/kg		0.742	2.28	1	04/04/2018 01:56	WG1092834

² Tc

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000266	0.0228	1	04/04/2018 01:35	WG1093064
Alpha BHC	U		0.000220	0.0228	1	04/04/2018 01:35	WG1093064
Beta BHC	U		0.000346	0.0228	1	04/04/2018 01:35	WG1093064
Delta BHC	U		0.000172	0.0228	1	04/04/2018 01:35	WG1093064
Gamma BHC	U		0.000280	0.0228	1	04/04/2018 01:35	WG1093064
4,4-DDD	U		0.000187	0.0228	1	04/04/2018 01:35	WG1093064
4,4-DDE	0.00803	<u>J P</u>	0.000188	0.0228	1	04/04/2018 01:35	WG1093064
4,4-DDT	0.00655	<u>J</u>	0.000304	0.0228	1	04/04/2018 01:35	WG1093064
Dieldrin	U		0.000102	0.0228	1	04/04/2018 01:35	WG1093064
Endosulfan I	U		0.000244	0.0228	1	04/04/2018 01:35	WG1093064
Endosulfan II	U	<u>J4</u>	0.000262	0.0228	1	04/04/2018 01:35	WG1093064
Endosulfan sulfate	U		0.000194	0.0228	1	04/04/2018 01:35	WG1093064
Endrin	U		0.000250	0.0228	1	04/04/2018 01:35	WG1093064
Endrin aldehyde	U		0.000276	0.0228	1	04/04/2018 01:35	WG1093064
Endrin ketone	U		0.000181	0.0228	1	04/04/2018 01:35	WG1093064
Heptachlor	U		0.000115	0.0228	1	04/04/2018 01:35	WG1093064
Heptachlor epoxide	U		0.000431	0.0228	1	04/04/2018 01:35	WG1093064
Hexachlorobenzene	U		0.000256	0.0228	1	04/04/2018 01:35	WG1093064
Methoxychlor	U		0.000302	0.0228	1	04/04/2018 01:35	WG1093064
Chlordane	U		0.0445	0.228	1	04/04/2018 01:35	WG1093064
Toxaphene	U		0.0411	0.456	1	04/04/2018 01:35	WG1093064
(S) Decachlorobiphenyl	47.2			10.0-148		04/04/2018 01:35	WG1093064
(S) Tetrachloro-m-xylene	71.4			21.0-146		04/04/2018 01:35	WG1093064

³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	93.9		1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	6.83		0.692	2.13	1	04/04/2018 01:58	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000248	0.0213	1	04/04/2018 01:47	WG1093064
Alpha BHC	U		0.000206	0.0213	1	04/04/2018 01:47	WG1093064
Beta BHC	U		0.000323	0.0213	1	04/04/2018 01:47	WG1093064
Delta BHC	U		0.000161	0.0213	1	04/04/2018 01:47	WG1093064
Gamma BHC	0.00200	J	0.000261	0.0213	1	04/04/2018 01:47	WG1093064
4,4-DDD	0.00145	J	0.000175	0.0213	1	04/04/2018 01:47	WG1093064
4,4-DDE	0.0113	J	0.000176	0.0213	1	04/04/2018 01:47	WG1093064
4,4-DDT	0.0249		0.000283	0.0213	1	04/04/2018 01:47	WG1093064
Dieldrin	0.000970	J	0.0000948	0.0213	1	04/04/2018 01:47	WG1093064
Endosulfan I	U		0.000228	0.0213	1	04/04/2018 01:47	WG1093064
Endosulfan II	U	J4	0.000245	0.0213	1	04/04/2018 01:47	WG1093064
Endosulfan sulfate	U		0.000181	0.0213	1	04/04/2018 01:47	WG1093064
Endrin	U		0.000233	0.0213	1	04/04/2018 01:47	WG1093064
Endrin aldehyde	U		0.000258	0.0213	1	04/04/2018 01:47	WG1093064
Endrin ketone	U		0.000169	0.0213	1	04/04/2018 01:47	WG1093064
Heptachlor	U		0.000108	0.0213	1	04/04/2018 01:47	WG1093064
Heptachlor epoxide	U		0.000403	0.0213	1	04/04/2018 01:47	WG1093064
Hexachlorobenzene	0.000380	JP	0.000239	0.0213	1	04/04/2018 01:47	WG1093064
Methoxychlor	U		0.000282	0.0213	1	04/04/2018 01:47	WG1093064
Chlordane	U		0.0415	0.213	1	04/04/2018 01:47	WG1093064
Toxaphene	U		0.0384	0.426	1	04/04/2018 01:47	WG1093064
(S) Decachlorobiphenyl	41.2		10.0-148		1	04/04/2018 01:47	WG1093064
(S) Tetrachloro-m-xylene	60.0		21.0-146		1	04/04/2018 01:47	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	87.8	%	1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	4.01	mg/kg	0.740	2.28	1	04/04/2018 02:00	WG1092834
Lead	27.5	mg/kg	0.216	0.569	1	04/04/2018 02:00	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U	mg/kg	0.000265	0.0228	1	04/04/2018 02:00	WG1093064
Alpha BHC	U	mg/kg	0.000220	0.0228	1	04/04/2018 02:00	WG1093064
Beta BHC	U	mg/kg	0.000345	0.0228	1	04/04/2018 02:00	WG1093064
Delta BHC	U	mg/kg	0.000172	0.0228	1	04/04/2018 02:00	WG1093064
Gamma BHC	U	mg/kg	0.000279	0.0228	1	04/04/2018 02:00	WG1093064
4,4-DDD	0.00158	J	0.000187	0.0228	1	04/04/2018 02:00	WG1093064
4,4-DDE	0.00350	J	0.000188	0.0228	1	04/04/2018 02:00	WG1093064
4,4-DDT	0.0133	J	0.000303	0.0228	1	04/04/2018 02:00	WG1093064
Die�drin	0.000373	J	0.000101	0.00228	1	04/04/2018 02:00	WG1093064
Endosulfan I	U	mg/kg	0.000244	0.0228	1	04/04/2018 02:00	WG1093064
Endosulfan II	U	J4	0.000262	0.0228	1	04/04/2018 02:00	WG1093064
Endosulfan sulfate	U	mg/kg	0.000194	0.0228	1	04/04/2018 02:00	WG1093064
Endrin	U	mg/kg	0.000249	0.0228	1	04/04/2018 02:00	WG1093064
Endrin aldehyde	U	mg/kg	0.000276	0.0228	1	04/04/2018 02:00	WG1093064
Endrin ketone	U	mg/kg	0.000181	0.0228	1	04/04/2018 02:00	WG1093064
Heptachlor	U	mg/kg	0.000115	0.0228	1	04/04/2018 02:00	WG1093064
Heptachlor epoxide	U	mg/kg	0.000430	0.0228	1	04/04/2018 02:00	WG1093064
Hexachlorobenzene	0.000418	J	0.000255	0.0228	1	04/04/2018 02:00	WG1093064
Methoxychlor	U	mg/kg	0.000302	0.0228	1	04/04/2018 02:00	WG1093064
Chlordane	U	mg/kg	0.0444	0.228	1	04/04/2018 02:00	WG1093064
Toxaphene	U	mg/kg	0.0410	0.455	1	04/04/2018 02:00	WG1093064
(S) Decachlorobiphenyl	25.9			10.0-148		04/04/2018 02:00	WG1093064
(S) Tetrachloro-m-xylene	44.9			21.0-146		04/04/2018 02:00	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	78.3		1	04/06/2018 13:30	WG1094322

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	5.38		0.830	2.56	1	04/04/2018 02:03	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000298	0.0256	1	04/04/2018 02:12	WG1093064
Alpha BHC	U		0.000247	0.0256	1	04/04/2018 02:12	WG1093064
Beta BHC	U		0.000387	0.0256	1	04/04/2018 02:12	WG1093064
Delta BHC	U		0.000193	0.0256	1	04/04/2018 02:12	WG1093064
Gamma BHC	U		0.000313	0.0256	1	04/04/2018 02:12	WG1093064
4,4-DDD	0.000856	J	0.000210	0.0256	1	04/04/2018 02:12	WG1093064
4,4-DDE	0.00539	J	0.000211	0.0256	1	04/04/2018 02:12	WG1093064
4,4-DDT	0.00589	J	0.000340	0.0256	1	04/04/2018 02:12	WG1093064
Dieldrin	U		0.000114	0.0256	1	04/04/2018 02:12	WG1093064
Endosulfan I	U		0.000273	0.0256	1	04/04/2018 02:12	WG1093064
Endosulfan II	U	J4	0.000294	0.0256	1	04/04/2018 02:12	WG1093064
Endosulfan sulfate	U		0.000217	0.0256	1	04/04/2018 02:12	WG1093064
Endrin	U		0.000280	0.0256	1	04/04/2018 02:12	WG1093064
Endrin aldehyde	U		0.000309	0.0256	1	04/04/2018 02:12	WG1093064
Endrin ketone	U		0.000203	0.0256	1	04/04/2018 02:12	WG1093064
Heptachlor	U		0.000129	0.0256	1	04/04/2018 02:12	WG1093064
Heptachlor epoxide	U		0.000483	0.0256	1	04/04/2018 02:12	WG1093064
Hexachlorobenzene	0.0128	J	0.000286	0.0256	1	04/04/2018 02:12	WG1093064
Methoxychlor	U		0.000339	0.0256	1	04/04/2018 02:12	WG1093064
Chlordane	U		0.0498	0.256	1	04/04/2018 02:12	WG1093064
Toxaphene	U		0.0460	0.511	1	04/04/2018 02:12	WG1093064
(S) Decachlorobiphenyl	28.9			10.0-148		04/04/2018 02:12	WG1093064
(S) Tetrachloro-m-xylene	57.7			21.0-146		04/04/2018 02:12	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	81.3		1	04/06/2018 13:30	WG1094322

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	4.54		0.799	2.46	1	04/04/2018 02:05	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000286	0.0246	1	04/04/2018 02:25	WG1093064
Alpha BHC	U		0.000237	0.0246	1	04/04/2018 02:25	WG1093064
Beta BHC	U		0.000372	0.0246	1	04/04/2018 02:25	WG1093064
Delta BHC	U		0.000186	0.0246	1	04/04/2018 02:25	WG1093064
Gamma BHC	U		0.000301	0.0246	1	04/04/2018 02:25	WG1093064
4,4-DDD	0.000750	J	0.000202	0.0246	1	04/04/2018 02:25	WG1093064
4,4-DDE	0.00289	J	0.000203	0.0246	1	04/04/2018 02:25	WG1093064
4,4-DDT	0.00610	J	0.000327	0.0246	1	04/04/2018 02:25	WG1093064
Dieldrin	U		0.000109	0.0246	1	04/04/2018 02:25	WG1093064
Endosulfan I	U		0.000263	0.0246	1	04/04/2018 02:25	WG1093064
Endosulfan II	U	J4	0.000283	0.0246	1	04/04/2018 02:25	WG1093064
Endosulfan sulfate	U		0.000209	0.0246	1	04/04/2018 02:25	WG1093064
Endrin	U		0.000269	0.0246	1	04/04/2018 02:25	WG1093064
Endrin aldehyde	U		0.000298	0.0246	1	04/04/2018 02:25	WG1093064
Endrin ketone	U		0.000195	0.0246	1	04/04/2018 02:25	WG1093064
Heptachlor	U		0.000124	0.0246	1	04/04/2018 02:25	WG1093064
Heptachlor epoxide	U		0.000465	0.0246	1	04/04/2018 02:25	WG1093064
Hexachlorobenzene	0.000774	J	0.000275	0.0246	1	04/04/2018 02:25	WG1093064
Methoxychlor	U		0.000326	0.0246	1	04/04/2018 02:25	WG1093064
Chlordane	U		0.0479	0.246	1	04/04/2018 02:25	WG1093064
Toxaphene	U		0.0443	0.492	1	04/04/2018 02:25	WG1093064
(S) Decachlorobiphenyl	36.8			10.0-148		04/04/2018 02:25	WG1093064
(S) Tetrachloro-m-xylene	56.0			21.0-146		04/04/2018 02:25	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	86.4	%	1	04/06/2018 14:14	WG1094318

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	4.18	mg/kg	0.752	2.31	1	04/04/2018 02:08	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000270	0.0231	1	04/04/2018 02:38	WG1093064
Alpha BHC	U		0.000223	0.0231	1	04/04/2018 02:38	WG1093064
Beta BHC	U		0.000351	0.0231	1	04/04/2018 02:38	WG1093064
Delta BHC	U		0.000175	0.0231	1	04/04/2018 02:38	WG1093064
Gamma BHC	U		0.000284	0.0231	1	04/04/2018 02:38	WG1093064
4,4-DDD	U		0.000190	0.0231	1	04/04/2018 02:38	WG1093064
4,4-DDE	0.00741	J P	0.000191	0.0231	1	04/04/2018 02:38	WG1093064
4,4-DDT	0.00226	J	0.000308	0.0231	1	04/04/2018 02:38	WG1093064
Dieldrin	U		0.000103	0.0231	1	04/04/2018 02:38	WG1093064
Endosulfan I	U		0.000248	0.0231	1	04/04/2018 02:38	WG1093064
Endosulfan II	U	J4	0.000266	0.0231	1	04/04/2018 02:38	WG1093064
Endosulfan sulfate	U		0.000197	0.0231	1	04/04/2018 02:38	WG1093064
Endrin	U		0.000253	0.0231	1	04/04/2018 02:38	WG1093064
Endrin aldehyde	U		0.000280	0.0231	1	04/04/2018 02:38	WG1093064
Endrin ketone	U		0.000184	0.0231	1	04/04/2018 02:38	WG1093064
Heptachlor	U		0.000117	0.0231	1	04/04/2018 02:38	WG1093064
Heptachlor epoxide	U		0.000437	0.0231	1	04/04/2018 02:38	WG1093064
Hexachlorobenzene	U		0.000259	0.0231	1	04/04/2018 02:38	WG1093064
Methoxychlor	U		0.000307	0.0231	1	04/04/2018 02:38	WG1093064
Chlordane	U		0.0451	0.231	1	04/04/2018 02:38	WG1093064
Toxaphene	U		0.0417	0.463	1	04/04/2018 02:38	WG1093064
(S) Decachlorobiphenyl	43.4			10.0-148		04/04/2018 02:38	WG1093064
(S) Tetrachloro-m-xylene	66.5			21.0-146		04/04/2018 02:38	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	87.7		1	04/06/2018 13:30	WG1094322

¹ Cp

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	8.71		0.741	2.28	1	04/04/2018 02:10	WG1092834

² Tc

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000266	0.0228	1	04/04/2018 02:50	WG1093064
Alpha BHC	U		0.000220	0.0228	1	04/04/2018 02:50	WG1093064
Beta BHC	U		0.000345	0.0228	1	04/04/2018 02:50	WG1093064
Delta BHC	U		0.000172	0.0228	1	04/04/2018 02:50	WG1093064
Gamma BHC	U		0.000279	0.0228	1	04/04/2018 02:50	WG1093064
4,4-DDD	0.00387	J	0.000187	0.0228	1	04/04/2018 02:50	WG1093064
4,4-DDE	0.00998	J	0.000188	0.0228	1	04/04/2018 02:50	WG1093064
4,4-DDT	0.0583		0.000303	0.0228	1	04/04/2018 02:50	WG1093064
Dieldrin	0.00218	J	0.000101	0.0228	1	04/04/2018 02:50	WG1093064
Endosulfan I	U		0.000244	0.0228	1	04/04/2018 02:50	WG1093064
Endosulfan II	U	J4	0.000262	0.0228	1	04/04/2018 02:50	WG1093064
Endosulfan sulfate	U		0.000194	0.0228	1	04/04/2018 02:50	WG1093064
Endrin	U		0.000250	0.0228	1	04/04/2018 02:50	WG1093064
Endrin aldehyde	U		0.000276	0.0228	1	04/04/2018 02:50	WG1093064
Endrin ketone	U		0.000181	0.0228	1	04/04/2018 02:50	WG1093064
Heptachlor	U		0.000115	0.0228	1	04/04/2018 02:50	WG1093064
Heptachlor epoxide	0.00137	J	0.000431	0.0228	1	04/04/2018 02:50	WG1093064
Hexachlorobenzene	U		0.000255	0.0228	1	04/04/2018 02:50	WG1093064
Methoxychlor	U		0.000302	0.0228	1	04/04/2018 02:50	WG1093064
Chlordane	0.0475	J	0.0444	0.228	1	04/04/2018 02:50	WG1093064
Toxaphene	U		0.0410	0.456	1	04/04/2018 02:50	WG1093064
(S) Decachlorobiphenyl	46.1			10.0-148		04/04/2018 02:50	WG1093064
(S) Tetrachloro-m-xylene	68.7			21.0-146		04/04/2018 02:50	WG1093064

³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	92.0	%	1	04/06/2018 13:30	WG1094322

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	5.56	mg/kg	0.706	2.17	1	04/04/2018 02:13	WG1092834
Lead	13.2	mg/kg	0.206	0.543	1	04/04/2018 02:13	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry)	<u>Qualifier</u>	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000253	0.0217	1	04/04/2018 03:03	WG1093064
Alpha BHC	U		0.000210	0.0217	1	04/04/2018 03:03	WG1093064
Beta BHC	U		0.000329	0.0217	1	04/04/2018 03:03	WG1093064
Delta BHC	U		0.000164	0.0217	1	04/04/2018 03:03	WG1093064
Gamma BHC	0.000274	J	0.000266	0.0217	1	04/04/2018 03:03	WG1093064
4,4-DDD	0.00373	J	0.000178	0.0217	1	04/04/2018 03:03	WG1093064
4,4-DDE	0.0292	P	0.000179	0.0217	1	04/04/2018 03:03	WG1093064
4,4-DDT	0.0364		0.000289	0.0217	1	04/04/2018 03:03	WG1093064
Dieldrin	0.000533	J P	0.0000967	0.00217	1	04/04/2018 03:03	WG1093064
Endosulfan I	U		0.000233	0.0217	1	04/04/2018 03:03	WG1093064
Endosulfan II	U	J4	0.000250	0.0217	1	04/04/2018 03:03	WG1093064
Endosulfan sulfate	U		0.000185	0.0217	1	04/04/2018 03:03	WG1093064
Endrin	U		0.000238	0.0217	1	04/04/2018 03:03	WG1093064
Endrin aldehyde	U		0.000263	0.0217	1	04/04/2018 03:03	WG1093064
Endrin ketone	U		0.000173	0.0217	1	04/04/2018 03:03	WG1093064
Heptachlor	U		0.000110	0.0217	1	04/04/2018 03:03	WG1093064
Heptachlor epoxide	U		0.000411	0.0217	1	04/04/2018 03:03	WG1093064
Hexachlorobenzene	U		0.000243	0.0217	1	04/04/2018 03:03	WG1093064
Methoxychlor	U		0.000288	0.0217	1	04/04/2018 03:03	WG1093064
Chlordane	U		0.0424	0.217	1	04/04/2018 03:03	WG1093064
Toxaphene	U		0.0391	0.435	1	04/04/2018 03:03	WG1093064
(S) Decachlorobiphenyl	46.2			10.0-148		04/04/2018 03:03	WG1093064
(S) Tetrachloro-m-xylene	71.9			21.0-146		04/04/2018 03:03	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	89.3		1	04/06/2018 13:30	WG1094322

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ GI⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	4.99		0.728	2.24	1	04/04/2018 02:20	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000261	0.0224	1	04/04/2018 03:15	WG1093064
Alpha BHC	0.000243	J	0.000216	0.0224	1	04/04/2018 03:15	WG1093064
Beta BHC	U		0.000339	0.0224	1	04/04/2018 03:15	WG1093064
Delta BHC	U		0.000169	0.0224	1	04/04/2018 03:15	WG1093064
Gamma BHC	0.00200	J	0.000274	0.0224	1	04/04/2018 03:15	WG1093064
4,4-DDD	0.00431	J P	0.000184	0.0224	1	04/04/2018 03:15	WG1093064
4,4-DDE	0.0184	J	0.000185	0.0224	1	04/04/2018 03:15	WG1093064
4,4-DDT	0.0298		0.000298	0.0224	1	04/04/2018 03:15	WG1093064
Dieldrin	0.00333	P	0.0000997	0.0224	1	04/04/2018 03:15	WG1093064
Endosulfan I	U		0.000240	0.0224	1	04/04/2018 03:15	WG1093064
Endosulfan II	U	J4	0.000258	0.0224	1	04/04/2018 03:15	WG1093064
Endosulfan sulfate	U		0.000190	0.0224	1	04/04/2018 03:15	WG1093064
Endrin	U		0.000245	0.0224	1	04/04/2018 03:15	WG1093064
Endrin aldehyde	U		0.000271	0.0224	1	04/04/2018 03:15	WG1093064
Endrin ketone	U		0.000178	0.0224	1	04/04/2018 03:15	WG1093064
Heptachlor	U		0.000113	0.0224	1	04/04/2018 03:15	WG1093064
Heptachlor epoxide	U		0.000423	0.0224	1	04/04/2018 03:15	WG1093064
Hexachlorobenzene	U		0.000251	0.0224	1	04/04/2018 03:15	WG1093064
Methoxychlor	U		0.000297	0.0224	1	04/04/2018 03:15	WG1093064
Chlordane	0.0969	J	0.0437	0.224	1	04/04/2018 03:15	WG1093064
Toxaphene	U		0.0403	0.448	1	04/04/2018 03:15	WG1093064
(S) Decachlorobiphenyl	52.2			10.0-148		04/04/2018 03:15	WG1093064
(S) Tetrachloro-m-xylene	81.4			21.0-146		04/04/2018 03:15	WG1093064



Total Solids by Method 2540 G-2011

Analyte	Result %	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Total Solids	88.8		1	04/06/2018 13:30	WG1094322

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Arsenic	4.50		0.732	2.25	1	04/04/2018 02:23	WG1092834

Pesticides (GC) by Method 8081

Analyte	Result (dry) mg/kg	<u>Qualifier</u>	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Aldrin	U		0.000262	0.0225	1	04/04/2018 03:28	WG1093064
Alpha BHC	U		0.000217	0.0225	1	04/04/2018 03:28	WG1093064
Beta BHC	U		0.000341	0.0225	1	04/04/2018 03:28	WG1093064
Delta BHC	U		0.000170	0.0225	1	04/04/2018 03:28	WG1093064
Gamma BHC	U		0.000276	0.0225	1	04/04/2018 03:28	WG1093064
4,4-DDD	0.00370	J	0.000185	0.0225	1	04/04/2018 03:28	WG1093064
4,4-DDE	0.00925	J	0.000186	0.0225	1	04/04/2018 03:28	WG1093064
4,4-DDT	0.0271		0.000299	0.0225	1	04/04/2018 03:28	WG1093064
Dieldrin	0.00261		0.000100	0.0225	1	04/04/2018 03:28	WG1093064
Endosulfan I	U		0.000241	0.0225	1	04/04/2018 03:28	WG1093064
Endosulfan II	U	J4	0.000259	0.0225	1	04/04/2018 03:28	WG1093064
Endosulfan sulfate	U		0.000191	0.0225	1	04/04/2018 03:28	WG1093064
Endrin	U		0.000246	0.0225	1	04/04/2018 03:28	WG1093064
Endrin aldehyde	U		0.000272	0.0225	1	04/04/2018 03:28	WG1093064
Endrin ketone	U		0.000179	0.0225	1	04/04/2018 03:28	WG1093064
Heptachlor	0.000412	J	0.000114	0.0225	1	04/04/2018 03:28	WG1093064
Heptachlor epoxide	0.00174	J P	0.000425	0.0225	1	04/04/2018 03:28	WG1093064
Hexachlorobenzene	0.000297	J P	0.000252	0.0225	1	04/04/2018 03:28	WG1093064
Methoxychlor	U		0.000298	0.0225	1	04/04/2018 03:28	WG1093064
Chlordane	0.218	J	0.0439	0.225	1	04/04/2018 03:28	WG1093064
Toxaphene	U		0.0405	0.450	1	04/04/2018 03:28	WG1093064
(S) Decachlorobiphenyl	37.1		10.0-148			04/04/2018 03:28	WG1093064
(S) Tetrachloro-m-xylene	56.6		21.0-146			04/04/2018 03:28	WG1093064



Method Blank (MB)

(MB) R3299868-1 04/06/18 14:14

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.000			

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L982236-01 Original Sample (OS) • Duplicate (DUP)

(OS) L982236-01 04/06/18 14:14 • (DUP) R3299868-3 04/06/18 14:14

Analyte	Original Result %	DUP Result %	Dilution %	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Solids	72.2	75.8	1	4.82		5

Laboratory Control Sample (LCS)

(LCS) R3299868-2 04/06/18 14:14

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl⁸Al⁹Sc

[L982236-09,10,12,13,14,15](#)

Method Blank (MB)

(MB) R3299865-1 04/06/18 13:30

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.00100			

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L982236-09 Original Sample (OS) • Duplicate (DUP)

(OS) L982236-09 04/06/18 13:30 • (DUP) R3299865-3 04/06/18 13:30

Analyte	Original Result %	DUP Result %	Dilution %	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Solids	78.3	79.5	1	1.56		5

Laboratory Control Sample (LCS)

(LCS) R3299865-2 04/06/18 13:30

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl⁸Al⁹Sc



Method Blank (MB)

(MB) R3298847-1 04/04/18 01:21

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.650	2.00
Lead	U		0.190	0.500

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3298847-2 04/04/18 01:23 • (LCSD) R3298847-3 04/04/18 01:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD	RPD Limits
Arsenic	100	94.3	94.1	94.3	94.1	80.0-120			0.193	20
Lead	100	96.7	97.3	96.7	97.3	80.0-120			0.615	20

L982236-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L982236-01 04/04/18 01:28 • (MS) R3298847-6 04/04/18 01:36 • (MSD) R3298847-7 04/04/18 01:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Arsenic	138	12.0	135	138	89.0	91.3	1	75.0-125			2.38	20
Lead	138	24.1	155	154	94.7	94.0	1	75.0-125			0.612	20



Method Blank (MB)

(MB) R3299231-3 04/03/18 23:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg										
Aldrin	U		0.000233	0.0200										¹ Cp
Alpha BHC	U		0.000193	0.0200										² Tc
Beta BHC	U		0.000303	0.0200										³ Ss
Delta BHC	U		0.000151	0.0200										⁴ Cn
Gamma BHC	U		0.000245	0.0200										⁵ Sr
4,4-DDD	U		0.000164	0.0200										⁶ Qc
4,4-DDE	U		0.000165	0.0200										⁷ Gl
4,4-DDT	U		0.000266	0.0200										⁸ Al
Dieldrin	U		0.0000890	0.00200										⁹ Sc
Endosulfan I	U		0.000214	0.0200										
Endosulfan II	U		0.000230	0.0200										
Endosulfan sulfate	U		0.000170	0.0200										
Endrin	U		0.000219	0.0200										
Endrin aldehyde	U		0.000242	0.0200										
Endrin ketone	U		0.000159	0.0200										
Heptachlor	U		0.000101	0.0200										
Heptachlor epoxide	U		0.000378	0.0200										
Hexachlorobenzene	U		0.000224	0.0200										
Methoxychlor	U		0.000265	0.0200										
Chlordane	U		0.0390	0.200										
Toxaphene	U		0.0360	0.400										
(S) Decachlorobiphenyl	61.5			10.0-148										
(S) Tetrachloro-m-xylene	76.0			21.0-146										

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3299231-1 04/03/18 23:17 • (LCSD) R3299231-2 04/03/18 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Aldrin	0.0667	0.0372	0.0447	55.8	67.0	55.0-137			18.2	29
Alpha BHC	0.0667	0.0386	0.0471	57.8	70.6	55.0-136			19.9	28
Beta BHC	0.0667	0.0364	0.0437	54.5	65.5	53.0-133			18.4	28
Delta BHC	0.0667	0.0369	0.0452	55.4	67.7	53.0-139			20.1	29
Gamma BHC	0.0667	0.0378	0.0459	56.6	68.8	54.0-136			19.4	29
4,4-DDD	0.0667	0.0386	0.0459	57.8	68.8	51.0-141			17.3	29
4,4-DDE	0.0667	0.0364	0.0438	54.6	65.7	53.0-142			18.4	30
4,4-DDT	0.0667	0.0363	0.0449	54.4	67.3	47.0-143			21.2	30
Dieldrin	0.0667	0.0381	0.0454	57.1	68.1	54.0-141			17.6	29
Endosulfan I	0.0667	0.0371	0.0440	55.5	66.0	54.0-141			17.2	29



L982236-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3299231-1 04/03/18 23:17 • (LCSD) R3299231-2 04/03/18 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Endosulfan II	0.0667	0.0350	0.0421	52.5	63.1	53.0-140	J4		18.2	28
Endosulfan sulfate	0.0667	0.0360	0.0428	53.9	64.1	52.0-141			17.3	29
Endrin	0.0667	0.0377	0.0448	56.5	67.1	52.0-137			17.2	29
Endrin aldehyde	0.0667	0.0310	0.0362	46.5	54.3	30.0-127			15.4	31
Endrin ketone	0.0667	0.0373	0.0440	56.0	65.9	51.0-139			16.3	28
Heptachlor	0.0667	0.0394	0.0481	59.1	72.0	53.0-144			19.7	29
Heptachlor epoxide	0.0667	0.0376	0.0453	56.4	67.9	54.0-137			18.4	28
Hexachlorobenzene	0.0667	0.0360	0.0431	54.0	64.7	50.0-135			18.1	28
Methoxychlor	0.0667	0.0391	0.0460	58.6	69.0	49.0-145			16.4	29
(S) Decachlorobiphenyl				46.2	50.9	10.0-148				
(S) Tetrachloro-m-xylene				55.4	62.0	21.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

L982236-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L982236-02 04/04/18 00:19 • (MS) R3299231-4 04/04/18 00:32 • (MSD) R3299231-5 04/04/18 00:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Aldrin	0.0789	U	0.0424	0.0499	53.7	63.3	1	19.0-152			16.3	24
Alpha BHC	0.0789	U	0.0477	0.0547	60.5	69.4	1	39.0-152			13.7	21
Beta BHC	0.0789	U	0.0425	0.0516	53.8	65.4	1	38.0-150			19.4	20
Delta BHC	0.0789	U	0.0375	0.0467	47.5	59.1	1	34.0-155	J3		21.8	21
Gamma BHC	0.0789	U	0.0453	0.0526	57.4	66.7	1	38.0-153			15.1	21
4,4-DDD	0.0789	0.00212	0.0465	0.0531	56.2	64.6	1	22.0-160			13.3	25
4,4-DDE	0.0789	0.0147	0.0564	0.0634	52.8	61.7	1	10.0-160			11.7	27
4,4-DDT	0.0789	0.00907	0.0476	0.0586	48.8	62.7	1	10.0-160			20.8	28
Dieldrin	0.0789	U	0.0421	0.0492	53.4	62.4	1	30.0-158			15.6	25
Endosulfan I	0.0789	U	0.0395	0.0476	50.0	60.3	1	31.0-155			18.7	25
Endosulfan II	0.0789	U	0.0362	0.0453	45.9	57.4	1	32.0-156			22.3	25
Endosulfan sulfate	0.0789	U	0.0316	0.0426	40.1	54.1	1	31.0-158	J3		29.7	24
Endrin	0.0789	U	0.0414	0.0487	52.4	61.7	1	30.0-149			16.3	25
Endrin aldehyde	0.0789	U	0.0298	0.0385	37.8	48.8	1	20.0-157			25.4	26
Endrin ketone	0.0789	U	0.0359	0.0451	45.5	57.2	1	32.0-154			22.8	23
Heptachlor	0.0789	U	0.0447	0.0537	56.6	68.1	1	18.0-160			18.4	23
Heptachlor epoxide	0.0789	U	0.0431	0.0499	54.6	63.2	1	31.0-154			14.6	25
Hexachlorobenzene	0.0789	0.00177	0.0468	0.0540	57.0	66.1	1	26.0-146			14.3	21
Methoxychlor	0.0789	U	0.0352	0.0467	44.6	59.3	1	10.0-160	J3		28.3	27
(S) Decachlorobiphenyl					38.7	45.6		10.0-148				
(S) Tetrachloro-m-xylene					57.9	66.8		21.0-146				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].	¹ Cp
MDL	Method Detection Limit.	² Tc
MDL (dry)	Method Detection Limit.	³ Ss
RDL	Reported Detection Limit.	⁴ Cn
RDL (dry)	Reported Detection Limit.	⁵ Sr
Rec.	Recovery.	⁶ Qc
RPD	Relative Percent Difference.	⁷ Gl
SDG	Sample Delivery Group.	⁸ Al
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.	⁹ Sc
U	Not detected at the Reporting Limit (or MDL where applicable).	
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.	
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.	
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.	
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.	
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.	
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.	
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.	
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.	
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.	
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.	
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.	

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
P	RPD between the primary and confirmatory analysis exceeded 40%.



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky ¹⁶	90010
Kentucky ²	16
Louisiana	AI30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LA000356
South Carolina	84004
South Dakota	n/a
Tennessee ¹⁴	2006
Texas	T 104704245-17-14
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

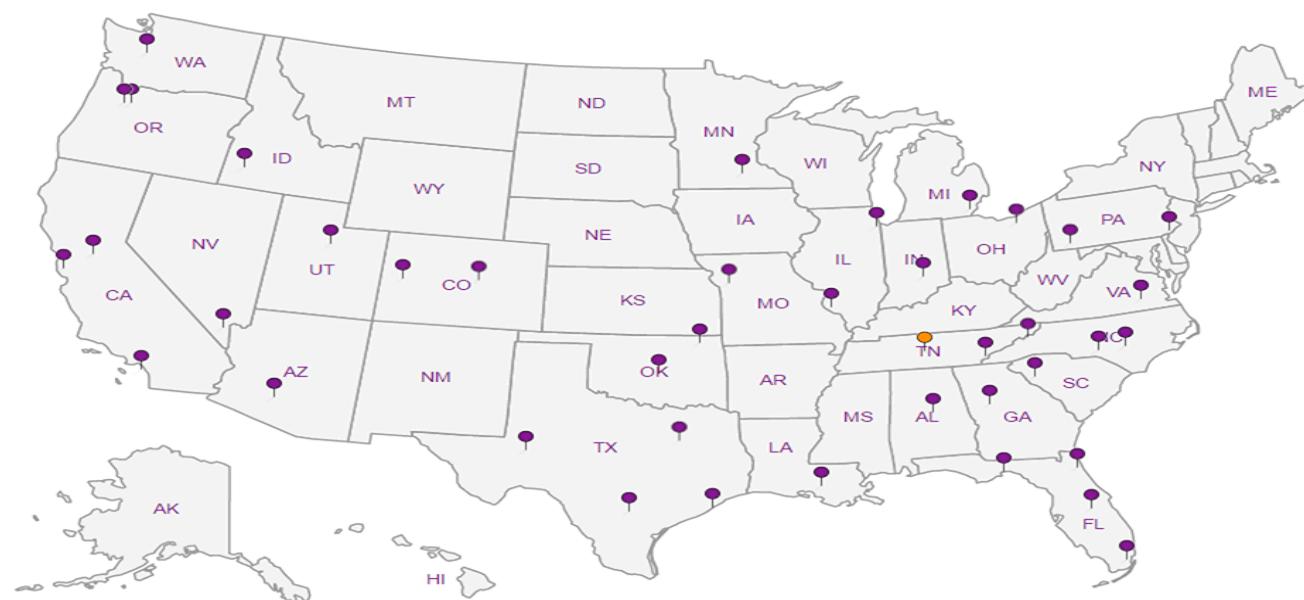
A2LA – ISO 17025	1461.01
A2LA – ISO 17025 ⁵	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

McCloskey Consultants Inc.

Billing Information:

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Report to:
Tom McCloskey / Chris Vertin

Email To:

Tom McCloskey / Chris Vertin

Project:
Description: Presentation HS.City/State:
San Jose / CA
Collected:

Phone: 925.895.6628

Fax:

Client Project #

Lab Project #

Collected by (print):
Chris Vertin

Site/Facility ID #

P.O. #

Collected by (signature):
Chris Vertin

Rush? (Lab MUST Be Notified)

Quote #

 Same Day Five Day Next Day 5 Day (Rad Only) Two Day 10 Day (Rad Only) Three Day

Date Results Needed:

No.
of
CntrsImmediately
Packed on Ice N Y

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

ACPs (808/A)

Arsenic

Lead

BP-1

Grab

SS

0-1/2'

3-28-18

10:43

1

X

X

X

BP-2

BP-3

BP-4

BP-5

BP-6

BP-7

BP-8

BP-9

BP-10

10:46

10:50

10:53

11:00

11:03

11:20

11:23

11:26

11:30

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

* Matrix:

SS - Soil AIR - Air

F - Filter

GW - Groundwater

B - Bioassay

WW - WasteWater

DW - Drinking Water

OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: Y NCOC Signed/Accurate: Y NBottles arrive intact: Y NCorrect bottles used: Y NSufficient volume sent: Y N

If Applicable

VOA Zero Headspace: Y NPreservation Correct/Checked: Y NSamples returned via:
UPS FedEx Courier

Tracking #

4196 32583439

Relinquished by: (Signature)

Date:

3/29/18

Time:

0800

Received by: (Signature)

ESC

Trip Blank Received: Yes / No

HCl / MeOH
TBR

Relinquished by: (Signature)

Date:

3/29/18

Time:

1500

Received by: (Signature)

FedEx

Temp: °C Bottles Received:

14 30 15

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

3/31/19

Time:

895

Received for lab by: (Signature)

B SH 962

Date:

3/31/19 895

Time:

Hold:

Condition:

NCF / OK



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982236
G070

