

## CERTIFICATE OF ANALYSIS

**Work Order** : **EM1911185**  
**Client** : **SMEC AUSTRALIA PTY LTD**  
**Contact** : JULIAN HOWARD  
**Address** : LEVEL 10 71 QUEENS RD  
 MELBOURNE VIC 3004  
**Telephone** : +61 03 9514 1500  
**Project** : 30041688  
**Order number** :  
**C-O-C number** : ----  
**Sampler** : LUKAS MCVEY  
**Site** : ----  
**Quote number** : EN/025/18 - Primary work  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 11  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Larissa Burns  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
**Telephone** : +6138549 9644  
**Date Samples Received** : 12-Jul-2019 12:10  
**Date Analysis Commenced** : 16-Jul-2019  
**Issue Date** : 22-Jul-2019 19:43



Accreditation No. 825  
 Accredited for compliance with  
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
∅ = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- EP202: Poor surrogate recovery due to matrix interference
- EG048G: EM1911185 #1, poor matrix recovery for hexavalent chromium due to sample matrix interferences.
- EP075: Poor surrogate recovery for sample EM1911185-001 due to sample matrix interference.
- EP075: Particular sample EM1911185-001 required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP074/074-UT: Surrogate recoveries for sample EM1911185\_001 fall outside of published limits as a result of suspected matrix interferences. Surrogate recoveries have been confirmed by re-analysis.
- EP074-UT: Particular sample EM1911185\_001 shows minor positive hit. Confirmed by re-analysis.
- ED009-X LOR of iodide was raised due to sample matrix.
- EP075-EM: Surrogate recoveries for sample EM1911185\_001 fall outside of published limits as a result of suspected matrix interferences. Surrogate recoveries have been confirmed by duplicate analysis.
- **As the sample required further crushing prior to analysis, volatiles have been compromised and results should be scrutinized accordingly.**
- EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.



### Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)			Client sample ID	WS1	----	----	----	----
Client sampling date / time			15-Jun-2019 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----
				Result	----	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	19	----	----	----	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	----	----	----	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	----	----	----	----
<b>ED009: Anions</b>								
Iodide	20461-54-5	0.010	mg/L	<0.500	----	----	----	----



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )		Client sample ID			<b>WS1</b>	----	----	----	----
Client sampling date / time		15-Jun-2019 00:00			----	----	----	----	
Compound	CAS Number	LOR	Unit	<b>EM1911185-001</b>	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl2)	----	0.1	pH Unit	<b>9.8</b>	----	----	----	----	
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%	<1.0	----	----	----	----	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Antimony	7440-36-0	5	mg/kg	<b>9</b>	----	----	----	----	
Arsenic	7440-38-2	5	mg/kg	<b>7</b>	----	----	----	----	
Barium	7440-39-3	10	mg/kg	<b>500</b>	----	----	----	----	
Beryllium	7440-41-7	1	mg/kg	<1	----	----	----	----	
Boron	7440-42-8	50	mg/kg	<b>60</b>	----	----	----	----	
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----	
Copper	7440-50-8	5	mg/kg	<b>621</b>	----	----	----	----	
Lead	7439-92-1	5	mg/kg	<b>83</b>	----	----	----	----	
Molybdenum	7439-98-7	2	mg/kg	<2	----	----	----	----	
Nickel	7440-02-0	2	mg/kg	<b>19</b>	----	----	----	----	
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----	
Silver	7440-22-4	2	mg/kg	<2	----	----	----	----	
Tin	7440-31-5	5	mg/kg	<b>14</b>	----	----	----	----	
Zinc	7440-66-6	5	mg/kg	<b>236</b>	----	----	----	----	
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>									
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----	
<b>EK025SF: Free CN by Segmented Flow Analyser</b>									
Free Cyanide	----	1	mg/kg	<1	----	----	----	----	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	----	
<b>EK040T: Fluoride Total</b>									
Fluoride	16984-48-8	40	mg/kg	<b>510</b>	----	----	----	----	
<b>EN60: ASLP Leaching Procedure</b>									
Initial pH	----	0.1	pH Unit	<b>9.7</b>	----	----	----	----	
After HCl pH	----	0.1	pH Unit	<b>1.5</b>	----	----	----	----	
Extraction Fluid pH	----	0.1	pH Unit	<b>5.0</b>	----	----	----	----	
Final pH	----	0.1	pH Unit	<b>5.0</b>	----	----	----	----	
<b>EP010: Formaldehyde</b>									



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EP010: Formaldehyde - Continued</b>									
Formaldehyde	50-00-0	1	mg/kg	<1	----	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>									
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	<0.2	----	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----	----
<b>EP074B: Oxygenated Compounds</b>									
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	----	----
<b>EP074H: Naphthalene</b>									
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>									
Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	----	----	----	----	----
1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	----	----	----	----	----
Methylene chloride	75-09-2	0.4	mg/kg	<0.4	----	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	----	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	----	----	----	----	----
Chloroform	67-66-3	0.02	mg/kg	<0.02	----	----	----	----	----
1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	----	----	----	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	----	----	----	----	----
1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	----	----	----	----	----
Trichloroethene	79-01-6	0.02	mg/kg	<b>0.05</b>	----	----	----	----	----
1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	----	----	----	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	----	----	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	----	----	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	----	----	----	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	----	----	----	----	----
Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	----	----	----	----	----



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EP074I: Volatile Halogenated Compounds - Continued</b>									
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	----	----	----	----	
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	----	----	----	----	
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	----	----	----	----	
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	<b>0.05</b>	----	----	----	----	
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	<b>0.05</b>	----	----	----	----	
<b>EP075A: Phenolic Compounds (Halogenated)</b>									
2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	----	----	----	----	
2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	----	----	----	----	
2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	----	----	----	----	
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	----	----	----	----	
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	----	----	----	----	
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	----	----	----	----	
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	----	----	----	----	
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	----	----	----	----	
Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	----	----	----	----	
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	<0.03	----	----	----	----	
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>									
Phenol	108-95-2	1	mg/kg	<1	----	----	----	----	
2-Methylphenol	95-48-7	1	mg/kg	<1	----	----	----	----	
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----	
2-Nitrophenol	88-75-5	1	mg/kg	<1	----	----	----	----	
2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	----	----	----	----	
2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	----	----	----	----	
4-Nitrophenol	100-02-7	5	mg/kg	<5	----	----	----	----	
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	----	----	----	----	
Dinoseb	88-85-7	5	mg/kg	<5	----	----	----	----	
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	----	----	----	----	
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	<1	----	----	----	----	
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----	
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----	



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----	
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----	
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----	
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----	
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	----	----	----	----	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<b>0.6</b>	----	----	----	----	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	----	----	----	----	
<b>EP075C: Phthalate Esters</b>									
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	----	----	----	----	
<b>EP075E: Nitroaromatics and Ketones</b>									
Nitrobenzene	98-95-3	0.5	mg/kg	<1.1	----	----	----	----	
2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.1	----	----	----	----	
<b>EP075I: Organochlorine Pesticides</b>									
alpha-BHC	319-84-6	0.03	mg/kg	<0.03	----	----	----	----	
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	----	----	----	----	
beta-BHC	319-85-7	0.03	mg/kg	<0.03	----	----	----	----	
gamma-BHC	58-89-9	0.03	mg/kg	<0.03	----	----	----	----	
delta-BHC	319-86-8	0.03	mg/kg	<0.03	----	----	----	----	
Heptachlor	76-44-8	0.03	mg/kg	<0.03	----	----	----	----	
Aldrin	309-00-2	0.03	mg/kg	<0.03	----	----	----	----	
Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	----	----	----	----	
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	----	----	----	----	
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	----	----	----	----	
Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	----	----	----	----	
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----	



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EP075I: Organochlorine Pesticides - Continued</b>									
Dieldrin	60-57-1	0.03	mg/kg	<0.03	----	----	----	----	
Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	----	----	----	----	
Endrin	72-20-8	0.03	mg/kg	<0.03	----	----	----	----	
Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	----	----	----	----	
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----	
Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	----	----	----	----	
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	----	----	----	----	
Methoxychlor	72-43-5	0.03	mg/kg	<0.03	----	----	----	----	
^ Sum of organochlorine pesticides	----	0.03	mg/kg	<0.03	----	----	----	----	
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	<0.03	----	----	----	----	
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----	
^ Chlordane	57-74-9	0.03	mg/kg	<0.03	----	----	----	----	
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	----	----	----	----	
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----	
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----	
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----	
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----	
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----	
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----	
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----	
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----	
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----	
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	----	
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----	
<b>EP202A: Phenoxyacetic Acid Herbicides by LCMS</b>									
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	----	----	----	----	
2,4-DB	94-82-6	0.02	mg/kg	<0.02	----	----	----	----	
Dicamba	1918-00-9	0.02	mg/kg	<0.02	----	----	----	----	
Mecoprop	93-65-2	0.02	mg/kg	<0.02	----	----	----	----	





## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
<b>EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued</b>									
MCPA	94-74-6	0.02	mg/kg	<0.02	----	----	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.02	----	----	----	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.02	----	----	----	----	----
Triclopyr	55335-06-3	0.02	mg/kg	<0.02	----	----	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	----	----	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.02	----	----	----	----	----
MCPB	94-81-5	0.02	mg/kg	<0.02	----	----	----	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.02	----	----	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.02	----	----	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	----	----	----	----	----
<b>EP217: Chelating Compounds</b>									
Ethylendiaminetetracetic Acid (EDTA)	60-00-4	0.1	mg/kg	<0.1	----	----	----	----	----
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%	119	----	----	----	----	----
<b>EP074S: VOC Surrogates</b>									
1.2-Dichloroethane-D4	17060-07-0	0.5	%	83.7	----	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	55.8	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	41.1	----	----	----	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>									
1.2-Dichloroethane-D4	17060-07-0	0.1	%	74.3	----	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	55.7	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	43.9	----	----	----	----	----
<b>EP075S: Acid Extractable Surrogates</b>									
2-Fluorophenol	367-12-4	0.5	%	58.0	----	----	----	----	----
Phenol-d6	13127-88-3	0.5	%	58.0	----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	59.0	----	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	Not Determined	----	----	----	----	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>									
Phenol-d6	13127-88-3	0.025	%	87.8	----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	60.3	----	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%	6.15	----	----	----	----	----
<b>EP075T: Base/Neutral Extractable Surrogates</b>									
Nitrobenzene-D5	4165-60-0	0.5	%	75.9	----	----	----	----	----



## Analytical Results

Sub-Matrix: <b>SOLID</b> (Matrix: <b>SOIL</b> )				Client sample ID	WS1	----	----	----	----
Client sampling date / time				15-Jun-2019 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EM1911185-001	-----	-----	-----	-----	
				Result	----	----	----	----	
<b>EP075T: Base/Neutral Extractable Surrogates - Continued</b>									
1,2-Dichlorobenzene-D4	2199-69-1	0.5	%	68.8	----	----	----	----	
2-Fluorobiphenyl	321-60-8	0.5	%	60.0	----	----	----	----	
Anthracene-d10	1719-06-8	0.5	%	17.8	----	----	----	----	
4-Terphenyl-d14	1718-51-0	0.5	%	6.55	----	----	----	----	
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>									
Nitrobenzene-D5	4165-60-0	0.025	%	98.4	----	----	----	----	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	99.7	----	----	----	----	
2-Fluorobiphenyl	321-60-8	0.025	%	83.1	----	----	----	----	
Anthracene-d10	1719-06-8	0.025	%	Not Determined	----	----	----	----	
4-Terphenyl-d14	1718-51-0	0.025	%	Not Determined	----	----	----	----	
<b>EP202S: Phenoxyacetic Acid Herbicide Surrogate</b>									
2,4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	4.84	----	----	----	----	



## Surrogate Control Limits

Sub-Matrix: <b>SOLID</b>		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	41	122
<b>EP074S: VOC Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>			
1,2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
<b>EP075S: Acid Extractable Surrogates</b>			
2-Fluorophenol	367-12-4	23	126
Phenol-d6	13127-88-3	23	122
2-Chlorophenol-D4	93951-73-6	22	127
2,4,6-Tribromophenol	118-79-6	19	133
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>			
Phenol-d6	13127-88-3	28	134
2-Chlorophenol-D4	93951-73-6	27	123
2,4,6-Tribromophenol	118-79-6	25	149
<b>EP075T: Base/Neutral Extractable Surrogates</b>			
Nitrobenzene-D5	4165-60-0	25	128
1,2-Dichlorobenzene-D4	2199-69-1	22	108
2-Fluorobiphenyl	321-60-8	31	127
Anthracene-d10	1719-06-8	42	142
4-Terphenyl-d14	1718-51-0	38	138
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>			
Nitrobenzene-D5	4165-60-0	29	125
1,2-Dichlorobenzene-D4	2199-69-1	31	117
2-Fluorobiphenyl	321-60-8	44	136
Anthracene-d10	1719-06-8	53	133
4-Terphenyl-d14	1718-51-0	59	141
<b>EP202S: Phenoxyacetic Acid Herbicide Surrogate</b>			
2,4-Dichlorophenyl Acetic Acid	19719-28-9	45	139