

SGS

AXYS

2045 Mills Road West

TEL: (250) 655-5800

Sidney, BC, Canada V8L5X2

TOLL-FREE: 1-888-373-0881

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: WG65124	Date: 15-Oct-2018
Analysis Type: E1 Pesticide	Matrix Type: Tissue
BATCH MAKEUP	
Contract: 4972 Samples: L29887-1 PDI-TF-SMB125 L29887-2 PDI-TF-SMB114 L29887-3 PDI-TF-SMB073 L29887-4 PDI-TF-SMB126 L29887-5 PDI-TF-SMB127 L29887-6 PDI-TF-SMB123 L29887-7 PDI-TF-SMB134 L29887-8 PDI-TF-SMB116 L29887-9 PDI-TF-SMB063 L29887-10 PDI-TF-SMB131 L29887-11 PDI-TF-SMB124 L29887-12 PDI-TF-SMB115 L29887-13 PDI-TF-SMB121 L29887-14 PDI-TF-SMB122 L29887-15 PDI-TF-SMB135 L29887-16 PDI-TF-SMB118	Blank: WG65124-101 Reference or Spike: WG65124-102 WG65124-104 Duplicate: WG65124-103
Comments: <ol style="list-style-type: none"> 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. 	

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORTCLIENT SAMPLE NO.
PDI-TF-SMB125
Sample Collection:
14-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972

Matrix: TISSUE

Sample Receipt Date: 16-Aug-2018

Extraction Date: 07-Sep-2018

Analysis Date: 10-Oct-2018 Time: 23:48:59

Extract Volume (uL): 40

Injection Volume (uL): 1.0

Dilution Factor: N/A

Project No.

Lab Sample I.D.:

Sample Size: 10.5 g (wet)

Initial Calibration Date: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

Sample Data Filename: CL82_139 S: 10

Blank Data Filename: CL82_139 S: 9

Cal. Ver. Data Filename: CL82_139 S: 5

PORTLAND HARBOR PDI AND
BASELINE TISSUE
L29887-1 i

Concentration Units: ug/kg (wet weight basis)

% Lipid: 3.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.699	0.0021 (Q)	1.22	1.001
Aldrin	309-00-2	U		0.0042 (Q)		
Chlordane, oxy-	27304-13-8	J	0.218	0.0118 (S)	1.59	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.075	0.0051 (S)	1.23	1.001
Chlordane, alpha (cis)	5103-71-9	J	0.282	0.0052 (S)	1.35	1.026
Nonachlor, trans-	39765-80-5		1.26	0.0058 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		0.439	0.0042 (Q)	1.26	1.001
2,4'-DDD	53-19-0	J	0.135	0.0187 (S)	1.79	0.951
4,4'-DDD	72-54-8		1.06	0.0235 (S)	1.68	1.000
2,4'-DDE	3424-82-6	J	0.045	0.0052 (S)	1.55	1.001
4,4'-DDE	72-55-9		13.9	0.0066 (S)	1.58	1.000
2,4'-DDT	789-02-6	J	0.079	0.0222 (S)	1.43	1.000
4,4'-DDT	50-29-3		0.921	0.0269 (S)	1.69	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-1_Form1A_CL82_139S10_SJ2445578.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB125
Sample Collection:
14-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-1 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.5 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	10-Oct-2018 Time: 23:48:59	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 10
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 5
		% Lipid:	3.56

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LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	16.3	101	1.31	0.790
13C-Aldrin		16.0	18.9	118	1.64	1.030
13C-Chlordane, oxy		16.0	23.7	148	1.63	1.110
13C-Chlordane, gamma (trans)		16.0	20.4	127	1.27	0.837
13C-Nonachlor, trans-		16.0	21.4	134	1.33	0.866
13C-Nonachlor, cis-		16.3	18.6	114	1.28	0.954
13C-2,4'-DDE		16.0	19.7	123	1.57	0.845
13C-4,4'-DDE		16.4	20.2	123	1.56	0.889
13C-4,4'-DDD		16.1	16.1	99.8	1.59	0.949
13C-2,4'-DDT		16.0	20.3	127	1.57	0.953
13C-4,4'-DDT		16.1	20.2	125	1.63	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-1_Form2_CL82_139S10_SJ2445578.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB114
Sample Collection:
15-Aug-2018 09:18

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-2 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.85 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 00:26:30	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 11
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_139 S: 5
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	3.86

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COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.790	0.0022 (Q)	1.25	1.000
Aldrin	309-00-2	K J	0.006	0.0045 (Q)	1.05	1.001
Chlordane, oxy-	27304-13-8		0.802	0.0115 (S)	1.54	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.405	0.0079 (S)	1.25	1.001
Chlordane, alpha (cis)	5103-71-9		1.45	0.0082 (S)	1.28	1.026
Nonachlor, trans-	39765-80-5		3.83	0.0090 (S)	1.29	1.001
Nonachlor, cis-	5103-73-1		1.26	0.0045 (Q)	1.21	1.001
2,4'-DDD	53-19-0		0.271	0.0231 (S)	1.65	0.951
4,4'-DDD	72-54-8		2.77	0.0290 (S)	1.71	1.001
2,4'-DDE	3424-82-6	J	0.156	0.0045 (Q)	1.56	1.001
4,4'-DDE	72-55-9		37.9	0.0049 (S)	1.60	1.001
2,4'-DDT	789-02-6	J	0.130	0.0267 (S)	1.44	1.001
4,4'-DDT	50-29-3		1.96	0.0323 (S)	1.68	1.001

(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.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-2_Form1A_CL82_139S11_SJ2445579.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB114
Sample Collection:
15-Aug-2018 09:18

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-2 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.85 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 00:26:30	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 11
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 5
		% Lipid:	3.86

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LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	13.1	81.0	1.30	0.791
13C-Aldrin		16.0	16.0	99.8	1.56	1.030
13C-Chlordane, oxy		16.0	18.6	116	1.74	1.110
13C-Chlordane, gamma (trans)		16.0	17.2	108	1.30	0.837
13C-Nonachlor, trans-		16.0	18.9	118	1.26	0.865
13C-Nonachlor, cis-		16.3	17.1	105	1.21	0.954
13C-2,4'-DDE		16.0	17.7	111	1.61	0.845
13C-4,4'-DDE		16.4	18.4	112	1.58	0.889
13C-4,4'-DDD		16.1	14.1	87.7	1.60	0.948
13C-2,4'-DDT		16.0	17.9	112	1.60	0.953
13C-4,4'-DDT		16.1	17.6	109	1.64	0.995

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-2_Form2_CL82_139S11_SJ2445579.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB073
Sample Collection:
13-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-3 i (A)
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.4 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 01:04:03	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 12
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_139 S: 5
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	6.21

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.54	0.0021 (Q)	1.24	1.001
Aldrin	309-00-2	K J	0.007	0.0041 (Q)	3.12	1.001
Chlordane, oxy-	27304-13-8		2.28	0.0077 (S)	1.67	1.001
Chlordane, gamma (trans)	5103-74-2		0.968	0.0107 (S)	1.25	1.001
Chlordane, alpha (cis)	5103-71-9		3.88	0.0111 (S)	1.26	1.026
Nonachlor, trans-	39765-80-5		10.2	0.0113 (S)	1.23	1.001
Nonachlor, cis-	5103-73-1		2.94	0.0135 (S)	1.27	1.001
2,4'-DDD	53-19-0		0.509	0.0145 (S)	1.67	0.951
4,4'-DDD	72-54-8		4.15	0.0181 (S)	1.65	1.001
2,4'-DDE	3424-82-6	J	0.175	0.0041 (Q)	1.55	1.001
4,4'-DDE	72-55-9		27.8	0.0044 (S)	1.59	1.001
2,4'-DDT	789-02-6		0.334	0.0193 (S)	1.65	1.001
4,4'-DDT	50-29-3		3.36	0.0235 (S)	1.66	1.001

(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.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-3_Form1A_CL82_139S12_SJ2445580.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB073
Sample Collection:
13-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-3 i (A)
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.4 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 01:04:03	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 12
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 5
		% Lipid:	6.21

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	13.3	82.1	1.29	0.790
13C-Aldrin		16.0	14.1	87.8	1.65	1.030
13C-Chlordane, oxy		16.0	17.8	111	1.49	1.110
13C-Chlordane, gamma (trans)		16.0	16.6	104	1.32	0.837
13C-Nonachlor, trans-		16.0	17.9	112	1.33	0.866
13C-Nonachlor, cis-		16.3	15.2	93.5	1.25	0.954
13C-2,4'-DDE		16.0	16.9	106	1.58	0.845
13C-4,4'-DDE		16.4	16.9	103	1.52	0.889
13C-4,4'-DDD		16.1	14.0	87.2	1.58	0.949
13C-2,4'-DDT		16.0	16.5	103	1.60	0.953
13C-4,4'-DDT		16.1	16.3	101	1.55	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-3_Form2_CL82_139S12_SJ2445580.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB073 (Duplicate)
Sample Collection:
13-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	WG65124-103 i (DUP L29887-3)
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.7 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 01:41:34	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 13
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_139 S: 5
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	6.15

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.55	0.0021 (Q)	1.23	1.001
Aldrin	309-00-2	K J	0.007	0.0042 (Q)	2.03	1.001
Chlordane, oxy-	27304-13-8		2.22	0.0095 (S)	1.54	1.001
Chlordane, gamma (trans)	5103-74-2		0.943	0.0109 (S)	1.28	1.000
Chlordane, alpha (cis)	5103-71-9		3.75	0.0112 (S)	1.26	1.026
Nonachlor, trans-	39765-80-5		10.2	0.0127 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		3.10	0.0123 (S)	1.25	1.001
2,4'-DDD	53-19-0		0.518	0.0164 (S)	1.65	0.951
4,4'-DDD	72-54-8		4.08	0.0206 (S)	1.66	1.001
2,4'-DDE	3424-82-6	J	0.176	0.0059 (S)	1.61	1.001
4,4'-DDE	72-55-9		27.6	0.0075 (S)	1.58	1.000
2,4'-DDT	789-02-6		0.361	0.0199 (S)	1.67	1.001
4,4'-DDT	50-29-3		3.27	0.0262 (S)	1.68	1.001

(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.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_WG65124-103_Form1A_CL82_139S13_SJ2445581.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORTCLIENT SAMPLE NO.
PDI-TF-SMB073 (Duplicate)
Sample Collection:
13-Aug-2018 11:47

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972

Matrix: TISSUE

Sample Receipt Date: 16-Aug-2018

Extraction Date: 07-Sep-2018

Analysis Date: 11-Oct-2018 Time: 01:41:34

Extract Volume (uL): 40

Injection Volume (uL): 1.0

Dilution Factor: N/A

Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND
BASELINE TISSUE

Lab Sample I.D.: WG65124-103 i (DUP L29887-3)

Sample Size: 10.7 g (wet)

Initial Calibration Date: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

Sample Data Filename: CL82_139 S: 13

Blank Data Filename: CL82_139 S: 9

Cal. Ver. Data Filename: CL82_139 S: 5

% Lipid: 6.15

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	12.3	76.0	1.32	0.790
13C-Aldrin		16.0	13.2	82.6	1.53	1.030
13C-Chlordane, oxy		16.0	16.6	104	1.76	1.109
13C-Chlordane, gamma (trans)		16.0	17.1	107	1.28	0.837
13C-Nonachlor, trans-		16.0	17.5	109	1.38	0.866
13C-Nonachlor, cis-		16.3	15.2	93.3	1.23	0.954
13C-2,4'-DDE		16.0	16.5	103	1.58	0.844
13C-4,4'-DDE		16.4	16.8	103	1.56	0.889
13C-4,4'-DDD		16.1	14.0	87.2	1.66	0.949
13C-2,4'-DDT		16.0	17.1	107	1.53	0.953
13C-4,4'-DDT		16.1	15.9	98.5	1.57	0.996

(1) Where applicable, custom lab flags have been used on this report.
(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_WG65124-103_Form2_CL82_139S13_SJ2445581.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

PESTICIDE 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-SMB073

Concentration Units:

ug/kg (wet weight basis)

COMPOUND	L29887-3 (A)		WG65124-103		MEAN	RELATIVE PERCENT DIFFERENCE
	LAB FLAG ¹	CONC. FOUND	LAB FLAG ¹	CONC. FOUND		
Hexachlorobenzene		1.54		1.55	1.54	0.714
Aldrin	K J	0.007	K J	0.007		
Chlordane, oxy-		2.28		2.22	2.25	2.98
Chlordane, gamma (trans)		0.968		0.943	0.956	2.62
Chlordane, alpha (cis)		3.88		3.75	3.81	3.36
Nonachlor, trans-		10.2		10.2	10.2	0.108
Nonachlor, cis-		2.94		3.10	3.02	5.40
2,4'-DDD		0.509		0.518	0.514	1.75
4,4'-DDD		4.15		4.08	4.12	1.77
2,4'-DDE	J	0.175	J	0.176	0.176	0.570
4,4'-DDE		27.8		27.6	27.7	0.692
2,4'-DDT		0.334		0.361	0.348	7.77
4,4'-DDT		3.36		3.27	3.32	2.53

(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.

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

Signed: _____ Ting Chen _____

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.xml; Created: 15-Oct-2018 15:58:28; Application: XMLTransformer-1.16.50;
Report Filename: RPD_PEST_HI_E1HI-RPD_WG65124-103_L29887-3_.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB126
Sample Collection:
14-Aug-2018 11:52

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-4 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.2 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 00:36:10	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 26
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	3.90

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.12	0.0022 (Q)	1.23	1.001
Aldrin	309-00-2	U		0.0044 (Q)		
Chlordane, oxy-	27304-13-8		0.835	0.0124 (S)	1.48	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.262	0.0085 (S)	1.27	1.001
Chlordane, alpha (cis)	5103-71-9		1.19	0.0088 (S)	1.26	1.026
Nonachlor, trans-	39765-80-5		6.54	0.0106 (S)	1.26	1.001
Nonachlor, cis-	5103-73-1		2.10	0.0069 (S)	1.17	1.001
2,4'-DDD	53-19-0		0.365	0.0088 (S)	1.61	0.951
4,4'-DDD	72-54-8		4.37	0.0111 (S)	1.59	1.001
2,4'-DDE	3424-82-6	J	0.132	0.0044 (Q)	1.58	1.000
4,4'-DDE	72-55-9		51.7	0.0044 (Q)	1.58	1.001
2,4'-DDT	789-02-6		0.312	0.0119 (S)	1.69	1.001
4,4'-DDT	50-29-3		4.08	0.0143 (S)	1.57	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-4_Form1A_CL82_137BS26_SJ2444164.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB126
Sample Collection:
14-Aug-2018 11:52

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972
Matrix: TISSUE
Sample Receipt Date: 16-Aug-2018
Extraction Date: 07-Sep-2018
Analysis Date: 07-Oct-2018 **Time:** 00:36:10
Extract Volume (uL): 40
Injection Volume (uL): 1.0
Dilution Factor: N/A
Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND
BASELINE TISSUE
Lab Sample I.D.: L29887-4 i
Sample Size: 10.2 g (wet)
Initial Calibration Date: 06-Oct-2018
Instrument ID: HR GC/MS
GC Column ID: DB5
Sample Data Filename: CL82_137B S: 26
Blank Data Filename: CL82_139 S: 9
Cal. Ver. Data Filename: CL82_137B S: 23
% Lipid: 3.90

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	10.7	66.1	1.25	0.790
13C-Aldrin		16.0	12.5	78.1	1.60	1.030
13C-Chlordane, oxy		16.0	14.5	90.8	1.69	1.110
13C-Chlordane, gamma (trans)		16.0	15.5	96.6	1.28	0.837
13C-Nonachlor, trans-		16.0	15.3	95.4	1.31	0.866
13C-Nonachlor, cis-		16.3	14.1	86.6	1.20	0.954
13C-2,4'-DDE		16.0	16.1	101	1.57	0.845
13C-4,4'-DDE		16.4	17.2	105	1.60	0.889
13C-4,4'-DDD		16.1	14.2	88.1	1.58	0.949
13C-2,4'-DDT		16.0	16.0	100	1.55	0.953
13C-4,4'-DDT		16.1	16.3	101	1.60	0.996

(1) Where applicable, custom lab flags have been used on this report.
(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-4_Form2_CL82_137BS26_SJ2444164.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB127
Sample Collection:
14-Aug-2018 11:19

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-5 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.52 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 01:13:45	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 27
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.52

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.787	0.0024 (Q)	1.26	1.001
Aldrin	309-00-2	U		0.0047 (Q)		
Chlordane, oxy-	27304-13-8		0.496	0.0101 (S)	1.53	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.102	0.0047 (Q)	1.27	1.000
Chlordane, alpha (cis)	5103-71-9		0.512	0.0047 (Q)	1.34	1.026
Nonachlor, trans-	39765-80-5		3.29	0.0051 (S)	1.26	1.000
Nonachlor, cis-	5103-73-1		0.884	0.0047 (Q)	1.27	1.000
2,4'-DDD	53-19-0	J	0.159	0.0057 (S)	1.58	0.951
4,4'-DDD	72-54-8		1.19	0.0071 (S)	1.60	1.001
2,4'-DDE	3424-82-6	J	0.046	0.0047 (Q)	1.36	1.000
4,4'-DDE	72-55-9		17.2	0.0047 (Q)	1.58	1.000
2,4'-DDT	789-02-6	J	0.104	0.0084 (S)	1.77	1.001
4,4'-DDT	50-29-3		1.67	0.0096 (S)	1.57	1.001

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-5_Form1A_CL82_137BS27_SJ2444165.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB127
Sample Collection:
14-Aug-2018 11:19

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-5 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.52 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 01:13:45	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 27
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	4.52

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	8.91	55.0	1.26	0.790
13C-Aldrin		16.0	10.8	67.2	1.71	1.030
13C-Chlordane, oxy		16.0	13.5	84.5	1.61	1.110
13C-Chlordane, gamma (trans)		16.0	13.9	86.9	1.23	0.838
13C-Nonachlor, trans-		16.0	14.3	89.6	1.32	0.866
13C-Nonachlor, cis-		16.3	13.7	83.8	1.19	0.954
13C-2,4'-DDE		16.0	14.2	89.1	1.58	0.845
13C-4,4'-DDE		16.4	15.4	93.9	1.57	0.889
13C-4,4'-DDD		16.1	13.9	86.1	1.60	0.949
13C-2,4'-DDT		16.0	14.6	91.3	1.55	0.953
13C-4,4'-DDT		16.1	15.3	95.1	1.59	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-5_Form2_CL82_137BS27_SJ2444165.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB123
Sample Collection:
14-Aug-2018 12:57

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-6 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.1 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 01:51:24	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 28
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.78

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.65	0.0022 (Q)	1.25	1.001
Aldrin	309-00-2	J	0.013	0.0044 (Q)	1.79	1.001
Chlordane, oxy-	27304-13-8		0.582	0.0108 (S)	1.56	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.264	0.0044 (S)	1.28	1.001
Chlordane, alpha (cis)	5103-71-9		0.749	0.0045 (S)	1.25	1.026
Nonachlor, trans-	39765-80-5		2.32	0.0053 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		0.817	0.0044 (Q)	1.30	1.001
2,4'-DDD	53-19-0		0.563	0.0065 (S)	1.60	0.952
4,4'-DDD	72-54-8		4.23	0.0082 (S)	1.60	1.001
2,4'-DDE	3424-82-6	J	0.163	0.0044 (Q)	1.57	1.001
4,4'-DDE	72-55-9		31.7	0.0044 (Q)	1.58	1.001
2,4'-DDT	789-02-6	J	0.205	0.0097 (S)	1.62	1.001
4,4'-DDT	50-29-3		1.29	0.0111 (S)	1.61	1.000

- (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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-6_Form1A_CL82_137BS28_SJ2444166.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB123
Sample Collection:
14-Aug-2018 12:57

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972
Matrix: TISSUE
Sample Receipt Date: 16-Aug-2018
Extraction Date: 07-Sep-2018
Analysis Date: 07-Oct-2018 **Time:** 01:51:24
Extract Volume (uL): 40
Injection Volume (uL): 1.0
Dilution Factor: N/A
Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND
BASELINE TISSUE
Lab Sample I.D.: L29887-6 i
Sample Size: 10.1 g (wet)
Initial Calibration Date: 06-Oct-2018
Instrument ID: HR GC/MS
GC Column ID: DB5
Sample Data Filename: CL82_137B S: 28
Blank Data Filename: CL82_139 S: 9
Cal. Ver. Data Filename: CL82_137B S: 23
% Lipid: 4.78

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	7.20	44.4	1.32	0.790
13C-Aldrin		16.0	9.19	57.5	1.65	1.030
13C-Chlordane, oxy		16.0	12.5	77.9	1.60	1.110
13C-Chlordane, gamma (trans)		16.0	11.7	73.2	1.26	0.837
13C-Nonachlor, trans-		16.0	12.0	74.9	1.23	0.866
13C-Nonachlor, cis-		16.3	11.6	71.4	1.25	0.954
13C-2,4'-DDE		16.0	12.5	77.9	1.57	0.845
13C-4,4'-DDE		16.4	13.9	84.8	1.59	0.889
13C-4,4'-DDD		16.1	13.8	85.5	1.58	0.948
13C-2,4'-DDT		16.0	13.8	86.4	1.60	0.953
13C-4,4'-DDT		16.1	14.9	92.9	1.60	0.996

(1) Where applicable, custom lab flags have been used on this report.
(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-6_Form2_CL82_137BS28_SJ2444166.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB134
Sample Collection:
14-Aug-2018 08:13

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-7 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.15 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 02:29:04	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 29
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.06	0.0024 (Q)	1.23	1.001
Aldrin	309-00-2	U		0.0049 (Q)		
Chlordane, oxy-	27304-13-8	J	0.298	0.0092 (S)	1.56	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.084	0.0049 (S)	1.23	1.001
Chlordane, alpha (cis)	5103-71-9	J	0.411	0.0051 (S)	1.34	1.026
Nonachlor, trans-	39765-80-5		2.04	0.0058 (S)	1.25	1.001
Nonachlor, cis-	5103-73-1		0.787	0.0051 (S)	1.17	1.001
2,4'-DDD	53-19-0	J	0.193	0.0072 (S)	1.60	0.951
4,4'-DDD	72-54-8		1.65	0.0091 (S)	1.57	1.000
2,4'-DDE	3424-82-6	J	0.088	0.0049 (Q)	1.64	1.001
4,4'-DDE	72-55-9		25.0	0.0049 (Q)	1.57	1.000
2,4'-DDT	789-02-6	J	0.147	0.0096 (S)	1.64	1.001
4,4'-DDT	50-29-3		1.64	0.0109 (S)	1.61	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-7_Form1A_CL82_137BS29_SJ2444167.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB134
Sample Collection:
14-Aug-2018 08:13

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-7 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.15 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 02:29:04	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 29
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	11.4	70.5	1.30	0.790
13C-Aldrin		16.0	12.6	78.7	1.55	1.030
13C-Chlordane, oxy		16.0	16.0	100	1.54	1.110
13C-Chlordane, gamma (trans)		16.0	13.9	87.0	1.25	0.837
13C-Nonachlor, trans-		16.0	14.5	90.8	1.24	0.866
13C-Nonachlor, cis-		16.3	13.8	84.9	1.32	0.954
13C-2,4'-DDE		16.0	14.8	92.8	1.61	0.845
13C-4,4'-DDE		16.4	16.3	99.4	1.63	0.889
13C-4,4'-DDD		16.1	16.1	100	1.55	0.949
13C-2,4'-DDT		16.0	17.6	110	1.57	0.953
13C-4,4'-DDT		16.1	19.1	119	1.55	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-7_Form2_CL82_137BS29_SJ2444167.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB116
Sample Collection:
15-Aug-2018 08:23

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-8 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.1 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 03:06:44	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 30
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	3.37

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.650	0.0022 (Q)	1.25	1.001
Aldrin	309-00-2	U		0.0043 (Q)		
Chlordane, oxy-	27304-13-8	J	0.333	0.0083 (S)	1.59	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.139	0.0050 (S)	1.24	1.001
Chlordane, alpha (cis)	5103-71-9		0.438	0.0051 (S)	1.32	1.026
Nonachlor, trans-	39765-80-5		2.14	0.0058 (S)	1.28	1.001
Nonachlor, cis-	5103-73-1		0.821	0.0043 (Q)	1.27	1.000
2,4'-DDD	53-19-0		0.314	0.0047 (S)	1.55	0.951
4,4'-DDD	72-54-8		2.79	0.0059 (S)	1.60	1.001
2,4'-DDE	3424-82-6	J	0.118	0.0043 (Q)	1.62	1.001
4,4'-DDE	72-55-9		30.0	0.0043 (Q)	1.57	1.001
2,4'-DDT	789-02-6	J	0.067	0.0067 (S)	1.77	1.001
4,4'-DDT	50-29-3		0.911	0.0075 (S)	1.59	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-8_Form1A_CL82_137BS30_SJ2444168.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB116
Sample Collection:
15-Aug-2018 08:23

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972
Matrix: TISSUE
Sample Receipt Date: 16-Aug-2018
Extraction Date: 07-Sep-2018
Analysis Date: 07-Oct-2018 **Time:** 03:06:44
Extract Volume (uL): 40
Injection Volume (uL): 1.0
Dilution Factor: N/A
Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND
BASELINE TISSUE
Lab Sample I.D.: L29887-8 i
Sample Size: 10.1 g (wet)
Initial Calibration Date: 06-Oct-2018
Instrument ID: HR GC/MS
GC Column ID: DB5
Sample Data Filename: CL82_137B S: 30
Blank Data Filename: CL82_139 S: 9
Cal. Ver. Data Filename: CL82_137B S: 23
% Lipid: 3.37

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	10.1	62.3	1.28	0.790
13C-Aldrin		16.0	11.6	72.8	1.54	1.030
13C-Chlordane, oxy		16.0	14.8	92.7	1.56	1.110
13C-Chlordane, gamma (trans)		16.0	14.6	91.1	1.24	0.837
13C-Nonachlor, trans-		16.0	15.6	97.4	1.26	0.866
13C-Nonachlor, cis-		16.3	15.1	92.4	1.22	0.954
13C-2,4'-DDE		16.0	15.7	98.1	1.59	0.844
13C-4,4'-DDE		16.4	17.7	108	1.60	0.889
13C-4,4'-DDD		16.1	17.1	106	1.58	0.948
13C-2,4'-DDT		16.0	18.2	114	1.57	0.953
13C-4,4'-DDT		16.1	19.8	123	1.63	0.996

(1) Where applicable, custom lab flags have been used on this report.
(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-8_Form2_CL82_137BS30_SJ2444168.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB063
Sample Collection:
13-Aug-2018 12:40

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-9 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.3 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 03:44:23	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 31
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	5.35

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.29	0.0020 (Q)	1.24	1.001
Aldrin	309-00-2	U		0.0040 (Q)		
Chlordane, oxy-	27304-13-8		0.759	0.0091 (S)	1.46	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.264	0.0083 (S)	1.32	1.001
Chlordane, alpha (cis)	5103-71-9		1.03	0.0086 (S)	1.30	1.026
Nonachlor, trans-	39765-80-5		4.09	0.0100 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		1.44	0.0079 (S)	1.27	1.001
2,4'-DDD	53-19-0		0.944	0.0064 (S)	1.57	0.951
4,4'-DDD	72-54-8		4.87	0.0080 (S)	1.59	1.000
2,4'-DDE	3424-82-6		0.245	0.0040 (Q)	1.59	1.001
4,4'-DDE	72-55-9		28.5	0.0040 (Q)	1.57	1.001
2,4'-DDT	789-02-6		0.649	0.0083 (S)	1.56	1.001
4,4'-DDT	50-29-3		3.97	0.0098 (S)	1.58	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-9_Form1A_CL82_137BS31_SJ2444169.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB063
Sample Collection:
13-Aug-2018 12:40

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-9 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.3 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 03:44:23	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 31
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	5.35

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	10.9	67.2	1.30	0.790
13C-Aldrin		16.0	12.8	80.2	1.66	1.030
13C-Chlordane, oxy		16.0	15.8	98.6	1.49	1.110
13C-Chlordane, gamma (trans)		16.0	15.7	98.1	1.35	0.837
13C-Nonachlor, trans-		16.0	15.9	99.1	1.29	0.866
13C-Nonachlor, cis-		16.3	14.0	86.1	1.26	0.954
13C-2,4'-DDE		16.0	16.3	102	1.60	0.845
13C-4,4'-DDE		16.4	17.0	104	1.59	0.889
13C-4,4'-DDD		16.1	15.4	95.4	1.58	0.949
13C-2,4'-DDT		16.0	17.3	108	1.60	0.953
13C-4,4'-DDT		16.1	17.9	111	1.58	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-9_Form2_CL82_137BS31_SJ2444169.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB131
Sample Collection:
14-Aug-2018 09:55

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-10 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.18 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 04:21:55	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 32
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	7.01

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.60	0.0025 (Q)	1.24	1.000
Aldrin	309-00-2	U		0.0049 (Q)		
Chlordane, oxy-	27304-13-8		1.02	0.0114 (S)	1.37	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.327	0.0096 (S)	1.27	1.001
Chlordane, alpha (cis)	5103-71-9		1.20	0.0099 (S)	1.22	1.026
Nonachlor, trans-	39765-80-5		6.16	0.0117 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		2.04	0.0075 (S)	1.27	1.000
2,4'-DDD	53-19-0		0.590	0.0103 (S)	1.58	0.951
4,4'-DDD	72-54-8		3.31	0.0129 (S)	1.59	1.000
2,4'-DDE	3424-82-6	J	0.145	0.0059 (S)	1.67	1.001
4,4'-DDE	72-55-9		25.4	0.0075 (S)	1.58	1.001
2,4'-DDT	789-02-6		0.389	0.0126 (S)	1.66	1.001
4,4'-DDT	50-29-3		2.66	0.0158 (S)	1.60	1.001

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-10_Form1A_CL82_137BS32_SJ2444170.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB131
Sample Collection:
14-Aug-2018 09:55

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-10 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.18 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 04:21:55	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 32
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	7.01

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	9.77	60.3	1.31	0.790
13C-Aldrin		16.0	11.4	71.1	1.48	1.030
13C-Chlordane, oxy		16.0	15.6	97.7	1.78	1.109
13C-Chlordane, gamma (trans)		16.0	16.9	106	1.26	0.837
13C-Nonachlor, trans-		16.0	16.8	105	1.30	0.866
13C-Nonachlor, cis-		16.3	14.5	89.0	1.27	0.954
13C-2,4'-DDE		16.0	16.9	106	1.59	0.845
13C-4,4'-DDE		16.4	17.3	105	1.58	0.889
13C-4,4'-DDD		16.1	14.9	92.4	1.60	0.949
13C-2,4'-DDT		16.0	17.5	109	1.56	0.953
13C-4,4'-DDT		16.1	17.0	105	1.64	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-10_Form2_CL82_137BS32_SJ2444170.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB124
Sample Collection:
14-Aug-2018 13:11

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-11 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.2 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 04:59:19	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 33
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	5.27

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.14	0.0022 (Q)	1.25	1.000
Aldrin	309-00-2	J	0.005	0.0044 (Q)	1.76	1.001
Chlordane, oxy-	27304-13-8		0.451	0.0158 (S)	1.48	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.119	0.0082 (S)	1.26	1.001
Chlordane, alpha (cis)	5103-71-9		0.481	0.0085 (S)	1.28	1.026
Nonachlor, trans-	39765-80-5		2.70	0.0094 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		0.823	0.0044 (Q)	1.28	1.001
2,4'-DDD	53-19-0		0.311	0.0115 (S)	1.51	0.951
4,4'-DDD	72-54-8		2.36	0.0144 (S)	1.60	1.001
2,4'-DDE	3424-82-6	J	0.105	0.0044 (Q)	1.66	1.001
4,4'-DDE	72-55-9		31.1	0.0058 (S)	1.58	1.001
2,4'-DDT	789-02-6	J	0.204	0.0152 (S)	1.82	1.001
4,4'-DDT	50-29-3		2.05	0.0184 (S)	1.59	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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-11_Form1A_CL82_137BS33_SJ2444171.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB124
Sample Collection:
14-Aug-2018 13:11

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-11 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.2 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 04:59:19	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 33
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	5.27

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	5.74	35.4	1.32	0.791
13C-Aldrin		16.0	5.91	36.9	1.60	1.030
13C-Chlordane, oxy		16.0	6.78	42.3	1.44	1.110
13C-Chlordane, gamma (trans)		16.0	8.14	50.9	1.27	0.837
13C-Nonachlor, trans-		16.0	8.32	52.0	1.26	0.865
13C-Nonachlor, cis-		16.3	7.67	47.1	1.36	0.954
13C-2,4'-DDE		16.0	8.14	50.8	1.58	0.845
13C-4,4'-DDE		16.4	8.21	50.0	1.57	0.889
13C-4,4'-DDD		16.1	7.26	45.1	1.64	0.948
13C-2,4'-DDT		16.0	8.07	50.4	1.64	0.953
13C-4,4'-DDT		16.1	8.13	50.5	1.63	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-11_Form2_CL82_137BS33_SJ2444171.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB115
Sample Collection:
15-Aug-2018 09:34

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-12 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.38 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 05:36:46	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 34
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	3.64

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.846	0.0022 (Q)	1.25	1.001
Aldrin	309-00-2	U		0.0043 (Q)		
Chlordane, oxy-	27304-13-8		0.697	0.0105 (S)	1.46	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.265	0.0087 (S)	1.23	1.001
Chlordane, alpha (cis)	5103-71-9		0.803	0.0090 (S)	1.33	1.026
Nonachlor, trans-	39765-80-5		3.46	0.0097 (S)	1.27	1.001
Nonachlor, cis-	5103-73-1		1.19	0.0051 (S)	1.27	1.001
2,4'-DDD	53-19-0		0.629	0.0123 (S)	1.62	0.951
4,4'-DDD	72-54-8		4.80	0.0154 (S)	1.59	1.001
2,4'-DDE	3424-82-6		0.270	0.0043 (Q)	1.59	1.000
4,4'-DDE	72-55-9		48.2	0.0043 (Q)	1.57	1.000
2,4'-DDT	789-02-6	K J	0.201	0.0151 (S)	1.89	1.001
4,4'-DDT	50-29-3		1.39	0.0201 (S)	1.62	1.001

- (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.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-12_Form1A_CL82_137BS34_SJ2444172.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB115
Sample Collection:
15-Aug-2018 09:34

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972
Matrix: TISSUE
Sample Receipt Date: 16-Aug-2018
Extraction Date: 07-Sep-2018
Analysis Date: 07-Oct-2018 **Time:** 05:36:46
Extract Volume (uL): 40
Injection Volume (uL): 1.0
Dilution Factor: N/A
Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND
BASELINE TISSUE
Lab Sample I.D.: L29887-12 i
Sample Size: 9.38 g (wet)
Initial Calibration Date: 06-Oct-2018
Instrument ID: HR GC/MS
GC Column ID: DB5
Sample Data Filename: CL82_137B S: 34
Blank Data Filename: CL82_139 S: 9
Cal. Ver. Data Filename: CL82_137B S: 23
% Lipid: 3.64

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	9.47	58.5	1.28	0.790
13C-Aldrin		16.0	11.8	74.0	1.62	1.030
13C-Chlordane, oxy		16.0	15.2	94.7	1.65	1.110
13C-Chlordane, gamma (trans)		16.0	17.4	109	1.26	0.838
13C-Nonachlor, trans-		16.0	17.8	112	1.21	0.866
13C-Nonachlor, cis-		16.3	15.8	96.8	1.24	0.954
13C-2,4'-DDE		16.0	17.9	112	1.60	0.845
13C-4,4'-DDE		16.4	18.6	114	1.59	0.889
13C-4,4'-DDD		16.1	15.8	97.9	1.59	0.949
13C-2,4'-DDT		16.0	18.7	117	1.61	0.953
13C-4,4'-DDT		16.1	17.4	108	1.56	0.996

(1) Where applicable, custom lab flags have been used on this report.
(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-12_Form2_CL82_137BS34_SJ2444172.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB121
Sample Collection:
14-Aug-2018 13:41

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-13 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.5 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 06:14:17	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 35
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
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.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.897	0.0022 (Q)	1.24	1.001
Aldrin	309-00-2	U		0.0044 (Q)		
Chlordane, oxy-	27304-13-8		1.66	0.0093 (S)	1.54	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.344	0.0119 (S)	1.27	1.001
Chlordane, alpha (cis)	5103-71-9		1.38	0.0123 (S)	1.27	1.026
Nonachlor, trans-	39765-80-5		8.30	0.0129 (S)	1.29	1.001
Nonachlor, cis-	5103-73-1		2.72	0.0090 (S)	1.27	1.001
2,4'-DDD	53-19-0		0.828	0.0087 (S)	1.56	0.951
4,4'-DDD	72-54-8		6.55	0.0109 (S)	1.59	1.001
2,4'-DDE	3424-82-6		0.286	0.0044 (Q)	1.61	1.001
4,4'-DDE	72-55-9	E				
2,4'-DDT	789-02-6		0.487	0.0122 (S)	1.62	1.001
4,4'-DDT	50-29-3		4.83	0.0144 (S)	1.58	1.001

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; J = concentration less than lowest calibration equivalent; E = exceeds calibrated linear range, see dilution data.
(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-13_Form1A_CL82_137BS35_SJ2444173.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB121
Sample Collection:
14-Aug-2018 13:41

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-13 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.5 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 06:14:17	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 35
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	4.20

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This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	9.73	60.0	1.30	0.790
13C-Aldrin		16.0	11.6	72.7	1.60	1.030
13C-Chlordane, oxy		16.0	14.7	91.7	1.71	1.110
13C-Chlordane, gamma (trans)		16.0	16.1	101	1.34	0.837
13C-Nonachlor, trans-		16.0	16.8	105	1.25	0.866
13C-Nonachlor, cis-		16.3	15.3	93.6	1.24	0.954
13C-2,4'-DDE		16.0	16.3	102	1.57	0.845
13C-4,4'-DDE	X					
13C-4,4'-DDD		16.1	16.3	101	1.60	0.949
13C-2,4'-DDT		16.0	18.1	113	1.59	0.953
13C-4,4'-DDT		16.1	18.4	114	1.56	0.996

(1) Where applicable, custom lab flags have been used on this report; X = result reported separately.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-13_Form2_CL82_137BS35_SJ2444173.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB121
Sample Collection:
14-Aug-2018 13:41

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-13 W
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.5 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 02:19:18	Instrument ID:	HR GC/MS
Extract Volume (uL):	100	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 14
Dilution Factor:	2.5	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_139 S: 5
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.20

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This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1	X				
Aldrin	309-00-2	X				
Chlordane, oxy-	27304-13-8	X				
Chlordane, gamma (trans)	5103-74-2	X				
Chlordane, alpha (cis)	5103-71-9	X				
Nonachlor, trans-	39765-80-5	X				
Nonachlor, cis-	5103-73-1	X				
2,4'-DDD	53-19-0	X				
4,4'-DDD	72-54-8	X				
2,4'-DDE	3424-82-6	X				
4,4'-DDE	72-55-9	D	66.9	0.0092 (S)	1.59	1.001
2,4'-DDT	789-02-6	X				
4,4'-DDT	50-29-3	X				

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.

(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-13_Form1A_CL82_139S14_SJ2445582.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB121
Sample Collection:
14-Aug-2018 13:41

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-13 W
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.5 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 02:19:18	Instrument ID:	HR GC/MS
Extract Volume (uL):	100	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 14
Dilution Factor:	2.5	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 5
		% Lipid:	4.20

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene	X					
13C-Aldrin	X					
13C-Chlordane, oxy	X					
13C-Chlordane, gamma (trans)	X					
13C-Nonachlor, trans-	X					
13C-Nonachlor, cis-	X					
13C-2,4'-DDE	X					
13C-4,4'-DDE	D	16.4	16.2	98.7	1.55	0.889
13C-4,4'-DDD	X					
13C-2,4'-DDT	X					
13C-4,4'-DDT	X					

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.
(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-13_Form2_CL82_139S14_SJ2445582.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB122
Sample Collection:
14-Aug-2018 13:38

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-14 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.7 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 06:51:56	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 36
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	3.86

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		0.866	0.0020 (Q)	1.25	1.001
Aldrin	309-00-2	U		0.0041 (Q)		
Chlordane, oxy-	27304-13-8	J	0.397	0.0084 (S)	1.56	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.111	0.0044 (S)	1.32	1.001
Chlordane, alpha (cis)	5103-71-9		0.412	0.0045 (S)	1.26	1.026
Nonachlor, trans-	39765-80-5		2.24	0.0051 (S)	1.23	1.001
Nonachlor, cis-	5103-73-1		0.786	0.0041 (Q)	1.27	1.001
2,4'-DDD	53-19-0		0.314	0.0060 (S)	1.65	0.951
4,4'-DDD	72-54-8		2.42	0.0075 (S)	1.59	1.000
2,4'-DDE	3424-82-6	J	0.082	0.0041 (Q)	1.46	1.001
4,4'-DDE	72-55-9		30.1	0.0041 (Q)	1.57	1.001
2,4'-DDT	789-02-6	J	0.162	0.0076 (S)	1.65	1.001
4,4'-DDT	50-29-3		1.55	0.0093 (S)	1.58	1.000

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-14_Form1A_CL82_137BS36_SJ2444174.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB122
Sample Collection:
14-Aug-2018 13:38

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-14 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.7 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 06:51:56	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 36
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	3.86

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	11.2	69.4	1.29	0.790
13C-Aldrin		16.0	12.7	79.5	1.56	1.030
13C-Chlordane, oxy		16.0	16.0	100	1.69	1.110
13C-Chlordane, gamma (trans)		16.0	16.2	101	1.28	0.837
13C-Nonachlor, trans-		16.0	16.9	106	1.30	0.866
13C-Nonachlor, cis-		16.3	14.9	91.2	1.28	0.954
13C-2,4'-DDE		16.0	16.8	105	1.61	0.845
13C-4,4'-DDE		16.4	18.0	110	1.60	0.889
13C-4,4'-DDD		16.1	16.5	102	1.62	0.949
13C-2,4'-DDT		16.0	18.6	116	1.55	0.953
13C-4,4'-DDT		16.1	18.8	117	1.60	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-14_Form2_CL82_137BS36_SJ2444174.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB135
Sample Collection:
14-Aug-2018 08:10

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-15 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.3 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 07:29:24	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 37
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	5.18

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.39	0.0022 (Q)	1.25	1.000
Aldrin	309-00-2	U		0.0045 (Q)		
Chlordane, oxy-	27304-13-8		0.629	0.0105 (S)	1.64	1.001
Chlordane, gamma (trans)	5103-74-2	J	0.136	0.0075 (S)	1.20	1.002
Chlordane, alpha (cis)	5103-71-9		0.677	0.0078 (S)	1.21	1.026
Nonachlor, trans-	39765-80-5		3.44	0.0085 (S)	1.26	1.001
Nonachlor, cis-	5103-73-1		1.21	0.0065 (S)	1.21	1.001
2,4'-DDD	53-19-0		0.249	0.0078 (S)	1.60	0.952
4,4'-DDD	72-54-8		2.89	0.0098 (S)	1.60	1.001
2,4'-DDE	3424-82-6	J	0.180	0.0045 (Q)	1.55	1.000
4,4'-DDE	72-55-9		46.7	0.0045 (Q)	1.57	1.001
2,4'-DDT	789-02-6		0.232	0.0101 (S)	1.72	1.001
4,4'-DDT	50-29-3		3.17	0.0124 (S)	1.60	1.001

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-15_Form1A_CL82_137BS37_SJ2444175.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB135
Sample Collection:
14-Aug-2018 08:10

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-15 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	10.3 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 07:29:24	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 37
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	5.18

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	12.2	75.1	1.28	0.790
13C-Aldrin		16.0	13.2	82.8	1.60	1.030
13C-Chlordane, oxy		16.0	17.0	106	1.77	1.109
13C-Chlordane, gamma (trans)		16.0	15.5	97.0	1.29	0.837
13C-Nonachlor, trans-		16.0	16.5	103	1.37	0.866
13C-Nonachlor, cis-		16.3	14.8	91.1	1.22	0.954
13C-2,4'-DDE		16.0	16.0	100	1.60	0.845
13C-4,4'-DDE		16.4	17.5	107	1.57	0.889
13C-4,4'-DDD		16.1	16.2	101	1.61	0.948
13C-2,4'-DDT		16.0	18.7	117	1.64	0.953
13C-4,4'-DDT		16.1	18.6	115	1.55	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-15_Form2_CL82_137BS37_SJ2444175.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB118
Sample Collection:
15-Aug-2018 08:05

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-16 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.44 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 08:06:51	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 38
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_137B S: 23
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1		1.13	0.0024 (Q)	1.28	1.000
Aldrin	309-00-2	K J	0.011	0.0048 (Q)	2.50	1.002
Chlordane, oxy-	27304-13-8		2.67	0.0095 (S)	1.48	1.001
Chlordane, gamma (trans)	5103-74-2		1.07	0.0125 (S)	1.29	1.001
Chlordane, alpha (cis)	5103-71-9		3.85	0.0129 (S)	1.24	1.026
Nonachlor, trans-	39765-80-5		18.6	0.0154 (S)	1.26	1.001
Nonachlor, cis-	5103-73-1		5.87	0.0143 (S)	1.25	1.001
2,4'-DDD	53-19-0		0.462	0.0055 (S)	1.59	0.951
4,4'-DDD	72-54-8		5.32	0.0068 (S)	1.59	1.001
2,4'-DDE	3424-82-6	J	0.216	0.0048 (Q)	1.63	1.001
4,4'-DDE	72-55-9	E				
2,4'-DDT	789-02-6		0.242	0.0081 (S)	1.58	1.001
4,4'-DDT	50-29-3		4.01	0.0093 (S)	1.60	1.000

(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; E = exceeds calibrated linear range, see dilution data.

(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-16_Form1A_CL82_137BS38_SJ2444176.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB118
Sample Collection:
15-Aug-2018 08:05

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-16 i
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.44 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 08:06:51	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 38
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23
		% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	11.1	68.8	1.32	0.790
13C-Aldrin		16.0	12.8	80.3	1.56	1.030
13C-Chlordane, oxy		16.0	17.4	108	1.55	1.109
13C-Chlordane, gamma (trans)		16.0	16.5	103	1.26	0.837
13C-Nonachlor, trans-		16.0	16.3	102	1.32	0.866
13C-Nonachlor, cis-		16.3	15.4	94.5	1.29	0.954
13C-2,4'-DDE		16.0	16.9	105	1.60	0.845
13C-4,4'-DDE	X					
13C-4,4'-DDD		16.1	18.7	116	1.59	0.949
13C-2,4'-DDT		16.0	19.2	120	1.59	0.954
13C-4,4'-DDT		16.1	20.9	130	1.60	0.996

(1) Where applicable, custom lab flags have been used on this report; X = result reported separately.

(2) R% = percent recovery.

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

Signed: _____ Ting Chen _____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-16_Form2_CL82_137BS38_SJ2444176.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB118
Sample Collection:
15-Aug-2018 08:05

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-16 W
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.44 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 02:56:49	Instrument ID:	HR GC/MS
Extract Volume (uL):	100	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 15
Dilution Factor:	2.5	Blank Data Filename:	CL82_139 S: 9
		Cal. Ver. Data Filename:	CL82_139 S: 5
Concentration Units:	ug/kg (wet weight basis)	% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1	X				
Aldrin	309-00-2	X				
Chlordane, oxy-	27304-13-8	X				
Chlordane, gamma (trans)	5103-74-2	X				
Chlordane, alpha (cis)	5103-71-9	X				
Nonachlor, trans-	39765-80-5	X				
Nonachlor, cis-	5103-73-1	X				
2,4'-DDD	53-19-0	X				
4,4'-DDD	72-54-8	X				
2,4'-DDE	3424-82-6	X				
4,4'-DDE	72-55-9	D	69.4	0.0074 (S)	1.60	1.001
2,4'-DDT	789-02-6	X				
4,4'-DDT	50-29-3	X				

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.

(2) Reporting Limit (Code): S = sample detection limit; M = method detection limit; L = lowest calibration level equivalent; Q = minimum reporting level.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-16_Form1A_CL82_139S15_SJ2445583.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 2
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.
PDI-TF-SMB118
Sample Collection:
15-Aug-2018 08:05

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Project No.	PORTLAND HARBOR PDI AND BASELINE TISSUE
Matrix:	TISSUE	Lab Sample I.D.:	L29887-16 W
Sample Receipt Date:	16-Aug-2018	Sample Size:	9.44 g (wet)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	11-Oct-2018 Time: 02:56:49	Instrument ID:	HR GC/MS
Extract Volume (uL):	100	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 15
Dilution Factor:	2.5	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 5
		% Lipid:	4.56

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene	X					
13C-Aldrin	X					
13C-Chlordane, oxy	X					
13C-Chlordane, gamma (trans)	X					
13C-Nonachlor, trans-	X					
13C-Nonachlor, cis-	X					
13C-2,4'-DDE	X					
13C-4,4'-DDE	D	16.4	17.4	106	1.55	0.889
13C-4,4'-DDD	X					
13C-2,4'-DDT	X					
13C-4,4'-DDT	X					

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.

(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_L29887-16_Form2_CL82_139S15_SJ2445583.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 1A
PESTICIDE ANALYSIS REPORTCLIENT 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

Contract No.: 4972

Matrix: CANOLA OIL

Sample Receipt Date: N/A

Extraction Date: 07-Sep-2018

Analysis Date: 10-Oct-2018 Time: 23:11:25

Extract Volume (uL): 40

Injection Volume (uL): 1.0

Dilution Factor: N/A

Project No. N/A

Lab Sample I.D.: WG65124-101 i

Sample Size: 10.0 g

Initial Calibration Date: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

Sample Data Filename: CL82_139 S: 9

Blank Data Filename: CL82_139 S: 9

Cal. Ver. Data Filename: CL82_139 S: 5

Concentration Units: ug/kg

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

COMPOUND	CAS NO.	LAB FLAG ¹	CONC. FOUND	REPORTING LIMIT (RL) ²	ION ABUND. RATIO	RRT
Hexachlorobenzene	118-74-1	J	0.004	0.0022 (Q)	1.11	1.001
Aldrin	309-00-2	U		0.0043 (Q)		
Chlordane, oxy-	27304-13-8	U		0.0081 (S)		
Chlordane, gamma (trans)	5103-74-2	U		0.0043 (Q)		
Chlordane, alpha (cis)	5103-71-9	U		0.0043 (Q)		
Nonachlor, trans-	39765-80-5	U		0.0043 (Q)		
Nonachlor, cis-	5103-73-1	U		0.0043 (Q)		
2,4'-DDD	53-19-0	U		0.0119 (S)		
4,4'-DDD	72-54-8	U		0.0149 (S)		
2,4'-DDE	3424-82-6	U		0.0043 (Q)		
4,4'-DDE	72-55-9	J	0.006	0.0053 (S)	1.51	1.001
2,4'-DDT	789-02-6	U		0.0151 (S)		
4,4'-DDT	50-29-3	U		0.0180 (S)		

- (1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; 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.

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

Signed: _____Ting Chen_____

For Axys Internal Use Only [XSL Template: Pest1A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_WG65124-101_Form1A_CL82_139S9_SJ2445576.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

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

Form 2
PESTICIDE ANALYSIS REPORT

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972
Matrix: CANOLA OIL
Sample Receipt Date: N/A
Extraction Date: 07-Sep-2018
Analysis Date: 10-Oct-2018 Time: 23:11:25
Extract Volume (uL): 40
Injection Volume (uL): 1.0
Dilution Factor: N/A
Concentration Units: ng absolute

Project No. N/A
Lab Sample I.D.: WG65124-101 i
Sample Size: 10.0 g
Initial Calibration Date: 06-Oct-2018
Instrument ID: HR GC/MS
GC Column ID: DB5
Sample Data Filename: CL82_139 S: 9
Blank Data Filename: CL82_139 S: 9
Cal. Ver. Data Filename: CL82_139 S: 5

This page is part of a total report that contains information necessary for accreditation compliance.
This test is not NELAP accredited. Sample results relate only to the sample tested.

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	12.6	78.0	1.32	0.790
13C-Aldrin		16.0	13.7	85.3	1.65	1.030
13C-Chlordane, oxy		16.0	16.3	102	1.55	1.109
13C-Chlordane, gamma (trans)		16.0	16.9	106	1.32	0.838
13C-Nonachlor, trans-		16.0	18.7	117	1.33	0.866
13C-Nonachlor, cis-		16.3	15.4	94.4	1.38	0.954
13C-2,4'-DDE		16.0	17.3	108	1.56	0.845
13C-4,4'-DDE		16.4	16.7	102	1.56	0.889
13C-4,4'-DDD		16.1	14.1	87.5	1.55	0.949
13C-2,4'-DDT		16.0	16.6	104	1.58	0.953
13C-4,4'-DDT		16.1	16.8	104	1.62	0.996

(1) Where applicable, custom lab flags have been used on this report.

(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

For Axy Internal Use Only [XSL Template: Pest2.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: Pest_PEST_HI_E1HI_WG65124-101_Form2_CL82_139S9_SJ2445576.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8A

PESTICIDE 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: CL82_139 S: 6

Matrix: CANOLA OIL

Lab Sample I.D.: WG65124-102 i

Extraction Date: 07-Sep-2018

Analysis Date: 10-Oct-2018 Time: 21:18:49

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON 100 uL EXTRACT.

COMPOUND	CAS NO.	LAB FLAG ¹	ION ABUND. RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	% RECOVERY
Hexachlorobenzene	118-74-1		1.23	80.0	84.8	56.0 - 104	106
Aldrin	309-00-2		1.65	208	230	146 - 270	110
Chlordane, oxy-	27304-13-8		1.60	160	176	112 - 208	110
Chlordane, gamma (trans)	5103-74-2		1.29	160	172	112 - 208	108
Chlordane, alpha (cis)	5103-71-9		1.24	160	175	112 - 209	109
Nonachlor, trans-	39765-80-5		1.34	136	138	95.3 - 177	101
Nonachlor, cis-	5103-73-1		1.21	160	164	112 - 208	102
2,4'-DDD	53-19-0		1.72	80.6	96.9	56.4 - 105	120
4,4'-DDD	72-54-8		1.66	97.0	101	67.9 - 126	104
2,4'-DDE	3424-82-6		1.56	80.8	80.7	56.6 - 105	99.9
4,4'-DDE	72-55-9		1.58	98.0	103	68.6 - 127	105
2,4'-DDT	789-02-6		1.66	79.8	84.1	55.9 - 104	105
4,4'-DDT	50-29-3		1.63	80.8	85.2	56.6 - 105	105

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____Ting Chen_____

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: Pest8A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
 Report Filename: Pest_PEST_HI_E1HI_WG65124-102_Form8A_SJ2445571.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8B

PESTICIDE 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: CL82_139 S: 6

Matrix: CANOLA OIL

Lab Sample I.D.: WG65124-102 i

Extraction Date: 07-Sep-2018

Analysis Date: 10-Oct-2018 Time: 21:18:49

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT, BASED ON 100 uL EXTRACT.

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	ION ABUND. RATIO	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)	% RECOVERY
13C-Hexachlorobenzene	93952-14-8		1.28	162	109	32.4-243	67.3
13C-Aldrin			1.59	160	121	48.0-240	75.7
13C-Chlordane, oxy			1.69	160	149	48.0-320	93.4
13C-Chlordane, gamma (trans)			1.20	160	151	48.0-320	94.5
13C-Nonachlor, trans-			1.26	160	169	48.0-240	106
13C-Nonachlor, cis-			1.25	163	151	48.9-245	92.8
13C-2,4'-DDE			1.60	160	159	64.0-240	99.4
13C-4,4'-DDE	201612-50-2		1.59	164	155	65.6-246	94.3
13C-4,4'-DDD			1.63	161	119	64.4-242	73.7
13C-2,4'-DDT			1.56	160	152	64.0-240	95.0
13C-4,4'-DDT	104215-84-1		1.65	161	142	64.4-242	88.5

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____Ting Chen_____

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: Pest8B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: Pest_PEST_HI_E1HI_WG65124-102_Form8B_SJ2445571.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8G

PESTICIDE CERTIFIED REFERENCE MATERIAL (CRM) REPORT FOR EDF2525

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Lab Sample I.D.:	WG65124-104 i
Matrix:	TISSUE	Sample Size:	3.05 g (as received)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 08:44:30	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 39
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng/kg (as received weight basis)	Cal. Ver. Data Filename:	CL82_137B S: 23

COMPOUND	CAS. NO.	LAB FLAG ¹	DETERMINED	CERTIFIED / REFERENCE
Hexachlorobenzene	118-74-1		17300	18100 +/- 15300
Chlordane, oxy-	27304-13-8		10200	18100 +/- 11200
Chlordane, gamma (trans)	5103-74-2		11700	11500 +/- 7240
Chlordane, alpha (cis)	5103-71-9		35100	30100 +/- 19000
Nonachlor, trans-	39765-80-5		84600	57700 +/- 51000
Nonachlor, cis-	5103-73-1		37500	27700 +/- 6400
4,4'-DDD	72-54-8		117000	97600 +/- 33200
4,4'-DDE	72-55-9	E		
4,4'-DDT	50-29-3	U		9100 +/- 2700

(1) Where applicable, custom lab flags have been used on this report; U = not detected at RL; E = exceeds calibrated linear range, see dilution data.

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

Signed: _____Ting Chen_____

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: Pest8G.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: _PEST_HI_E1HI_WG65124-104_Form8G_SJ2444177.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8H

PESTICIDE CERTIFIED REFERENCE MATERIAL (CRM) REPORT FOR EDF2525

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Lab Sample I.D.:	WG65124-104 i
Matrix:	TISSUE	Sample Size:	3.05 g (as received)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	06-Oct-2018
Analysis Date:	07-Oct-2018 Time: 08:44:30	Instrument ID:	HR GC/MS
Extract Volume (uL):	40	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_137B S: 39
Dilution Factor:	N/A	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_137B S: 23

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene		16.2	7.14	44.0	1.27	0.790
13C-Aldrin		16.0	11.0	69.0	1.53	1.030
13C-Chlordane, oxy		16.0	14.7	91.9	1.63	1.110
13C-Chlordane, gamma (trans)		16.0	17.9	112	1.25	0.837
13C-Nonachlor, trans-		16.0	18.6	116	1.29	0.866
13C-Nonachlor, cis-		16.3	16.6	102	1.25	0.954
13C-2,4'-DDE		16.0	18.1	113	1.59	0.844
13C-4,4'-DDE	X					
13C-4,4'-DDD		16.1	19.4	120	1.58	0.948
13C-2,4'-DDT		16.0	18.8	118	1.61	0.953
13C-4,4'-DDT		16.1	18.3	114	1.57	0.996

(1) Where applicable, custom lab flags have been used on this report; X = result reported separately.

(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

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: Pest8H.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: _PEST_HI_E1HI_WG65124-104_Form8H_SJ2444177.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8G

PESTICIDE CERTIFIED REFERENCE MATERIAL (CRM) REPORT FOR EDF2525

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Lab Sample I.D.:	WG65124-104 W2
Matrix:	TISSUE	Sample Size:	3.05 g (as received)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	11-Oct-2018
Analysis Date:	11-Oct-2018 Time: 21:51:20	Instrument ID:	HR GC/MS
Extract Volume (uL):	300	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 44
Dilution Factor:	7.5	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng/kg (as received weight basis)	Cal. Ver. Data Filename:	CL82_139 S: 32

COMPOUND	CAS. NO.	LAB FLAG ¹	DETERMINED	CERTIFIED / REFERENCE
Hexachlorobenzene	118-74-1	X		
Chlordane, oxy-	27304-13-8	X		
Chlordane, gamma (trans)	5103-74-2	X		
Chlordane, alpha (cis)	5103-71-9	X		
Nonachlor, trans-	39765-80-5	X		
Nonachlor, cis-	5103-73-1	X		
4,4'-DDD	72-54-8	X		
4,4'-DDE	72-55-9	D	582000	587000 +/- 140000
4,4'-DDT	50-29-3	X		

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.

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

Signed: _____Ting Chen_____

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: Pest8G.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: _PEST_HI_E1HI_WG65124-104_Form8G_SJ2446072.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 8H

PESTICIDE CERTIFIED REFERENCE MATERIAL (CRM) REPORT FOR EDF2525

SGS AXYS ANALYTICAL SERVICES

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

Contract No.:	4972	Lab Sample I.D.:	WG65124-104 W2
Matrix:	TISSUE	Sample Size:	3.05 g (as received)
Extraction Date:	07-Sep-2018	Initial Calibration Date:	11-Oct-2018
Analysis Date:	11-Oct-2018 Time: 21:51:20	Instrument ID:	HR GC/MS
Extract Volume (uL):	300	GC Column ID:	DB5
Injection Volume (uL):	1.0	Sample Data Filename:	CL82_139 S: 44
Dilution Factor:	7.5	Blank Data Filename:	CL82_139 S: 9
Concentration Units:	ng absolute	Cal. Ver. Data Filename:	CL82_139 S: 32

LABELED COMPOUND	LAB FLAG ¹	SPIKE CONC.	CONC. FOUND	R(%) ²	ION ABUND. RATIO	RRT
13C-Hexachlorobenzene	X					
13C-Aldrin	X					
13C-Chlordane, oxy	X					
13C-Chlordane, gamma (trans)	X					
13C-Nonachlor, trans-	X					
13C-Nonachlor, cis-	X					
13C-2,4'-DDE	X					
13C-4,4'-DDE	D	16.4	16.9	103	1.50	0.889
13C-4,4'-DDD	X					
13C-2,4'-DDT	X					
13C-4,4'-DDT	X					

(1) Where applicable, custom lab flags have been used on this report; D = dilution data; X = result reported separately.

(2) R% = percent recovery.

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

Signed: _____Ting Chen_____

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: Pest8H.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: _PEST_HI_E1HI_WG65124-104_Form8H_SJ2446072.html; Workgroup: WG65124; Design ID: 3361]

Form 3A
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: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_137B S: 3

CS2 Data Filename: CL82_137B S: 4

CS3 Data Filename: CL82_137B S: 9

CS4 Data Filename: CL82_137B S: 6

CS5 Data Filename: CL82_137B S: 5

CS6 Data Filename: N/A

COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)						MEAN RR	CV (%RSD) ²
		CS0	CS1	CS2	CS3	CS4	CS5		
Hexachlorobenzene			1.09	1.04	1.01	1.03	1.02	1.04	3.08
HCH, alpha			1.18	1.18	1.21	1.18	1.18	1.19	0.93
HCH, beta			1.18	1.05	1.11	1.11	1.08	1.11	4.30
HCH, gamma			1.05	1.02	1.03	1.02	1.02	1.03	1.12
HCH, delta			1.17	1.21	1.09	1.12	1.15	1.15	3.89
Heptachlor			1.21	1.12	1.08	1.11	1.12	1.13	4.33
Aldrin			1.12	1.09	1.04	1.09	1.08	1.08	2.81
Chlordane, oxy-			0.97	1.07	1.03	1.04	1.03	1.03	3.63
Chlordane, gamma (trans)			1.12	1.08	1.07	1.12	1.05	1.09	2.63
Chlordane, alpha (cis)			1.07	1.06	1.03	1.10	1.01	1.05	3.40
Nonachlor, trans-			1.18	1.09	1.09	1.10	1.05	1.10	4.31
Nonachlor, cis-			1.03	1.06	1.03	1.08	0.96	1.03	4.48
2,4'-DDD			1.58	1.53	1.49	1.49	1.40	1.50	4.50
4,4'-DDD			1.22	1.17	1.17	1.19	1.22	1.20	2.05
2,4'-DDE			1.31	1.20	1.21	1.23	1.24	1.24	3.42
4,4'-DDE			1.26	1.25	1.20	1.23	1.22	1.23	1.93
2,4'-DDT			1.22	1.17	1.17	1.22	1.20	1.20	2.15
4,4'-DDT			1.50	1.44	1.39	1.44	1.51	1.45	3.38
Mirex			0.93	0.90	0.85	0.90	0.90	0.90	3.24

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limit is 20% for native compounds with a labeled analog, 35% for those without a labeled analog.

(3) Hexachlorobutadiene is not present in the calibration standards. Reported RRF is a weighted value of 1,2,3-Trichlorobenzene based on the analysis of an external standard.

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

Signed: _____ Anita Riggs _____

SGS AXYS METHOD MLA-028 Rev 06

Form 3B
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: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_137B S: 3

CS2 Data Filename: CL82_137B S: 4

CS3 Data Filename: CL82_137B S: 9

CS4 Data Filename: CL82_137B S: 6

CS5 Data Filename: CL82_137B S: 5

CS6 Data Filename: N/A

LABELLED COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)						MEAN RR	CV (%RSD) ²
		CS0	CS1	CS2	CS3	CS4	CS5		
13C-Hexachlorobenzene			1.52	1.54	1.56	1.51	1.54	1.53	1.16
13C-beta-HCH			0.46	0.48	0.47	0.50	0.52	0.49	4.40
13C-gamma-HCH			0.59	0.59	0.58	0.60	0.60	0.59	1.68
13C-delta-HCH			0.44	0.43	0.47	0.51	0.51	0.47	8.08
13C-Heptachlor			0.20	0.21	0.22	0.21	0.23	0.21	4.32
13C-Aldrin			0.35	0.35	0.37	0.36	0.35	0.36	2.00
13C-Chlordane, oxy			0.07	0.07	0.07	0.07	0.08	0.07	6.75
13C-Chlordane, gamma (trans)			0.27	0.26	0.27	0.28	0.29	0.27	3.42
13C-Nonachlor, trans-			0.22	0.22	0.22	0.23	0.23	0.22	2.27
13C-Nonachlor, cis-			0.17	0.17	0.17	0.17	0.18	0.17	1.42
13C-2,4'-DDE			2.96	2.92	3.01	3.17	3.29	3.07	5.00
13C-4,4'-DDE			2.21	2.16	2.24	2.39	2.54	2.31	6.75
13C-4,4'-DDD			1.49	1.46	1.55	1.70	1.99	1.64	13.1
13C-2,4'-DDT			1.32	1.28	1.31	1.39	1.55	1.37	7.88
13C-4,4'-DDT			0.76	0.77	0.78	0.85	0.98	0.83	11.1
13C-Mirex			1.51	1.47	1.53	1.52	1.49	1.50	1.52

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limit is 35% for labeled compounds.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Form3B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: PestHR_E1_Pest_06-Oct-2018_CL82__Form3B_GS78058.html; Workgroup: WG65124; Design ID: 3361]

Form 3C
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: 06-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_137B S: 3

CS2 Data Filename: CL82_137B S: 4

CS3 Data Filename: CL82_137B S: 9

CS4 Data Filename: CL82_137B S: 6

CS5 Data Filename: CL82_137B S: 5

CS6 Data Filename: N/A

COMPOUND	LAB FLAG ¹	M/Z's FORMING RATIO	ION ABUNDANCE RATIO						QC LIMITS ²
			CS0	CS1	CS2	CS3	CS4	CS5	
Hexachlorobenzene		284/286		1.30	1.22	1.24	1.26	1.25	1.00-1.50
HCH, alpha		217/219		0.76	0.77	0.83	0.79	0.80	0.62-0.92
HCH, beta		217/219		0.79	0.80	0.79	0.81	0.80	0.62-0.92
HCH, gamma		217/219		0.82	0.79	0.80	0.79	0.79	0.62-0.92
HCH, delta		217/219		0.74	0.80	0.79	0.78	0.79	0.62-0.92
Heptachlor		272/274		1.17	1.30	1.24	1.30	1.26	0.99-1.49
Aldrin		263/265		1.50	1.47	1.48	1.48	1.49	1.24-1.86
Chlordane, oxy-		263/265		1.68	1.45	1.48	1.48	1.51	1.24-1.86
Chlordane, gamma (trans)		272/274		1.26	1.25	1.25	1.26	1.27	0.99-1.49
Chlordane, alpha (cis)		272/274		1.28	1.25	1.26	1.26	1.27	0.99-1.49
Nonachlor, trans-		272/274		1.28	1.30	1.25	1.26	1.26	0.99-1.49
Nonachlor, cis-		272/274		1.25	1.18	1.23	1.25	1.26	0.99-1.49
2,4'-DDD		235/237		1.50	1.60	1.58	1.58	1.56	1.25-1.87
4,4'-DDD		235/237		1.60	1.58	1.57	1.57	1.57	1.25-1.87
2,4'-DDE		246/248		1.57	1.56	1.57	1.57	1.58	1.25-1.87
4,4'-DDE		246/248		1.67	1.58	1.59	1.57	1.57	1.25-1.87
2,4'-DDT		235/237		1.61	1.60	1.58	1.57	1.56	1.25-1.87
4,4'-DDT		235/237		1.51	1.56	1.59	1.57	1.57	1.25-1.87
Mirex		270/272		0.50	0.52	0.52	0.52	0.52	0.42-0.62

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limits are +/- 20%.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Form3C.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: PestHR_E1_Pest_06-Oct-2018_CL82_Form3C_GS78058.html; Workgroup: WG65124; Design ID: 3361]

Form 3D
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: 06-Oct-2018

Instrument ID: HR GC/MS**GC Column ID:** DB5

CS0 Data Filename: N/A
CS1 Data Filename: CL82_137B S: 3
CS2 Data Filename: CL82_137B S: 4
CS3 Data Filename: CL82_137B S: 9
CS4 Data Filename: CL82_137B S: 6
CS5 Data Filename: CL82_137B S: 5
CS6 Data Filename: N/A

LABELED COMPOUND	LAB FLAG ¹	M/Z's FORMING RATIO	ION ABUNDANCE RATIO						QC LIMITS ²	
			CS0	CS1	CS2	CS3	CS4	CS5		CS6
13C-Hexachlorobenzene		290/292		1.24	1.28	1.29	1.29	1.29		1.00-1.50
13C-beta-HCH		223/225		0.78	0.80	0.79	0.80	0.82		0.62-0.94
13C-gamma-HCH		223/225		0.77	0.75	0.78	0.81	0.79		0.62-0.94
13C-delta-HCH		223/225		0.81	0.74	0.78	0.80	0.78		0.62-0.94
13C-Heptachlor		277/279		1.25	1.27	1.20	1.30	1.23		0.99-1.49
13C-Aldrin		270/272		1.58	1.49	1.62	1.50	1.57		1.24-1.86
13C-Chlordane, oxy		270/272		1.59	1.54	1.60	1.51	1.65		1.09-2.02
13C-Chlordane, gamma (trans)		277/279		1.25	1.24	1.31	1.25	1.30		0.99-1.49
13C-Nonachlor, trans-		277/279		1.34	1.29	1.23	1.26	1.30		0.99-1.49
13C-Nonachlor, cis-		277/279		1.23	1.23	1.23	1.28	1.35		0.99-1.49
13C-2,4'-DDE		258/260		1.59	1.61	1.59	1.60	1.58		1.25-1.87
13C-4,4'-DDE		258/260		1.58	1.60	1.56	1.61	1.58		1.25-1.87
13C-4,4'-DDD		247/249		1.60	1.58	1.57	1.49	1.54		1.25-1.87
13C-2,4'-DDT		247/249		1.57	1.57	1.56	1.64	1.58		1.25-1.87
13C-4,4'-DDT		247/249		1.51	1.61	1.54	1.58	1.55		1.25-1.87
13C-Mirex		277/279		1.27	1.26	1.25	1.27	1.30		1.00-1.50

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limits are +/- 20% (+/- 30% for labeled oxychlordane).

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Form3D.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_06-Oct-2018_CL82_Form3D_GS78058.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 06-Oct-2018 VER Data Filename: CL82_137B S: 23
Instrument ID: HR GC/MS Analysis Date: 06-Oct-2018
GC Column ID: DB5 Analysis Time: 22:43:19

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.26	1.00-1.50	77.9	64.0-96.0
HCH, alpha	319-84-6		217/219	0.80	0.62-0.92	155	104-216
HCH, beta	319-85-7		217/219	0.80	0.62-0.92	163	133-200
HCH, gamma	58-89-9		217/219	0.79	0.62-0.92	153	128-192
HCH, delta	319-86-8		217/219	0.78	0.62-0.92	172	143-215
Heptachlor	76-44-8		272/274	1.28	0.99-1.49	77.2	63.9-95.9
Aldrin	309-00-2		263/265	1.48	1.24-1.86	207	166-249
Chlordane, oxy-	27304-13-8		263/265	1.48	1.24-1.86	151	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.29	0.99-1.49	158	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.27	0.99-1.49	158	104-217
Nonachlor, trans-	39765-80-5		272/274	1.30	0.99-1.49	132	109-163
Nonachlor, cis-	5103-73-1		272/274	1.24	0.99-1.49	161	128-192
2,4'-DDD	53-19-0		235/237	1.57	1.25-1.87	82.8	52.4-109
4,4'-DDD	72-54-8		235/237	1.57	1.25-1.87	100	77.6-116
2,4'-DDE	3424-82-6		246/248	1.59	1.25-1.87	79.8	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.58	1.25-1.87	101	78.4-118
2,4'-DDT	789-02-6		235/237	1.57	1.25-1.87	78.9	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.55	1.25-1.87	77.6	64.6-97.0
Mirex	2385-85-5		270/272	0.51	0.42-0.62	79.6	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_137BS23__Form4A_SJ2444162.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 06-Oct-2018

VER Data Filename: CL82_137B S: 23

Instrument ID: HR GC/MS

Analysis Date: 06-Oct-2018

GC Column ID: DB5

Analysis Time: 22:43:19

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.29	1.00-1.50	81.5
13C-beta-HCH	222966-68-9		223/225	0.79	0.62-0.94	82.6
13C-gamma-HCH	104215-85-2		223/225	0.79	0.62-0.94	84.4
13C-delta-HCH			223/225	0.80	0.62-0.94	80.1
13C-Heptachlor			277/279	1.29	0.99-1.49	93.3
13C-Aldrin			270/272	1.56	1.24-1.86	77.3
13C-Chlordane, oxy			270/272	1.58	1.09-2.02	86.3
13C-Chlordane, gamma (trans)			277/279	1.30	0.99-1.49	86.8
13C-Nonachlor, trans-			277/279	1.27	0.99-1.49	88.4
13C-Nonachlor, cis-			277/279	1.30	0.99-1.49	85.4
13C-2,4'-DDE			258/260	1.59	1.25-1.87	86.0
13C-4,4'-DDE	201612-50-2		258/260	1.61	1.25-1.87	85.7
13C-4,4'-DDD			247/249	1.61	1.25-1.87	86.9
13C-2,4'-DDT			247/249	1.60	1.25-1.87	89.9
13C-4,4'-DDT	104215-84-1		247/249	1.62	1.25-1.87	83.7
13C-Mirex			277/279	1.27	1.00-1.50	78.3

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axy Internal Use Only [XSL Template: Pest4B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_137BS23__Form4B_SJ2444162.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 06-Oct-2018 VER Data Filename: CL82_137B S: 40
Instrument ID: HR GC/MS Analysis Date: 07-Oct-2018
GC Column ID: DB5 Analysis Time: 09:21:57

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.26	1.00-1.50	77.7	64.0-96.0
HCH, alpha	319-84-6		217/219	0.79	0.62-0.92	150	104-216
HCH, beta	319-85-7		217/219	0.81	0.62-0.92	164	133-200
HCH, gamma	58-89-9		217/219	0.79	0.62-0.92	152	128-192
HCH, delta	319-86-8		217/219	0.79	0.62-0.92	171	143-215
Heptachlor	76-44-8		272/274	1.26	0.99-1.49	75.1	63.9-95.9
Aldrin	309-00-2		263/265	1.50	1.24-1.86	208	166-249
Chlordane, oxy-	27304-13-8		263/265	1.47	1.24-1.86	156	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.26	0.99-1.49	159	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.24	0.99-1.49	159	104-217
Nonachlor, trans-	39765-80-5		272/274	1.28	0.99-1.49	132	109-163
Nonachlor, cis-	5103-73-1		272/274	1.26	0.99-1.49	166	128-192
2,4'-DDD	53-19-0		235/237	1.59	1.25-1.87	83.7	52.4-109
4,4'-DDD	72-54-8		235/237	1.59	1.25-1.87	100	77.6-116
2,4'-DDE	3424-82-6		246/248	1.57	1.25-1.87	78.0	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.59	1.25-1.87	102	78.4-118
2,4'-DDT	789-02-6		235/237	1.59	1.25-1.87	80.1	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.58	1.25-1.87	80.2	64.6-97.0
Mirex	2385-85-5		270/272	0.51	0.42-0.62	78.8	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_137BS40_Form4A_SJ2444178.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 06-Oct-2018 VER Data Filename: CL82_137B S: 40
 Instrument ID: HR GC/MS Analysis Date: 07-Oct-2018
 GC Column ID: DB5 Analysis Time: 09:21:57

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.30	1.00-1.50	80.2
13C-beta-HCH	222966-68-9		223/225	0.77	0.62-0.94	81.3
13C-gamma-HCH	104215-85-2		223/225	0.80	0.62-0.94	86.5
13C-delta-HCH			223/225	0.85	0.62-0.94	80.6
13C-Heptachlor			277/279	1.22	0.99-1.49	110
13C-Aldrin			270/272	1.61	1.24-1.86	80.6
13C-Chlordane, oxy			270/272	1.42	1.09-2.02	93.3
13C-Chlordane, gamma (trans)			277/279	1.27	0.99-1.49	89.1
13C-Nonachlor, trans-			277/279	1.24	0.99-1.49	92.6
13C-Nonachlor, cis-			277/279	1.32	0.99-1.49	85.1
13C-2,4'-DDE			258/260	1.60	1.25-1.87	89.0
13C-4,4'-DDE	201612-50-2		258/260	1.58	1.25-1.87	86.9
13C-4,4'-DDD			247/249	1.58	1.25-1.87	92.6
13C-2,4'-DDT			247/249	1.60	1.25-1.87	95.4
13C-4,4'-DDT	104215-84-1		247/249	1.59	1.25-1.87	89.3
13C-Mirex			277/279	1.28	1.00-1.50	77.5

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axy Internal Use Only [XSL Template: Pest4B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_137BS40_Form4B_SJ2444178.html; Workgroup: WG65124; Design ID: 3361]

Form 3A
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: 11-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_139 S: 26

CS2 Data Filename: CL82_139 S: 27

CS3 Data Filename: CL82_139 S: 24

CS4 Data Filename: CL82_139 S: 29

CS5 Data Filename: CL82_139 S: 28

CS6 Data Filename: N/A

COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)						MEAN RR	CV (%RSD) ²
		CS0	CS1	CS2	CS3	CS4	CS5		
Hexachlorobenzene			1.08	1.06	1.03	1.04	1.02	1.05	2.19
HCH, alpha			1.16	1.19	1.16	1.16	1.18	1.17	1.21
HCH, beta			1.09	1.07	1.06	1.07	1.09	1.08	0.92
HCH, gamma			1.05	1.03	0.96	0.98	1.01	1.00	3.46
HCH, delta			1.17	1.17	1.10	1.13	1.13	1.14	2.57
Heptachlor			1.12	1.10	1.06	1.12	1.14	1.11	2.66
Aldrin			1.24	1.19	1.17	1.22	1.14	1.19	3.10
Chlordane, oxy-			1.21	1.10	1.12	1.08	0.97	1.10	7.88
Chlordane, gamma (trans)			1.14	1.13	1.09	1.11	1.06	1.11	3.03
Chlordane, alpha (cis)			1.13	1.10	1.08	1.07	1.03	1.08	3.37
Nonachlor, trans-			1.12	1.08	1.06	1.10	1.03	1.08	3.30
Nonachlor, cis-			1.10	1.04	1.00	1.01	0.90	1.01	7.02
2,4'-DDD			1.70	1.64	1.48	1.60	1.48	1.58	6.19
4,4'-DDD			1.25	1.23	1.20	1.24	1.24	1.23	1.64
2,4'-DDE			1.33	1.29	1.25	1.28	1.18	1.26	4.52
4,4'-DDE			1.32	1.30	1.25	1.30	1.22	1.28	3.28
2,4'-DDT			1.24	1.23	1.16	1.24	1.23	1.22	2.80
4,4'-DDT			1.49	1.47	1.43	1.49	1.50	1.48	1.81
Mirex			0.96	0.89	0.86	0.89	0.87	0.90	4.14

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limit is 20% for native compounds with a labeled analog, 35% for those without a labeled analog.

(3) Hexachlorobutadiene is not present in the calibration standards. Reported RRF is a weighted value of 1,2,3-Trichlorobenzene based on the analysis of an external standard.

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 _____

SGS AXYS METHOD MLA-028 Rev 06

Form 3B
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: 11-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_139 S: 26

CS2 Data Filename: CL82_139 S: 27

CS3 Data Filename: CL82_139 S: 24

CS4 Data Filename: CL82_139 S: 29

CS5 Data Filename: CL82_139 S: 28

CS6 Data Filename: N/A

LABELED COMPOUND	LAB FLAG ¹	RELATIVE RESPONSE (RR)						MEAN RR	CV (%RSD) ²
		CS0	CS1	CS2	CS3	CS4	CS5		
13C-Hexachlorobenzene			1.67	1.77	1.73	1.77	1.72	1.73	2.48
13C-beta-HCH			0.58	0.58	0.64	0.62	0.66	0.62	6.06
13C-gamma-HCH			0.72	0.71	0.77	0.77	0.79	0.75	4.53
13C-delta-HCH			0.52	0.52	0.60	0.58	0.65	0.57	9.80
13C-Heptachlor			0.31	0.30	0.32	0.32	0.37	0.33	8.66
13C-Aldrin			0.38	0.39	0.40	0.40	0.40	0.39	2.47
13C-Chlordane, oxy			0.08	0.09	0.09	0.10	0.12	0.10	13.6
13C-Chlordane, gamma (trans)			0.27	0.25	0.24	0.29	0.29	0.27	9.06
13C-Nonachlor, trans-			0.23	0.23	0.21	0.25	0.25	0.23	6.86
13C-Nonachlor, cis-			0.17	0.16	0.16	0.19	0.19	0.17	7.87
13C-2,4'-DDE			2.95	2.86	2.82	3.23	3.47	3.07	9.02
13C-4,4'-DDE			2.20	2.17	2.19	2.40	2.61	2.31	8.19
13C-4,4'-DDD			1.39	1.40	1.45	1.62	2.04	1.58	17.1
13C-2,4'-DDT			1.45	1.35	1.44	1.54	1.83	1.52	12.2
13C-4,4'-DDT			0.83	0.87	0.92	1.00	1.22	0.97	15.9
13C-Mirex			1.40	1.44	1.40	1.50	1.50	1.45	3.48

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limit is 35% for labeled compounds.

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 _____

For Axys Internal Use Only [XSL Template: Form3B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: PestHR_E1_Pest_11-Oct-2018_CL82__Form3B_GS78113.html; Workgroup: WG65124; Design ID: 3361]

Form 3C
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: 11-Oct-2018

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL82_139 S: 26

CS2 Data Filename: CL82_139 S: 27

CS3 Data Filename: CL82_139 S: 24

CS4 Data Filename: CL82_139 S: 29

CS5 Data Filename: CL82_139 S: 28

CS6 Data Filename: N/A

COMPOUND	LAB FLAG ¹	M/Z's FORMING RATIO	ION ABUNDANCE RATIO						QC LIMITS ²
			CS0	CS1	CS2	CS3	CS4	CS5	
Hexachlorobenzene		284/286		1.25	1.27	1.27	1.27	1.26	1.00-1.50
HCH, alpha		217/219		0.78	0.78	0.78	0.78	0.78	0.62-0.92
HCH, beta		217/219		0.79	0.79	0.78	0.78	0.79	0.62-0.92
HCH, gamma		217/219		0.81	0.78	0.78	0.77	0.78	0.62-0.92
HCH, delta		217/219		0.74	0.76	0.77	0.77	0.77	0.62-0.92
Heptachlor		272/274		1.21	1.26	1.26	1.24	1.23	0.99-1.49
Aldrin		263/265		1.59	1.63	1.61	1.59	1.60	1.24-1.86
Chlordane, oxy-		263/265		1.63	1.63	1.62	1.62	1.63	1.24-1.86
Chlordane, gamma (trans)		272/274		1.31	1.26	1.29	1.27	1.28	0.99-1.49
Chlordane, alpha (cis)		272/274		1.22	1.24	1.26	1.28	1.27	0.99-1.49
Nonachlor, trans-		272/274		1.32	1.26	1.28	1.28	1.28	0.99-1.49
Nonachlor, cis-		272/274		1.30	1.23	1.25	1.25	1.24	0.99-1.49
2,4'-DDD		235/237		1.68	1.67	1.65	1.67	1.66	1.25-1.87
4,4'-DDD		235/237		1.76	1.66	1.68	1.68	1.67	1.25-1.87
2,4'-DDE		246/248		1.62	1.59	1.59	1.58	1.41	1.25-1.87
4,4'-DDE		246/248		1.63	1.61	1.60	1.59	1.48	1.25-1.87
2,4'-DDT		235/237		1.72	1.71	1.68	1.66	1.65	1.25-1.87
4,4'-DDT		235/237		1.75	1.72	1.70	1.64	1.69	1.25-1.87
Mirex		270/272		0.48	0.51	0.51	0.50	0.51	0.42-0.62

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limits are +/- 20%.

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 _____

For Axy Internal Use Only [XSL Template: Form3C.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: PestHR_E1_Pest_11-Oct-2018_CL82_Form3C_GS78113.html; Workgroup: WG65124; Design ID: 3361]

Form 3D
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: 11-Oct-2018

Instrument ID: HR GC/MS**GC Column ID:** DB5

CS0 Data Filename: N/A
CS1 Data Filename: CL82_139 S: 26
CS2 Data Filename: CL82_139 S: 27
CS3 Data Filename: CL82_139 S: 24
CS4 Data Filename: CL82_139 S: 29
CS5 Data Filename: CL82_139 S: 28
CS6 Data Filename: N/A

LABELED COMPOUND	LAB FLAG ¹	M/Z's FORMING RATIO	ION ABUNDANCE RATIO						QC LIMITS ²
			CS0	CS1	CS2	CS3	CS4	CS5	
13C-Hexachlorobenzene		290/292		1.30	1.29	1.29	1.30	1.31	1.00-1.50
13C-beta-HCH		223/225		0.78	0.76	0.79	0.76	0.78	0.62-0.94
13C-gamma-HCH		223/225		0.79	0.76	0.78	0.75	0.77	0.62-0.94
13C-delta-HCH		223/225		0.81	0.78	0.80	0.77	0.81	0.62-0.94
13C-Heptachlor		277/279		1.28	1.31	1.22	1.22	1.30	0.99-1.49
13C-Aldrin		270/272		1.66	1.61	1.63	1.63	1.67	1.24-1.86
13C-Chlordane, oxy		270/272		1.75	1.68	1.72	1.55	1.73	1.09-2.02
13C-Chlordane, gamma (trans)		277/279		1.26	1.28	1.30	1.24	1.35	0.99-1.49
13C-Nonachlor, trans-		277/279		1.25	1.33	1.27	1.28	1.32	0.99-1.49
13C-Nonachlor, cis-		277/279		1.24	1.32	1.32	1.27	1.45	0.99-1.49
13C-2,4'-DDE		258/260		1.57	1.57	1.55	1.57	1.57	1.25-1.87
13C-4,4'-DDE		258/260		1.56	1.59	1.56	1.59	1.55	1.25-1.87
13C-4,4'-DDD		247/249		1.55	1.55	1.56	1.57	1.57	1.25-1.87
13C-2,4'-DDT		247/249		1.57	1.60	1.56	1.56	1.58	1.25-1.87
13C-4,4'-DDT		247/249		1.55	1.54	1.57	1.56	1.57	1.25-1.87
13C-Mirex		277/279		1.26	1.27	1.26	1.31	1.28	1.00-1.50

(1) Where applicable, custom lab flags have been used on this report.

(2) QC limits are +/- 20% (+/- 30% for labeled oxychlordane).

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 _____

For Axys Internal Use Only [XSL Template: Form3D.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_11-Oct-2018_CL82_Form3D_GS78113.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 06-Oct-2018 VER Data Filename: CL82_139 S: 5
 Instrument ID: HR GC/MS Analysis Date: 10-Oct-2018
 GC Column ID: DB5 Analysis Time: 20:41:09

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.23	1.00-1.50	78.6	64.0-96.0
HCH, alpha	319-84-6		217/219	0.76	0.62-0.92	154	104-216
HCH, beta	319-85-7		217/219	0.77	0.62-0.92	156	133-200
HCH, gamma	58-89-9		217/219	0.77	0.62-0.92	155	128-192
HCH, delta	319-86-8		217/219	0.78	0.62-0.92	166	143-215
Heptachlor	76-44-8		272/274	1.28	0.99-1.49	76.5	63.9-95.9
Aldrin	309-00-2		263/265	1.60	1.24-1.86	220	166-249
Chlordane, oxy-	27304-13-8		263/265	1.61	1.24-1.86	173	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.26	0.99-1.49	158	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.25	0.99-1.49	157	104-217
Nonachlor, trans-	39765-80-5		272/274	1.28	0.99-1.49	132	109-163
Nonachlor, cis-	5103-73-1		272/274	1.22	0.99-1.49	163	128-192
2,4'-DDD	53-19-0		235/237	1.66	1.25-1.87	78.9	52.4-109
4,4'-DDD	72-54-8		235/237	1.64	1.25-1.87	97.7	77.6-116
2,4'-DDE	3424-82-6		246/248	1.59	1.25-1.87	81.9	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.57	1.25-1.87	99.3	78.4-118
2,4'-DDT	789-02-6		235/237	1.63	1.25-1.87	79.7	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.66	1.25-1.87	79.7	64.6-97.0
Mirex	2385-85-5		270/272	0.50	0.42-0.62	77.6	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

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SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 06-Oct-2018 VER Data Filename: CL82_139 S: 5
Instrument ID: HR GC/MS Analysis Date: 10-Oct-2018
GC Column ID: DB5 Analysis Time: 20:41:09

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.31	1.00-1.50	84.2
13C-beta-HCH	222966-68-9		223/225	0.76	0.62-0.94	89.4
13C-gamma-HCH	104215-85-2		223/225	0.76	0.62-0.94	85.5
13C-delta-HCH			223/225	0.77	0.62-0.94	85.4
13C-Heptachlor			277/279	1.27	0.99-1.49	103
13C-Aldrin			270/272	1.68	1.24-1.86	79.4
13C-Chlordane, oxy			270/272	1.79	1.09-2.02	87.9
13C-Chlordane, gamma (trans)			277/279	1.27	0.99-1.49	74.5
13C-Nonachlor, trans-			277/279	1.29	0.99-1.49	75.7
13C-Nonachlor, cis-			277/279	1.29	0.99-1.49	76.1
13C-2,4'-DDE			258/260	1.58	1.25-1.87	73.3
13C-4,4'-DDE	201612-50-2		258/260	1.59	1.25-1.87	75.7
13C-4,4'-DDD			247/249	1.54	1.25-1.87	74.9
13C-2,4'-DDT			247/249	1.59	1.25-1.87	81.6
13C-4,4'-DDT	104215-84-1		247/249	1.56	1.25-1.87	86.0
13C-Mirex			277/279	1.26	1.00-1.50	75.5

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_139S5__Form4B_SJ2445569.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 06-Oct-2018 VER Data Filename: CL82_139 S: 23
 Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
 GC Column ID: DB5 Analysis Time: 07:57:11

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.26	1.00-1.50	78.5	64.0-96.0
HCH, alpha	319-84-6		217/219	0.78	0.62-0.92	151	104-216
HCH, beta	319-85-7		217/219	0.77	0.62-0.92	155	133-200
HCH, gamma	58-89-9		217/219	0.76	0.62-0.92	148	128-192
HCH, delta	319-86-8		217/219	0.77	0.62-0.92	162	143-215
Heptachlor	76-44-8		272/274	1.28	0.99-1.49	72.9	63.9-95.9
Aldrin	309-00-2		263/265	1.63	1.24-1.86	221	166-249
Chlordane, oxy-	27304-13-8		263/265	1.57	1.24-1.86	171	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.28	0.99-1.49	162	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.26	0.99-1.49	160	104-217
Nonachlor, trans-	39765-80-5		272/274	1.27	0.99-1.49	132	109-163
Nonachlor, cis-	5103-73-1		272/274	1.28	0.99-1.49	160	128-192
2,4'-DDD	53-19-0		235/237	1.66	1.25-1.87	84.8	52.4-109
4,4'-DDD	72-54-8		235/237	1.70	1.25-1.87	96.7	77.6-116
2,4'-DDE	3424-82-6		246/248	1.59	1.25-1.87	82.2	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.59	1.25-1.87	99.1	78.4-118
2,4'-DDT	789-02-6		235/237	1.68	1.25-1.87	80.5	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.66	1.25-1.87	79.6	64.6-97.0
Mirex	2385-85-5		270/272	0.51	0.42-0.62	79.0	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_139S23_Form4A_SJ2445586.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 06-Oct-2018 VER Data Filename: CL82_139 S: 23
 Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
 GC Column ID: DB5 Analysis Time: 07:57:11

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.29	1.00-1.50	87.9
13C-beta-HCH	222966-68-9		223/225	0.80	0.62-0.94	91.2
13C-gamma-HCH	104215-85-2		223/225	0.76	0.62-0.94	94.5
13C-delta-HCH			223/225	0.78	0.62-0.94	88.0
13C-Heptachlor			277/279	1.28	0.99-1.49	115
13C-Aldrin			270/272	1.62	1.24-1.86	84.3
13C-Chlordane, oxy			270/272	1.53	1.09-2.02	92.6
13C-Chlordane, gamma (trans)			277/279	1.28	0.99-1.49	86.5
13C-Nonachlor, trans-			277/279	1.31	0.99-1.49	91.2
13C-Nonachlor, cis-			277/279	1.26	0.99-1.49	85.7
13C-2,4'-DDE			258/260	1.58	1.25-1.87	84.0
13C-4,4'-DDE	201612-50-2		258/260	1.60	1.25-1.87	84.5
13C-4,4'-DDD			247/249	1.56	1.25-1.87	78.1
13C-2,4'-DDT			247/249	1.59	1.25-1.87	86.2
13C-4,4'-DDT	104215-84-1		247/249	1.57	1.25-1.87	82.8
13C-Mirex			277/279	1.26	1.00-1.50	79.9

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_139S23__Form4B_SJ2445586.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 11-Oct-2018 VER Data Filename: CL82_139 S: 32
Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
GC Column ID: DB5 Analysis Time: 14:20:42

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.23	1.00-1.50	78.3	64.0-96.0
HCH, alpha	319-84-6		217/219	0.78	0.62-0.92	155	104-216
HCH, beta	319-85-7		217/219	0.79	0.62-0.92	165	133-200
HCH, gamma	58-89-9		217/219	0.77	0.62-0.92	156	128-192
HCH, delta	319-86-8		217/219	0.78	0.62-0.92	169	143-215
Heptachlor	76-44-8		272/274	1.20	0.99-1.49	76.8	63.9-95.9
Aldrin	309-00-2		263/265	1.59	1.24-1.86	203	166-249
Chlordane, oxy-	27304-13-8		263/265	1.64	1.24-1.86	156	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.28	0.99-1.49	156	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.27	0.99-1.49	158	104-217
Nonachlor, trans-	39765-80-5		272/274	1.27	0.99-1.49	131	109-163
Nonachlor, cis-	5103-73-1		272/274	1.24	0.99-1.49	163	128-192
2,4'-DDD	53-19-0		235/237	1.66	1.25-1.87	86.7	52.4-109
4,4'-DDD	72-54-8		235/237	1.68	1.25-1.87	95.9	77.6-116
2,4'-DDE	3424-82-6		246/248	1.57	1.25-1.87	78.0	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.59	1.25-1.87	95.5	78.4-118
2,4'-DDT	789-02-6		235/237	1.66	1.25-1.87	79.5	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.68	1.25-1.87	80.1	64.6-97.0
Mirex	2385-85-5		270/272	0.51	0.42-0.62	77.7	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_139S32_Form4A_SJ2446070.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 11-Oct-2018 VER Data Filename: CL82_139 S: 32
Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
GC Column ID: DB5 Analysis Time: 14:20:42

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.32	1.00-1.50	78.5
13C-beta-HCH	222966-68-9		223/225	0.78	0.62-0.94	73.6
13C-gamma-HCH	104215-85-2		223/225	0.76	0.62-0.94	75.2
13C-delta-HCH			223/225	0.78	0.62-0.94	71.4
13C-Heptachlor			277/279	1.23	0.99-1.49	71.0
13C-Aldrin			270/272	1.70	1.24-1.86	77.2
13C-Chlordane, oxy			270/272	1.66	1.09-2.02	73.9
13C-Chlordane, gamma (trans)			277/279	1.27	0.99-1.49	86.3
13C-Nonachlor, trans-			277/279	1.27	0.99-1.49	90.0
13C-Nonachlor, cis-			277/279	1.33	0.99-1.49	86.5
13C-2,4'-DDE			258/260	1.59	1.25-1.87	85.5
13C-4,4'-DDE	201612-50-2		258/260	1.58	1.25-1.87	84.2
13C-4,4'-DDD			247/249	1.51	1.25-1.87	73.6
13C-2,4'-DDT			247/249	1.54	1.25-1.87	78.9
13C-4,4'-DDT	104215-84-1		247/249	1.57	1.25-1.87	68.4
13C-Mirex			277/279	1.27	1.00-1.50	83.4

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

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Report Filename: PestHR_E1_Pest_CL82_139S32__Form4B_SJ2446070.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4A
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: 11-Oct-2018 VER Data Filename: CL82_139 S: 45
Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
GC Column ID: DB5 Analysis Time: 22:28:47

COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)	CONC. RANGE (ng/mL)
Hexachlorobenzene	118-74-1		284/286	1.26	1.00-1.50	79.1	64.0-96.0
HCH, alpha	319-84-6		217/219	0.77	0.62-0.92	151	104-216
HCH, beta	319-85-7		217/219	0.77	0.62-0.92	159	133-200
HCH, gamma	58-89-9		217/219	0.75	0.62-0.92	154	128-192
HCH, delta	319-86-8		217/219	0.78	0.62-0.92	166	143-215
Heptachlor	76-44-8		272/274	1.23	0.99-1.49	76.5	63.9-95.9
Aldrin	309-00-2		263/265	1.65	1.24-1.86	203	166-249
Chlordane, oxy-	27304-13-8		263/265	1.56	1.24-1.86	154	128-192
Chlordane, gamma (trans)	5103-74-2		272/274	1.28	0.99-1.49	156	128-192
Chlordane, alpha (cis)	5103-71-9		272/274	1.25	0.99-1.49	155	104-217
Nonachlor, trans-	39765-80-5		272/274	1.28	0.99-1.49	138	109-163
Nonachlor, cis-	5103-73-1		272/274	1.23	0.99-1.49	161	128-192
2,4'-DDD	53-19-0		235/237	1.66	1.25-1.87	82.9	52.4-109
4,4'-DDD	72-54-8		235/237	1.71	1.25-1.87	95.3	77.6-116
2,4'-DDE	3424-82-6		246/248	1.58	1.25-1.87	80.5	64.6-97.0
4,4'-DDE	72-55-9		246/248	1.59	1.25-1.87	99.0	78.4-118
2,4'-DDT	789-02-6		235/237	1.67	1.25-1.87	78.0	63.8-95.8
4,4'-DDT	50-29-3		235/237	1.70	1.25-1.87	79.7	64.6-97.0
Mirex	2385-85-5		270/272	0.50	0.42-0.62	76.7	64.0-96.0

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4A.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50;
Report Filename: PestHR_E1_Pest_CL82_139S45_Form4A_SJ2446073.html; Workgroup: WG65124; Design ID: 3361]

SGS AXYS METHOD MLA-028 Rev 06

Form 4B
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: 11-Oct-2018 VER Data Filename: CL82_139 S: 45
Instrument ID: HR GC/MS Analysis Date: 11-Oct-2018
GC Column ID: DB5 Analysis Time: 22:28:47

LABELLED COMPOUND	CAS NO.	LAB FLAG ¹	m/e ION CHANNELS	ION ABUND. RATIO	QC LIMITS	CONC. FOUND (ng/mL)
13C-Hexachlorobenzene	93952-14-8		290/292	1.32	1.00-1.50	80.1
13C-beta-HCH	222966-68-9		223/225	0.78	0.62-0.94	85.7
13C-gamma-HCH	104215-85-2		223/225	0.79	0.62-0.94	87.2
13C-delta-HCH			223/225	0.78	0.62-0.94	84.0
13C-Heptachlor			277/279	1.22	0.99-1.49	86.1
13C-Aldrin			270/272	1.61	1.24-1.86	84.5
13C-Chlordane, oxy			270/272	1.64	1.09-2.02	85.0
13C-Chlordane, gamma (trans)			277/279	1.27	0.99-1.49	88.3
13C-Nonachlor, trans-			277/279	1.27	0.99-1.49	87.4
13C-Nonachlor, cis-			277/279	1.26	0.99-1.49	85.9
13C-2,4'-DDE			258/260	1.60	1.25-1.87	85.5
13C-4,4'-DDE	201612-50-2		258/260	1.56	1.25-1.87	84.7
13C-4,4'-DDD			247/249	1.53	1.25-1.87	80.1
13C-2,4'-DDT			247/249	1.60	1.25-1.87	76.4
13C-4,4'-DDT	104215-84-1		247/249	1.55	1.25-1.87	69.9
13C-Mirex			277/279	1.25	1.00-1.50	77.4

(1) Where applicable, custom lab flags have been used on this report.

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

Signed: _____ Anita Riggs _____

For Axys Internal Use Only [XSL Template: Pest4B.xsl; Created: 15-Oct-2018 15:56:34; Application: XMLTransformer-1.16.50; Report Filename: PestHR_E1_Pest_CL82_139S45__Form4B_SJ2446073.html; Workgroup: WG65124; Design ID: 3361]

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum								Tissue						Urine		Water											
				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
		EPA 8081	MLA-007																												
		EPA 1699	MLA-028																												
		SGS AXYS MLA-028	MLA-028	Y	Y	Y					Y	Y	Y	Y	Y	Y				Y											Y
Endosulphan sulphate		SGS AXYS MLA-007	MLA-007	Y	Y	Y									Y																Y
		EPA 608	MLA-007																							Y	Y		Y	Y	
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y																
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y						Y	Y	Y	Y	Y	Y				Y						Y				Y
Endrin		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 608	MLA-007																						Y	Y		Y	Y		
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y						Y	Y	Y	Y	Y	Y				Y						Y				Y
Endrin aldehyde		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 608	MLA-007																						Y	Y		Y	Y		
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y											Y	Y		Y	Y	
Endrin ketone		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 608	MLA-007																						Y	Y		Y	Y		
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y											Y	Y		Y	Y	
Gamma-HCH (Lindane)		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 625	MLA-007																						Y	Y		Y	Y		
		EPA 8270	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y										Y	Y		Y	Y		
Heptachlor		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 625	MLA-007																						Y	Y		Y	Y		
		EPA 8270	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y										Y	Y		Y	Y		
Heptachlor epoxide		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 608	MLA-007																						Y	Y		Y	Y		
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y										Y	Y		Y	Y		
Hexachlorobenzene		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 1625	MLA-007																						Y	Y		Y	Y		
		EPA 8270	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y										Y	Y		Y	Y		
Methoxychlor		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y											Y	Y		Y	Y		
		EPA 608	MLA-007																						Y	Y		Y	Y		
		EPA 8081	MLA-007			Y				Y	Y	Y	Y	Y	Y															Y	
		EPA 1699	MLA-028			Y									Y																Y
		SGS AXYS MLA-028	MLA-028	Y	Y	Y									Y										Y	Y		Y	Y		
Mirex		SGS AXYS MLA-007	MLA-007	Y	Y	Y								Y										Y	Y		Y	Y			
		EPA 8270	MLA-007			Y				Y	Y	Y	Y	Y										Y	Y		Y	Y			
		EPA 1699	MLA-028			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-033	MLA-033	Y	Y																																		
	BDE 154 2,2',4,4',5',6-hexabromodiphenylether	EPA 1614	MLA-033						Y																														
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 155 2,2',4,4',6,6'-hexabromodiphenylether	EPA 1614	MLA-033							Y																													
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 166 2,3,4,4',5,6-hexabromodiphenylether	EPA 1614	MLA-033								Y																												
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 17 2,2',4-tribromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 181 2,2',3,4,4',5,6-heptabromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 190 2,3,3',4,4',5,6-heptabromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 206 2,2',3,3',4,4',5,5',6-nonabromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 207 2,2',3,3',4,4',5,6,6'-nonabromodiphenylether	EPA 1614	MLA-033										Y																										
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 208 2,2',3,3',4,5,5',6,6'-nonabromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 209 Decabromodiphenylether	EPA 1614	MLA-033									Y																											
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 25 2,3',4-tribromodiphenylether	EPA 1614	MLA-033										Y																										
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 28 2,4,4'-tribromodiphenylether	EPA 1614	MLA-033										Y																										
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 30 2,4,6-tribromodiphenylether	EPA 1614	MLA-033										Y																										
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 35 3,3',4-tribromodiphenylether	EPA 1614	MLA-033										Y																										
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 37 3,4,4'-tribromodiphenylether	EPA 1614	MLA-033											Y																									
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 47 2,2',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033											Y																									
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 49 2,2',4,5'-tetrabromodiphenylether	EPA 1614	MLA-033												Y																								
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 66 2,3',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033											Y																									
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 7 2,4-dibromodiphenylether	EPA 1614	MLA-033												Y																								
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 75 2,4,4',6-tetrabromodiphenylether	EPA 1614	MLA-033													Y																							
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 77 3,3',4,4'-tetrabromodiphenylether	EPA 1614	MLA-033													Y																							
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 8 2,4'-dibromodiphenylether	EPA 1614	MLA-033													Y																							
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 85 2,2',3,4,4'-pentabromodiphenylether	EPA 1614	MLA-033													Y																							
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE 99 2,2',4,4',5-pentabromodiphenylether	EPA 1614	MLA-033														Y																						
		SGS AXYS MLA-033	MLA-033	Y	Y																																		
	BDE-183 2,2',3,4,4',5',6-heptabromodiphenylether	EPA 1614	MLA-033														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									Tissue					Urine		Water														
				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																															
		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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						Y				Y	Y	Y	Y	Y		Y	Y		
		SGS AXYS MLA-007	MLA-007		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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						Y				Y	Y	Y	Y	Y		Y	Y		
		SGS AXYS MLA-007	MLA-007		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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						Y				Y	Y	Y	Y	Y		Y	Y		
		SGS AXYS MLA-007	MLA-007		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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						Y				Y	Y	Y	Y	Y		Y	Y		
		SGS AXYS MLA-007	MLA-007		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		Y	Y		
		EPA 8270	MLA-007							Y																								
		SGS AXYS MLA-010	MLA-010	Y	Y	Y					Y		Y		Y						Y				Y	Y	Y	Y	Y		Y	Y		
		SGS AXYS MLA-007	MLA-007		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		Y	Y		
		SGS AXYS MLA-010	MLA-010	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								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
		EPA 8270	MLA-007																				
		SGS AXYS MLA-010	MLA-010	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
		SGS AXYS MLA-010	MLA-010	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
		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 23 2,3,5-Trichlorobiphenyl	EPA 1668	MLA-010			Y		Y	Y	Y	Y		Y										Y
		SGS AXYS MLA-010	MLA-010	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
		SGS AXYS MLA-010	MLA-010	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
		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 26 2,3',5-Trichlorobiphenyl	EPA 1668	MLA-010			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 27 2,3',6-Trichlorobiphenyl	EPA 1668	MLA-010			Y	Y	Y	Y	Y	Y	Y			Y								Y
		SGS AXYS MLA-010	MLA-010	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
		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 29 2,4,5-Trichlorobiphenyl	EPA 1668	MLA-010			Y	Y	Y	Y	Y	Y				Y								Y
		SGS AXYS MLA-010	MLA-010	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
		EPA 8270	MLA-007							Y													
		SGS AXYS MLA-010	MLA-010	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
		SGS AXYS MLA-010	MLA-010	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
		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 32 2,4',6-Trichlorobiphenyl	EPA 1668	MLA-010			Y	Y	Y	Y	Y	Y	Y			Y								Y
		SGS AXYS MLA-010	MLA-010	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
		SGS AXYS MLA-010	MLA-010	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										
	PCB 34 2,3',5'-Trichlorobiphenyl	EPA 1668	MLA-010			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						

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Compound Class	Compound	Accredited Method ID	SGS AXYS Method ID	Serum										Tissue					Water																					
				California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	New York DOH	Virginia DGS	Washington DE	Maine DOH	ANAB ISO 17025	ANAB DoD **	California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP	ANAB ISO 17025	ANAB DoD **																	
		SGS AXYS MLA-010	MLA-010	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																									
		SGS AXYS MLA-010	MLA-010	Y	Y	Y								Y	Y																									
	PCB 95/93	EPA 8270	MLA-007											Y																										
		SGS AXYS MLA-007	MLA-007		Y										Y																									
	PCB 96 2,2',3,6,6'-Pentachlorobiphenyl	EPA 1668	MLA-010			Y		Y	Y	Y	Y	Y	Y	Y																										
		EPA 8270	MLA-007											Y																										
		SGS AXYS MLA-010	MLA-010	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																										
		SGS AXYS MLA-010	MLA-010	Y	Y	Y								Y	Y																									
	PCB 97/86	EPA 8270	MLA-007											Y																										
		SGS AXYS MLA-007	MLA-007		Y										Y																									
	PCB 98 2,2',3,4',6'-Pentachlorobiphenyl	EPA 1668	MLA-010			Y		Y	Y	Y	Y	Y	Y	Y																										
		SGS AXYS MLA-010	MLA-010	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																										
		EPA 8270	MLA-007											Y																										
		SGS AXYS MLA-010	MLA-010	Y	Y	Y								Y	Y																									
		SGS AXYS MLA-007	MLA-007		Y										Y																									
		SGS AXYS MLA-901	MLA-901	Y																																				
	PCB congeners, total	EPA 1668	MLA-010											Y																										
	Sum - Dichlorobiphenyls (BZ-12+ BZ-13)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Heptachlorobiphenyls (BZ-171 + BZ-173)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Heptachlorobiphenyls (BZ-180 + BZ-193)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Heptachlorobiphenyls (BZ-183 + BZ-185)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-128 + BZ-166)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-129 + BZ-138 + BZ-160 + BZ-163)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-134 + BZ-143)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-135 + BZ-151 + BZ-154)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-139 + BZ-140)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-147 + BZ-149)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-153 + BZ-168)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Hexachlorobiphenyls (BZ-156 + BZ-157)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Pentachlorobiphenyls (BZ-107 + BZ-124)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Pentachlorobiphenyls (BZ-108 + BZ-124)	EPA 1668	MLA-010											Y																										
		SGS AXYS MLA-010	MLA-010											Y																										
	Sum - Pentachlorobiphenyls (BZ-110 + BZ-115)	EPA 1668	MLA-010											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, 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 **					
1,2,3,7,8,9-HxCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
1,2,3,7,8-PeCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
1,2,3,7,8-PeCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
2,3,4,6,7,8-HxCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
2,3,4,7,8-PeCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
2,3,7,8-TCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
2,3,7,8-TCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
OCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
OCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Total HpCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total HpCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total HxCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total HxCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total PCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total PCDD+PCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total PCDF	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					
	SGS AXYS MLA-017	MLA-017																																					
Total PeCDD	EPA 1613	MLA-017																																					
	EPA 8290	MLA-017																																					

Accreditation Scope SGS AXYS Analytical Services Ltd. file ref.: ACC-101 Rev. 40				Serum									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	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 **			
PFAS	Total PeCDF	SGS AXYS MLA-017	MLA-017				Y										Y				Y						Y											
		EPA 1613	MLA-017																Y			Y						Y										
		EPA 8290	MLA-017					Y	Y	Y	Y	Y						Y	Y	Y	Y	Y					Y											
	Total TCDD	SGS AXYS MLA-017	MLA-017					Y										Y				Y						Y										
		EPA 1613	MLA-017																			Y						Y										
		EPA 8290	MLA-017					Y	Y	Y	Y	Y						Y	Y	Y	Y	Y					Y											
	Total TCDF	SGS AXYS MLA-017	MLA-017					Y										Y				Y						Y										
		EPA 1613	MLA-017																			Y						Y										
		EPA 8290	MLA-017					Y	Y	Y	Y	Y						Y	Y	Y	Y	Y					Y											
	4:2 Fluorotelomersulfonate (4:2 FTS)	SGS AXYS MLA-081	MLA-081															Y				Y					Y											
		SGS AXYS MLA-089	MLA-089																			Y																
	6:2 Fluorotelomersulfonate (6:2 FTS)	SGS AXYS MLA-110	MLA-110		Y	Y																				Y	Y					Y			Y	Y		
SGS AXYS MLA-081		MLA-081																																				
8:2 Fluorotelomersulfonate (8:2 FTS)	SGS AXYS MLA-089	MLA-089																																				
	SGS AXYS MLA-110	MLA-110		Y	Y																				Y	Y					Y				Y	Y		
	SGS AXYS MLA-081	MLA-081																																				
N-Ethylperfluorooctanesulfonamide (N-EtFOSA)	SGS AXYS MLA-110	MLA-110		Y	Y																				Y	Y												
	SGS AXYS MLA-089	MLA-089																																				
	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												
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
N-Methylperfluorooctanesulfonamide (N-MeFOSA)	SGS AXYS MLA-110	MLA-110		Y	Y																				Y	Y												
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
N-Methylperfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	SGS AXYS MLA-110	MLA-110		Y	Y																				Y	Y												
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
	SGS AXYS MLA-110	MLA-110		Y	Y																																	
N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	SGS AXYS MLA-110	MLA-110		Y	Y																																	
	SGS AXYS MLA-060	MLA-060																																				
	SGS AXYS MLA-041	MLA-041		Y	Y	Y	Y																															
Perfluorobutanesulfonate (PFBS)	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												
Perfluorobutanoate (PFBA)	SGS AXYS MLA-060	MLA-060																																				
	SGS AXYS MLA-041	MLA-041		Y	Y	Y	Y																															
	SGS AXYS MLA-043	MLA-043															Y	Y	Y	Y	Y																	
Perfluorodecanesulfonate (PFDS)	SGS AXYS MLA-042	MLA-042		Y																																		
	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
Perfluorodecanoate (PFDA)	SGS AXYS MLA-041	MLA-041		Y	Y	Y	Y																															
	SGS AXYS MLA-043	MLA-043																																				
	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
Perfluorododecanesulfonate (PFDoS)	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
	SGS AXYS MLA-060	MLA-060																																				
	SGS AXYS MLA-041	MLA-041		Y	Y	Y	Y																															
Perfluorododecanoate (PFDoA)	SGS AXYS MLA-043	MLA-043																																				
	SGS AXYS MLA-042	MLA-042		Y																																		
	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
Perfluoroheptanesulfonate (PFHpS)	SGS AXYS MLA-110	MLA-110		Y	Y	Y																																
	SGS AXYS MLA-060	MLA-060																																				
	SGS AXYS MLA-041	MLA-041		Y	Y	Y	Y																															

Accreditation ScopeSGS 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		California DPH	Florida DOH	Minnesota DOH	New Jersey DEP	Virginia DGS	Washington DE *	Maine DOH	Pennsylvania DEP
	lysoPhosphatidylcholine acyl C20:4	SGS AXYS MLM-001	MLM-001	Y									Y													
	lysoPhosphatidylcholine acyl C24:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	lysoPhosphatidylcholine acyl C26:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	lysoPhosphatidylcholine acyl C28:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	lysoPhosphatidylcholine acyl C28:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Methionine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Methioninesulfoxide	SGS AXYS MLM-001	MLM-001	Y									Y													
	Methylglutaryl carnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Nitrotyrosine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Nonacylcarnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	octadecadienoic acid (linoleic acid)	SGS AXYS MLM-001	MLM-001	Y									Y													
	Octadecadienyl carnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	octadecanoic acid (stearic acid)	SGS AXYS MLM-001	MLM-001	Y									Y													
	Octadecanoyl carnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	octadecatrienoic acid (γ-linolenic acid)	SGS AXYS MLM-001	MLM-001	Y									Y													
	Octadecenoyl carnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Octanoyl carnitine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Ornithine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phenylalanine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phenylethylamine	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C30:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C30:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C30:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C32:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C32:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C34:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C34:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C34:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C34:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:4	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C36:5	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:5	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C38:6	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:4	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:5	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C40:6	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:0	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:1	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:2	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:4	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C42:5	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C44:3	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C44:4	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C44:5	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine acyl-alkyl C44:6	SGS AXYS MLM-001	MLM-001	Y									Y													
	Phosphatidylcholine diacyl C24:0	SGS AXYS MLM-001	MLM-001	Y									Y													

Accreditation Scope

SGS AXYS Analytical Services Ltd.
file ref.: ACC-101 Rev. 40

Accreditation Scope				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 California DOH Minnesota DOH New Jersey DEP Virginia DGS ANAB ISO 17025	CALA	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		
	Pimelycarnitine	SGS AXYS MLM-001	MLM-001	Y		Y	Y		
	Proline	SGS AXYS MLM-001	MLM-001	Y		Y	Y		
	Propionylcarnitine	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. 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	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		
	tauroolithocholic acid	SGS AXYS MLM-001	MLM-001	Y		Y	Y		
	taurosodexoxycholic 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		Y	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)

