SGS AXYS

2045 Mills Road West
Sidney, BC, Canada V8L5X2

TEL: (250) 655-5800
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SGS AXYS Client No.: 4972

Client Address: AECOM
1111 Third Avenue, Suite 1600
Seattle, WA, US, 98101

The SGS AXYS contact for these data is Sean Campbell.

BATCH SUMMARY

Batch ID: WG65310	***Date:*** 01-Nov-2018
Analysis Type: Dioxin/Furan	***Matrix Type:*** Tissue

BATCH MAKEUP

Contract: 4972

Samples:

L30042-1	PDI-TF-SMB117	L30042-11	PDI-TF-SMB037
L30042-2	PDI-TF-SMB082	L30042-12	PDI-TF-SMB026
L30042-3	PDI-TF-SMB102	L30042-13	PDI-TF-SMB033
L30042-4	PDI-TF-SMB120	L30042-14	PDI-TF-SMB027
L30042-5	PDI-TF-SMB113	L30042-15	PDI-TF-SMB041
L30042-6	PDI-TF-SMB060	L30042-16	PDI-TF-SMB059
L30042-7	PDI-TF-SMB071	L30042-17	PDI-TF-SMB017
L30042-8	PDI-TF-SMB132	L30042-18	PDI-TF-SMB012
L30042-9	PDI-TF-SMB019	L30042-19	PDI-TF-SMB045
L30042-10	PDI-TF-SMB047		

Blank: WG65310-101

Reference or Spike: WG65310-102

Duplicate: WG65310-103

Comments:

1. Data are considered final.
2. Data are not blank corrected. Blank data should be taken into consideration when evaluating sample data.
3. Blank data should be evaluated against specifications using the same blank sample size as the size of the client samples.
4. For the sample PDI-TF-SMB102 (SGS AXYS ID: L30042-3), a disturbance of the mass ion used to monitor instrument performance (lock-mass) was observed at the retention time corresponding to one of the labeled surrogates, 13C-123678-HxCDD, on DB-225 analysis data. The surrogate recovery met the method specifications and the associated analyte 1,2,3,7,8,9-HXCDD was not detected, data is not considered affected.
5. For the sample PDI-TF-SMB132 (SGS AXYS ID: L30042-8), a disturbance of the mass ion used to monitor instrument performance (lock-mass) was observed at the retention time corresponding to 2378-TCDF on DB-225 analysis data. The result for this analyte has been flagged with a 'G', data are not considered significantly affected.
6. For the sample PDI-TF-SMB047 (SGS AXYS ID: L30042-10), Relative Retention Time (RRT) for 2378-TCDD was outside the RRT control limits provided on Form 6A. This compound was determined to be present based on the comparison of the chromatographic pattern between the sample and the calibration data.
7. For the lab blank (SGS AXYS ID: WG65310-101), percent recoveries of some labeled surrogates did not meet the method specifications and are flagged with a 'V'. As the isotope dilution method of quantification produces data that are recovery corrected, the slight variances from the method acceptance criteria are deemed not to affect the quantification of these analytes. Percent labeled compound recoveries are used as a general method performance indicator only.

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB117
Sample Collection:
09-Sep-2018 07:25

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-1
Matrix:	TISSUE	**Sample Size:**	10.4 L
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 06:01:01	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 40**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	ug/kg	**% Lipid:**	2.59

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.0236	0.0000851 (S)	0.81	1.001
1,2,3,7,8-PECDD [4]		0.0734	0.000102 (S)	0.63	1.001
1,2,3,4,7,8-HXCDD		0.00488	0.000174 (S)	1.18	1.001
1,2,3,6,7,8-HXCDD		0.0308	0.000170 (S)	1.19	1.001
1,2,3,7,8,9-HXCDD		0.00242	0.000171 (S)	1.39	1.011
1,2,3,4,6,7,8-HPCDD	J	0.000701	0.000135 (S)	1.20	1.000
OCDD	J	0.000509	0.000470 (S)	0.80	1.000
2,3,7,8-TCDF		0.000331	0.0000697 (Q)	0.78	1.001
1,2,3,7,8-PECDF	J	0.000224	0.0000697 (Q)	1.67	1.001
2,3,4,7,8-PECDF		0.00224	0.0000697 (Q)	1.63	1.001
1,2,3,4,7,8-HXCDF	K J	0.000434	0.0000697 (Q)	0.86	1.001
1,2,3,6,7,8-HXCDF	K J	0.000747	0.0000697 (Q)	0.96	1.000
1,2,3,7,8,9-HXCDF	K J	0.0000908	0.0000790 (S)	0.90	1.000
2,3,4,6,7,8-HXCDF	K J	0.000581	0.0000697 (Q)	0.88	1.001
1,2,3,4,6,7,8-HPCDF	K J	0.000396	0.0000874 (S)	1.45	1.001
1,2,3,4,7,8,9-HPCDF	K J	0.000701	0.000123 (S)	0.79	1.000
OCDF	J	0.000732	0.000314 (S)	1.00	1.003

(1) Where applicable, custom lab flags have been used on this report; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-1_Form1A_DX8M_123S40_SJ2451063.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB117
Sample Collection:
09-Sep-2018 07:25

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-1
Matrix:	TISSUE	**Sample Size:**	10.4 L
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 06:01:01	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 40**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	pg absolute	**% Lipid:**	2.59

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Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1150	57.3	0.79	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1120	56.0	0.62	1.382
13C-1,2,3,4,7,8-HXCDD		2000	956	47.8	1.23	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1090	54.5	1.20	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	906	45.3	1.13	1.094
13C-OCDD		4000	1090	27.2	0.93	1.178
13C-2,3,7,8-TCDF		2000	1090	54.7	0.79	0.966
13C-1,2,3,7,8-PECDF		2000	969	48.4	1.57	1.284
13C-2,3,4,7,8-PECDF		2000	939	47.0	1.59	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1020	51.1	0.51	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1110	55.5	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	970	48.5	0.51	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1020	51.1	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	883	44.1	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	805	40.2	0.44	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	22.5	56.3		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-1_Form2_DX8M_123S40_SJ2451063.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB117
Sample Collection:
09-Sep-2018 07:25

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-1
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	15-Oct-2018 **Time:** 23:50:10	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 6**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	2.59

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Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	J	0.00127	0.000468 (S)	1.39	1.063
2,3,7,8-TCDF	J	0.000113	0.0000836 (S)	0.79	1.001

(1) Where applicable, custom lab flags have been used on this report; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

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Report Filename: 1613_DIOXINS_1613DB225_L30042-1_Form1A_DB83_173S6_SJ2451307.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-2 (A)
Matrix:	TISSUE	**Sample Size:**	9.99 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 16:55:54	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 5**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.02

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000299	0.0000738 (Q)	0.66	1.001
1,2,3,7,8-PECDD [4]	J	0.000346	0.0000738 (Q)	0.70	1.000
1,2,3,4,7,8-HXCDD	J	0.0000958	0.0000738 (Q)	1.29	1.000
1,2,3,6,7,8-HXCDD	J	0.000241	0.0000738 (Q)	1.41	1.000
1,2,3,7,8,9-HXCDD	U		0.0000738 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000180	0.0000738 (Q)	1.47	1.001
OCDD	K J	0.000459	0.000157 (S)	1.26	1.001
2,3,7,8-TCDF		0.000817	0.0000738 (Q)	0.83	1.002
1,2,3,7,8-PECDF	K J	0.000195	0.0000738 (Q)	2.04	1.000
2,3,4,7,8-PECDF	K J	0.000334	0.0000738 (Q)	1.25	1.001
1,2,3,4,7,8-HXCDF	U		0.0000738 (Q)		
1,2,3,6,7,8-HXCDF	U		0.0000738 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000739 (S)		
2,3,4,6,7,8-HXCDF	U		0.0000738 (Q)		
1,2,3,4,6,7,8-HPCDF	J	0.000118	0.0000738 (Q)	1.06	1.000
1,2,3,4,7,8,9-HPCDF	U		0.0000738 (Q)		
OCDF	U		0.0000738 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-2_Form1A_DX8M_124S5_SJ2451016.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-2 (A)
Matrix:	TISSUE	**Sample Size:**	9.99 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 16:55:54	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 5**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	pg absolute	**% Lipid:**	5.02

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1230	61.3	0.77	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1310	65.7	0.65	1.382
13C-1,2,3,4,7,8-HXCDD		2000	1250	62.7	1.31	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1360	68.1	1.24	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1200	60.0	1.12	1.094
13C-OCDD		4000	2030	50.7	0.89	1.178
13C-2,3,7,8-TCDF		2000	1230	61.5	0.79	0.966
13C-1,2,3,7,8-PECDF		2000	1160	57.8	1.58	1.284
13C-2,3,4,7,8-PECDF		2000	1140	57.2	1.56	1.350
13C-1,2,3,4,7,8-HXCDF		2000	1280	64.2	0.53	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1340	66.8	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1280	63.9	0.54	1.004
13C-2,3,4,6,7,8-HXCDF		2000	1330	66.3	0.53	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1150	57.6	0.47	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1140	56.8	0.44	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	23.5	58.8		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-2_Form2_DX8M_124S5_SJ2451016.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-2 (A)
Matrix:	TISSUE	**Sample Size:**	9.99 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 00:31:22	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 7**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.02

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.000777	0.0000738 (Q)	0.81	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-2_Form1A_DB83_173S7_SJ2451308.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082 (Duplicate)
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	WG65310-103 (DUP L30042-2)
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 17:51:06	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 6**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.67

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000284	0.0000728 (Q)	0.67	1.001
1,2,3,7,8-PECDD [4]	J	0.000455	0.0000780 (S)	0.57	1.001
1,2,3,4,7,8-HXCDD	U		0.0000728 (Q)		
1,2,3,6,7,8-HXCDD	K J	0.000292	0.0000728 (Q)	0.77	1.000
1,2,3,7,8,9-HXCDD	J	0.000112	0.0000728 (Q)	1.39	1.010
1,2,3,4,6,7,8-HPCDD	K J	0.000238	0.0000728 (Q)	0.63	1.000
OCDD	J	0.000512	0.0000728 (Q)	0.89	1.000
2,3,7,8-TCDF		0.000928	0.0000728 (Q)	0.76	1.001
1,2,3,7,8-PECDF	K J	0.000170	0.0000728 (Q)	1.26	1.001
2,3,4,7,8-PECDF	J	0.000324	0.0000728 (Q)	1.36	1.001
1,2,3,4,7,8-HXCDF	K J	0.0000758	0.0000728 (Q)	3.28	1.000
1,2,3,6,7,8-HXCDF	U		0.0000728 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000728 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000728 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000728 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000728 (Q)		
OCDF	U		0.0000728 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_WG65310-103_Form1A_DX8M_124S6_SJ2451017.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082 (Duplicate)
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	WG65310-103 (DUP L30042-2)
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 17:51:06	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 6**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	pg absolute	**% Lipid:**	5.67

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	2270	114	0.75	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1660	82.9	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1720	85.8	1.27	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1720	86.1	1.28	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1480	74.0	1.00	1.095
13C-OCDD		4000	2200	54.9	0.92	1.178
13C-2,3,7,8-TCDF		2000	1330	66.5	0.76	0.966
13C-1,2,3,7,8-PECDF		2000	1400	70.2	1.56	1.283
13C-2,3,4,7,8-PECDF		2000	1390	69.4	1.51	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1520	76.2	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1650	82.5	0.51	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1760	87.8	0.51	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1720	86.0	0.54	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1640	82.0	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1440	71.9	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	47.9	120		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_WG65310-103_Form2_DX8M_124S6_SJ2451017.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB082 (Duplicate)
Sample Collection:
08-Sep-2018 10:42

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	WG65310-103 (DUP L30042-2)
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 01:12:34	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 8**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.67

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	U		0.000173 (S)		
2,3,7,8-TCDF		0.000779	0.0000728 (Q)	0.80	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_WG65310-103_Form1A_DB83_173S8_SJ2451309.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

PCDD/PCDF ANALYSIS REPORT
RELATIVE PERCENT DIFFERENCE

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No. PORTLAND HARBOR PDI AND BASELINE TISSUE

Contract No.: 4972

Client ID: PDI-TF-SMB082

Concentration Units: ug/kg (wet weight basis)

COMPOUND	L30042-2 (A)		WG65310-103		MEAN	RELATIVE PERCENT DIFFERENCE
	LAB FLAG [1]	CONC. FOUND	LAB FLAG [1]	CONC. FOUND		
2,3,7,8-TCDD	J	0.000299	J	0.000284	0.000291	5.19
1,2,3,7,8-PECDD	J	0.000346	J	0.000455	0.000401	27.2
1,2,3,4,7,8-HXCDD	J	0.0000958	U			
1,2,3,6,7,8-HXCDD	J	0.000241	K J	0.000292		
1,2,3,7,8,9-HXCDD	U		J	0.000112		
1,2,3,4,6,7,8-HPCDD	K J	0.000180	K J	0.000238		
OCDD	K J	0.000459	J	0.000512		
2,3,7,8-TCDF		0.000817		0.000928	0.000873	12.7
1,2,3,7,8-PECDF	K J	0.000195	K J	0.000170		
2,3,4,7,8-PECDF	K J	0.000334	J	0.000324		
1,2,3,4,7,8-HXCDF	U		K J	0.0000758		
1,2,3,6,7,8-HXCDF	U		U			
1,2,3,7,8,9-HXCDF	U		U			
2,3,4,6,7,8-HXCDF	U		U			
1,2,3,4,6,7,8-HPCDF	J	0.000118	U			
1,2,3,4,7,8,9-HPCDF	U		U			
OCDF	U		U			

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.
Signed: _____Henry Huang_____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

For Axys Internal Use Only [XSL Template: RPD.xsl; Created: 01-Nov-2018 10:38:57; Application: XMLTransformer-1.16.51;
Report Filename: RPD_DIOXINS_1613-RPD_WG65310-103_L30042-2_.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB102
Sample Collection:
08-Sep-2018 10:35

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-3
Matrix:	TISSUE	**Sample Size:**	9.99 L
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 06:56:09	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 41**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	ug/kg	**% Lipid:**	3.84

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	K	0.000300	0.0000723 (Q)	0.58	1.001
1,2,3,7,8-PECDD [4]	K J	0.000480	0.0000723 (Q)	0.52	1.001
1,2,3,4,7,8-HXCDD	K J	0.000115	0.0000755 (S)	1.04	1.000
1,2,3,6,7,8-HXCDD	K J	0.000387	0.0000743 (S)	1.73	1.001
1,2,3,7,8,9-HXCDD	K J	0.000129	0.0000744 (S)	0.90	1.010
1,2,3,4,6,7,8-HPCDD	K J	0.000198	0.0000840 (S)	1.24	1.000
OCDD	J	0.000150	0.0000798 (S)	0.82	1.001
2,3,7,8-TCDF		0.000791	0.0000723 (Q)	0.81	1.002
1,2,3,7,8-PECDF	K J	0.000136	0.0000723 (Q)	2.14	1.000
2,3,4,7,8-PECDF	J	0.000238	0.0000723 (Q)	1.47	1.000
1,2,3,4,7,8-HXCDF	U		0.0000723 (Q)		
1,2,3,6,7,8-HXCDF	U		0.0000723 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000723 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000723 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000723 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000723 (Q)		
OCDF	U		0.0000723 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-3_Form1A_DX8M_123S41_SJ2451064.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB102
Sample Collection:
08-Sep-2018 10:35

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-3
Matrix:	TISSUE	**Sample Size:**	9.99 L
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 06:56:09	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 41**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	pg absolute	**% Lipid:**	3.84

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1490	74.6	0.78	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1530	76.4	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1350	67.4	1.26	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1560	77.9	1.26	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1150	57.6	1.08	1.095
13C-OCDD		4000	1520	38.1	0.88	1.179
13C-2,3,7,8-TCDF		2000	1380	68.9	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1240	62.0	1.55	1.284
13C-2,3,4,7,8-PECDF		2000	1150	57.3	1.58	1.352
13C-1,2,3,4,7,8-HXCDF		2000	1370	68.4	0.55	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1550	77.6	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1450	72.3	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1450	72.3	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1250	62.5	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1050	52.7	0.48	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	29.8	74.4		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-3_Form2_DX8M_123S41_SJ2451064.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB102
Sample Collection:
08-Sep-2018 10:35

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-3
Matrix:	TISSUE	**Sample Size:**	10.3 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 01:53:46	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 9**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	3.84

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	U		0.000279 (S)		
2,3,7,8-TCDF		0.000762	0.0000703 (Q)	0.81	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-3_Form1A_DB83_173S9_SJ2451310.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB120
Sample Collection:
09-Sep-2018 08:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-4
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 18:46:17	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 7**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	3.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000183	0.0000728 (Q)	0.87	1.001
1,2,3,7,8-PECDD [4]	K J	0.000261	0.0000728 (Q)	0.48	1.000
1,2,3,4,7,8-HXCDD	U		0.000136 (S)		
1,2,3,6,7,8-HXCDD	J	0.000252	0.000144 (S)	1.37	1.000
1,2,3,7,8,9-HXCDD	U		0.000139 (S)		
1,2,3,4,6,7,8-HPCDD	J	0.000241	0.0000728 (Q)	1.00	1.000
OCDD	J	0.000438	0.0000728 (Q)	0.88	1.000
2,3,7,8-TCDF	K	0.000408	0.0000728 (Q)	1.03	1.001
1,2,3,7,8-PECDF	J	0.000127	0.0000728 (Q)	1.53	1.001
2,3,4,7,8-PECDF	J	0.000175	0.0000728 (Q)	1.33	1.001
1,2,3,4,7,8-HXCDF	U		0.0000728 (Q)		
1,2,3,6,7,8-HXCDF	U		0.0000728 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000728 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000728 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000728 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000728 (Q)		
OCDF	U		0.0000728 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-4_Form1A_DX8M_124S7_SJ2451018.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB120
Sample Collection:
09-Sep-2018 08:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-4
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 18:46:17	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 7**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	pg absolute	**% Lipid:**	3.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1570	78.4	0.77	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1640	82.2	0.62	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1590	79.5	1.26	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1710	85.4	1.22	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1450	72.7	1.12	1.094
13C-OCDD		4000	2070	51.8	0.92	1.178
13C-2,3,7,8-TCDF		2000	1520	75.8	0.79	0.966
13C-1,2,3,7,8-PECDF		2000	1450	72.3	1.57	1.284
13C-2,3,4,7,8-PECDF		2000	1450	72.4	1.59	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1640	82.2	0.50	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1750	87.7	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1620	80.9	0.55	1.004
13C-2,3,4,6,7,8-HXCDF		2000	1720	86.0	0.54	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1480	74.1	0.43	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1380	68.8	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	30.2	75.5		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-4_Form2_DX8M_124S7_SJ2451018.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB120
Sample Collection:
09-Sep-2018 08:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-4
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 02:34:58	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 10**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	3.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.000360	0.0000728 (Q)	0.75	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-4_Form1A_DB83_173S10_SJ2451311.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB113
Sample Collection:
08-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-5 i
Matrix:	TISSUE	**Sample Size:**	9.96 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	20-Oct-2018 **Time:** 00:21:33	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 64**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 59
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	4.20

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000177	0.0000730 (Q)	0.79	1.001
1,2,3,7,8-PECDD [4]	J	0.000318	0.0000730 (Q)	0.53	1.001
1,2,3,4,7,8-HXCDD	U		0.0000730 (Q)		
1,2,3,6,7,8-HXCDD	J	0.000366	0.0000730 (Q)	1.12	1.001
1,2,3,7,8,9-HXCDD	U		0.0000730 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000184	0.0000730 (Q)	0.44	1.000
OCDD	J	0.000430	0.0000730 (Q)	0.89	1.000
2,3,7,8-TCDF		0.000768	0.0000730 (Q)	0.78	1.001
1,2,3,7,8-PECDF	K J	0.000114	0.0000730 (Q)	1.04	1.001
2,3,4,7,8-PECDF	J	0.000331	0.0000730 (Q)	1.61	1.001
1,2,3,4,7,8-HXCDF	U		0.0000730 (Q)		
1,2,3,6,7,8-HXCDF	U		0.0000730 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000730 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000730 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000730 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000730 (Q)		
OCDF	U		0.0000730 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-5_Form1A_DX8M_124S64_SJ2453367.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB113
Sample Collection:
08-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-5 i
Matrix:	TISSUE	**Sample Size:**	9.96 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	20-Oct-2018 **Time:** 00:21:33	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 64**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 59
Concentration Units:	pg absolute	**% Lipid:**	4.20

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1420	71.2	0.79	1.012
13C-1,2,3,7,8-PECDD [4]		2000	1540	77.2	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1240	61.9	1.23	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1380	69.2	1.30	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1250	62.5	1.03	1.094
13C-OCDD		4000	1830	45.6	0.93	1.178
13C-2,3,7,8-TCDF		2000	1370	68.3	0.79	0.965
13C-1,2,3,7,8-PECDF		2000	1290	64.3	1.59	1.283
13C-2,3,4,7,8-PECDF		2000	1290	64.4	1.55	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1250	62.4	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1370	68.6	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1380	69.1	0.50	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1360	67.8	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1220	60.9	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1230	61.6	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	27.2	68.1		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-5_Form2_DX8M_124S64_SJ2453367.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB113
Sample Collection:
08-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-5
Matrix:	TISSUE	**Sample Size:**	9.95 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 03:16:10	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 11**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	4.20

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.000769	0.0000730 (Q)	0.84	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-5_Form1A_DB83_173S11_SJ2451312.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB060
Sample Collection:
07-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-6
Matrix:	TISSUE	**Sample Size:**	10.5 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 20:36:44	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 9**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	7.03

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000596	0.0000696 (Q)	0.81	1.001
1,2,3,7,8-PECDD [4]	K J	0.00125	0.0000696 (Q)	0.50	1.001
1,2,3,4,7,8-HXCDD	J	0.000509	0.0000696 (Q)	1.40	1.000
1,2,3,6,7,8-HXCDD		0.00274	0.0000696 (Q)	1.15	1.000
1,2,3,7,8,9-HXCDD	J	0.000437	0.0000696 (Q)	1.07	1.011
1,2,3,4,6,7,8-HPCDD		0.00725	0.0000995 (S)	0.93	1.000
OCDD		0.0185	0.000131 (S)	0.91	1.000
2,3,7,8-TCDF		0.00212	0.0000696 (Q)	0.77	1.001
1,2,3,7,8-PECDF	J	0.000614	0.0000696 (Q)	1.58	1.001
2,3,4,7,8-PECDF		0.00148	0.0000696 (Q)	1.42	1.001
1,2,3,4,7,8-HXCDF	J	0.000957	0.0000696 (Q)	1.23	1.001
1,2,3,6,7,8-HXCDF	K J	0.000263	0.0000696 (Q)	1.00	1.000
1,2,3,7,8,9-HXCDF	U		0.0000696 (Q)		
2,3,4,6,7,8-HXCDF	J	0.000151	0.0000696 (Q)	1.08	1.001
1,2,3,4,6,7,8-HPCDF	J	0.000706	0.0000696 (Q)	1.03	1.000
1,2,3,4,7,8,9-HPCDF	U		0.0000696 (Q)		
OCDF	K J	0.000305	0.0000696 (Q)	0.69	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-6_Form1A_DX8M_124S9_SJ2451020.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB060
Sample Collection:
07-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-6
Matrix:	TISSUE	**Sample Size:**	10.5 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 20:36:44	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 9**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 2
Concentration Units:	pg absolute	**% Lipid:**	7.03

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1510	75.7	0.78	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1600	80.2	0.61	1.382
13C-1,2,3,4,7,8-HXCDD		2000	1560	77.8	1.26	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1680	83.9	1.27	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1420	71.2	1.02	1.095
13C-OCDD		4000	2330	58.2	0.88	1.179
13C-2,3,7,8-TCDF		2000	1420	70.8	0.81	0.966
13C-1,2,3,7,8-PECDF		2000	1390	69.7	1.54	1.283
13C-2,3,4,7,8-PECDF		2000	1320	66.0	1.54	1.350
13C-1,2,3,4,7,8-HXCDF		2000	1560	77.8	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1630	81.4	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1580	78.9	0.54	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1600	80.2	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1440	71.8	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1400	70.1	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	28.4	71.1		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-6_Form2_DX8M_124S9_SJ2451020.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB060
Sample Collection:
07-Sep-2018 13:09

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-6
Matrix:	TISSUE	**Sample Size:**	10.5 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 03:57:22	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 12**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	7.03

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	J	0.000436	0.000255 (S)	1.40	1.063
2,3,7,8-TCDF		0.00194	0.0000696 (Q)	0.81	1.001

(1) Where applicable, custom lab flags have been used on this report; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-6_Form1A_DB83_173S12_SJ2451313.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB071
Sample Collection:
08-Sep-2018 08:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-7
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 01:26:58	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 14**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.12

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000840	0.0000705 (Q)	0.88	1.001
1,2,3,7,8-PECDD [4]	J	0.000955	0.0000705 (Q)	0.69	1.001
1,2,3,4,7,8-HXCDD	J	0.0000839	0.0000705 (Q)	1.12	1.001
1,2,3,6,7,8-HXCDD	J	0.000379	0.0000705 (Q)	1.37	1.001
1,2,3,7,8,9-HXCDD	U		0.0000705 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000113	0.0000906 (S)	0.74	1.000
OCDD	J	0.000187	0.0000705 (Q)	0.83	1.000
2,3,7,8-TCDF		0.00359	0.0000705 (Q)	0.77	1.001
1,2,3,7,8-PECDF	J	0.000551	0.0000705 (Q)	1.60	1.000
2,3,4,7,8-PECDF		0.00261	0.0000705 (Q)	1.56	1.001
1,2,3,4,7,8-HXCDF	J	0.000112	0.0000705 (Q)	1.13	1.001
1,2,3,6,7,8-HXCDF	K J	0.0000737	0.0000705 (Q)	1.00	1.001
1,2,3,7,8,9-HXCDF	U		0.0000705 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000705 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000705 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000705 (Q)		
OCDF	U		0.0000705 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-7_Form1A_DX8M_124S14_SJ2450992.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB071
Sample Collection:
08-Sep-2018 08:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-7
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 01:26:58	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 14**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	5.12

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1660	83.0	0.78	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1800	90.1	0.64	1.382
13C-1,2,3,4,7,8-HXCDD		2000	1620	80.8	1.25	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1810	90.4	1.25	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1590	79.7	1.04	1.094
13C-OCDD		4000	2640	66.0	0.90	1.178
13C-2,3,7,8-TCDF		2000	1560	78.2	0.80	0.966
13C-1,2,3,7,8-PECDF		2000	1490	74.7	1.58	1.284
13C-2,3,4,7,8-PECDF		2000	1440	72.1	1.52	1.350
13C-1,2,3,4,7,8-HXCDF		2000	1650	82.4	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1760	88.1	0.54	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1800	89.9	0.51	1.004
13C-2,3,4,6,7,8-HXCDF		2000	1740	87.2	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1780	88.8	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1490	74.6	0.46	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	31.3	78.2		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-7_Form2_DX8M_124S14_SJ2450992.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB071
Sample Collection:
08-Sep-2018 08:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-7
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 04:38:34	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 13**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.12

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00343	0.0000705 (Q)	0.77	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-7_Form1A_DB83_173S13_SJ2451314.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB132
Sample Collection:
09-Sep-2018 11:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-8
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 02:22:12	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 15**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000220	0.0000698 (Q)	0.78	1.001
1,2,3,7,8-PECDD [4]	K J	0.000464	0.0000698 (Q)	0.90	1.001
1,2,3,4,7,8-HXCDD	J	0.000173	0.000102 (S)	1.36	1.000
1,2,3,6,7,8-HXCDD	K J	0.000597	0.0000989 (S)	1.67	1.000
1,2,3,7,8,9-HXCDD	J	0.000117	0.000100 (S)	1.11	1.010
1,2,3,4,6,7,8-HPCDD	J	0.000771	0.0000698 (Q)	1.07	1.000
OCDD	J	0.000816	0.0000698 (Q)	1.02	1.000
2,3,7,8-TCDF		0.000773	0.0000698 (Q)	0.88	1.001
1,2,3,7,8-PECDF	J	0.000180	0.0000698 (Q)	1.73	1.000
2,3,4,7,8-PECDF	J	0.000253	0.0000698 (Q)	1.36	1.001
1,2,3,4,7,8-HXCDF	J	0.000134	0.0000698 (Q)	1.41	1.000
1,2,3,6,7,8-HXCDF	U		0.0000698 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000698 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000698 (Q)		
1,2,3,4,6,7,8-HPCDF	K J	0.000153	0.0000698 (Q)	1.66	1.000
1,2,3,4,7,8,9-HPCDF	U		0.0000698 (Q)		
OCDF	U		0.0000698 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-8_Form1A_DX8M_124S15_SJ2450993.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB132
Sample Collection:
09-Sep-2018 11:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-8
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 02:22:12	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 15**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1570	78.4	0.79	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1950	97.5	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1620	81.1	1.24	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1760	88.2	1.21	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1550	77.3	1.07	1.095
13C-OCDD		4000	2580	64.6	0.91	1.179
13C-2,3,7,8-TCDF		2000	1450	72.6	0.76	0.966
13C-1,2,3,7,8-PECDF		2000	1620	81.2	1.58	1.284
13C-2,3,4,7,8-PECDF		2000	1510	75.3	1.53	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1600	80.0	0.50	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1720	86.0	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1700	85.1	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1700	84.8	0.53	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1620	81.0	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1530	76.3	0.46	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	27.0	67.6		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-8_Form2_DX8M_124S15_SJ2450993.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB132
Sample Collection:
09-Sep-2018 11:26

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-8
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 05:19:46	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 14**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	U		0.000671 (S)		
2,3,7,8-TCDF	G	0.000746	0.0000698 (Q)	0.83	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; G = lock mass interference present.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-8_Form1A_DB83_173S14_SJ2451315.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB019
Sample Collection:
06-Sep-2018 08:30

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-9
Matrix:	TISSUE	**Sample Size:**	9.98 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 03:17:25	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 16**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.73

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000318	0.0000730 (Q)	0.82	1.001
1,2,3,7,8-PECDD [4]	J	0.000580	0.0000730 (Q)	0.57	1.001
1,2,3,4,7,8-HXCDD	J	0.000119	0.0000730 (Q)	1.42	1.000
1,2,3,6,7,8-HXCDD	K J	0.000323	0.0000730 (Q)	1.56	1.000
1,2,3,7,8,9-HXCDD	U		0.0000730 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000173	0.0000730 (Q)	0.76	1.000
OCDD	J	0.000452	0.0000730 (Q)	0.80	1.001
2,3,7,8-TCDF		0.00248	0.0000730 (Q)	0.77	1.001
1,2,3,7,8-PECDF	J	0.000398	0.0000730 (Q)	1.67	1.000
2,3,4,7,8-PECDF	J	0.000559	0.0000730 (Q)	1.68	1.000
1,2,3,4,7,8-HXCDF	J	0.0000866	0.0000730 (Q)	1.37	1.000
1,2,3,6,7,8-HXCDF	U		0.0000730 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000730 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000730 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000730 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000730 (Q)		
OCDF	U		0.0000730 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-9_Form1A_DX8M_124S16_SJ2450994.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB019
Sample Collection:
06-Sep-2018 08:30

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-9
Matrix:	TISSUE	**Sample Size:**	9.98 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 03:17:25	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 16**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	5.73

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1420	71.0	0.77	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1740	86.9	0.62	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1510	75.7	1.23	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1590	79.6	1.26	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1410	70.5	1.06	1.094
13C-OCDD		4000	2550	63.7	0.89	1.178
13C-2,3,7,8-TCDF		2000	1380	69.2	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1390	69.4	1.55	1.284
13C-2,3,4,7,8-PECDF		2000	1350	67.7	1.56	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1510	75.5	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1640	82.0	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1570	78.6	0.54	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1600	80.1	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1630	81.5	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1350	67.5	0.42	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	23.4	58.6		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-9_Form2_DX8M_124S16_SJ2450994.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB019
Sample Collection:
06-Sep-2018 08:30

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-9
Matrix:	TISSUE	**Sample Size:**	9.98 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 06:00:57	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 15**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.73

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00249	0.0000730 (Q)	0.80	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-9_Form1A_DB83_173S15_SJ2451316.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB047
Sample Collection:
07-Sep-2018 09:05

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-10
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 04:12:38	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 17**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.16

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000306	0.0000716 (Q)	0.72	1.003
1,2,3,7,8-PECDD [4]	J	0.000553	0.0000716 (Q)	0.67	1.000
1,2,3,4,7,8-HXCDD	K J	0.0000886	0.0000716 (Q)	2.43	1.000
1,2,3,6,7,8-HXCDD	J	0.000315	0.0000716 (Q)	1.40	1.000
1,2,3,7,8,9-HXCDD	U		0.0000716 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000190	0.0000716 (Q)	0.84	1.000
OCDD	K J	0.000239	0.0000716 (Q)	1.30	1.000
2,3,7,8-TCDF		0.0484	0.0000764 (S)	0.79	1.001
1,2,3,7,8-PECDF		0.0366	0.000129 (S)	1.55	1.001
2,3,4,7,8-PECDF		0.0963	0.000111 (S)	1.59	1.001
1,2,3,4,7,8-HXCDF		0.0219	0.0000716 (Q)	1.22	1.001
1,2,3,6,7,8-HXCDF		0.00491	0.0000716 (Q)	1.13	1.000
1,2,3,7,8,9-HXCDF	J	0.000144	0.0000716 (Q)	1.07	1.000
2,3,4,6,7,8-HXCDF	J	0.000467	0.0000716 (Q)	1.39	1.001
1,2,3,4,6,7,8-HPCDF	K J	0.000234	0.0000716 (Q)	1.60	1.000
1,2,3,4,7,8,9-HPCDF	K J	0.000184	0.0000716 (Q)	0.68	1.000
OCDF	U		0.0000716 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-10_Form1A_DX8M_124S17_SJ2450995.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB047
Sample Collection:
07-Sep-2018 09:05

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-10
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 04:12:38	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 17**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	5.16

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1430	71.3	0.79	1.012
13C-1,2,3,7,8-PECDD [4]		2000	1710	85.5	0.64	1.382
13C-1,2,3,4,7,8-HXCDD		2000	1500	75.0	1.27	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1550	77.5	1.29	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1380	69.0	1.03	1.095
13C-OCDD		4000	2450	61.4	0.91	1.179
13C-2,3,7,8-TCDF		2000	1380	68.9	0.75	0.966
13C-1,2,3,7,8-PECDF		2000	1300	65.0	1.50	1.283
13C-2,3,4,7,8-PECDF		2000	1290	64.6	1.54	1.350
13C-1,2,3,4,7,8-HXCDF		2000	1410	70.7	0.51	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1510	75.3	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1450	72.3	0.53	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1490	74.4	0.55	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1440	72.1	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1360	67.9	0.46	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	30.2	75.5		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-10_Form2_DX8M_124S17_SJ2450995.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB047
Sample Collection:
07-Sep-2018 09:05

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-10
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 06:42:10	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_173 S: 16**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_173 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.16

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.0477	0.0000902 (S)	0.79	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-10_Form1A_DB83_173S16_SJ2451317.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB037
Sample Collection:
06-Sep-2018 12:47

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-11
Matrix:	TISSUE	**Sample Size:**	9.81 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 05:07:51	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 18**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000288	0.0000751 (Q)	0.65	1.001
1,2,3,7,8-PECDD [4]	J	0.000383	0.0000751 (Q)	0.68	1.001
1,2,3,4,7,8-HXCDD	U		0.0000751 (Q)		
1,2,3,6,7,8-HXCDD	J	0.000240	0.0000751 (Q)	1.12	1.000
1,2,3,7,8,9-HXCDD	U		0.0000751 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.0000879	0.0000751 (Q)	3.07	1.000
OCDD	J	0.000251	0.0000751 (Q)	1.02	1.000
2,3,7,8-TCDF		0.00520	0.0000751 (Q)	0.77	1.001
1,2,3,7,8-PECDF		0.00151	0.0000751 (Q)	1.50	1.001
2,3,4,7,8-PECDF	K J	0.00132	0.0000751 (Q)	1.30	1.001
1,2,3,4,7,8-HXCDF	K J	0.000368	0.0000751 (Q)	0.89	1.000
1,2,3,6,7,8-HXCDF	K J	0.000115	0.0000751 (Q)	1.56	1.001
1,2,3,7,8,9-HXCDF	U		0.0000751 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000751 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000751 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000751 (Q)		
OCDF	U		0.0000751 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-11_Form1A_DX8M_124S18_SJ2450996.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB037
Sample Collection:
06-Sep-2018 12:47

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-11
Matrix:	TISSUE	**Sample Size:**	9.81 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 05:07:51	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 18**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1580	79.0	0.79	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1920	95.9	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1610	80.4	1.24	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1730	86.6	1.23	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1690	84.7	1.03	1.094
13C-OCDD		4000	2790	69.8	0.89	1.178
13C-2,3,7,8-TCDF		2000	1550	77.4	0.77	0.966
13C-1,2,3,7,8-PECDF		2000	1500	74.8	1.56	1.284
13C-2,3,4,7,8-PECDF		2000	1480	74.2	1.59	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1600	80.2	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1640	82.2	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1640	82.1	0.54	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1680	84.0	0.53	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1510	75.4	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1620	81.2	0.44	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	31.2	78.1		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-11_Form2_DX8M_124S18_SJ2450996.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB037
Sample Collection:
06-Sep-2018 12:47

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-11
Matrix:	TISSUE	**Sample Size:**	9.81 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 14:24:44	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 5**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00488	0.000157 (S)	0.74	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-11_Form1A_DB83_174AS5_SJ2451323.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB026
Sample Collection:
06-Sep-2018 09:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-12
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 06:03:05	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 19**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000339	0.0000798 (S)	0.79	1.002
1,2,3,7,8-PECDD [4]	J	0.000764	0.0000725 (Q)	0.69	1.000
1,2,3,4,7,8-HXCDD	K J	0.000125	0.0000725 (Q)	3.76	1.000
1,2,3,6,7,8-HXCDD	K J	0.00109	0.0000725 (Q)	1.51	1.000
1,2,3,7,8,9-HXCDD	K J	0.000108	0.0000725 (Q)	2.08	1.012
1,2,3,4,6,7,8-HPCDD	K J	0.000401	0.0000725 (Q)	1.25	1.000
OCDD	J	0.00185	0.0000725 (Q)	0.79	1.000
2,3,7,8-TCDF		0.00301	0.0000725 (Q)	0.79	1.001
1,2,3,7,8-PECDF	J	0.000745	0.0000869 (S)	1.56	1.001
2,3,4,7,8-PECDF	J	0.000846	0.0000756 (S)	1.73	1.001
1,2,3,4,7,8-HXCDF	K J	0.000219	0.0000725 (Q)	2.24	1.000
1,2,3,6,7,8-HXCDF	U		0.0000725 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000725 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000725 (Q)		
1,2,3,4,6,7,8-HPCDF	K J	0.0000770	0.0000725 (Q)	1.37	1.000
1,2,3,4,7,8,9-HPCDF	U		0.0000725 (Q)		
OCDF	J	0.000260	0.0000725 (Q)	0.86	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-12_Form1A_DX8M_124S19_SJ2450997.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB026
Sample Collection:
06-Sep-2018 09:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-12
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 06:03:05	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 19**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1600	80.1	0.80	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1890	94.7	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1630	81.5	1.24	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1720	85.9	1.25	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1570	78.4	1.06	1.094
13C-OCDD		4000	2690	67.3	0.91	1.178
13C-2,3,7,8-TCDF		2000	1560	78.1	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1440	72.1	1.60	1.284
13C-2,3,4,7,8-PECDF		2000	1440	71.8	1.52	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1650	82.4	0.51	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1760	87.9	0.53	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1680	84.1	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1730	86.5	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1550	77.5	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1590	79.5	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	33.9	84.7		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-12_Form2_DX8M_124S19_SJ2450997.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB026
Sample Collection:
06-Sep-2018 09:11

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-12
Matrix:	TISSUE	**Sample Size:**	10.1 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 15:05:56	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 6**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.38

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	U		0.00194 (S)		
2,3,7,8-TCDF		0.00294	0.000154 (S)	0.79	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-12_Form1A_DB83_174AS6_SJ2451324.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB033
Sample Collection:
06-Sep-2018 11:03

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-13
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 06:58:18	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 20**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.68

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000296	0.0000699 (Q)	0.68	1.001
1,2,3,7,8-PECDD [4]	J	0.000756	0.0000699 (Q)	0.53	1.001
1,2,3,4,7,8-HXCDD	K J	0.000113	0.0000699 (Q)	1.44	1.000
1,2,3,6,7,8-HXCDD	J	0.000534	0.0000699 (Q)	1.27	1.000
1,2,3,7,8,9-HXCDD	U		0.0000699 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000336	0.0000699 (Q)	1.32	1.000
OCDD	K J	0.000249	0.0000699 (Q)	0.68	1.000
2,3,7,8-TCDF		0.00211	0.0000699 (Q)	0.78	1.001
1,2,3,7,8-PECDF	J	0.000557	0.0000699 (Q)	1.52	1.000
2,3,4,7,8-PECDF	J	0.000728	0.0000699 (Q)	1.59	1.001
1,2,3,4,7,8-HXCDF	J	0.000197	0.0000699 (Q)	1.09	1.001
1,2,3,6,7,8-HXCDF	J	0.0000918	0.0000699 (Q)	1.17	1.001
1,2,3,7,8,9-HXCDF	U		0.0000699 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000699 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000699 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000699 (Q)		
OCDF	U		0.0000699 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-13_Form1A_DX8M_124S20_SJ2450998.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB033
Sample Collection:
06-Sep-2018 11:03

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-13
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 06:58:18	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 20**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	5.68

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1590	79.5	0.76	1.013
13C-1,2,3,7,8-PECDD [4]		2000	2060	103	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1560	77.8	1.28	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1660	83.0	1.22	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1600	79.9	1.06	1.095
13C-OCDD		4000	2920	73.0	0.87	1.179
13C-2,3,7,8-TCDF		2000	1590	79.6	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1520	76.2	1.55	1.284
13C-2,3,4,7,8-PECDF		2000	1530	76.7	1.56	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1540	76.9	0.53	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1630	81.3	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1640	81.8	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1630	81.7	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1610	80.4	0.44	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1630	81.5	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	35.0	87.5		1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-13_Form2_DX8M_124S20_SJ2450998.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB033
Sample Collection:
06-Sep-2018 11:03

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-13
Matrix:	TISSUE	**Sample Size:**	10.4 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 15:47:08	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 7**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.68

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00185	0.000147 (S)	0.79	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-13_Form1A_DB83_174AS7_SJ2451325.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB027
Sample Collection:
06-Sep-2018 09:53

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-14
Matrix:	TISSUE	**Sample Size:**	9.82 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 07:53:31	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 21**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000317	0.0000744 (Q)	0.87	1.002
1,2,3,7,8-PECDD [4]	J	0.000440	0.0000744 (Q)	0.64	1.001
1,2,3,4,7,8-HXCDD	K J	0.000107	0.0000744 (Q)	0.96	1.001
1,2,3,6,7,8-HXCDD	J	0.000422	0.0000744 (Q)	1.42	1.000
1,2,3,7,8,9-HXCDD	U		0.0000744 (Q)		
1,2,3,4,6,7,8-HPCDD	J	0.000146	0.0000744 (Q)	0.92	1.001
OCDD	K J	0.000191	0.0000744 (Q)	1.19	1.001
2,3,7,8-TCDF		0.00246	0.0000744 (Q)	0.78	1.001
1,2,3,7,8-PECDF	J	0.000398	0.0000744 (Q)	1.46	1.001
2,3,4,7,8-PECDF	J	0.000610	0.0000744 (Q)	1.48	1.001
1,2,3,4,7,8-HXCDF	J	0.000156	0.0000744 (Q)	1.31	1.001
1,2,3,6,7,8-HXCDF	U		0.0000744 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000744 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000744 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000744 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000744 (Q)		
OCDF	U		0.0000744 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-14_Form1A_DX8M_124S21_SJ2450999.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB027
Sample Collection:
06-Sep-2018 09:53

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-14
Matrix:	TISSUE	**Sample Size:**	9.82 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 07:53:31	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 21**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 10
Concentration Units:	pg absolute	**% Lipid:**	6.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1550	77.5	0.81	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1860	92.9	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1540	76.8	1.27	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1600	79.8	1.24	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1520	75.9	1.02	1.094
13C-OCDD		4000	2650	66.3	0.92	1.178
13C-2,3,7,8-TCDF		2000	1520	75.8	0.76	0.966
13C-1,2,3,7,8-PECDF		2000	1490	74.7	1.53	1.284
13C-2,3,4,7,8-PECDF		2000	1430	71.6	1.52	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1460	73.0	0.51	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1610	80.5	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1590	79.5	0.54	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1550	77.5	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1500	74.9	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1440	72.1	0.48	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	32.5	81.3		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-14_Form2_DX8M_124S21_SJ2450999.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB027
Sample Collection:
06-Sep-2018 09:53

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-14
Matrix:	TISSUE	**Sample Size:**	9.82 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 16:28:20	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 8**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.19

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00236	0.000158 (S)	0.80	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

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Report Filename: 1613_DIOXINS_1613DB225_L30042-14_Form1A_DB83_174AS8_SJ2451326.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB041
Sample Collection:
06-Sep-2018 13:33

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-15 i
Matrix:	TISSUE	**Sample Size:**	10.0 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	19-Oct-2018 **Time:** 23:26:19	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 63**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 59
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	7.76

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000353	0.0000731 (Q)	0.80	1.001
1,2,3,7,8-PECDD [4]	K J	0.000657	0.000104 (S)	0.81	1.001
1,2,3,4,7,8-HXCDD	K J	0.000173	0.0000731 (Q)	2.04	1.000
1,2,3,6,7,8-HXCDD	J	0.000481	0.0000731 (Q)	1.37	1.000
1,2,3,7,8,9-HXCDD	K J	0.0000889	0.0000731 (Q)	0.97	1.011
1,2,3,4,6,7,8-HPCDD	J	0.000363	0.0000731 (Q)	0.91	1.000
OCDD	J	0.000261	0.0000731 (Q)	0.82	1.000
2,3,7,8-TCDF		0.00950	0.0000731 (Q)	0.73	1.001
1,2,3,7,8-PECDF		0.00293	0.0000731 (Q)	1.58	1.000
2,3,4,7,8-PECDF		0.00230	0.0000731 (Q)	1.39	1.000
1,2,3,4,7,8-HXCDF	J	0.00106	0.0000731 (Q)	1.42	1.001
1,2,3,6,7,8-HXCDF	J	0.000302	0.0000731 (Q)	1.39	1.000
1,2,3,7,8,9-HXCDF	U		0.0000731 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000731 (Q)		
1,2,3,4,6,7,8-HPCDF	K J	0.0000837	0.0000731 (Q)	1.45	1.001
1,2,3,4,7,8,9-HPCDF	U		0.0000731 (Q)		
OCDF	U		0.0000731 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-15_Form1A_DX8M_124S63_SJ2453366.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB041
Sample Collection:
06-Sep-2018 13:33

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-15 i
Matrix:	TISSUE	**Sample Size:**	10.0 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	19-Oct-2018 **Time:** 23:26:19	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 63**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 59
Concentration Units:	pg absolute	**% Lipid:**	7.76

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1590	79.5	0.76	1.012
13C-1,2,3,7,8-PECDD [4]		2000	1660	82.8	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1430	71.5	1.20	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1670	83.4	1.23	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1370	68.5	1.07	1.094
13C-OCDD		4000	2200	55.0	0.86	1.178
13C-2,3,7,8-TCDF		2000	1490	74.5	0.75	0.965
13C-1,2,3,7,8-PECDF		2000	1380	68.9	1.56	1.283
13C-2,3,4,7,8-PECDF		2000	1330	66.5	1.56	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1480	73.9	0.52	0.953
13C-1,2,3,6,7,8-HXCDF		2000	1620	81.1	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1550	77.4	0.51	1.004
13C-2,3,4,6,7,8-HXCDF		2000	1540	76.8	0.50	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1390	69.4	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1390	69.6	0.44	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	22.5	56.1		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-15_Form2_DX8M_124S63_SJ2453366.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB041
Sample Collection:
06-Sep-2018 13:33

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-15
Matrix:	TISSUE	**Sample Size:**	10.0 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 17:09:28	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 9**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	7.76

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
1,2,3,7,8,9-HXCDD	U		0.00164 (S)		
2,3,7,8-TCDF		0.00899	0.000133 (S)	0.78	1.002

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-15_Form1A_DB83_174AS9_SJ2451327.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB059
Sample Collection:
06-Sep-2018 10:13

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-16
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 13:45:22	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 27**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.50

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000302	0.0000717 (Q)	0.73	1.002
1,2,3,7,8-PECDD [4]	K J	0.000505	0.0000717 (Q)	0.46	1.001
1,2,3,4,7,8-HXCDD	U		0.0000717 (Q)		
1,2,3,6,7,8-HXCDD	J	0.000268	0.0000717 (Q)	1.30	1.001
1,2,3,7,8,9-HXCDD	U		0.0000717 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.0000887	0.0000717 (Q)	2.08	1.000
OCDD	J	0.000200	0.0000717 (Q)	0.94	1.000
2,3,7,8-TCDF		0.00797	0.0000717 (Q)	0.75	1.001
1,2,3,7,8-PECDF	J	0.000418	0.0000717 (Q)	1.67	1.001
2,3,4,7,8-PECDF	J	0.00115	0.0000717 (Q)	1.36	1.001
1,2,3,4,7,8-HXCDF	J	0.000196	0.0000717 (Q)	1.21	1.001
1,2,3,6,7,8-HXCDF	K J	0.0000773	0.0000717 (Q)	0.75	1.000
1,2,3,7,8,9-HXCDF	U		0.0000717 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000717 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000717 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000717 (Q)		
OCDF	U		0.0000717 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-16_Form1A_DX8M_124S27_SJ2450920.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB059
Sample Collection:
06-Sep-2018 10:13

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-16
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 13:45:22	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 27**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	pg absolute	**% Lipid:**	6.50

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1410	70.5	0.75	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1650	82.7	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1480	74.2	1.20	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1560	78.2	1.26	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1450	72.7	1.07	1.095
13C-OCDD		4000	2130	53.4	0.86	1.179
13C-2,3,7,8-TCDF		2000	1330	66.6	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1270	63.5	1.59	1.284
13C-2,3,4,7,8-PECDF		2000	1230	61.3	1.61	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1490	74.7	0.51	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1610	80.4	0.54	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1340	67.2	0.49	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1440	71.9	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1470	73.3	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1470	73.5	0.46	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	30.4	76.1		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-16_Form2_DX8M_124S27_SJ2450920.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB059
Sample Collection:
06-Sep-2018 10:13

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-16
Matrix:	TISSUE	**Sample Size:**	10.2 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 17:50:40	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 10**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.50

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00673	0.000185 (S)	0.77	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-16_Form1A_DB83_174AS10_SJ2451328.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB017
Sample Collection:
05-Sep-2018 13:55

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-17
Matrix:	TISSUE	**Sample Size:**	9.88 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 14:40:36	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 28**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	4.67

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000291	0.0000858 (S)	0.78	1.001
1,2,3,7,8-PECDD [4]	J	0.000600	0.0000743 (Q)	0.61	1.000
1,2,3,4,7,8-HXCDD	K J	0.0000960	0.0000743 (Q)	0.95	1.000
1,2,3,6,7,8-HXCDD	J	0.000349	0.0000743 (Q)	1.40	1.001
1,2,3,7,8,9-HXCDD	U		0.0000743 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000153	0.0000743 (Q)	0.54	1.000
OCDD	J	0.000525	0.0000743 (Q)	0.95	1.000
2,3,7,8-TCDF		0.00170	0.0000743 (Q)	0.70	1.001
1,2,3,7,8-PECDF	K J	0.000343	0.0000743 (Q)	1.06	1.001
2,3,4,7,8-PECDF	J	0.000621	0.0000743 (Q)	1.32	1.001
1,2,3,4,7,8-HXCDF	J	0.000181	0.0000743 (Q)	1.19	1.001
1,2,3,6,7,8-HXCDF	U		0.0000743 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000743 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000743 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000743 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000743 (Q)		
OCDF	U		0.0000743 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-17_Form1A_DX8M_124S28_SJ2450921.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB017
Sample Collection:
05-Sep-2018 13:55

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-17
Matrix:	TISSUE	**Sample Size:**	9.88 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 14:40:36	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 28**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	pg absolute	**% Lipid:**	4.67

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LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1660	82.9	0.80	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1850	92.7	0.64	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1700	84.8	1.26	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1580	78.9	1.22	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1060	53.0	1.04	1.095
13C-OCDD		4000	1310	32.7	0.90	1.177
13C-2,3,7,8-TCDF		2000	1620	81.0	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1520	76.0	1.54	1.284
13C-2,3,4,7,8-PECDF		2000	1470	73.4	1.55	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1080	54.1	0.51	0.953
13C-1,2,3,6,7,8-HXCDF		2000	1210	60.3	0.53	0.957
13C-1,2,3,7,8,9-HXCDF		2000	1590	79.7	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1530	76.7	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1370	68.6	0.46	1.063
13C-1,2,3,4,7,8,9-HPCDF		2000	1010	50.7	0.43	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	35.2	88.0		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-17_Form2_DX8M_124S28_SJ2450921.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB017
Sample Collection:
05-Sep-2018 13:55

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-17
Matrix:	TISSUE	**Sample Size:**	9.88 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	16-Oct-2018 **Time:** 18:31:52	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_174A S: 11**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_174A S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	4.67

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00137	0.000251 (S)	0.75	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-17_Form1A_DB83_174AS11_SJ2451329.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB012
Sample Collection:
05-Sep-2018 11:50

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-18
Matrix:	TISSUE	**Sample Size:**	9.90 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 15:35:49	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 29**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	J	0.000210	0.0000733 (Q)	0.66	1.001
1,2,3,7,8-PECDD [4]	J	0.000399	0.0000733 (Q)	0.68	1.001
1,2,3,4,7,8-HXCDD	U		0.0000733 (Q)		
1,2,3,6,7,8-HXCDD	J	0.000212	0.0000733 (Q)	1.39	1.001
1,2,3,7,8,9-HXCDD	U		0.0000733 (Q)		
1,2,3,4,6,7,8-HPCDD	K J	0.000116	0.0000733 (Q)	2.19	1.000
OCDD	J	0.000180	0.0000733 (Q)	0.78	1.000
2,3,7,8-TCDF		0.00257	0.0000733 (Q)	0.75	1.001
1,2,3,7,8-PECDF	J	0.000437	0.0000733 (Q)	1.33	1.001
2,3,4,7,8-PECDF	J	0.000448	0.0000733 (Q)	1.36	1.000
1,2,3,4,7,8-HXCDF	K J	0.000113	0.0000733 (Q)	0.86	1.001
1,2,3,6,7,8-HXCDF	U		0.0000733 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000733 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000733 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000733 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000733 (Q)		
OCDF	U		0.0000733 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-18_Form1A_DX8M_124S29_SJ2450922.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB012
Sample Collection:
05-Sep-2018 11:50

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-18
Matrix:	TISSUE	**Sample Size:**	9.90 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 15:35:49	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 29**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	pg absolute	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1470	73.5	0.77	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1720	86.1	0.63	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1480	73.8	1.22	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1620	81.1	1.29	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1730	86.3	1.03	1.094
13C-OCDD		4000	2800	69.9	0.88	1.178
13C-2,3,7,8-TCDF		2000	1260	62.9	0.78	0.966
13C-1,2,3,7,8-PECDF		2000	1340	67.2	1.60	1.284
13C-2,3,4,7,8-PECDF		2000	1350	67.6	1.57	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1460	72.8	0.52	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1540	77.1	0.51	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1580	79.2	0.53	1.004
13C-2,3,4,6,7,8-HXCDF		2000	1530	76.7	0.53	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1710	85.3	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1700	85.0	0.43	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	26.6	66.5		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-18_Form2_DX8M_124S29_SJ2450922.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB012
Sample Collection:
05-Sep-2018 11:50

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-18
Matrix:	TISSUE	**Sample Size:**	9.90 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 04:18:39	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_175 S: 13**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_175 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	5.77

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00212	0.000213 (S)	0.80	1.002

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

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Report Filename: 1613_DIOXINS_1613DB225_L30042-18_Form1A_DB83_175S13_SJ2451349.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB045
Sample Collection:
07-Sep-2018 08:06

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-19
Matrix:	TISSUE	**Sample Size:**	9.94 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 16:31:02	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 30**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.05

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD		0.000455	0.0000737 (Q)	0.85	1.002
1,2,3,7,8-PECDD [4]	K J	0.000468	0.0000829 (S)	0.44	1.000
1,2,3,4,7,8-HXCDD	J	0.000100	0.0000737 (Q)	1.36	1.000
1,2,3,6,7,8-HXCDD	K J	0.000404	0.0000737 (Q)	0.82	1.000
1,2,3,7,8,9-HXCDD	U		0.0000737 (Q)		
1,2,3,4,6,7,8-HPCDD	J	0.000103	0.0000737 (Q)	0.92	1.000
OCDD	J	0.000213	0.0000737 (Q)	0.79	1.001
2,3,7,8-TCDF		0.00783	0.0000737 (Q)	0.74	1.001
1,2,3,7,8-PECDF		0.00395	0.0000737 (Q)	1.49	1.001
2,3,4,7,8-PECDF		0.00432	0.0000737 (Q)	1.53	1.001
1,2,3,4,7,8-HXCDF		0.00168	0.0000737 (Q)	1.28	1.001
1,2,3,6,7,8-HXCDF	J	0.000304	0.0000737 (Q)	1.11	1.000
1,2,3,7,8,9-HXCDF	U		0.0000737 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000737 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000737 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000737 (Q)		
OCDF	U		0.0000737 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; K = peak detected but did not meet quantification criteria, result reported represents the estimated maximum possible concentration; J = concentration less than lowest calibration equivalent.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-19_Form1A_DX8M_124S30_SJ2450923.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB045
Sample Collection:
07-Sep-2018 08:06

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-19
Matrix:	TISSUE	**Sample Size:**	9.94 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	18-Oct-2018 **Time:** 16:31:02	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_124 S: 30**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_124 S: 22
Concentration Units:	pg absolute	**% Lipid:**	6.05

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD		2000	1570	78.7	0.77	1.013
13C-1,2,3,7,8-PECDD [4]		2000	1760	88.0	0.62	1.383
13C-1,2,3,4,7,8-HXCDD		2000	1560	78.0	1.27	0.987
13C-1,2,3,6,7,8-HXCDD		2000	1650	82.6	1.23	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	1550	77.5	0.99	1.094
13C-OCDD		4000	2820	70.6	0.90	1.178
13C-2,3,7,8-TCDF		2000	1560	78.2	0.77	0.966
13C-1,2,3,7,8-PECDF		2000	1390	69.4	1.55	1.284
13C-2,3,4,7,8-PECDF		2000	1360	68.1	1.58	1.351
13C-1,2,3,4,7,8-HXCDF		2000	1550	77.6	0.53	0.954
13C-1,2,3,6,7,8-HXCDF		2000	1660	83.1	0.51	0.958
13C-1,2,3,7,8,9-HXCDF		2000	1600	79.9	0.52	1.005
13C-2,3,4,6,7,8-HXCDF		2000	1620	81.2	0.52	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	1490	74.6	0.46	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	1650	82.3	0.46	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	26.5	66.4		1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_L30042-19_Form2_DX8M_124S30_SJ2450923.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB045
Sample Collection:
07-Sep-2018 08:06

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE		
Contract No.:	4972	**Lab Sample I.D.:**	L30042-19
Matrix:	TISSUE	**Sample Size:**	9.94 g (wet)
Sample Receipt Date:	12-Sep-2018	**Initial Calibration Date:**	10-Jul-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 04:59:51	**GC Column ID:**	DB225
Extract Volume (uL):	20	**Sample Data Filename:**	**DB83_175 S: 14**
Injection Volume (uL):	2.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DB83_175 S: 2
Concentration Units:	ug/kg (wet weight basis)	**% Lipid:**	6.05

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDF		0.00725	0.000321 (S)	0.81	1.001

(1) Where applicable, custom lab flags have been used on this report.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB225_L30042-19_Form1A_DB83_175S14_SJ2451350.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 1A

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
Lab Blank
Sample Collection:
N/A

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	N/A		
Contract No.:	4972	**Lab Sample I.D.:**	WG65310-101
Matrix:	CANOLA OIL	**Sample Size:**	10.0 L
Sample Receipt Date:	N/A	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 01:25:21	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 35**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	ug/kg		

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

COMPOUND	LAB FLAG [1]	CONCENTRATION FOUND	REPORTING LIMIT (RL)[2]	ION ABUND. RATIO [3]	RRT [3]
2,3,7,8-TCDD	U		0.0000726 (Q)		
1,2,3,7,8-PECDD [4]	U		0.0000726 (Q)		
1,2,3,4,7,8-HXCDD	U		0.0000726 (Q)		
1,2,3,6,7,8-HXCDD	U		0.0000726 (Q)		
1,2,3,7,8,9-HXCDD	U		0.0000726 (Q)		
1,2,3,4,6,7,8-HPCDD	U		0.0000726 (Q)		
OCDD	U		0.0000726 (Q)		
2,3,7,8-TCDF	U		0.0000726 (Q)		
1,2,3,7,8-PECDF	U		0.0000726 (Q)		
2,3,4,7,8-PECDF	U		0.0000726 (Q)		
1,2,3,4,7,8-HXCDF	U		0.0000726 (Q)		
1,2,3,6,7,8-HXCDF	U		0.0000726 (Q)		
1,2,3,7,8,9-HXCDF	U		0.0000726 (Q)		
2,3,4,6,7,8-HXCDF	U		0.0000726 (Q)		
1,2,3,4,6,7,8-HPCDF	U		0.0000726 (Q)		
1,2,3,4,7,8,9-HPCDF	U		0.0000726 (Q)		
OCDF	U		0.0000726 (Q)		

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form1A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_WG65310-101_Form1A_DX8M_123S35_SJ2451062.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 2

PCDD/PCDF ANALYSIS REPORT

CLIENT SAMPLE NO.
Lab Blank
Sample Collection:
N/A

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Project No.	N/A		
Contract No.:	4972	**Lab Sample I.D.:**	WG65310-101
Matrix:	CANOLA OIL	**Sample Size:**	10.0 L
Sample Receipt Date:	N/A	**Initial Calibration Date:**	04-Jun-2018
Extraction Date:	25-Sep-2018	**Instrument ID:**	HR GC/MS
Analysis Date:	17-Oct-2018 **Time:** 01:25:21	**GC Column ID:**	DB5
Extract Volume (uL):	20	**Sample Data Filename:**	**DX8M_123 S: 35**
Injection Volume (uL):	1.0	**Blank Data Filename:**	DX8M_123 S: 35
Dilution Factor:	N/A	**Cal. Ver. Data Filename:**	DX8M_123 S: 31
Concentration Units:	pg absolute		

This page is part of a total report that contains information necessary for accreditation compliance.
Results are compliant with NELAP accreditation described in the total report. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG [1]	SPIKE CONC.	CONC. FOUND	R(%) [2]	ION ABUND. RATIO [3]	RRT [3]
13C-2,3,7,8-TCDD	V	2000	3350	167	0.79	1.013
13C-1,2,3,7,8-PECDD [4]		2000	2800	140	0.64	1.382
13C-1,2,3,4,7,8-HXCDD		2000	2810	141	1.25	0.987
13C-1,2,3,6,7,8-HXCDD	V	2000	3180	159	1.26	0.990
13C-1,2,3,4,6,7,8-HPCDD		2000	2290	114	1.01	1.095
13C-OCDD		4000	3650	91.3	0.91	1.179
13C-2,3,7,8-TCDF		2000	2950	147	0.77	0.966
13C-1,2,3,7,8-PECDF		2000	2870	144	1.52	1.284
13C-2,3,4,7,8-PECDF		2000	2470	124	1.55	1.350
13C-1,2,3,4,7,8-HXCDF		2000	2840	142	0.51	0.954
13C-1,2,3,6,7,8-HXCDF	V	2000	3220	161	0.52	0.958
13C-1,2,3,7,8,9-HXCDF		2000	2790	140	0.53	1.005
13C-2,3,4,6,7,8-HXCDF	V	2000	3060	153	0.51	0.980
13C-1,2,3,4,6,7,8-HPCDF		2000	2540	127	0.45	1.062
13C-1,2,3,4,7,8,9-HPCDF		2000	2300	115	0.45	1.104
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD		40.0	59.9	150		1.001

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.
(2) Contract-required limits for percent recovery (R) are specified in Section 9.3.3, Method 1613.
(3) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613. NOTE: There is no ion abundance ratio for 37Cl4-2,3,7,8-TCDD
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

For Axys Internal Use Only [XSL Template: Form2.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_1613DB5_WG65310-101_Form2_DX8M_123S35_SJ2451062.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.:	4972	**OPR Data Filename:**	**DX8M_123 S: 32**
Matrix:	CANOLA OIL	**Lab Sample I.D.:**	WG65310-102
Extraction Date:	25-Sep-2018	**Analysis Date:**	16-Oct-2018 **Time:** 22:42:34

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 20 uL EXTRACT VOLUME.

COMPOUND	LAB FLAG [1]	ION ABUND. RATIO [2]	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS [3] (ng/mL)	% RECOVERY
2,3,7,8-TCDD		0.81	10.0	8.94	6.70 - 15.8	89.4
1,2,3,7,8-PECDD [4]		0.61	50.0	49.9	35.0 - 71.0	99.9
1,2,3,4,7,8-HXCDD		1.23	50.0	48.7	35.0 - 82.0	97.5
1,2,3,6,7,8-HXCDD		1.17	50.0	51.4	38.0 - 67.0	103
1,2,3,7,8,9-HXCDD		1.20	50.0	51.3	32.0 - 81.0	103
1,2,3,4,6,7,8-HPCDD		1.02	50.0	50.1	35.0 - 70.0	100
OCDD		0.89	100	97.4	78.0 - 144	97.4
2,3,7,8-TCDF		0.85	10.0	10.3	7.50 - 15.8	103
1,2,3,7,8-PECDF		1.57	50.0	48.2	40.0 - 67.0	96.4
2,3,4,7,8-PECDF		1.52	50.0	49.7	34.0 - 80.0	99.4
1,2,3,4,7,8-HXCDF		1.28	50.0	49.0	36.0 - 67.0	98.0
1,2,3,6,7,8-HXCDF		1.24	50.0	50.1	42.0 - 65.0	100
1,2,3,7,8,9-HXCDF		1.24	50.0	51.3	39.0 - 65.0	103
2,3,4,6,7,8-HXCDF		1.23	50.0	50.7	35.0 - 78.0	101
1,2,3,4,6,7,8-HPCDF		1.07	50.0	51.5	41.0 - 61.0	103
1,2,3,4,7,8,9-HPCDF		1.02	50.0	47.3	39.0 - 69.0	94.5
OCDF		0.92	100	102	63.0 - 170	102

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required Ion Abundance Ratios are specified in Table 9, Method 1613.
(3) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under OPR.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

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Report Filename: 1613_DIOXINS_1613DB5_WG65310-102_Form8A_SJ2451057.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Contract No.: 4972 **OPR Data Filename:** **DX8M_123 S: 32**

Matrix: CANOLA OIL **Lab Sample I.D.:** WG65310-102

Extraction Date: 25-Sep-2018 **Analysis Date:** 16-Oct-2018 **Time:** 22:42:34

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON A 20 uL EXTRACT VOLUME.

LABELED COMPOUND	LAB FLAG [1]	ION ABUND. RATIO [2]	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS [3] (ng/mL)	% RECOVERY
13C-2,3,7,8-TCDD		0.79	100	72.2	20.0-175	72.2
13C-1,2,3,7,8-PECDD [4]		0.63	100	77.3	21.0-227	77.3
13C-1,2,3,4,7,8-HXCDD		1.23	100	72.0	21.0-193	72.0
13C-1,2,3,6,7,8-HXCDD		1.25	100	79.5	25.0-163	79.5
13C-1,2,3,4,6,7,8-HPCDD		1.04	100	58.2	26.0-166	58.2
13C-OCDD		0.87	200	83.3	26.0-397	41.6
13C-2,3,7,8-TCDF		0.77	100	69.8	22.0-152	69.8
13C-1,2,3,7,8-PECDF		1.56	100	67.1	21.0-192	67.1
13C-2,3,4,7,8-PECDF		1.62	100	63.3	13.0-328	63.3
13C-1,2,3,4,7,8-HXCDF		0.52	100	72.2	19.0-202	72.2
13C-1,2,3,6,7,8-HXCDF		0.54	100	81.6	21.0-159	81.6
13C-1,2,3,7,8,9-HXCDF		0.52	100	71.1	17.0-205	71.1
13C-2,3,4,6,7,8-HXCDF		0.52	100	74.6	22.0-176	74.6
13C-1,2,3,4,6,7,8-HPCDF		0.44	100	61.3	21.0-158	61.3
13C-1,2,3,4,7,8,9-HPCDF		0.48	100	61.8	20.0-186	61.8
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD			2.00	1.64	0.620-3.82	82.0

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required Ion Abundance Ratios are specified in Table 9, Method 1613.
(3) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. Labeled compound concentrations limits are based on required percent recovery (Section 15.5, Method 1613).
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Henry Huang_____

These pages are part of a larger report that may contain information necessary for full data evaluation. Results reported relate only to the sample tested.

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Report Filename: 1613_DIOXINS_1613DB5_WG65310-102_Form8B_SJ2451057.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3A
PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 04-Jun-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: DX8M_065C S: 1
CS1 Data Filename: DX8M_065C S: 3
CS2 Data Filename: DX8M_065C S: 4
CS3 Data Filename: DX8M_065C S: 7
CS4 Data Filename: DX8M_065C S: 6
CS5 Data Filename: DX8M_065C S: 5
CS6 Data Filename: N/A

		RELATIVE RESPONSE (RR)								
COMPOUND	**LAB FLAG [1]**	**CS0**	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CS6**	**MEAN RR**	**CV (%RSD)[2]**
2,3,7,8-TCDD		1.26	1.15	1.05	1.09	1.07	1.07		1.11	7.15
1,2,3,7,8-PECDD [3]		0.92	1.09	1.04	1.04	1.04	1.03		1.03	5.33
1,2,3,4,7,8-HXCDD		0.94	1.02	0.98	1.04	1.02	1.02		1.00	3.60
1,2,3,6,7,8-HXCDD		0.89	0.95	0.91	0.97	0.94	0.94		0.93	3.09
1,2,3,7,8,9-HXCDD [4]		1.02	0.96	0.93	0.99	0.97	0.95		0.97	3.34
1,2,3,4,6,7,8-HPCDD		1.02	0.97	0.98	0.99	1.01	1.00		1.00	2.04
OCDD		1.02	1.04	0.97	1.04	1.04	1.00		1.02	2.76
2,3,7,8-TCDF		0.93	0.88	0.90	0.94	0.93	0.91		0.91	2.43
1,2,3,7,8-PECDF		0.93	0.90	0.86	0.97	0.93	0.95		0.92	4.19
2,3,4,7,8-PECDF		0.95	0.93	0.92	0.94	0.95	0.95		0.94	1.39
1,2,3,4,7,8-HXCDF		1.09	1.14	1.05	1.13	1.14	1.13		1.12	3.26
1,2,3,6,7,8-HXCDF		1.08	1.06	1.01	1.06	1.07	1.10		1.06	2.74
1,2,3,7,8,9-HXCDF		0.95	1.02	0.98	1.02	1.01	1.02		1.00	2.99
2,3,4,6,7,8-HXCDF		1.10	1.12	1.11	1.19	1.16	1.16		1.14	3.17
1,2,3,4,6,7,8-HPCDF		1.16	1.28	1.21	1.24	1.23	1.22		1.22	3.38
1,2,3,4,7,8,9-HPCDF		1.24	1.27	1.23	1.28	1.25	1.24		1.25	1.37
OCDF [5]		1.12	1.23	1.14	1.25	1.31	1.32		1.23	6.84

(1) Where applicable, custom lab flags have been used on this report.
(2) For contract CV specifications, see Section 10.5.4, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(4) Response ratios are calculated relative to the labeled analogs of the other two HXCDDs (Section 17.1.2, Method 1613).
(5) Response ratios are calculated relative to the labeled analog of OCDD (Section 17.1.1, Method 1613).

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Kristen Bowes_____

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Report Filename: 1613_DIOXINS_04-Jun-2018_DX8M__Form3A_GS78277.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3B
PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 04-Jun-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: DX8M_065C S: 1
CS1 Data Filename: DX8M_065C S: 3
CS2 Data Filename: DX8M_065C S: 4
CS3 Data Filename: DX8M_065C S: 7
CS4 Data Filename: DX8M_065C S: 6
CS5 Data Filename: DX8M_065C S: 5
CS6 Data Filename: N/A

		RELATIVE RESPONSE (RR)								
LABELED COMPOUND	**LAB FLAG [1]**	**CS0**	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CS6**	**MEAN RR**	**CV (%RSD)[2]**
13C-2,3,7,8-TCDD		1.04	0.95	0.99	1.00	1.00	1.05		1.00	3.74
13C-1,2,3,7,8-PECDD [3]		0.68	0.61	0.64	0.62	0.64	0.75		0.66	8.04
13C-1,2,3,4,7,8-HXCDD		1.05	0.96	0.96	0.95	0.98	1.00		0.98	3.74
13C-1,2,3,6,7,8-HXCDD		1.07	1.02	1.01	1.03	1.04	1.07		1.04	2.53
13C-1,2,3,4,6,7,8-HPCDD		0.88	0.78	0.80	0.79	0.80	0.83		0.81	4.34
13C-OCDD		0.78	0.64	0.67	0.67	0.69	0.84		0.72	10.4
13C-2,3,7,8-TCDF		1.68	1.56	1.60	1.60	1.59	1.66		1.61	2.83
13C-1,2,3,7,8-PECDF		1.20	1.07	1.13	1.11	1.15	1.33		1.16	7.84
13C-2,3,4,7,8-PECDF		1.15	1.03	1.08	1.07	1.10	1.31		1.12	8.87
13C-1,2,3,4,7,8-HXCDF		1.35	1.25	1.26	1.25	1.27	1.29		1.28	2.93
13C-1,2,3,6,7,8-HXCDF		1.42	1.33	1.34	1.35	1.35	1.39		1.36	2.30
13C-1,2,3,7,8,9-HXCDF		1.28	1.17	1.19	1.16	1.19	1.23		1.20	3.61
13C-2,3,4,6,7,8-HXCDF		1.28	1.20	1.21	1.18	1.21	1.24		1.22	2.95
13C-1,2,3,4,6,7,8-HPCDF		1.09	0.99	0.98	0.99	1.01	1.05		1.02	3.89
13C-1,2,3,4,7,8,9-HPCDF		0.86	0.77	0.77	0.75	0.78	0.84		0.79	5.44
CLEANUP STANDARD										
37CL-2,3,7,8-TCDD		1.06	1.27	1.07	1.07	1.07	1.13		1.11	7.11

(1) Where applicable, custom lab flags have been used on this report.
(2) For contract CV specifications, see Section 10.5.4, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Kristen Bowes_____

For Axys Internal Use Only [XSL Template: Form3B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_04-Jun-2018_DX8M__Form3B_GS78277.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3C
PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 04-Jun-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: DX8M_065C S: 1
CS1 Data Filename: DX8M_065C S: 3
CS2 Data Filename: DX8M_065C S: 4
CS3 Data Filename: DX8M_065C S: 7
CS4 Data Filename: DX8M_065C S: 6
CS5 Data Filename: DX8M_065C S: 5
CS6 Data Filename: N/A

COMPOUND	LAB FLAG [1]	M/Z's FORMING RATIO [2]	ION ABUNDANCE RATIO CS0	CS1	CS2	CS3	CS4	CS5	CS6	QC LIMITS[3]
2,3,7,8-TCDD		**M/M+2**	0.77	0.82	0.70	0.79	0.79	0.78		0.65-0.89
1,2,3,7,8-PECDD [4]		**M/M+2**	0.53	0.64	0.59	0.64	0.62	0.62		0.52-0.70
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.19	1.27	1.28	1.22	1.24	1.25		1.05-1.43
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.41	1.20	1.19	1.27	1.22	1.22		1.05-1.43
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.35	1.25	1.24	1.23	1.23		1.05-1.43
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.02	1.00	1.01	1.03	1.06	1.04		0.88-1.20
OCDD		**M+2/M+4**	0.84	0.95	0.89	0.87	0.87	0.87		0.76-1.02
2,3,7,8-TCDF		**M/M+2**	0.82	0.67	0.76	0.71	0.77	0.77		0.65-0.89
1,2,3,7,8-PECDF		**M+2/M+4**	1.49	1.49	1.42	1.44	1.48	1.47		1.32-1.78
2,3,4,7,8-PECDF		**M+2/M+4**	1.53	1.41	1.45	1.45	1.50	1.47		1.32-1.78
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.36	1.15	1.10	1.17	1.18	1.18		1.05-1.43
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.27	1.07	1.21	1.17	1.18	1.19		1.05-1.43
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.20	1.13	1.21	1.18	1.19	1.20		1.05-1.43
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.26	1.16	1.16	1.19	1.17	1.19		1.05-1.43
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.01	0.98	0.98	1.00	0.96	1.01		0.88-1.20
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.02	0.92	0.99	1.01	0.97	1.02		0.88-1.20
OCDF		**M+2/M+4**	0.91	0.79	0.84	0.86	0.89	0.89		0.76-1.02

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits from Table 9, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Kristen Bowes_____

For Axys Internal Use Only [XSL Template: Form3C.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_04-Jun-2018_DX8M__Form3C_GS78277.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3D
PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 04-Jun-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: DX8M_065C S: 1
CS1 Data Filename: DX8M_065C S: 3
CS2 Data Filename: DX8M_065C S: 4
CS3 Data Filename: DX8M_065C S: 7
CS4 Data Filename: DX8M_065C S: 6
CS5 Data Filename: DX8M_065C S: 5
CS6 Data Filename: N/A

LABELED COMPOUND	LAB FLAG[1]	M/Z's FORMING RATIO [2]	ION ABUNDANCE RATIO CS0	CS1	CS2	CS3	CS4	CS5	CS6	QC LIMITS[3]
13C-2,3,7,8-TCDD		**M/M+2**	0.79	0.78	0.79	0.77	0.76	0.82		0.65-0.89
13C-1,2,3,7,8-PECDD [4]		**M/M+2**	0.66	0.66	0.67	0.65	0.66	0.67		0.52-0.70
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.27	1.25	1.27	1.24	1.26	1.26		1.05-1.43
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.23	1.22	1.22	1.22	1.21	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.01	1.03	0.99	1.01	1.03	1.05		0.88-1.20
13C-OCDD		**M+2/M+4**	0.88	0.92	0.87	0.90	0.86	0.89		0.76-1.02
13C-2,3,7,8-TCDF		**M/M+2**	0.77	0.78	0.77	0.77	0.78	0.74		0.65-0.89
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.56	1.55	1.57	1.51	1.57	1.54		1.32-1.78
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.54	1.56	1.54	1.56	1.56	1.54		1.32-1.78
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.50	0.53	0.52	0.52	0.52	0.52		0.43-0.59
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.52	0.53	0.52	0.52	0.53	0.51		0.43-0.59
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.52	0.52	0.52	0.53	0.53	0.52		0.43-0.59
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.51	0.52	0.54	0.53	0.54	0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.46	0.46	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.47	0.45	0.47	0.46	0.46	0.44		0.37-0.51

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits from Table 9, Method 1613.
(4) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Kristen Bowes_____

For Axys Internal Use Only [XSL Template: Form3D.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_04-Jun-2018_DX8M__Form3D_GS78277.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_065C S: 7	**Analysis Date:**	05-Jun-2018	**Time:** 00:06:54
DB-5 IS Data Filename:	DX8M_065C S: 7	**Analysis Date:**	05-Jun-2018	**Time:** 00:06:54
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:57	**1,3,6,8-TCDF (F)**	21:25
1,2,8,9-TCDD (L)	28:19	**1,2,8,9-TCDF (L)**	28:09
1,2,4,7,9-PECDD (F)	32:04	**1,3,4,6,8-PECDF (F)**	28:52
1,2,3,8,9-PECDD (L)	37:04	**1,2,3,8,9-PECDF (L)**	37:07
1,2,4,6,7,9-HXCDD (F)	40:03	**1,2,3,4,6,8-HXCDF (F)**	39:00
1,2,3,4,6,7-HXCDD (L)	42:40	**1,2,3,4,8,9-HXCDF (L)**	43:00
1,2,3,4,6,7,9-HPCDD (F)	45:47	**1,2,3,4,6,7,8-HPCDF (F)**	45:18
1,2,3,4,6,7,8-HPCDD (L)	46:42	**1,2,3,4,7,8,9-HPCDF (L)**	47:06

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	6
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Leanne Henley_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DX8M_065CS7_Form5_SJ2388667.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3A
PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 10-Jul-2018

Instrument ID: HR GC/MS

GC Column ID: DB225

CS0 Data Filename: DB83_121 S: 4
CS1 Data Filename: DB83_121 S: 3
CS2 Data Filename: DB83_121 S: 2
CS3 Data Filename: DB83_121 S: 7
CS4 Data Filename: DB83_121 S: 6
CS5 Data Filename: DB83_121 S: 5
CS6 Data Filename: N/A

		RELATIVE RESPONSE (RR)								
COMPOUND	**LAB FLAG [1]**	**CS0**	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CS6**	**MEAN RR**	**CV (%RSD)[2]**
1,2,3,7,8,9-HXCDD		0.82	0.89	0.85	0.97	0.99	1.00		0.92	8.53
2,3,7,8-TCDF		0.93	0.91	0.89	1.04	1.03	1.01		0.97	7.11

(1) Where applicable, custom lab flags have been used on this report.
(2) For contract CV specifications, see Section 10.5.4, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Bjorn Arvi_____

For Axys Internal Use Only [XSL Template: Form3A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_10-Jul-2018_DB83__Form3A_GS78273.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 3C

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date: 10-Jul-2018

Instrument ID: HR GC/MS

GC Column ID: DB225

CS0 Data Filename: DB83_121 S: 4

CS1 Data Filename: DB83_121 S: 3

CS2 Data Filename: DB83_121 S: 2

CS3 Data Filename: DB83_121 S: 7

CS4 Data Filename: DB83_121 S: 6

CS5 Data Filename: DB83_121 S: 5

CS6 Data Filename: N/A

			ION ABUNDANCE RATIO							
COMPOUND	**LAB FLAG [1]**	**M/Z's FORMING RATIO [2]**	**CS0**	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CS6**	**QC LIMITS[3]**
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.25	1.29	1.26	1.26	1.25	1.25		1.05-1.43
2,3,7,8-TCDF		**M/M+2**	0.88	0.81	0.78	0.78	0.78	0.78		0.65-0.89

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits from Table 9, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Bjorn Arvi_____

For Axys Internal Use Only [XSL Template: Form3C.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_10-Jul-2018_DB83__Form3C_GS78273.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		10-Jul-2018
RT Window Data Filename:		**Analysis Date:**		**Time:**
DB-5 IS Data Filename:		**Analysis Date:**		**Time:**
DB-225 IS Data Filename:	DB83_121 S: 1	**Analysis Date:**	10-Jul-2018	**Time:** 15:40:53

DB225 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	N/A	**1,3,6,8-TCDF (F)**	N/A
1,2,8,9-TCDD (L)	N/A	**1,2,8,9-TCDF (L)**	N/A
1,2,4,7,9-PECDD (F)	N/A	**1,3,4,6,8-PECDF (F)**	N/A
1,2,3,8,9-PECDD (L)	N/A	**1,2,3,8,9-PECDF (L)**	N/A
1,2,4,6,7,9-HXCDD (F)	N/A	**1,2,3,4,6,8-HXCDF (F)**	N/A
1,2,3,4,6,7-HXCDD (L)	N/A	**1,2,3,4,8,9-HXCDF (L)**	N/A
1,2,3,4,6,7,9-HPCDD (F)	N/A	**1,2,3,4,6,7,8-HPCDF (F)**	N/A
1,2,3,4,6,7,8-HPCDD (L)	N/A	**1,2,3,4,7,8,9-HPCDF (L)**	N/A

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	N/A	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	N/A
1,2,7,8-TCDD **1,4,7,8-TCDD**	N/A	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	3
1,4,7,8-TCDD **1,2,3,7-TCDD**	N/A	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	5
1,2,3,7-TCDD **1,2,3,8-TCDD**	N/A		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Brian Watson_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_173 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	15-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	21:05:22

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.05-1.43	49.9	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	10.0	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_173S2__Form4A_SJ2451302.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_173 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	15-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	21:05:22

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.064	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_173S2__Form6A_SJ2451302.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_173 S: 17
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	07:23:22

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.05-1.43	49.3	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	9.87	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_173S17__Form4A_SJ2451318.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_173 S: 17
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	07:23:22

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.064	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.002	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_173S17__Form6A_SJ2451318.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		10-Jul-2018
RT Window Data Filename:		**Analysis Date:**		**Time:**
DB-5 IS Data Filename:		**Analysis Date:**		**Time:**
DB-225 IS Data Filename:	DB83_173 S: 1	**Analysis Date:**	15-Oct-2018	**Time:** 20:24:11

DB225 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	N/A	**1,3,6,8-TCDF (F)**	N/A
1,2,8,9-TCDD (L)	N/A	**1,2,8,9-TCDF (L)**	N/A
1,2,4,7,9-PECDD (F)	N/A	**1,3,4,6,8-PECDF (F)**	N/A
1,2,3,8,9-PECDD (L)	N/A	**1,2,3,8,9-PECDF (L)**	N/A
1,2,4,6,7,9-HXCDD (F)	N/A	**1,2,3,4,6,8-HXCDF (F)**	N/A
1,2,3,4,6,7-HXCDD (L)	N/A	**1,2,3,4,8,9-HXCDF (L)**	N/A
1,2,3,4,6,7,9-HPCDD (F)	N/A	**1,2,3,4,6,7,8-HPCDF (F)**	N/A
1,2,3,4,6,7,8-HPCDD (L)	N/A	**1,2,3,4,7,8,9-HPCDF (L)**	N/A

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	N/A	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	N/A
1,2,7,8-TCDD **1,4,7,8-TCDD**	N/A	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	6
1,4,7,8-TCDD **1,2,3,7-TCDD**	N/A	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	11
1,2,3,7-TCDD **1,2,3,8-TCDD**	N/A		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DB83_173S1_Form5_SJ2451299.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_174A S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	12:19:41

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.05-1.43	48.3	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	9.81	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_174AS2__Form4A_SJ2451320.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_174A S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	12:19:41

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.063	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_174AS2__Form6A_SJ2451320.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_174A S: 12
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	19:13:04

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.05-1.43	46.8	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	9.69	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_174AS12__Form4A_SJ2451330.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_174A S: 12
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	19:13:04

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.064	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.002	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_174AS12__Form6A_SJ2451330.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		10-Jul-2018
RT Window Data Filename:		**Analysis Date:**		**Time:**
DB-5 IS Data Filename:		**Analysis Date:**		**Time:**
DB-225 IS Data Filename:	DB83_174A S: 1	**Analysis Date:**	16-Oct-2018	**Time:** 11:38:33

DB225 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	N/A	**1,3,6,8-TCDF (F)**	N/A
1,2,8,9-TCDD (L)	N/A	**1,2,8,9-TCDF (L)**	N/A
1,2,4,7,9-PECDD (F)	N/A	**1,3,4,6,8-PECDF (F)**	N/A
1,2,3,8,9-PECDD (L)	N/A	**1,2,3,8,9-PECDF (L)**	N/A
1,2,4,6,7,9-HXCDD (F)	N/A	**1,2,3,4,6,8-HXCDF (F)**	N/A
1,2,3,4,6,7-HXCDD (L)	N/A	**1,2,3,4,8,9-HXCDF (L)**	N/A
1,2,3,4,6,7,9-HPCDD (F)	N/A	**1,2,3,4,6,7,8-HPCDF (F)**	N/A
1,2,3,4,6,7,8-HPCDD (L)	N/A	**1,2,3,4,7,8,9-HPCDF (L)**	N/A

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	N/A	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	N/A
1,2,7,8-TCDD **1,4,7,8-TCDD**	N/A	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	7
1,4,7,8-TCDD **1,2,3,7-TCDD**	N/A	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	13
1,2,3,7-TCDD **1,2,3,8-TCDD**	N/A		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DB83_174AS1_Form5_SJ2451300.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_175 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	20:40:22

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.30	1.05-1.43	47.5	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	9.01	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Leanne Henley_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_175S2__Form4A_SJ2449423.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_175 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	20:40:22

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.064	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Leanne Henley_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_175S2__Form6A_SJ2449423.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_175 S: 15
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	05:41:03

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.19	1.05-1.43	48.6	41 - 61
2,3,7,8-TCDF		**M/M+2**	0.76	0.65-0.89	8.88	8.4 - 12

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51;
Report Filename: 1613_DIOXINS_DB83_175S15__Form4A_SJ2451351.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	10-Jul-2018	**VER Data Filename:**	DB83_175 S: 15
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB225	**Analysis Time:**	05:41:03

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.063	1.052-1.075
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.002	0.999-1.003

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DB83_175S15__Form6A_SJ2451351.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		10-Jul-2018	
RT Window Data Filename:		**Analysis Date:**		**Time:**	
DB-5 IS Data Filename:		**Analysis Date:**		**Time:**	
DB-225 IS Data Filename:	DB83_175 S: 1	**Analysis Date:**	16-Oct-2018	**Time:**	19:59:11

DB225 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	N/A	**1,3,6,8-TCDF (F)**	N/A
1,2,8,9-TCDD (L)	N/A	**1,2,8,9-TCDF (L)**	N/A
1,2,4,7,9-PECDD (F)	N/A	**1,3,4,6,8-PECDF (F)**	N/A
1,2,3,8,9-PECDD (L)	N/A	**1,2,3,8,9-PECDF (L)**	N/A
1,2,4,6,7,9-HXCDD (F)	N/A	**1,2,3,4,6,8-HXCDF (F)**	N/A
1,2,3,4,6,7-HXCDD (L)	N/A	**1,2,3,4,8,9-HXCDF (L)**	N/A
1,2,3,4,6,7,9-HPCDD (F)	N/A	**1,2,3,4,6,7,8-HPCDF (F)**	N/A
1,2,3,4,6,7,8-HPCDD (L)	N/A	**1,2,3,4,7,8,9-HPCDF (L)**	N/A

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	N/A	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	N/A
1,2,7,8-TCDD **1,4,7,8-TCDD**	N/A	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	9
1,4,7,8-TCDD **1,2,3,7-TCDD**	N/A	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	16
1,2,3,7-TCDD **1,2,3,8-TCDD**	N/A		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Leanne Henley_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:37:06; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DB83_175S1_Form5_SJ2449474.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:38:16

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.76	0.65-0.89	9.79	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.61	0.52-0.70	49.7	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.29	1.05-1.43	52.4	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.20	1.05-1.43	50.9	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.23	1.05-1.43	48.6	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.01	0.88-1.20	49.5	43 - 58
OCDD		**M+2/M+4**	0.86	0.76-1.02	100	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	11.1	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.58	1.32-1.78	52.1	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	50.9	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.26	1.05-1.43	52.8	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	52.9	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.21	1.05-1.43	45.5	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.22	1.05-1.43	52.3	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.02	0.88-1.20	50.5	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.07	0.88-1.20	51.6	43 - 58
OCDF		**M+2/M+4**	0.92	0.76-1.02	106	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_123S31__Form4A_SJ2451054.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:38:16

LABELED COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
13C-2,3,7,8-TCDD		**M/M+2**	0.78	0.65-0.89	104	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.64	0.52-0.70	81.9	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.28	1.05-1.43	90.6	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.30	1.05-1.43	110	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.03	0.88-1.20	78.6	72 - 138
13C-OCDD		**M+2/M+4**	0.89	0.76-1.02	129	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.76	0.65-0.89	95.2	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	84.6	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	84.5	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	97.3	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	110	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.54	0.43-0.59	93.0	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.54	0.43-0.59	102	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.44	0.37-0.51	80.1	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.45	0.37-0.51	77.8	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.64	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_123S31__Form4B_SJ2451054.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:38:16

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.001	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.011	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.000	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.000	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.000	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_123S31__Form6A_SJ2451054.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	16-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:38:16

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.382	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.094	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.178	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.283	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.350	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.005	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 43
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:46:24

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.78	0.65-0.89	10.4	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.63	0.52-0.70	51.1	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.22	1.05-1.43	50.2	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.21	1.05-1.43	52.6	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.19	1.05-1.43	50.3	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	0.99	0.88-1.20	49.2	43 - 58
OCDD		**M+2/M+4**	0.87	0.76-1.02	102	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	10.2	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.52	1.32-1.78	51.6	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.55	1.32-1.78	52.0	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	53.1	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	52.2	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.30	1.05-1.43	45.7	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	54.6	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.05	0.88-1.20	50.6	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.08	0.88-1.20	50.3	43 - 58
OCDF		**M+2/M+4**	0.89	0.76-1.02	107	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 43
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:46:24

LABELED COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
13C-2,3,7,8-TCDD		**M/M+2**	0.79	0.65-0.89	98.2	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	77.8	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.25	1.05-1.43	89.1	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.19	1.05-1.43	108	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.08	0.88-1.20	80.5	72 - 138
13C-OCDD		**M+2/M+4**	0.92	0.76-1.02	133	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	98.4	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	82.4	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	83.6	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.51	0.43-0.59	94.7	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.51	0.43-0.59	107	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.51	0.43-0.59	93.4	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	95.3	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.43	0.37-0.51	86.9	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.46	0.37-0.51	79.4	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.88	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 43
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:46:24

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.002	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.000	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.001	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.000	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.000	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_123 S: 43
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:46:24

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.382	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.095	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.179	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.284	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.005	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_123 S: 31	**Analysis Date:**	16-Oct-2018	**Time:** 21:38:16
DB-5 IS Data Filename:	DX8M_123 S: 31	**Analysis Date:**	16-Oct-2018	**Time:** 21:38:16
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:58	**1,3,6,8-TCDF (F)**	21:26
1,2,8,9-TCDD (L)	28:20	**1,2,8,9-TCDF (L)**	28:11
1,2,4,7,9-PECDD (F)	32:03	**1,3,4,6,8-PECDF (F)**	28:53
1,2,3,8,9-PECDD (L)	37:03	**1,2,3,8,9-PECDF (L)**	37:07
1,2,4,6,7,9-HXCDD (F)	40:01	**1,2,3,4,6,8-HXCDF (F)**	38:59
1,2,3,4,6,7-HXCDD (L)	42:41	**1,2,3,4,8,9-HXCDF (L)**	43:01
1,2,3,4,6,7,9-HPCDD (F)	45:48	**1,2,3,4,6,7,8-HPCDF (F)**	45:20
1,2,3,4,6,7,8-HPCDD (L)	46:42	**1,2,3,4,7,8,9-HPCDF (L)**	47:07

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	22
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	12:28:38

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.81	0.65-0.89	9.98	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.63	0.52-0.70	49.7	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.20	1.05-1.43	50.5	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.25	1.05-1.43	51.7	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.24	1.05-1.43	49.2	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	0.98	0.88-1.20	48.8	43 - 58
OCDD		**M+2/M+4**	0.89	0.76-1.02	97.9	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.72	0.65-0.89	10.6	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.50	1.32-1.78	52.1	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	51.3	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.25	1.05-1.43	52.7	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.25	1.05-1.43	52.5	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.22	1.05-1.43	50.7	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.23	1.05-1.43	53.0	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	0.97	0.88-1.20	50.8	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.02	0.88-1.20	51.0	43 - 58
OCDF		**M+2/M+4**	0.91	0.76-1.02	99.8	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	12:28:38

LABELED COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
13C-2,3,7,8-TCDD		**M/M+2**	0.78	0.65-0.89	95.3	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	77.8	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.23	1.05-1.43	98.1	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.21	1.05-1.43	106	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.08	0.88-1.20	86.0	72 - 138
13C-OCDD		**M+2/M+4**	0.85	0.76-1.02	159	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	96.9	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	81.3	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	82.2	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	104	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.51	0.43-0.59	108	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.55	0.43-0.59	93.4	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.54	0.43-0.59	102	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.45	0.37-0.51	88.3	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.45	0.37-0.51	85.4	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.53	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S2__Form4B_SJ2451013.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	12:28:38

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.000	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.000	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.001	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.001	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.000	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.000	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 2
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	12:28:38

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.382	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.095	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.179	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.965	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.284	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.350	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.005	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 10
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:31:58

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.80	0.65-0.89	10.1	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.63	0.52-0.70	50.6	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.24	1.05-1.43	51.2	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.29	1.05-1.43	51.3	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.26	1.05-1.43	50.9	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.04	0.88-1.20	50.5	43 - 58
OCDD		**M+2/M+4**	0.88	0.76-1.02	101	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	10.5	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	53.7	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.55	1.32-1.78	51.1	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.22	1.05-1.43	53.8	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	53.1	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.24	1.05-1.43	50.2	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.23	1.05-1.43	51.9	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.01	0.88-1.20	53.8	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	0.99	0.88-1.20	51.6	43 - 58
OCDF		**M+2/M+4**	0.91	0.76-1.02	104	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S10__Form4A_SJ2450989.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 10
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:31:58

	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
LABELED COMPOUND						
13C-2,3,7,8-TCDD		**M/M+2**	0.77	0.65-0.89	96.0	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.65	0.52-0.70	85.1	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.28	1.05-1.43	94.8	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.19	1.05-1.43	101	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.11	0.88-1.20	85.4	72 - 138
13C-OCDD		**M+2/M+4**	0.91	0.76-1.02	177	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	91.6	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	86.0	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	86.8	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.51	0.43-0.59	93.1	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	99.3	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.55	0.43-0.59	95.7	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	99.6	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.45	0.37-0.51	86.7	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.44	0.37-0.51	91.4	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.52	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S10__Form4B_SJ2450989.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 10
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:31:58

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.001	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.000	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.001	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.001	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S10__Form6A_SJ2450989.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 10
Instrument ID:	HR GC/MS	**Analysis Date:**	17-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	21:31:58

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.382	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.094	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.178	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.284	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.004	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 22
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:48:46

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.77	0.65-0.89	9.78	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	50.9	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.22	1.05-1.43	50.4	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.22	1.05-1.43	50.9	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.20	1.05-1.43	49.3	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.06	0.88-1.20	50.4	43 - 58
OCDD		**M+2/M+4**	0.88	0.76-1.02	99.9	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.75	0.65-0.89	10.6	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	52.4	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.58	1.32-1.78	51.5	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.23	1.05-1.43	54.1	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.26	1.05-1.43	53.1	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.22	1.05-1.43	50.5	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.20	1.05-1.43	53.2	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.03	0.88-1.20	51.5	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.02	0.88-1.20	51.3	43 - 58
OCDF		**M+2/M+4**	0.91	0.76-1.02	102	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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Report Filename: 1613_DIOXINS_DX8M_124S22__Form4A_SJ2450916.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 22
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:48:46

LABELED COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
13C-2,3,7,8-TCDD		**M/M+2**	0.80	0.65-0.89	94.1	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	83.0	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.23	1.05-1.43	99.4	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.24	1.05-1.43	106	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.03	0.88-1.20	94.6	72 - 138
13C-OCDD		**M+2/M+4**	0.89	0.76-1.02	204	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	92.1	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	85.3	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.53	1.32-1.78	84.8	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	95.2	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	104	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.55	0.43-0.59	98.2	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	103	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.45	0.37-0.51	96.7	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.46	0.37-0.51	98.4	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.05	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S22__Form4B_SJ2450916.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 22
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:48:46

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.000	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.001	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.000	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 22
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	08:48:46

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.383	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.095	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.179	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.284	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.005	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S22__Form6B_SJ2450916.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	17:26:16

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.78	0.65-0.89	9.60	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.64	0.52-0.70	50.6	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.20	1.05-1.43	50.8	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.22	1.05-1.43	50.9	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.26	1.05-1.43	51.8	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.00	0.88-1.20	48.7	43 - 58
OCDD		**M+2/M+4**	0.89	0.76-1.02	100	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	10.7	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.56	1.32-1.78	53.0	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.55	1.32-1.78	52.4	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	53.8	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	52.7	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.22	1.05-1.43	51.6	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.22	1.05-1.43	52.7	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.02	0.88-1.20	53.4	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.03	0.88-1.20	51.7	43 - 58
OCDF		**M+2/M+4**	0.90	0.76-1.02	106	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4A.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S31__Form4A_SJ2450924.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	17:26:16

LABELED COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
13C-2,3,7,8-TCDD		**M/M+2**	0.78	0.65-0.89	97.7	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.63	0.52-0.70	83.3	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.25	1.05-1.43	94.5	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.24	1.05-1.43	102	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.03	0.88-1.20	91.7	72 - 138
13C-OCDD		**M+2/M+4**	0.91	0.76-1.02	205	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.80	0.65-0.89	96.7	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	83.7	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	84.4	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	92.6	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	101	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.53	0.43-0.59	96.1	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	98.7	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.45	0.37-0.51	92.7	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.42	0.37-0.51	101	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.34	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S31__Form4B_SJ2450924.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	17:26:16

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.000	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.001	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.000	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 31
Instrument ID:	HR GC/MS	**Analysis Date:**	18-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	17:26:16

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.383	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.095	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.179	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.284	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.005	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 59
Instrument ID:	HR GC/MS	**Analysis Date:**	19-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	19:36:50

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.82	0.65-0.89	9.25	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	47.7	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.26	1.05-1.43	52.7	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.19	1.05-1.43	52.9	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.20	1.05-1.43	53.8	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.02	0.88-1.20	52.6	43 - 58
OCDD		**M+2/M+4**	0.89	0.76-1.02	103	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.77	0.65-0.89	10.9	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	49.9	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.58	1.32-1.78	50.0	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.22	1.05-1.43	53.9	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.21	1.05-1.43	52.3	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.22	1.05-1.43	50.4	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.25	1.05-1.43	51.7	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.05	0.88-1.20	51.3	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.03	0.88-1.20	51.7	43 - 58
OCDF		**M+2/M+4**	0.90	0.76-1.02	111	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 59
Instrument ID:	HR GC/MS	**Analysis Date:**	19-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	19:36:50

	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
LABELED COMPOUND						
13C-2,3,7,8-TCDD		**M/M+2**	0.75	0.65-0.89	103	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	94.3	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.22	1.05-1.43	90.9	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.28	1.05-1.43	102	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.04	0.88-1.20	89.8	72 - 138
13C-OCDD		**M+2/M+4**	0.90	0.76-1.02	174	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.80	0.65-0.89	94.7	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	99.6	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.52	1.32-1.78	96.8	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.51	0.43-0.59	93.3	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	103	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.54	0.43-0.59	97.0	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	101	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.46	0.37-0.51	92.4	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.44	0.37-0.51	94.2	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.31	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form4B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S59__Form4B_SJ2453362.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 59
Instrument ID:	HR GC/MS	**Analysis Date:**	19-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	19:36:50

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.000	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.001	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.011	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.001	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.000	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.001	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 59
Instrument ID:	HR GC/MS	**Analysis Date:**	19-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	19:36:50

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.383	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.094	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.178	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.283	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.004	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: Form6B.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS_DX8M_124S59__Form6B_SJ2453362.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 4A
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 71
Instrument ID:	HR GC/MS	**Analysis Date:**	20-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	06:48:00

COMPOUND	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
2,3,7,8-TCDD		**M/M+2**	0.81	0.65-0.89	10.1	7.8 - 12.9
1,2,3,7,8-PECDD [5]		**M/M+2**	0.62	0.52-0.70	49.2	39 - 65
1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.24	1.05-1.43	51.3	39 - 64
1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.25	1.05-1.43	52.0	39 - 64
1,2,3,7,8,9-HXCDD		**M+2/M+4**	1.23	1.05-1.43	50.6	41 - 61
1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.13	0.88-1.20	47.0	43 - 58
OCDD		**M+2/M+4**	0.89	0.76-1.02	101	79 - 126
2,3,7,8-TCDF		**M/M+2**	0.79	0.65-0.89	10.6	8.4 - 12
1,2,3,7,8-PECDF		**M+2/M+4**	1.55	1.32-1.78	52.8	41 - 60
2,3,4,7,8-PECDF		**M+2/M+4**	1.54	1.32-1.78	52.3	41 - 61
1,2,3,4,7,8-HXCDF		**M+2/M+4**	1.25	1.05-1.43	54.0	45 - 56
1,2,3,6,7,8-HXCDF		**M+2/M+4**	1.24	1.05-1.43	52.7	44 - 57
1,2,3,7,8,9-HXCDF		**M+2/M+4**	1.23	1.05-1.43	49.5	45 - 56
2,3,4,6,7,8-HXCDF		**M+2/M+4**	1.20	1.05-1.43	52.5	44 - 57
1,2,3,4,6,7,8-HPCDF		**M+2/M+4**	1.02	0.88-1.20	52.1	45 - 55
1,2,3,4,7,8,9-HPCDF		**M+2/M+4**	1.04	0.88-1.20	51.6	43 - 58
OCDF		**M+2/M+4**	0.91	0.76-1.02	107	63 - 159

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 4B
PCDD/PCDF CALIBRATION VERIFICATION

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 71
Instrument ID:	HR GC/MS	**Analysis Date:**	20-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	06:48:00

	LAB FLAG [1]	MZ's FORMING RATIO [2]	ION ABUND. RATIO	QC LIMITS [3]	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL) [4]
LABELED COMPOUND						
13C-2,3,7,8-TCDD		**M/M+2**	0.80	0.65-0.89	98.9	82 - 121
13C-1,2,3,7,8-PECDD [5]		**M/M+2**	0.64	0.52-0.70	90.6	62 - 160
13C-1,2,3,4,7,8-HXCDD		**M+2/M+4**	1.28	1.05-1.43	97.2	85 - 117
13C-1,2,3,6,7,8-HXCDD		**M+2/M+4**	1.27	1.05-1.43	107	85 - 118
13C-1,2,3,4,6,7,8-HPCDD		**M+2/M+4**	1.00	0.88-1.20	88.9	72 - 138
13C-OCDD		**M+2/M+4**	0.89	0.76-1.02	161	96 - 415
13C-2,3,7,8-TCDF		**M/M+2**	0.78	0.65-0.89	97.4	71 - 140
13C-1,2,3,7,8-PECDF		**M+2/M+4**	1.57	1.32-1.78	96.6	76 - 130
13C-2,3,4,7,8-PECDF		**M+2/M+4**	1.55	1.32-1.78	94.3	77 - 130
13C-1,2,3,4,7,8-HXCDF		**M/M+2**	0.53	0.43-0.59	96.8	76 - 131
13C-1,2,3,6,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	107	70 - 143
13C-1,2,3,7,8,9-HXCDF		**M/M+2**	0.51	0.43-0.59	100	74 - 135
13C-2,3,4,6,7,8-HXCDF		**M/M+2**	0.52	0.43-0.59	105	73 - 137
13C-1,2,3,4,6,7,8-HPCDF		**M/M+2**	0.45	0.37-0.51	90.2	78 - 129
13C-1,2,3,4,7,8,9-HPCDF		**M/M+2**	0.46	0.37-0.51	94.0	77 - 129
CLEANUP STANDARD						
37CL-2,3,7,8-TCDD [6]					9.48	7.9 - 12.7

(1) Where applicable, custom lab flags have been used on this report.
(2) See Table 8, Method 1613, for m/z specifications.
(3) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
(4) Contract-required concentration range as determined from the percent of the test concentration in Table 6, Method 1613, under VER.
(5) Alternate confirmation and quantitation ions used for native and labeled PECDD.
(6) No ion abundance ratio for 37Cl4-2,3,7,8-TCDD; concentration reported.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6A
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 71
Instrument ID:	HR GC/MS	**Analysis Date:**	20-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	06:48:00

COMPOUND	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
2,3,7,8-TCDD		13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PECDD [3]		13C-1,2,3,7,8-PECDD	1.001	0.999-1.002
1,2,3,4,7,8-HXCDD		13C-1,2,3,4,7,8-HXCDD	1.000	0.999-1.001
1,2,3,6,7,8-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.000	0.998-1.004
1,2,3,7,8,9-HXCDD		13C-1,2,3,6,7,8-HXCDD	1.010	1.000-1.019
1,2,3,4,6,7,8-HPCDD		13C-1,2,3,4,6,7,8-HPCDD	1.000	0.999-1.001
OCDD		13C-OCDD	1.000	0.999-1.001
2,3,7,8-TCDF		13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PECDF		13C-1,2,3,7,8-PECDF	1.001	0.999-1.002
2,3,4,7,8-PECDF		13C-2,3,4,7,8-PECDF	1.001	0.999-1.002
1,2,3,4,7,8-HXCDF		13C-1,2,3,4,7,8-HXCDF	1.000	0.999-1.001
1,2,3,6,7,8-HXCDF		13C-1,2,3,6,7,8-HXCDF	1.000	0.997-1.005
1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDF	1.001	0.999-1.001
2,3,4,6,7,8-HXCDF		13C-2,3,4,6,7,8-HXCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HPCDF		13C-1,2,3,4,6,7,8-HPCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HPCDF		13C-1,2,3,4,7,8,9-HPCDF	1.000	0.999-1.001
OCDF		13C-OCDD	1.002	0.999-1.008

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.
(3) Alternate confirmation and quantitation ions used for native and labeled PECDD.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 6B
PCDD/PCDF RELATIVE RETENTION TIMES

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Initial Calibration Date:	04-Jun-2018	**VER Data Filename:**	DX8M_124 S: 71
Instrument ID:	HR GC/MS	**Analysis Date:**	20-Oct-2018
GC Column ID:	DB5	**Analysis Time:**	06:48:00

	LAB FLAG [1]	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS [2]
LABELED COMPOUND				
13C-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.013	0.976-1.043
13C-1,2,3,7,8-PECDD		13C-1,2,3,4-TCDD	1.383	1.000-1.567
13C-1,2,3,4,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.987	0.977-1.000
13C-1,2,3,6,7,8-HXCDD		13C-1,2,3,7,8,9-HXCDD	0.990	0.981-1.003
13C-1,2,3,4,6,7,8-HPCDD		13C-1,2,3,7,8,9-HXCDD	1.095	1.086-1.110
13C-OCDD		13C-1,2,3,7,8,9-HXCDD	1.178	1.032-1.311
13C-2,3,7,8-TCDF		13C-1,2,3,4-TCDD	0.966	0.923-1.103
13C-1,2,3,7,8-PECDF		13C-1,2,3,4-TCDD	1.283	1.000-1.425
13C-2,3,4,7,8-PECDF		13C-1,2,3,4-TCDD	1.351	1.011-1.526
13C-1,2,3,4,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.954	0.944-0.970
13C-1,2,3,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.958	0.949-0.975
13C-1,2,3,7,8,9-HXCDF		13C-1,2,3,7,8,9-HXCDD	1.004	0.977-1.047
13C-2,3,4,6,7,8-HXCDF		13C-1,2,3,7,8,9-HXCDD	0.980	0.959-1.021
13C-1,2,3,4,6,7,8-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.062	1.043-1.085
13C-1,2,3,4,7,8,9-HPCDF		13C-1,2,3,7,8,9-HXCDD	1.104	1.057-1.151
CLEANUP STANDARD				
37CL-2,3,7,8-TCDD		13C-1,2,3,4-TCDD	1.001	0.989-1.052

(1) Where applicable, custom lab flags have been used on this report.
(2) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_124 S: 2	**Analysis Date:**	17-Oct-2018	**Time:** 12:28:38
DB-5 IS Data Filename:	DX8M_124 S: 2	**Analysis Date:**	17-Oct-2018	**Time:** 12:28:38
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:58	**1,3,6,8-TCDF (F)**	21:26
1,2,8,9-TCDD (L)	28:20	**1,2,8,9-TCDF (L)**	28:11
1,2,4,7,9-PECDD (F)	32:03	**1,3,4,6,8-PECDF (F)**	28:53
1,2,3,8,9-PECDD (L)	37:04	**1,2,3,8,9-PECDF (L)**	37:07
1,2,4,6,7,9-HXCDD (F)	40:02	**1,2,3,4,6,8-HXCDF (F)**	39:00
1,2,3,4,6,7-HXCDD (L)	42:41	**1,2,3,4,8,9-HXCDF (L)**	43:02
1,2,3,4,6,7,9-HPCDD (F)	45:48	**1,2,3,4,6,7,8-HPCDF (F)**	45:20
1,2,3,4,6,7,8-HPCDD (L)	46:43	**1,2,3,4,7,8,9-HPCDF (L)**	47:07

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	12
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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Report Filename: 1613_DIOXINS__DX8M_124S2_Form5_SJ2451355.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_124 S: 10	**Analysis Date:**	17-Oct-2018	**Time:** 21:31:58
DB-5 IS Data Filename:	DX8M_124 S: 10	**Analysis Date:**	17-Oct-2018	**Time:** 21:31:58
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:58	**1,3,6,8-TCDF (F)**	21:27
1,2,8,9-TCDD (L)	28:20	**1,2,8,9-TCDF (L)**	28:11
1,2,4,7,9-PECDD (F)	32:03	**1,3,4,6,8-PECDF (F)**	28:53
1,2,3,8,9-PECDD (L)	37:04	**1,2,3,8,9-PECDF (L)**	37:08
1,2,4,6,7,9-HXCDD (F)	40:03	**1,2,3,4,6,8-HXCDF (F)**	39:00
1,2,3,4,6,7-HXCDD (L)	42:42	**1,2,3,4,8,9-HXCDF (L)**	43:02
1,2,3,4,6,7,9-HPCDD (F)	45:49	**1,2,3,4,6,7,8-HPCDF (F)**	45:21
1,2,3,4,6,7,8-HPCDD (L)	46:43	**1,2,3,4,7,8,9-HPCDF (L)**	47:09

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	13
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Leanne Henley_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DX8M_124S10_Form5_SJ2450147.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_124 S: 22	**Analysis Date:**	18-Oct-2018	**Time:** 08:48:46
DB-5 IS Data Filename:	DX8M_124 S: 22	**Analysis Date:**	18-Oct-2018	**Time:** 08:48:46
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:58	**1,3,6,8-TCDF (F)**	21:26
1,2,8,9-TCDD (L)	28:19	**1,2,8,9-TCDF (L)**	28:09
1,2,4,7,9-PECDD (F)	32:02	**1,3,4,6,8-PECDF (F)**	28:52
1,2,3,8,9-PECDD (L)	37:03	**1,2,3,8,9-PECDF (L)**	37:07
1,2,4,6,7,9-HXCDD (F)	40:02	**1,2,3,4,6,8-HXCDF (F)**	38:59
1,2,3,4,6,7-HXCDD (L)	42:41	**1,2,3,4,8,9-HXCDF (L)**	43:01
1,2,3,4,6,7,9-HPCDD (F)	45:48	**1,2,3,4,6,7,8-HPCDF (F)**	45:20
1,2,3,4,6,7,8-HPCDD (L)	46:42	**1,2,3,4,7,8,9-HPCDF (L)**	47:07

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	11
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

For Axys Internal Use Only [XSL Template: DXForm5.xsl; Created: 01-Nov-2018 10:34:47; Application: XMLTransformer-1.16.51; Report Filename: 1613_DIOXINS__DX8M_124S22_Form5_SJ2450734.html; Workgroup: WG65310; Design ID: 3389]

SGS AXYS METHOD MLA-017 Rev 20

Form 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

SGS AXYS ANALYTICAL SERVICES
2045 MILLS RD., SIDNEY, B.C., CANADA
V8L 5X2 TEL (250) 655-5800 FAX (250) 655-5811

Instrument ID:	HR GC/MS	**Initial Calibration Date:**		04-Jun-2018
RT Window Data Filename:	DX8M_124 S: 59	**Analysis Date:**	19-Oct-2018	**Time:** 19:36:50
DB-5 IS Data Filename:	DX8M_124 S: 59	**Analysis Date:**	19-Oct-2018	**Time:** 19:36:50
DB-225 IS Data Filename:		**Analysis Date:**		**Time:**

DB5 RT WINDOW DEFINING STANDARDS RESULT

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:57	**1,3,6,8-TCDF (F)**	21:26
1,2,8,9-TCDD (L)	28:19	**1,2,8,9-TCDF (L)**	28:09
1,2,4,7,9-PECDD (F)	32:01	**1,3,4,6,8-PECDF (F)**	28:51
1,2,3,8,9-PECDD (L)	37:03	**1,2,3,8,9-PECDF (L)**	37:06
1,2,4,6,7,9-HXCDD (F)	40:02	**1,2,3,4,6,8-HXCDF (F)**	38:59
1,2,3,4,6,7-HXCDD (L)	42:41	**1,2,3,4,8,9-HXCDF (L)**	43:01
1,2,3,4,6,7,9-HPCDD (F)	45:48	**1,2,3,4,6,7,8-HPCDF (F)**	45:20
1,2,3,4,6,7,8-HPCDD (L)	46:42	**1,2,3,4,7,8,9-HPCDF (L)**	47:07

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARDS RESULT

Isomers	% Valley Height Between Compared Peaks	Isomers	% Valley Height Between Compared Peaks
1,2,3,4-TCDD **1,2,7,8-TCDD**	0	**1,2,3,8-TCDD** **2,3,7,8-TCDD**	16
1,2,7,8-TCDD **1,4,7,8-TCDD**	0	**2,3,4,7-TCDF** **2,3,7,8-TCDF**	N/A
1,4,7,8-TCDD **1,2,3,7-TCDD**	0	**2,3,7,8-TCDF** **1,2,3,9-TCDF**	N/A
1,2,3,7-TCDD **1,2,3,8-TCDD**	DB-5 column; co-elute as per Figure 6 in Method		

These data are validated and reported as accurate and in accord with SGS AXYS Analytical Services Ltd. ISO17025 compliant quality assurance processes.

Signed: _____Thong Do_____

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Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
BFR	BTBPE	SGS AXYS MLA-033	MLA-033		Y											Y							Y											
	DBDPE	SGS AXYS MLA-033	MLA-033		Y											Y							Y											
	HBB	SGS AXYS MLA-033	MLA-033		Y											Y							Y											
	PBEB	SGS AXYS MLA-033	MLA-033		Y											Y							Y											
Bisphenols	Bisphenol A	SGS AXYS MLA-113	MLA-113		Y																		Y											
	Bisphenol AF	SGS AXYS MLA-113	MLA-113		Y																		Y											
	Bisphenol B	SGS AXYS MLA-113	MLA-113		Y																		Y											
	Bisphenol E	SGS AXYS MLA-113	MLA-113		Y																		Y											
	Bisphenol F	SGS AXYS MLA-113	MLA-113		Y																		Y											
	Bisphenol S	SGS AXYS MLA-113	MLA-113		Y																		Y											
BPA and MPE	4,4'-dihydroxy-2,2-diphenylpropane (Bisphenol A) (BPA)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-(3-carboxypropyl) phthalate (MCPP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-2-ethylhexyl phthalate (MEHP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-benzyl phthalate (MBzP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-butyl phthalate (MBP) (n + iso)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-cyclohexyl phthalate (MCHP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-ethyl phthalate (MEP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-iso-nonyl phthalate (MiNP)	SGS AXYS MLA-059	MLA-059																			Y											
	Mono-methyl phthalate (MMP)	SGS AXYS MLA-059	MLA-059																			Y											
HBCDD	alpha-hexabromocyclododecane (a-HBCDD)	SGS AXYS MLA-070	MLA-070	Y																													
	beta-hexabromocyclododecane (b-HBCDD)	SGS AXYS MLA-070	MLA-070	Y																													
	gamma-hexabromocyclododecane (g-HBCDD)	SGS AXYS MLA-070	MLA-070	Y																													
OC Pesticides	"Organochlorine Pesticides" category (CA only)	EPA 608	MLA-007																					Y									
		EPA 625	MLA-007																					Y									
		EPA 8081	MLA-007			Y																											
	"Pesticides" category (CA only)	EPA 8270	MLA-007			Y																											
	2,4'-DDD	EPA 625	MLA-007																						Y								Y
		EPA 8270	MLA-007				Y						Y		Y																			
		EPA 1699	MLA-028				Y								Y										Y								Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y						Y		Y	Y							Y		Y						Y		Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y								Y	Y							Y		Y								Y
	2,4'-DDE	EPA 625	MLA-007																						Y								Y
		EPA 8270	MLA-007				Y						Y		Y																			
		EPA 1699	MLA-028				Y								Y										Y								Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y						Y		Y	Y							Y		Y						Y		Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y								Y	Y							Y		Y								Y
	2,4'-DDT	EPA 625	MLA-007																						Y								Y
		EPA 8270	MLA-007				Y						Y		Y																			
		EPA 1699	MLA-028				Y								Y										Y								Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y						Y		Y	Y							Y		Y						Y		Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y								Y	Y							Y		Y								Y
	4,4'-DDD	EPA 625	MLA-007																						Y				Y	Y		Y	Y
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y								Y										Y								Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y						Y		Y	Y							Y		Y						Y		Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y								Y	Y							Y		Y								Y
	4,4'-DDE	EPA 625	MLA-007																						Y				Y	Y		Y	Y
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																				

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue							Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025		CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		EPA 1699	MLA-028				Y							Y											Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	4,4'-DDT	EPA 625	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Aldrin	EPA 625	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Alpha-HCH	EPA 625	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Beta-HCH	EPA 625	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Chlordane, technical	EPA 625	MLA-007																														Y		
		EPA 8270	MLA-007				Y			Y	Y		Y	Y													Y				Y	Y		Y	Y	
		SGS AXYS MLA-007	MLA-007				Y							Y												Y								Y	
	cis-Chlordane (alpha-Chlordane)	EPA 8270	MLA-007				Y			Y		Y	Y	Y												Y				Y			Y	Y	
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	cis-Nonachlor	EPA 8270	MLA-007				Y					Y		Y												Y								Y	
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Delta-HCH	EPA 608	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Dieldrin	EPA 608	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Endosulphan I	EPA 608	MLA-007																							Y				Y	Y		Y	Y	
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																					
		EPA 1699	MLA-028				Y							Y												Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y								Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y								Y										Y	
	Endosulphan II	EPA 608	MLA-007																							Y				Y	Y		Y	Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable									
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																			
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Endosulphan sulphate	EPA 608	MLA-007																						Y				Y	Y		Y		Y
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Endrin	EPA 608	MLA-007																						Y				Y	Y		Y		Y
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Endrin aldehyde	EPA 608	MLA-007																						Y				Y	Y		Y		Y
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007		Y		Y							Y									Y		Y								Y
	Endrin ketone	EPA 8081	MLA-007				Y			Y		Y		Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								
	Gamma-HCH (Lindane)	EPA 625	MLA-007																						Y				Y	Y		Y		Y
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Heptachlor	EPA 625	MLA-007																						Y				Y	Y		Y		Y
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Heptachlor epoxide	EPA 608	MLA-007																						Y				Y	Y		Y		Y
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Hexachlorobenzene	EPA 1625	MLA-007																						Y				Y					Y
		EPA 8270	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Methoxychlor	EPA 608	MLA-007																						Y				Y	Y		Y		Y
		EPA 8081	MLA-007				Y			Y	Y	Y	Y	Y																				
		EPA 1699	MLA-028				Y							Y											Y									Y
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y
	Mirex	EPA 8270	MLA-007				Y			Y		Y		Y											Y				Y	Y		Y		Y
		EPA 1699	MLA-028				Y							Y											Y									Y

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable									
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y	
	Oxychlordane	EPA 8270	MLA-007				Y					Y													Y								Y	
		EPA 1699	MLA-028				Y							Y											Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y									Y							Y		Y								Y	
	Toxaphene	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	trans-Chlordane (gamma-Chlordane)	EPA 8270	MLA-007				Y			Y		Y	Y	Y											Y				Y			Y	Y	
		EPA 1699	MLA-028				Y							Y											Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y	
	trans-Nonachlor	EPA 8270	MLA-007				Y					Y		Y											Y								Y	
		EPA 1699	MLA-028				Y							Y											Y								Y	
		SGS AXYS MLA-028	MLA-028	Y	Y		Y					Y		Y		Y							Y		Y					Y			Y	
		SGS AXYS MLA-007	MLA-007	Y	Y		Y							Y		Y							Y		Y								Y	
PAH	1,2,6-Trimethylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1,2-Dimethylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1,4,6,7-Tetramethylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1,7-Dimethylfluorene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1,7-Dimethylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1,8-Dimethylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1-Methylchrysene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1-Methylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	1-Methylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2,3,5-Trimethylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2,3,6-Trimethylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2,4-Dimethyldibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2,6-Dimethylnaphthalene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2,6-Dimethylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2-Methylanthracene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2-Methyldibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2-Methylfluorene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	2-Methylnaphthalene	EPA 1625	MLA-021																															Y
		EPA 8270	MLA-021				Y			Y						Y									Y										
		SGS AXYS MLA-021	MLA-021		Y		Y									Y																		Y	
	2-Methylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	3,6-Dimethylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	3-Methyldibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	3-Methylfluoranthene/ Benzo(a)fluorene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	3-Methylphenanthrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	5,9-Dimethylchrysene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	5/6-Methylchrysenes	SGS AXYS MLA-021	MLA-021		Y																		Y											
	7-Methylbenzo(a)pyrene	SGS AXYS MLA-021	MLA-021		Y																		Y											
	9/4-Methylphenanthrenes	SGS AXYS MLA-021	MLA-021		Y																		Y											
	Acenaphthene	EPA 1625	MLA-021																						Y				Y	Y				Y
		EPA 8270	MLA-021				Y			Y	Y			Y	Y																				
		SGS AXYS MLA-021	MLA-021		Y		Y								Y										Y										Y
	Acenaphthylene	EPA 1625	MLA-021																						Y				Y	Y				Y
		EPA 8270	MLA-021				Y			Y	Y			Y	Y																				

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Anthracene	EPA 1625	MLA-021																					Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Benz[a]anthracene	EPA 1625	MLA-021																					Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Benzo[a]pyrene	EPA 1625	MLA-021																					Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Benzo[b]fluoranthene	EPA 1625	MLA-021																					Y				Y	Y		Y		Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Benzo[e]pyrene	SGS AXYS MLA-021	MLA-021		Y											Y						Y												
	Benzo[ghi]perylene	EPA 1625	MLA-021																					Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y						Y		Y									Y	
	Benzo[j/k]fluoranthenes	SGS AXYS MLA-021	MLA-021		Y											Y						Y												
	Benzo[k]fluoranthene	EPA 1625	MLA-021																					Y				Y	Y		Y		Y	
		EPA 8270	MLA-021				Y			Y			Y	Y																					
		SGS AXYS MLA-021	MLA-021				Y							Y											Y									Y	
	Biphenyl	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Acenaphthenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Benz(a)anthracenes/chrysenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Benzofluoranthenes/ Benzopyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Biphenyls	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Dibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Fluorenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Naphthalenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C1-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Benz(a)anthracenes/Chrysenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Benzofluoranthenes/ Benzopyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Biphenyls	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Dibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Fluorenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Naphthalenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C2-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Benz(a)anthracenes/Chrysenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Dibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Fluorenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Naphthalenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C3-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C4-Benz(a)anthracenes/Chrysenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C4-Dibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C4-Fluoranthenes/Pyrenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C4-Naphthalenes	SGS AXYS MLA-021	MLA-021		Y																	Y												
	C4-Phenanthrenes/Anthracenes	SGS AXYS MLA-021	MLA-021		Y																	Y												

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Chrysene	EPA 1625	MLA-021																					Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Dibenz[a,h]anthracene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Dibenzothiophene	SGS AXYS MLA-021	MLA-021		Y																		Y												
	Fluoranthene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Fluorene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Indeno[1,2,3-cd]pyrene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Naphthalene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Perylene	SGS AXYS MLA-021	MLA-021		Y											Y							Y												
	Phenanthrene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Pyrene	EPA 1625	MLA-021																						Y				Y	Y				Y	
		EPA 8270	MLA-021				Y			Y	Y		Y	Y																					
		SGS AXYS MLA-021	MLA-021		Y		Y							Y		Y							Y		Y									Y	
	Retene	SGS AXYS MLA-021	MLA-021		Y																		Y												
PBDPE	BDE 10 2,6-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 100 2,2',4,4',6-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 105 2,3,3',4,4'-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 11 3,3'-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 116 2,3,4,5,6-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 119 2,3',4,4',6-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 12 3,4-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 126 3,3',4,4',5-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 13 3,4'-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 140 2,2',3,4,4',6'-hexabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 15 4,4'-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y												
	BDE 153 2,2',4,4',5,5'-hexabromodiphenylether	EPA 1614	MLA-033									Y																		Y				

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SGS AXYS Analytical Services Ltd.
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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 154 2,2',4,4',5',6-hexabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 155 2,2',4,4',6,6'-hexabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 166 2,3,4,4',5,6-hexabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 17 2,2',4-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 181 2,2',3,4,4',5,6-heptabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 190 2,3,3',4,4',5,6-heptabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 206 2,2',3,3',4,4',5,5',6-nonabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 207 2,2',3,3',4,4',5,6,6'-nonabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 208 2,2',3,3',4,5,5',6,6'-nonabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 209 Decabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 25 2,3',4-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 28 2,4,4'-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 30 2,4,6-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 35 3,3',4-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 37 3,4,4'-tribromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 47 2,2',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 49 2,2',4,5'-tetrabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 66 2,3',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 7 2,4-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 75 2,4,4',6-tetrabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 77 3,3',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 8 2,4'-dibromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 85 2,2',3,4,4'-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE 99 2,2',4,4',5-pentabromodiphenylether	EPA 1614	MLA-033									Y																		Y				
		SGS AXYS MLA-033	MLA-033	Y	Y											Y							Y											
	BDE-183 2,2',3,4,4',5',6-heptabromodiphenylether	EPA 1614	MLA-033									Y																		Y				

Accreditation Scope

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				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-033	MLA-033	Y	Y											Y								Y										
	BDE-33 2',3,4-tribromodiphenylether	EPA 1614	MLA-033									Y																			Y			
		SGS AXYS MLA-033	MLA-033	Y	Y											Y								Y										
PCB Aroclors	"PCBs" category (CA only)	EPA 625	MLA-007																					Y										
		EPA 8270	MLA-007			Y																												
	PCB Aroclor 1016	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y			Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1016/1242	EPA 8270	MLA-007									Y																						
	PCB Aroclor 1221	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y	Y		Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1232	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y	Y		Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1242	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y			Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1248	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y	Y		Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1254	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y	Y		Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1260	EPA 1668	MLA-010				Y						Y	Y											Y							Y		Y	
		EPA 625	MLA-007																						Y				Y	Y		Y		Y	
		EPA 8270	MLA-007				Y			Y	Y	Y		Y																					
		SGS AXYS MLA-010	MLA-010				Y							Y											Y									Y	
		SGS AXYS MLA-007	MLA-007		Y		Y							Y		Y							Y		Y									Y	
	PCB Aroclor 1268	SGS AXYS MLA-007	MLA-007		Y											Y							Y											
PCB congeners	PCB 1 2-Chlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y									Y	
	PCB 10 2,6-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y									Y	
	PCB 100 2,2',4,4',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y									Y	

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				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 101 2,2',4,5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 101/90/89	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 102 2,2',4,5,6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 103 2,2',4,5',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 104 2,2',4,6,6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 105 2,3,3',4,4'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 105/127	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 106 2,3,3',4,5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 107 2,3,3',4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 107/109	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 108 2,3,3',4,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 109 2,3,3',4,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 11 3,3'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 110 2,3,3',4',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 111 2,3,3',5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 111/117	EPA 8270	MLA-007									Y																						
	PCB 112 2,3,3',5,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 113 2,3,3',5',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 114 2,3,4,4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 115 2,3,4,4',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 116 2,3,4,5,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 117 2,3,4',5,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y			Y								Y	
	PCB 118 2,3',4,4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
		SGS AXYS MLA-901	MLA-901	Y																															
	PCB 118/106	EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-007	MLA-007		Y											Y																			
	PCB 119 2,3',4,4',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 12 3,4-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 12/13	EPA 8270	MLA-007									Y																							
	PCB 120 2,3',4,5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 121 2,3',4,5',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 122 2,3,3',4',5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 123 2,3',4,4',5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 124 2,3',4',5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 125 2,3',4',5',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 126 3,3',4,4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y																			
	PCB 127 3,3',4,5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 128 2,2',3,3',4,4'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y																			
	PCB 129 2,2',3,3',4,5-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y																			
	PCB 13 3,4'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
	PCB 130 2,2',3,3',4,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																							
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y																			
	PCB 131 2,2',3,3',4,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y				Y								Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
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				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 131/142	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 132 2,2',3,3',4,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 132/168	EPA 8270	MLA-007									Y																					
	PCB 133 2,2',3,3',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 134 2,2',3,3',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 134/143	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 135 2,2',3,3',5,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 136 2,2',3,3',6,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 137 2,2',3,4,4',5-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 138 2,2',3,4,4',5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-901	MLA-901	Y																													
	PCB 138/163/164	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 139 2,2',3,4,4',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 14 3,5-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 140 2,2',3,4,4',6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 141 2,2',3,4,5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 142 2,2',3,4,5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 143 2,2',3,4,5,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 144 2,2',3,4,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 144/135	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 145 2,2',3,4,6,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 146 2,2',3,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y

Accreditation Scope

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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 147 2,2',3,4',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 148 2,2',3,4',5,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 149 2,2',3,4',5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 149/139	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 15 4,4'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 150 2,2',3,4',6,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 151 2,2',3,5,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 152 2,2',3,5,6,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 153 2,2',4,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 154 2,2',4,4',5,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 155 2,2',4,4',6,6'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
	PCB 156 2,3,3',4,4',5-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 157 2,3,3',4,4',5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 158 2,3,3',4,4',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y			Y	Y	Y			Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y			Y										Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH
	PCB 158/160	EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 159 2,3,3',4,5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 16 2,2',3-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 16/32	EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 160 2,3,3',4,5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 161 2,3,3',4,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 162 2,3,3',4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 163 2,3,3',4',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 164 2,3,3',4',5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 165 2,3,3',5,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 166 2,3,4,4',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 167 2,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 168 2,3',4,4',5',6-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
	PCB 169 3,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 17 2,2',4-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 170 2,2',3,3',4,4',5-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y						
		SGS AXYS MLA-901	MLA-901	Y																											
	PCB 170/190	EPA 8270	MLA-007									Y																			
		SGS AXYS MLA-007	MLA-007		Y											Y							Y								
	PCB 171 2,2',3,3',4,4',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y	
		EPA 8270	MLA-007									Y																			

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Water, Non-Potable								
				Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 158/160	EPA 8270	MLA-007			
		SGS AXYS MLA-007	MLA-007			
	PCB 159 2,3,3',4,5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-007	MLA-007			
	PCB 16 2,2',3-Trichlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
	PCB 16/32	EPA 8270	MLA-007			
		SGS AXYS MLA-007	MLA-007			
	PCB 160 2,3,3',4,5,6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-007	MLA-007			
	PCB 161 2,3,3',4,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-007	MLA-007			
	PCB 162 2,3,3',4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
	PCB 163 2,3,3',4',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
	PCB 164 2,3,3',4',5',6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
	PCB 165 2,3,3',5,5',6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
	PCB 166 2,3,4,4',5,6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
	PCB 167 2,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
	PCB 168 2,3',4,4',5',6-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
	PCB 169 3,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-007	MLA-007			
	PCB 17 2,2',4-Trichlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-007	MLA-007			
	PCB 170 2,2',3,3',4,4',5-Heptachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		SGS AXYS MLA-010	MLA-010			Y
		SGS AXYS MLA-901	MLA-901			
	PCB 170/190	EPA 8270	MLA-007			
		SGS AXYS MLA-007	MLA-007			
	PCB 171 2,2',3,3',4,4',6-Heptachlorobiphenyl	EPA 1668	MLA-010	Y	Y	
		EPA 8270	MLA-007			

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				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 172 2,2',3,3',4,5,5'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 172/192	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 173 2,2',3,3',4,5,6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 174 2,2',3,3',4,5,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 174/181	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 175 2,2',3,3',4,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 176 2,2',3,3',4,6,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 177 2,2',3,3',4,5',6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 178 2,2',3,3',5,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 179 2,2',3,3',5,6,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 18 2,2',5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 180 2,2',3,4,4',5,5'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 181 2,2',3,4,4',5,6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 182 2,2',3,4,4',5,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 183 2,2',3,4,4',5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											

Accreditation Scope

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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 184 2,2',3,4,4',6,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y					Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 185 2,2',3,4,5,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 186 2,2',3,4,5,6,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 187 2,2',3,4',5,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 187/182	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 188 2,2',3,4',5,6,6'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 189 2,3,3',4,4',5,5'-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 19 2,2',6-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 190 2,3,3',4,4',5,6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 191 2,3,3',4,4',5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 192 2,3,3',4,5,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 193 2,3,3',4',5,5',6-Heptachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 194 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB 195 2,2',3,3',4,4',5,6-Octachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 196 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 196/203	EPA 8270	MLA-007									Y																						

Accreditation Scope

SGS AXYS Analytical Services Ltd.
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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 197 2,2',3,3',4,4',6,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y		Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 198 2,2',3,3',4,5,5',6-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 199 2,2',3,3',4,5,5',6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y		Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 2 3-Chlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 20 2,3,3'-Trichlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 200 2,2',3,3',4,5,6,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 201 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y		Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 202 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 203 2,2',3,4,4',5,5',6-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 204 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
	PCB 205 2,3,3',4,4',5,5',6-Octachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 206 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 207 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y		Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 208 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y		Y						Y				Y			Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007										Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y								Y	Y					Y		Y		Y									Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 209 Decachlorobiphenyl	EPA 1668	MLA-010				Y			Y	Y	Y	Y	Y	Y						Y				Y			Y	Y	Y	Y		Y	Y

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				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable									
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 21 2,3,4-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 22 2,3,4'-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 23 2,3,5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 23/34	EPA 8270	MLA-007									Y																					
	PCB 24 2,3,6-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 24/27	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 25 2,3',4-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 26 2,3',5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 27 2,3',6-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 28 2,4,4'-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 29 2,4,5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 3 4-Chlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 30 2,4,6-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 31 2,4',5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 32 2,4',6-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 33 2,3',4'-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
	PCB 33/20/21	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 34 2,3',5'-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										

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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 35 3,3',4-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y						Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 36 3,3',5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 37 3,4,4'-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 38 3,4,5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 39 3,4',5-Trichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 4 2,2'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 4/10	EPA 8270	MLA-007									Y																					
	PCB 40 2,2',3,3'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 41 2,2',3,4-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 41/71/64/68	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 42 2,2',3,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 42/59	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 43 2,2',3,5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 44 2,2',3,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 45 2,2',3,6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 46 2,2',3,6'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 47 2,2',4,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 47/48/75	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y										
	PCB 48 2,2',4,5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 49 2,2',4,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 49/43	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 5 2,3-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 50 2,2',4,6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 51 2,2',4,6'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 52 2,2',5,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 52/73	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 53 2,2',5,6'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 54 2,2',6,6'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 55 2,3,3',4-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 56 2,3,3',4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 56/60	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 57 2,3,3',5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 58 2,3,3',5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 59 2,3,3',6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 6 2,3'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 60 2,3,4,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 61 2,3,4,5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 62 2,3,4,6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y					Y		Y		Y								Y	
	PCB 62/65	EPA 8270	MLA-007									Y																						
	PCB 63 2,3,4',5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 64 2,3,4',6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 65 2,3,5,6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 66 2,3',4,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 66/80	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 67 2,3',4,5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 68 2,3',4,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 69 2,3',4,6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 7 2,4-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 7/9	EPA 8270	MLA-007									Y																					
	PCB 70 2,3',4',5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 70/76	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 71 2,3',4',6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 72 2,3',5,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 73 2,3',5',6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 74 2,4,4',5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
		SGS AXYS MLA-901	MLA-901	Y																													
	PCB 74/61	EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 75 2,4,4',6-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 76 2,3',4',5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 77 3,3',4,4'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 78 3,3',4,5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 79 3,3',4,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																					
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	PCB 8 2,4'-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 8/5	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 80 3,3',5,5'-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 81 3,4,4',5-Tetrachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 82 2,2',3,3',4-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 83 2,2',3,3',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 83/108	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 84 2,2',3,3',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 85 2,2',3,4,4'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 85/120	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 86 2,2',3,4,5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 87 2,2',3,4,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 87/115/116	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 88 2,2',3,4,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 88/121	EPA 8270	MLA-007									Y																						
	PCB 89 2,2',3,4,6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 9 2,5-Dichlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y		Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 90 2,2',3,4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 91 2,2',3,4',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	PCB 92 2,2',3,5,5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 93 2,2',3,5,6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		SGS AXYS MLA-010	MLA-010		Y	Y	Y							Y		Y					Y		Y		Y								Y	
	PCB 94 2,2',3,5,6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y			Y	
		EPA 8270	MLA-007									Y																						

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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 95 2,2',3,5',6-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 95/93	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y								Y										
	PCB 96 2,2',3,6,6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 97 2,2',3,4',5'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 97/86	EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-007	MLA-007		Y											Y								Y										
	PCB 98 2,2',3,4',6'-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
	PCB 98/102	EPA 8270	MLA-007									Y																						
	PCB 99 2,2',4,4',5-Pentachlorobiphenyl	EPA 1668	MLA-010				Y		Y	Y	Y	Y	Y	Y							Y				Y		Y	Y	Y	Y		Y	Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y		Y							Y		Y				Y		Y		Y								Y	
		SGS AXYS MLA-007	MLA-007		Y											Y								Y										
		SGS AXYS MLA-901	MLA-901	Y																														
	PCB congeners, total	EPA 1668	MLA-010							Y																		Y						
	Sum - Dichlorobiphenyls (BZ-12-+ BZ-13)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Heptachlorobiphenyls (BZ-171 + BZ-173)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Heptachlorobiphenyls (BZ-180 + BZ-193)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Heptachlorobiphenyls (BZ-183 + BZ-185)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-128 + BZ-166)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-129 + BZ-138 + BZ-160 + BZ-163)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-134 + BZ-143)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-135 + BZ-151 + BZ-154)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-139 + BZ-140)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-147 + BZ-149)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-153 + BZ-168)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Hexachlorobiphenyls (BZ-156 + BZ-157)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Pentachlorobiphenyls (BZ-107 + BZ-124)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Pentachlorobiphenyls (BZ-108 + BZ-124)	EPA 1668	MLA-010											Y							Y												Y	
		SGS AXYS MLA-010	MLA-010											Y							Y												Y	
	Sum - Pentachlorobiphenyls (BZ-110 + BZ-115)	EPA 1668	MLA-010											Y							Y												Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-83 + BZ-99)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-85 + BZ-116 + BZ-117)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-86 + BZ-87 + BZ 97 + BZ-109 + BZ-119 + BZ-125)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-86 + BZ-87 + BZ-97 + BZ-108 + BZ-119 +BZ-125)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-88 + BZ-91)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-90 + BZ-101 + BZ-113)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Pentachlorobiphenyls (BZ-93 + BZ-95 + BZ-98 + BZ-100 + BZ-102)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-40 + BZ-41 + BZ-71)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-44 + BZ-47 + BZ-65)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-45 + BZ-51)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-49 + BZ-69)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-50 + BZ-53)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-59 + BZ-62 + BZ-75)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Tetrachlorobiphenyls (BZ-61 + BZ-70 + BZ-74 + BZ-76)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Trichlorobiphenyls (BZ-18 + BZ-30)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Trichlorobiphenyls (BZ-20 + BZ-28)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Trichlorobiphenyls (BZ-21 + BZ-33)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Sum - Trichlorobiphenyls (BZ-26 + BZ-29)	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Total Dichlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y			Y											Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	Total Heptachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y			Y											Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	Total Hexachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y			Y											Y	
		SGS AXYS MLA-007	MLA-007		Y											Y							Y											
	Total Monochlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable									
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
	Total Nonachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y						Y											
	Total Octachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y						Y											
	Total PCBs	EPA 1668	MLA-010											Y						Y													Y	
		SGS AXYS MLA-010	MLA-010											Y						Y													Y	
	Total Pentachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y						Y											
	Total Polychlorinated biphenyls	SGS AXYS MLA-007	MLA-007		Y											Y						Y											
	Total Tetrachlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y						Y											
	Total Trichlorobiphenyls	EPA 1668	MLA-010											Y						Y													Y	
		EPA 8270	MLA-007									Y																						
		SGS AXYS MLA-010	MLA-010	Y	Y									Y		Y				Y		Y										Y	
		SGS AXYS MLA-007	MLA-007		Y											Y						Y											
PCDDF	"Dioxins and Dibenzofurans" category (CA only)	EPA 1613	MLA-017																					Y										
		EPA 8290	MLA-017			Y																												
	1,2,3,4,6,7,8-HpCDD	EPA 1613	MLA-017									Y		Y											Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,4,6,7,8-HpCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,4,7,8,9-HpCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,4,7,8-HxCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,4,7,8-HxCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,6,7,8-HxCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,6,7,8-HxCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,7,8,9-HxCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	1,2,3,7,8,9-HxCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,7,8-PeCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	1,2,3,7,8-PeCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	2,3,4,6,7,8-HxCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	2,3,4,7,8-PeCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	2,3,7,8-TCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	2,3,7,8-TCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	OCDD	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	OCDF	EPA 1613	MLA-017									Y		Y							Y				Y		Y	Y	Y	Y	Y		Y	
		EPA 8290	MLA-017				Y		Y	Y	Y		Y	Y			Y		Y	Y	Y				Y			Y	Y				Y	
		SGS AXYS MLA-017	MLA-017	Y	Y		Y							Y		Y	Y				Y		Y		Y								Y	
	Total HpCDD	EPA 1613	MLA-017											Y							Y				Y							Y	Y	
		EPA 8290	MLA-017				Y		Y		Y			Y	Y				Y	Y	Y					Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y									Y	
	Total HpCDF	EPA 1613	MLA-017											Y							Y				Y							Y		
		EPA 8290	MLA-017				Y		Y		Y			Y	Y				Y	Y	Y					Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y									Y	
	Total HxCDD	EPA 1613	MLA-017											Y							Y				Y							Y		
		EPA 8290	MLA-017				Y		Y		Y			Y	Y				Y	Y	Y					Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y									Y	
	Total HxCDF	EPA 1613	MLA-017											Y							Y				Y							Y		
		EPA 8290	MLA-017				Y		Y		Y			Y	Y				Y	Y	Y					Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y									Y	
	Total PCDD	EPA 1613	MLA-017											Y							Y													Y	
		EPA 8290	MLA-017											Y							Y													Y	
		SGS AXYS MLA-017	MLA-017											Y							Y													Y	
	Total PCDD+PCDF	EPA 1613	MLA-017											Y							Y													Y	
		EPA 8290	MLA-017											Y							Y													Y	
		SGS AXYS MLA-017	MLA-017											Y							Y													Y	
	Total PCDF	EPA 1613	MLA-017											Y							Y													Y	
		EPA 8290	MLA-017											Y							Y													Y	
		SGS AXYS MLA-017	MLA-017											Y							Y													Y	
	Total PeCDD	EPA 1613	MLA-017											Y							Y				Y							Y		Y	
		EPA 8290	MLA-017				Y		Y		Y			Y	Y				Y	Y	Y					Y					Y			Y	

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y								Y	
	Total PeCDF	EPA 1613	MLA-017											Y							Y				Y							Y	Y	
		EPA 8290	MLA-017				Y		Y		Y		Y	Y			Y		Y	Y	Y				Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y								Y	
	Total TCDD	EPA 1613	MLA-017											Y							Y				Y							Y	Y	
		EPA 8290	MLA-017				Y		Y		Y		Y	Y			Y		Y	Y	Y				Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y								Y	
	Total TCDF	EPA 1613	MLA-017											Y							Y				Y							Y	Y	
		EPA 8290	MLA-017				Y		Y		Y		Y	Y			Y		Y	Y	Y				Y					Y			Y	
		SGS AXYS MLA-017	MLA-017				Y							Y			Y				Y				Y								Y	
PFAS	4:2 Fluorotelomersulfonate (4:2 FTS)	SGS AXYS MLA-081	MLA-081																														Y	
		SGS AXYS MLA-089	MLA-089											Y																					
		SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	6:2 Fluorotelomersulfonate (6:2 FTS)	SGS AXYS MLA-081	MLA-081																														Y	
		SGS AXYS MLA-089	MLA-089											Y																					
		SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	8:2 Fluorotelomersulfonate (8:2 FTS)	SGS AXYS MLA-081	MLA-081																														Y	
		SGS AXYS MLA-089	MLA-089											Y																					
		SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	N-Ethylperfluorooctanesulfonamide (N-EtFOSA)	SGS AXYS MLA-110	MLA-110		Y							Y											Y								Y			
	N-Ethylperfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	N-Ethylperfluorooctanesulfonamidoethanol (N-EtFOSE)	SGS AXYS MLA-110	MLA-110		Y							Y											Y								Y			
	N-Methylperfluorooctanesulfonamide (N-MeFOSA)	SGS AXYS MLA-110	MLA-110		Y							Y											Y								Y			
	N-Methylperfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	SGS AXYS MLA-110	MLA-110		Y							Y											Y								Y			
	Perfluorobutanesulfonate (PFBS)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																					
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y		Y														
		SGS AXYS MLA-042	MLA-042	Y																															
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y					Y			Y	Y
	Perfluorobutanoate (PFBA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																					
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y		Y														
		SGS AXYS MLA-042	MLA-042	Y																															
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y					Y			Y	Y
	Perfluorodecanesulfonate (PFDS)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	Perfluorodecanoate (PFDA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																					
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y		Y														
		SGS AXYS MLA-042	MLA-042	Y																															
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y					Y			Y	Y
	Perfluorododecanesulfonate (PFDoS)	SGS AXYS MLA-110	MLA-110		Y							Y											Y								Y			
	Perfluorododecanoate (PFDoA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																					
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y		Y														
		SGS AXYS MLA-042	MLA-042	Y																															
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y					Y			Y	Y
	Perfluoroheptanesulfonate (PFHpS)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y						Y			Y	Y
	Perfluoroheptanoate (PFHpA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																					

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorohexanesulfonate (PFHxS)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorohexanoate (PFHxA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorononanesulfonate (PFNS)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y					Y			Y	Y
	Perfluorononanoate (PFNA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorooctanesulfonamide (PFOSA), a.k.a. FOSA	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorooctanesulfonate (PFOS)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorooctanoate (PFOA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluoropentanesulfonate (PFPeS)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y	Y								Y		Y					Y			Y	Y
	Perfluoropentanoate (PFPeA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
	Perfluorotetradecanoate (PFTeDA)	SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y									Y		Y	Y				Y			Y	Y
	Perfluorotridecanoate (PFTrDA)	SGS AXYS MLA-110	MLA-110		Y		Y					Y		Y									Y		Y					Y			Y	Y
	Perfluoroundecanoate (PFUnA)	SGS AXYS MLA-060	MLA-060																				Y		Y	Y	Y						Y	
		SGS AXYS MLA-041	MLA-041		Y		Y	Y	Y					Y																				
		SGS AXYS MLA-043	MLA-043													Y	Y	Y	Y	Y														
		SGS AXYS MLA-042	MLA-042	Y																														
		SGS AXYS MLA-110	MLA-110		Y		Y	Y				Y		Y	Y								Y		Y	Y				Y			Y	Y
PPCP	1,7-Dimethylxanthine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	10-hydroxy-amitriptyline	SGS AXYS MLA-075	MLA-075		Y																		Y											

Accreditation Scope

SGS AXYS Analytical Services Ltd.
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Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids										Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	2-hydroxy-ibuprofen	SGS AXYS MLA-075	MLA-075		Y																	Y											
	4-Epianhydrochlortetracycline (EACTC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	4-Epianhydrotetracycline (EATC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	4-Epichlortetracycline (ECTC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	4-Epioxytetracycline (EOTC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	4-Epitetracycline (ETC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Acetaminophen	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Albuterol	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Alprazolam	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Amitriptyline	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Amlodipine	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Amphetamine	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Anhydrochlortetracycline (ACTC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Anhydrotetracycline (ATC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Atenolol	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Atorvastatin	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Azithromycin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Benzoylecgonine	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Benztropine	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Betamethasone	SGS AXYS MLA-075	MLA-075		Y																	Y											
	Bisphenol A	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Caffeine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Carbadox	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Carbamazepine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Cefotaxime	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Chlortetracycline (CTC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Cimetidine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Ciprofloxacin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Clarithromycin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											
	Clinafloxacin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																	Y											

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Clonidine	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Cloxacillin	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Cocaine	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Codeine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Cotinine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	DEET (N,N-diethyl-m-toluamide)	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Dehydronifedipine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Demeclocycline	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Desmethyldiltiazem	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Diazepam	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Digoxigenin	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Digoxin	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Diltiazem	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Diphenhydramine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Doxycycline	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Enalapril	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Enrofloxacin	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Erythromycin	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Erythromycin anydrate	EPA 1694	MLA-075										Y																			Y			
	Flumequine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Fluocinonide	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Fluoxetine	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Fluticasone propionate	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Furosemide	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Gemfibrozil	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Glipizide	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Glyburide	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Hydrochlorothiazide	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Hydrocodone	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Hydrocortisone	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Ibuprofen	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Isochlortetracycline (ICTC)	EPA 1694	MLA-075										Y																			Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Lincomycin	EPA 1694	MLA-075										Y																			Y			

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025		CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Lomefloxacin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Meprobamate	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Metformin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Methylprednisolone	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Metoprolol	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Miconazole	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Minocycline	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Naproxen	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Norfloxacin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Norfluoxetine	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Norgestimate	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Norverapamil	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Ofloxacin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Ormetoprim	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Oxacillin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Oxolinic acid	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Oxycodone	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Oxytetracycline (OTC)	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Paroxetine	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Penicillin G	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Penicillin V	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Prednisolone	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Prednisone	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Promethazine	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Propoxyphene	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Propranolol	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Ranitidine	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Roxithromycin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Sarafloxacin	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Sertraline	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Simvastatin	SGS AXYS MLA-075	MLA-075		Y																			Y										
	Sulfachloropyridazine	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Sulfadiazine	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										
	Sulfadimethoxine	EPA 1694	MLA-075										Y																				Y		
		SGS AXYS MLA-075	MLA-075		Y																			Y										

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Sulfamerazine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Sulfamethazine	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Sulfamethizole	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Sulfamethoxazole	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Sulfanilamide	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Sulfathiazole	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Tetracycline (TC)	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Theophylline	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Thiabendazole	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Trenbolone	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Trenbolone acetate	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Triamterene	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Triclocarban	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Triclosan	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Trimethoprim	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Tylosin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Valsartan	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Verapamil	SGS AXYS MLA-075	MLA-075		Y																		Y											
	Virginiamycin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
	Warfarin	EPA 1694	MLA-075										Y																		Y			
		SGS AXYS MLA-075	MLA-075		Y																		Y											
Targeted Metabolites	11, 14, 17-eicosatrienoic acid (eicosatrienoic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	11, 14-eicosadienoic acid	SGS AXYS MLM-001	MLM-001													Y																		
	3-hydroxytyrosine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Acetylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Acetylornithine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Alanine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	alpha-Aminoadipic acid	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Arginine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Asparagine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Aspartate	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Asymmetric dimethylarginine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Butenylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Butyrylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	C22:5 ISOMER 1 (tentatively all-cis-4, 8, 12, 15, 19-docosapentaenoic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	C22:5 ISOMER 2 (all-cis-7,10,13,16,19-docosapentaenoic acid (DPA)	SGS AXYS MLM-001	MLM-001													Y																		
	C22:5 ISOMER 3 (tentatively all-cis-4, 7, 10, 13, 16-docosapentaenoic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	Carnitine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Carnosine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	chenodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	cholic acid	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Citrulline	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Creatinine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	Decadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y							Y											
	decanoic acid (capric acid)	SGS AXYS MLM-001	MLM-001													Y																		

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum	Solids											Tissue						Urine	Water	Water, Non-Potable								
				CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Decanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Decenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	deoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	docosahexaenoic acid (DHA)	SGS AXYS MLM-001	MLM-001													Y																		
	docosatetraenoic acid (adrenic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	Dodecanedioylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Dodecanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Dodecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Dopamine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	eicosapentaenoic acid (EPA)	SGS AXYS MLM-001	MLM-001													Y																		
	Eicosatetraenoic acid (arachidonic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	eicosatrienoic acid (dihomo-γ-linolenic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	Glutaconylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Glutamate	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Glutamine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Glutarylcarnitine (Hydroxyhexanoylcarnitine)	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Glycine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	glycochenodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	glycocholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	glycodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hexadecadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	hexadecanoic acid (palmitic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	Hexadecanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	hexadecenoic acid (palmitoleic acid)	SGS AXYS MLM-001	MLM-001													Y																		
	Hexadecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hexanoylcarnitine (Fumarylcarnitine)	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hexenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hexose (sum isomers)	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Histamine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Histidine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyhexadecadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyhexadecanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyhexadecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxylbutyrylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyoctadecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyproline	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxypropionylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxysphingomyeline C14:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxysphingomyeline C16:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxysphingomyeline C22:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxysphingomyeline C22:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxysphingomyeline C24:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxytetradecadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxytetradecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Hydroxyvalerylcarnitine (Methylmalonylcarnitine)	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Isoleucine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Kynurenine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Leucine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lithocholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	Lysine	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C14:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C16:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C16:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C17:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C18:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C18:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C18:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y												
	lysoPhosphatidylcholine acyl C20:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y												

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable									
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	lysoPhosphatidylcholine acyl C20:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	lysoPhosphatidylcholine acyl C24:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	lysoPhosphatidylcholine acyl C26:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	lysoPhosphatidylcholine acyl C28:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	lysoPhosphatidylcholine acyl C28:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Methionine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Methioninesulfoxide	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Methylglutarylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Nitrotyrosine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Nonaylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	octadecadienoic acid (linoleic acid)	SGS AXYS MLM-001	MLM-001													Y																	
	Octadecadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	octadecanoic acid (stearic acid)	SGS AXYS MLM-001	MLM-001													Y																	
	Octadecanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	octadecatrienoic acid (γ-linolenic acid)	SGS AXYS MLM-001	MLM-001													Y																	
	Octadecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Octanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Ornithine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phenylalanine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phenylethylamine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C30:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C30:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C30:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C32:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C32:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C34:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C34:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C34:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C34:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C36:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C38:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C40:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C42:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C44:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C44:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C44:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine acyl-alkyl C44:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C24:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

				Serum	Solids											Tissue							Urine	Water	Water, Non-Potable								
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Phosphatidylcholine diacyl C26:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C28:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C30:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C30:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C32:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C32:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C32:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C32:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C34:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C34:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C34:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C34:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C36:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C38:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C40:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:4	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:5	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Phosphatidylcholine diacyl C42:6	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Pimelylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Proline	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Propenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Propionylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Putrescine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sarcosine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Serine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Serotonin	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Spermidine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Spermine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C16:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C16:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C18:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C18:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C20:2	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C22:3	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C24:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C24:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C26:0	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Sphingomyeline C26:1	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Symmetric dimethylarginine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											

Accreditation Scope

SGS AXYS Analytical Services Ltd.
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				Serum	Solids											Tissue						Urine	Water	Water, Non-Potable									
Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	CALA	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	ANAB ISO 17025	CALA	CALA	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **
	Taurine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	taurochenodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	taurocholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	taurodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	taurolithocholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	tauroursodeoxycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Tetradecadienylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	tetradecanoic acid (myristic acid)	SGS AXYS MLM-001	MLM-001													Y																	
	Tetradecanoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Tetradecenoylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Threonine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Tiglylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Total dimethylarginine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Tryptophan	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Tyrosine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	ursodexoycholic acid	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Valerylcarnitine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
	Valine	SGS AXYS MLM-001	MLM-001	Y												Y						Y											
TBBPA	Tetrabromobisphenol A	SGS AXYS MLA-079	MLA-079	Y																													
TOP	Perfluorobutanesulfonate (PFBS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorobutanoate (PFBA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorodecanesulfonate (PFDS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorodecanoate (PFDA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorododecanesulfonate (PFDoS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorododecanoate (PFDoA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluoroheptanesulfonate (PFHpS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluoroheptanoate (PFHpA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorohexanesulfonate (PFHxS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorohexanoate (PFHxA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorononanesulfonate (PFNS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorononanoate (PFNA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorooctanesulfonate (PFOS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorooctanoate (PFOA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluoropentanesulfonate (PFPeS)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluoropentanoate (PFPeA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorotetradecanoate (PFTeDA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluorotridecanoate (PFTrDA)	SGS AXYS MLA-111	MLA-111		Y																		Y										
	Perfluoroundecanoate (PFUnA)	SGS AXYS MLA-111	MLA-111		Y																		Y										

Note * Analysis of pesticides and PCBs in non-potable water samples by AXYS method MLA-007, with the exception of NPDES or State permitted discharges and Stormwater applications, may fall within the scope of Washington State Department of Ecology solids matrix accreditation, subject to approval of the Ecology Project Manager.

Note ** PFAS by LC-MS/MS compliant with US DoD QSM 5.1 table B-15

Legend

Y	Accreditation scope
BFR	Brominated flame retardants (non-PBDPE)
BPA and mPE	Bisphenol A and mono-Phthalate Esters
HBCDD	Hexabromocyclododecane
OC Pesticides	Organochlorine Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PBDPE	Polybrominated diphenylethers
PCB	Polychlorinated Biphenyls
PCDDF	Polychlorinated dibenzodioxins/furans
PFAS	Per- and Polyfluoroalkyl Substances
PPCP	Pharmaceutical and Personal Care Products
TBBPA	Tetrabromobisphenol A
TOP	Total Oxidizable Precursors
California DPH	California Department of Public Health, Lab ID 2911
Florida DOH	Florida Department of Health, Lab ID E871007, (NELAC Standard)
Pennsylvania DEP	Pennsylvania Department of Environmental Protection
Minnesota DOH	Minnesota Department of Health, Lab ID 232-999-430, (NELAC Standard)
New Jersey DEP	New Jersey Department of Environmental Protection, Lab ID CANA005, (NELAC Standard)
New York DOH	New York Department of Health, Lab ID 11674, (NELAC Standard)
Washington DE	Washington Department of Ecology, Lab ID C404
Virginia DGS	Virginia Department of General Services, Division of Consolidated Laboratory Services, Lab ID 460224, (NELAC Standard)
Maine DOH	Maine Center for Disease Control and Prevention, Department of Health and Human Services, Lab ID CN00003

ANAB DoD — ANSI-ASQ National Accreditation Board, certificate ADE-1861, (US DoD QSM 5.1 Standard)

CALA — Canadian Association for Laboratory Accreditation Inc., Lab ID A2637, (ISO/IEC 17025:2005 Standard)

ANAB ISO 17025 — ANSI-ASQ National Accreditation Board, certificate ADE-1861.01, (ISO/IEC 17025:2005 Standard)