

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-RB-XD-190127  
Sample Collection:  
27-Jan-2019 15:50

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-1 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 20:07:18 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 16                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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 <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   | J                     | 0.134          | 0.0270 (Q)                           | 1.43                | 1.001 |
| Aldrin                   | 309-00-2   | K J                   | 0.063          | 0.0540 (Q)                           | 2.12                | 1.002 |
| Chlordane, oxy-          | 27304-13-8 | U                     |                | 0.158 (S)                            |                     |       |
| Chlordane, gamma (trans) | 5103-74-2  | K J                   | 0.112          | 0.0540 (Q)                           | 0.12                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | K J                   | 0.059          | 0.0540 (Q)                           | 1.87                | 1.027 |
| Nonachlor, trans-        | 39765-80-5 | K J                   | 0.174          | 0.0540 (Q)                           | 0.61                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | J                     | 0.161          | 0.0540 (Q)                           | 1.12                | 1.001 |
| 2,4'-DDD                 | 53-19-0    | U                     |                | 0.191 (S)                            |                     |       |
| 4,4'-DDD                 | 72-54-8    | U                     |                | 0.242 (S)                            |                     |       |
| 2,4'-DDE                 | 3424-82-6  | U                     |                | 0.0540 (Q)                           |                     |       |
| 4,4'-DDE                 | 72-55-9    | U                     |                | 0.0540 (Q)                           |                     |       |
| 2,4'-DDT                 | 789-02-6   | U                     |                | 0.260 (S)                            |                     |       |
| 4,4'-DDT                 | 50-29-3    | U                     |                | 0.305 (S)                            |                     |       |

- (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\_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-RB-XD-190127  
Sample Collection:  
27-Jan-2019 15:50

SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-1 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 20:07:18 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 16                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
| <b>Concentration Units:</b>   | ng absolute                | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |

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| LABELED COMPOUND             | LAB FLAG <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 6.48        | 26.7              | 1.31             | 0.790 |
| 13C-Aldrin                   | V                     | 24.0        | 6.26        | 26.1              | 1.64             | 1.031 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 4.45        | 18.5              | 1.49             | 1.110 |
| 13C-Chlordane, gamma (trans) | V                     | 24.0        | 6.02        | 25.1              | 1.22             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 7.80        | 32.5              | 1.17             | 0.868 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 8.80        | 36.0              | 1.28             | 0.956 |
| 13C-2,4'-DDE                 | V                     | 24.0        | 8.68        | 36.1              | 1.63             | 0.847 |
| 13C-4,4'-DDE                 |                       | 24.6        | 9.96        | 40.5              | 1.58             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 6.64        | 27.5              | 1.69             | 0.950 |
| 13C-2,4'-DDT                 | V                     | 24.0        | 9.59        | 40.0              | 1.57             | 0.955 |
| 13C-4,4'-DDT                 | V                     | 24.2        | 9.49        | 39.3              | 1.63             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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\_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T04-1902  
Sample Collection:  
17-Feb-2019 19:35

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-2 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 20:44:39 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 17                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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| COMPOUND                 | CAS NO.    | LAB FLAG <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 7.70           | 0.0268 (Q)                           | 1.27                | 1.000 |
| Aldrin                   | 309-00-2   | K J                   | 0.134          | 0.0535 (Q)                           | 1.07                | 1.000 |
| Chlordane, oxy-          | 27304-13-8 | K J                   | 0.394          | 0.390 (S)                            | 2.16                | 1.001 |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.06           | 0.0811 (S)                           | 1.21                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 1.67           | 0.0842 (S)                           | 1.12                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 1.01           | 0.0865 (S)                           | 1.03                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | U                     |                | 0.313 (S)                            |                     |       |
| 2,4'-DDD                 | 53-19-0    |                       | 6.83           | 0.113 (S)                            | 1.52                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 8.35           | 0.143 (S)                            | 1.55                | 1.000 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.452          | 0.0535 (Q)                           | 1.55                | 1.000 |
| 4,4'-DDE                 | 72-55-9    |                       | 9.60           | 0.0535 (Q)                           | 1.50                | 1.001 |
| 2,4'-DDT                 | 789-02-6   | J                     | 1.87           | 0.157 (S)                            | 1.53                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 5.27           | 0.178 (S)                            | 1.40                | 1.000 |

- (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 \_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T04-1902  
Sample Collection:  
17-Feb-2019 19:35

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-2 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 20:44:39 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 17                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
| <b>Concentration Units:</b>   | ng absolute                | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |

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| LABELED COMPOUND             | LAB<br>FLAG <sup>1</sup> | SPIKE<br>CONC. | CONC.<br>FOUND | R(%) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|------------------------------|--------------------------|----------------|----------------|-------------------|---------------------|-------|
| 13C-Hexachlorobenzene        |                          | 24.3           | 12.4           | 51.1              | 1.33                | 0.790 |
| 13C-Aldrin                   |                          | 24.0           | 13.5           | 56.2              | 1.67                | 1.031 |
| 13C-Chlordane, oxy           |                          | 24.0           | 9.76           | 40.7              | 1.73                | 1.110 |
| 13C-Chlordane, gamma (trans) |                          | 24.0           | 12.5           | 52.0              | 1.24                | 0.839 |
| 13C-Nonachlor, trans-        |                          | 24.0           | 15.6           | 65.0              | 1.21                | 0.868 |
| 13C-Nonachlor, cis-          |                          | 24.5           | 14.6           | 59.5              | 1.29                | 0.956 |
| 13C-2,4'-DDE                 |                          | 24.0           | 17.2           | 71.5              | 1.61                | 0.846 |
| 13C-4,4'-DDE                 |                          | 24.6           | 18.7           | 76.1              | 1.61                | 0.891 |
| 13C-4,4'-DDD                 |                          | 24.2           | 13.0           | 53.8              | 1.60                | 0.950 |
| 13C-2,4'-DDT                 |                          | 24.0           | 18.4           | 76.7              | 1.61                | 0.955 |
| 13C-4,4'-DDT                 |                          | 24.2           | 18.6           | 77.2              | 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\_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T05-1902  
Sample Collection:  
17-Feb-2019 19:17

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-3 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 21:22:05 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 18                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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| COMPOUND                 | CAS NO.    | LAB FLAG <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 8.97           | 0.0269 (Q)                           | 1.26                | 1.000 |
| Aldrin                   | 309-00-2   | J                     | 0.261          | 0.0539 (Q)                           | 1.64                | 1.001 |
| Chlordane, oxy-          | 27304-13-8 | U                     |                | 0.158 (S)                            |                     |       |
| Chlordane, gamma (trans) | 5103-74-2  | K J                   | 1.12           | 0.0539 (Q)                           | 0.87                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 1.60           | 0.0539 (Q)                           | 1.14                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 1.09           | 0.0539 (Q)                           | 1.21                | 1.000 |
| Nonachlor, cis-          | 5103-73-1  | J                     | 0.478          | 0.0572 (S)                           | 1.10                | 1.000 |
| 2,4'-DDD                 | 53-19-0    | J                     | 1.56           | 0.184 (S)                            | 1.61                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 3.29           | 0.233 (S)                            | 1.53                | 1.001 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.223          | 0.0539 (Q)                           | 1.43                | 1.001 |
| 4,4'-DDE                 | 72-55-9    |                       | 8.84           | 0.0539 (Q)                           | 1.48                | 1.001 |
| 2,4'-DDT                 | 789-02-6   | J                     | 1.29           | 0.247 (S)                            | 1.47                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 4.89           | 0.305 (S)                            | 1.56                | 1.000 |

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(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 \_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T05-1902  
Sample Collection:  
17-Feb-2019 19:17

## 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:** XAD  
**Sample Receipt Date:** 22-Feb-2019  
**Extraction Date:** 07-Mar-2019  
**Analysis Date:** 10-Apr-2019 **Time:** 21:22:05  
**Extract Volume (uL):** 40  
**Injection Volume (uL):** 1.0  
**Dilution Factor:** N/A  
**Concentration Units:** ng absolute

**Project No.** PORTLAND HARBOR PDI AND  
BASELINE WATER  
**Lab Sample I.D.:** L30772-3 i  
**Sample Size:** 1 sample  
**Initial Calibration Date:** 10-Apr-2019  
**Instrument ID:** HR GC/MS  
**GC Column ID:** DB5  
**Sample Data Filename:** CL92\_036B S: 18  
**Blank Data Filename:** CL92\_036B S: 15  
**Cal. Ver. Data Filename:** CL92\_036B S: 9

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| LABELED COMPOUND             | LAB FLAG <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 8.06        | 33.2              | 1.34             | 0.789 |
| 13C-Aldrin                   |                       | 24.0        | 7.95        | 33.1              | 1.71             | 1.030 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 6.94        | 28.9              | 1.36             | 1.110 |
| 13C-Chlordane, gamma (trans) |                       | 24.0        | 8.47        | 35.3              | 1.20             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 10.8        | 45.0              | 1.26             | 0.868 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 10.4        | 42.6              | 1.30             | 0.956 |
| 13C-2,4'-DDE                 |                       | 24.0        | 12.0        | 49.9              | 1.59             | 0.846 |
| 13C-4,4'-DDE                 |                       | 24.6        | 12.8        | 52.2              | 1.63             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 8.45        | 35.0              | 1.61             | 0.949 |
| 13C-2,4'-DDT                 |                       | 24.0        | 12.3        | 51.2              | 1.63             | 0.955 |
| 13C-4,4'-DDT                 |                       | 24.2        | 11.5        | 47.7              | 1.56             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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 \_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T06-1901  
Sample Collection:  
27-Jan-2019 10:40

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-4 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 21:59:34 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 19                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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| COMPOUND                 | CAS NO.    | LAB FLAG <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 9.01           | 0.0272 (Q)                           | 1.34                | 1.001 |
| Aldrin                   | 309-00-2   | K J                   | 0.180          | 0.0544 (Q)                           | 1.94                | 1.001 |
| Chlordane, oxy-          | 27304-13-8 | U                     |                | 0.112 (S)                            |                     |       |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.06           | 0.0544 (Q)                           | 1.04                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | K J                   | 1.40           | 0.0544 (Q)                           | 1.55                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 0.829          | 0.0544 (Q)                           | 1.20                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | K J                   | 0.295          | 0.0548 (S)                           | 0.60                | 1.001 |
| 2,4'-DDD                 | 53-19-0    | J                     | 1.51           | 0.156 (S)                            | 1.72                | 0.951 |
| 4,4'-DDD                 | 72-54-8    | J                     | 3.19           | 0.197 (S)                            | 1.53                | 1.001 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.203          | 0.0544 (Q)                           | 1.63                | 1.001 |
| 4,4'-DDE                 | 72-55-9    |                       | 6.37           | 0.0544 (Q)                           | 1.56                | 1.000 |
| 2,4'-DDT                 | 789-02-6   | J                     | 1.27           | 0.211 (S)                            | 1.53                | 1.000 |
| 4,4'-DDT                 | 50-29-3    |                       | 3.52           | 0.265 (S)                            | 1.46                | 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 \_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T06-1901  
Sample Collection:  
27-Jan-2019 10:40

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-4 i                                |
| <b>Sample Receipt Date:</b>   | 22-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 21:59:34 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 19                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
| <b>Concentration Units:</b>   | ng absolute                | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |

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 <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 8.78        | 36.1              | 1.31             | 0.788 |
| 13C-Aldrin                   |                       | 24.0        | 8.61        | 35.9              | 1.68             | 1.030 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 5.80        | 24.2              | 1.70             | 1.110 |
| 13C-Chlordane, gamma (trans) |                       | 24.0        | 8.10        | 33.8              | 1.23             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 10.2        | 42.6              | 1.32             | 0.867 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 9.82        | 40.2              | 1.29             | 0.956 |
| 13C-2,4'-DDE                 |                       | 24.0        | 11.9        | 49.5              | 1.64             | 0.846 |
| 13C-4,4'-DDE                 |                       | 24.6        | 12.7        | 51.6              | 1.56             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 8.05        | 33.3              | 1.64             | 0.949 |
| 13C-2,4'-DDT                 |                       | 24.0        | 11.6        | 48.4              | 1.57             | 0.955 |
| 13C-4,4'-DDT                 |                       | 24.2        | 10.9        | 45.1              | 1.67             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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 \_\_\_\_\_



Form 1A  
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: XAD

Sample Receipt Date: 22-Feb-2019

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 22:37:04

Extract Volume (uL): 40

Injection Volume (uL): 1.0

Dilution Factor: N/A

Concentration Units: ng/sample

Project No.

Lab Sample I.D.:

Sample Size:

Initial Calibration Date:

Instrument ID:

GC Column ID:

Sample Data Filename:

Blank Data Filename:

Cal. Ver. Data Filename:

PORTLAND HARBOR PDI AND  
BASELINE WATER  
L30772-5 i

1 sample

10-Apr-2019

HR GC/MS

DB5

CL92\_036B S: 20

CL92\_036B S: 15

CL92\_036B S: 9

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 <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 5.96           | 0.0268 (Q)                           | 1.23                | 1.000 |
| Aldrin                   | 309-00-2   | J                     | 0.087          | 0.0536 (Q)                           | 1.72                | 1.000 |
| Chlordane, oxy-          | 27304-13-8 | J                     | 0.402          | 0.0837 (S)                           | 1.26                | 1.001 |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.27           | 0.0536 (Q)                           | 1.05                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 1.85           | 0.0536 (Q)                           | 1.03                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 1.00           | 0.0536 (Q)                           | 1.20                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | J                     | 0.406          | 0.0536 (Q)                           | 1.37                | 1.001 |
| 2,4'-DDD                 | 53-19-0    | J                     | 2.27           | 0.128 (S)                            | 1.61                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 4.29           | 0.162 (S)                            | 1.53                | 1.001 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.316          | 0.0536 (Q)                           | 1.50                | 1.000 |
| 4,4'-DDE                 | 72-55-9    |                       | 9.59           | 0.0536 (Q)                           | 1.49                | 1.000 |
| 2,4'-DDT                 | 789-02-6   | J                     | 2.32           | 0.172 (S)                            | 1.55                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 6.60           | 0.207 (S)                            | 1.44                | 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\_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T07-1901  
Sample Collection:  
26-Jan-2019 09:46

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: XAD  
Sample Receipt Date: 22-Feb-2019  
Extraction Date: 07-Mar-2019  
Analysis Date: 10-Apr-2019 Time: 22:37:04  
Extract Volume (uL): 40  
Injection Volume (uL): 1.0  
Dilution Factor: N/A  
Concentration Units: ng absolute

Project No. PORTLAND HARBOR PDI AND BASELINE WATER  
Lab Sample I.D.: L30772-5 i  
Sample Size: 1 sample  
Initial Calibration Date: 10-Apr-2019  
Instrument ID: HR GC/MS  
GC Column ID: DB5  
Sample Data Filename: CL92\_036B S: 20  
Blank Data Filename: CL92\_036B S: 15  
Cal. Ver. Data Filename: CL92\_036B S: 9

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 <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 8.76        | 36.1              | 1.37             | 0.789 |
| 13C-Aldrin                   |                       | 24.0        | 8.64        | 36.0              | 1.57             | 1.031 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 5.80        | 24.2              | 1.34             | 1.109 |
| 13C-Chlordane, gamma (trans) |                       | 24.0        | 8.93        | 37.2              | 1.19             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 11.0        | 46.0              | 1.28             | 0.867 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 11.0        | 44.8              | 1.29             | 0.956 |
| 13C-2,4'-DDE                 |                       | 24.0        | 12.6        | 52.4              | 1.62             | 0.847 |
| 13C-4,4'-DDE                 |                       | 24.6        | 13.2        | 53.7              | 1.60             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 8.69        | 36.0              | 1.58             | 0.950 |
| 13C-2,4'-DDT                 |                       | 24.0        | 12.4        | 51.8              | 1.63             | 0.955 |
| 13C-4,4'-DDT                 |                       | 24.2        | 11.6        | 48.1              | 1.61             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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\_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T01-1902  
Sample Collection:  
18-Feb-2019 20:15

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-6 i                                |
| <b>Sample Receipt Date:</b>   | 21-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 23:14:34 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 21                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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 <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 6.13           | 0.0271 (Q)                           | 1.28                | 1.000 |
| Aldrin                   | 309-00-2   | K J                   | 0.204          | 0.0542 (Q)                           | 0.92                | 1.001 |
| Chlordane, oxy-          | 27304-13-8 | K J                   | 0.432          | 0.164 (S)                            | 0.74                | 1.001 |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.43           | 0.0542 (Q)                           | 1.06                | 1.000 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 2.01           | 0.0542 (Q)                           | 1.35                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 1.46           | 0.0542 (Q)                           | 1.10                | 1.000 |
| Nonachlor, cis-          | 5103-73-1  | J                     | 0.764          | 0.0542 (Q)                           | 1.40                | 1.000 |
| 2,4'-DDD                 | 53-19-0    | J                     | 1.83           | 0.165 (S)                            | 1.58                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 3.52           | 0.209 (S)                            | 1.65                | 1.001 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.250          | 0.0542 (Q)                           | 1.56                | 1.001 |
| 4,4'-DDE                 | 72-55-9    |                       | 8.79           | 0.0542 (Q)                           | 1.50                | 1.001 |
| 2,4'-DDT                 | 789-02-6   | J                     | 1.71           | 0.224 (S)                            | 1.75                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 5.69           | 0.275 (S)                            | 1.46                | 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.

(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 \_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T01-1902  
Sample Collection:  
18-Feb-2019 20:15

SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-6 i                                |
| <b>Sample Receipt Date:</b>   | 21-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 23:14:34 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 21                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
| <b>Concentration Units:</b>   | ng absolute                | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |

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 <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 48.6        | 18.4        | 37.8              | 1.34             | 0.789 |
| 13C-Aldrin                   |                       | 48.0        | 17.0        | 35.5              | 1.60             | 1.030 |
| 13C-Chlordane, oxy           | V                     | 48.0        | 12.5        | 26.0              | 1.53             | 1.109 |
| 13C-Chlordane, gamma (trans) |                       | 48.0        | 17.4        | 36.3              | 1.25             | 0.840 |
| 13C-Nonachlor, trans-        |                       | 48.0        | 22.3        | 46.4              | 1.22             | 0.868 |
| 13C-Nonachlor, cis-          |                       | 48.9        | 21.3        | 43.7              | 1.38             | 0.956 |
| 13C-2,4'-DDE                 |                       | 48.0        | 23.8        | 49.7              | 1.61             | 0.846 |
| 13C-4,4'-DDE                 |                       | 49.2        | 25.5        | 51.9              | 1.61             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 48.3        | 16.5        | 34.1              | 1.58             | 0.950 |
| 13C-2,4'-DDT                 |                       | 48.0        | 23.6        | 49.3              | 1.61             | 0.955 |
| 13C-4,4'-DDT                 |                       | 48.3        | 22.2        | 46.1              | 1.56             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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\_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T02-1902  
Sample Collection:  
18-Feb-2019 21:36

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-7 i                                |
| <b>Sample Receipt Date:</b>   | 21-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 10-Apr-2019 Time: 23:52:03 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 22                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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 <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 7.28           | 0.0269 (Q)                           | 1.34                | 1.000 |
| Aldrin                   | 309-00-2   | K J                   | 0.178          | 0.0537 (Q)                           | 2.10                | 1.001 |
| Chlordane, oxy-          | 27304-13-8 | K J                   | 0.448          | 0.135 (S)                            | 2.16                | 1.000 |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.44           | 0.0537 (Q)                           | 1.13                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 1.73           | 0.0537 (Q)                           | 1.39                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | J                     | 1.31           | 0.0537 (Q)                           | 1.33                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | K J                   | 0.515          | 0.0606 (S)                           | 0.89                | 1.001 |
| 2,4'-DDD                 | 53-19-0    | J                     | 2.23           | 0.232 (S)                            | 1.85                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 3.97           | 0.294 (S)                            | 1.44                | 1.000 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.318          | 0.0537 (Q)                           | 1.56                | 1.001 |
| 4,4'-DDE                 | 72-55-9    |                       | 10.5           | 0.0537 (Q)                           | 1.50                | 1.000 |
| 2,4'-DDT                 | 789-02-6   | J                     | 2.20           | 0.285 (S)                            | 1.57                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 6.55           | 0.351 (S)                            | 1.65                | 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\_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T02-1902  
Sample Collection:  
18-Feb-2019 21:36

## 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:** XAD  
**Sample Receipt Date:** 21-Feb-2019  
**Extraction Date:** 07-Mar-2019  
**Analysis Date:** 10-Apr-2019 **Time:** 23:52:03  
**Extract Volume (uL):** 40  
**Injection Volume (uL):** 1.0  
**Dilution Factor:** N/A  
**Concentration Units:** ng absolute

**Project No.** PORTLAND HARBOR PDI AND  
BASELINE WATER  
**Lab Sample I.D.:** L30772-7 i  
**Sample Size:** 1 sample  
**Initial Calibration Date:** 10-Apr-2019  
**Instrument ID:** HR GC/MS  
**GC Column ID:** DB5  
**Sample Data Filename:** CL92\_036B S: 22  
**Blank Data Filename:** CL92\_036B S: 15  
**Cal. Ver. Data Filename:** CL92\_036B S: 9

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 <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 5.84        | 24.1              | 1.40             | 0.789 |
| 13C-Aldrin                   | V                     | 24.0        | 6.13        | 25.5              | 1.58             | 1.030 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 4.45        | 18.5              | 1.56             | 1.109 |
| 13C-Chlordane, gamma (trans) | V                     | 24.0        | 5.90        | 24.6              | 1.35             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 8.17        | 34.1              | 1.31             | 0.867 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 7.59        | 31.0              | 1.48             | 0.956 |
| 13C-2,4'-DDE                 | V                     | 24.0        | 8.90        | 37.1              | 1.61             | 0.846 |
| 13C-4,4'-DDE                 |                       | 24.6        | 10.0        | 40.8              | 1.63             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 6.06        | 25.1              | 1.54             | 0.950 |
| 13C-2,4'-DDT                 | V                     | 24.0        | 9.05        | 37.7              | 1.65             | 0.955 |
| 13C-4,4'-DDT                 | V                     | 24.2        | 8.46        | 35.0              | 1.63             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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 \_\_\_\_\_

Form 1A  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T03-1902  
Sample Collection:  
18-Feb-2019 11:31

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-8 i                                |
| <b>Sample Receipt Date:</b>   | 21-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 11-Apr-2019 Time: 00:29:33 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 23                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
|                               |                            | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |
| <b>Concentration Units:</b>   | ng/sample                  |                                  |   |

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 <sup>1</sup> | CONC.<br>FOUND | REPORTING<br>LIMIT (RL) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|--------------------------|------------|-----------------------|----------------|--------------------------------------|---------------------|-------|
| Hexachlorobenzene        | 118-74-1   |                       | 7.80           | 0.0269 (Q)                           | 1.26                | 1.000 |
| Aldrin                   | 309-00-2   | J                     | 0.136          | 0.0538 (Q)                           | 1.73                | 1.001 |
| Chlordane, oxy-          | 27304-13-8 | K J                   | 0.743          | 0.131 (S)                            | 1.23                | 1.001 |
| Chlordane, gamma (trans) | 5103-74-2  | J                     | 1.65           | 0.0538 (Q)                           | 0.99                | 1.001 |
| Chlordane, alpha (cis)   | 5103-71-9  | J                     | 2.15           | 0.0538 (Q)                           | 1.12                | 1.026 |
| Nonachlor, trans-        | 39765-80-5 | K J                   | 1.40           | 0.0538 (Q)                           | 1.57                | 1.001 |
| Nonachlor, cis-          | 5103-73-1  | K J                   | 0.650          | 0.0708 (S)                           | 0.60                | 1.001 |
| 2,4'-DDD                 | 53-19-0    | J                     | 2.28           | 0.198 (S)                            | 1.53                | 0.951 |
| 4,4'-DDD                 | 72-54-8    |                       | 4.38           | 0.251 (S)                            | 1.48                | 1.001 |
| 2,4'-DDE                 | 3424-82-6  | J                     | 0.282          | 0.0538 (Q)                           | 1.56                | 1.001 |
| 4,4'-DDE                 | 72-55-9    |                       | 11.4           | 0.0538 (Q)                           | 1.51                | 1.000 |
| 2,4'-DDT                 | 789-02-6   | J                     | 1.74           | 0.254 (S)                            | 1.38                | 1.001 |
| 4,4'-DDT                 | 50-29-3    |                       | 6.67           | 0.331 (S)                            | 1.50                | 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 \_\_\_\_\_

Form 2  
PESTICIDE ANALYSIS REPORT

CLIENT SAMPLE NO.  
PDI-WS-T03-1902  
Sample Collection:  
18-Feb-2019 11:31

## SGS AXYS ANALYTICAL SERVICES

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

|                               |                            |                                  |   |
|-------------------------------|----------------------------|----------------------------------|---|
| <b>Contract No.:</b>          | 4972                       | <b>Project No.</b>               | PORTLAND HARBOR PDI AND<br>BASELINE WATER |
| <b>Matrix:</b>                | XAD                        | <b>Lab Sample I.D.:</b>          | L30772-8 i                                |
| <b>Sample Receipt Date:</b>   | 21-Feb-2019                | <b>Sample Size:</b>              | 1 sample                                  |
| <b>Extraction Date:</b>       | 07-Mar-2019                | <b>Initial Calibration Date:</b> | 10-Apr-2019                               |
| <b>Analysis Date:</b>         | 11-Apr-2019 Time: 00:29:33 | <b>Instrument ID:</b>            | HR GC/MS                                  |
| <b>Extract Volume (uL):</b>   | 40                         | <b>GC Column ID:</b>             | DB5                                       |
| <b>Injection Volume (uL):</b> | 1.0                        | <b>Sample Data Filename:</b>     | CL92_036B S: 23                           |
| <b>Dilution Factor:</b>       | N/A                        | <b>Blank Data Filename:</b>      | CL92_036B S: 15                           |
| <b>Concentration Units:</b>   | ng absolute                | <b>Cal. Ver. Data Filename:</b>  | CL92_036B S: 9                            |

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<br>FLAG <sup>1</sup> | SPIKE<br>CONC. | CONC.<br>FOUND | R(%) <sup>2</sup> | ION ABUND.<br>RATIO | RRT   |
|------------------------------|--------------------------|----------------|----------------|-------------------|---------------------|-------|
| 13C-Hexachlorobenzene        |                          | 24.3           | 5.37           | 22.1              | 1.32                | 0.789 |
| 13C-Aldrin                   | V                        | 24.0           | 6.67           | 27.8              | 1.70                | 1.030 |
| 13C-Chlordane, oxy           | V                        | 24.0           | 4.63           | 19.3              | 1.56                | 1.109 |
| 13C-Chlordane, gamma (trans) | V                        | 24.0           | 7.18           | 29.9              | 1.22                | 0.839 |
| 13C-Nonachlor, trans-        |                          | 24.0           | 9.41           | 39.2              | 1.16                | 0.867 |
| 13C-Nonachlor, cis-          |                          | 24.5           | 9.19           | 37.6              | 1.30                | 0.956 |
| 13C-2,4'-DDE                 |                          | 24.0           | 10.6           | 44.0              | 1.58                | 0.846 |
| 13C-4,4'-DDE                 |                          | 24.6           | 11.4           | 46.4              | 1.59                | 0.891 |
| 13C-4,4'-DDD                 | V                        | 24.2           | 7.06           | 29.2              | 1.63                | 0.949 |
| 13C-2,4'-DDT                 |                          | 24.0           | 10.7           | 44.8              | 1.66                | 0.955 |
| 13C-4,4'-DDT                 | V                        | 24.2           | 9.52           | 39.4              | 1.57                | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.  
(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\_\_\_\_\_



Form 1A  
PESTICIDE ANALYSIS REPORT

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

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972  
Matrix: XAD  
Sample Receipt Date: N/A  
Extraction Date: 07-Mar-2019  
Analysis Date: 10-Apr-2019 Time: 19:29:59  
Extract Volume (uL): 40  
Injection Volume (uL): 1.0  
Dilution Factor: N/A

Project No. N/A  
Lab Sample I.D.: WG67276-101 i  
Sample Size: 1 sample  
Initial Calibration Date: 10-Apr-2019  
Instrument ID: HR GC/MS  
GC Column ID: DB5  
Sample Data Filename: CL92\_036B S: 15  
Blank Data Filename: CL92\_036B S: 15  
Cal. Ver. Data Filename: CL92\_036B S: 9

Concentration Units: ng/sample

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 <sup>1</sup> | CONC. FOUND | REPORTING LIMIT (RL) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|--------------------------|------------|-----------------------|-------------|-----------------------------------|------------------|-------|
| Hexachlorobenzene        | 118-74-1   | K J                   | 0.058       | 0.0267 (Q)                        | 0.88             | 1.000 |
| Aldrin                   | 309-00-2   | U                     |             | 0.0534 (Q)                        |                  |       |
| Chlordane, oxy-          | 27304-13-8 | U                     |             | 0.144 (S)                         |                  |       |
| Chlordane, gamma (trans) | 5103-74-2  | U                     |             | 0.0534 (Q)                        |                  |       |
| Chlordane, alpha (cis)   | 5103-71-9  | K J                   | 0.078       | 0.0534 (Q)                        | 0.86             | 1.027 |
| Nonachlor, trans-        | 39765-80-5 | U                     |             | 0.0534 (Q)                        |                  |       |
| Nonachlor, cis-          | 5103-73-1  | K J                   | 0.139       | 0.0534 (Q)                        | 0.16             | 1.000 |
| 2,4'-DDD                 | 53-19-0    | U                     |             | 0.169 (S)                         |                  |       |
| 4,4'-DDD                 | 72-54-8    | U                     |             | 0.213 (S)                         |                  |       |
| 2,4'-DDE                 | 3424-82-6  | U                     |             | 0.0534 (Q)                        |                  |       |
| 4,4'-DDE                 | 72-55-9    | U                     |             | 0.0534 (Q)                        |                  |       |
| 2,4'-DDT                 | 789-02-6   | U                     |             | 0.255 (S)                         |                  |       |
| 4,4'-DDT                 | 50-29-3    | U                     |             | 0.285 (S)                         |                  |       |

(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\_\_\_\_\_

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: XAD

Sample Receipt Date: N/A

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 19:29:59

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.:

WG67276-101 i

Sample Size:

1 sample

Initial Calibration Date:

10-Apr-2019

Instrument ID:

HR GC/MS

GC Column ID:

DB5

Sample Data Filename:

CL92\_036B S: 15

Blank Data Filename:

CL92\_036B S: 15

Cal. Ver. Data Filename:

CL92\_036B S: 9

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.

| LABELLED COMPOUND            | LAB FLAG <sup>1</sup> | SPIKE CONC. | CONC. FOUND | R(%) <sup>2</sup> | ION ABUND. RATIO | RRT   |
|------------------------------|-----------------------|-------------|-------------|-------------------|------------------|-------|
| 13C-Hexachlorobenzene        |                       | 24.3        | 7.00        | 28.8              | 1.38             | 0.790 |
| 13C-Aldrin                   | V                     | 24.0        | 6.78        | 28.2              | 1.53             | 1.031 |
| 13C-Chlordane, oxy           | V                     | 24.0        | 4.31        | 18.0              | 1.19             | 1.110 |
| 13C-Chlordane, gamma (trans) | V                     | 24.0        | 6.45        | 26.9              | 1.15             | 0.839 |
| 13C-Nonachlor, trans-        |                       | 24.0        | 8.41        | 35.1              | 1.19             | 0.868 |
| 13C-Nonachlor, cis-          |                       | 24.5        | 8.78        | 35.9              | 1.25             | 0.956 |
| 13C-2,4'-DDE                 | V                     | 24.0        | 9.05        | 37.7              | 1.60             | 0.847 |
| 13C-4,4'-DDE                 |                       | 24.6        | 9.94        | 40.4              | 1.58             | 0.891 |
| 13C-4,4'-DDD                 | V                     | 24.2        | 6.89        | 28.5              | 1.58             | 0.950 |
| 13C-2,4'-DDT                 | V                     | 24.0        | 9.13        | 38.1              | 1.62             | 0.955 |
| 13C-4,4'-DDT                 | V                     | 24.2        | 9.47        | 39.2              | 1.78             | 0.996 |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.

(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\_\_\_\_\_

## 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: CL92\_036B S: 11

Matrix: XAD

Lab Sample I.D.: WG67276-102 i (A)

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 17:00:37

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

| COMPOUND                 | CAS NO.    | LAB<br>FLAG <sup>1</sup> | ION<br>ABUND.<br>RATIO | SPIKE<br>CONC.<br>(ng/mL) | CONC.<br>FOUND<br>(ng/mL) | OPR CONC.<br>LIMITS<br>(ng/mL) | %<br>RECOVERY |
|--------------------------|------------|--------------------------|------------------------|---------------------------|---------------------------|--------------------------------|---------------|
| Hexachlorobenzene        | 118-74-1   |                          | 1.29                   | 120                       | 123                       | 84.0 - 156                     | 103           |
| Aldrin                   | 309-00-2   |                          | 1.42                   | 312                       | 334                       | 218 - 405                      | 107           |
| Chlordane, oxy-          | 27304-13-8 |                          | 1.33                   | 240                       | 249                       | 168 - 312                      | 104           |
| Chlordane, gamma (trans) | 5103-74-2  |                          | 1.22                   | 240                       | 239                       | 168 - 312                      | 99.7          |
| Chlordane, alpha (cis)   | 5103-71-9  |                          | 1.27                   | 241                       | 265                       | 168 - 313                      | 110           |
| Nonachlor, trans-        | 39765-80-5 |                          | 1.21                   | 204                       | 218                       | 143 - 265                      | 107           |
| Nonachlor, cis-          | 5103-73-1  |                          | 1.23                   | 240                       | 249                       | 168 - 312                      | 104           |
| 2,4'-DDD                 | 53-19-0    |                          | 1.50                   | 121                       | 138                       | 84.6 - 157                     | 115           |
| 4,4'-DDD                 | 72-54-8    |                          | 1.49                   | 145                       | 151                       | 102 - 189                      | 104           |
| 2,4'-DDE                 | 3424-82-6  |                          | 1.49                   | 121                       | 126                       | 84.8 - 158                     | 104           |
| 4,4'-DDE                 | 72-55-9    |                          | 1.50                   | 147                       | 149                       | 103 - 191                      | 101           |
| 2,4'-DDT                 | 789-02-6   |                          | 1.48                   | 120                       | 121                       | 83.8 - 156                     | 101           |
| 4,4'-DDT                 | 50-29-3    |                          | 1.48                   | 121                       | 125                       | 84.8 - 158                     | 103           |

(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.

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: CL92\_036B S: 11

Matrix: XAD

Lab Sample I.D.: WG67276-102 i (A)

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 17:00:37

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

| LABELLED COMPOUND            | CAS NO.     | LAB FLAG <sup>1</sup> | ION ABUND. RATIO | SPIKE CONC. (ng/mL) | CONC. FOUND (ng/mL) | OPR CONC. LIMITS (ng/mL) | % RECOVERY |
|------------------------------|-------------|-----------------------|------------------|---------------------|---------------------|--------------------------|------------|
| 13C-Hexachlorobenzene        | 93952-14-8  |                       | 1.34             | 243                 | 65.5                | 48.6-365                 | 27.0       |
| 13C-Aldrin                   |             | V                     | 1.71             | 240                 | 52.8                | 72.0-360                 | 22.0       |
| 13C-Chlordane, oxy           |             | K V                   | 2.10             | 240                 | 50.5                | 72.0-480                 | 21.0       |
| 13C-Chlordane, gamma (trans) |             |                       | 1.25             | 240                 | 78.3                | 72.0-480                 | 32.6       |
| 13C-Nonachlor, trans-        |             |                       | 1.20             | 240                 | 89.0                | 72.0-360                 | 37.1       |
| 13C-Nonachlor, cis-          |             |                       | 1.22             | 245                 | 92.0                | 73.4-367                 | 37.6       |
| 13C-2,4'-DDE                 |             |                       | 1.59             | 240                 | 105                 | 96.0-360                 | 43.9       |
| 13C-4,4'-DDE                 | 201612-50-2 |                       | 1.63             | 246                 | 117                 | 98.4-369                 | 47.4       |
| 13C-4,4'-DDD                 |             | V                     | 1.69             | 242                 | 70.2                | 96.6-362                 | 29.0       |
| 13C-2,4'-DDT                 |             |                       | 1.62             | 240                 | 103                 | 96.0-360                 | 42.9       |
| 13C-4,4'-DDT                 | 104215-84-1 |                       | 1.52             | 242                 | 97.9                | 96.6-362                 | 40.6       |

(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; V = surrogate recovery is not within method/contract control limits.

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.

## 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: CL92\_036B S: 12

Matrix: XAD

Lab Sample I.D.: WG67276-103 i (DUP WG67276-102)

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 17:37:58

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

| COMPOUND                 | CAS NO.    | LAB<br>FLAG <sup>1</sup> | ION<br>ABUND.<br>RATIO | SPIKE<br>CONC.<br>(ng/mL) | CONC.<br>FOUND<br>(ng/mL) | OPR CONC.<br>LIMITS<br>(ng/mL) | %<br>RECOVERY |
|--------------------------|------------|--------------------------|------------------------|---------------------------|---------------------------|--------------------------------|---------------|
| Hexachlorobenzene        | 118-74-1   |                          | 1.31                   | 120                       | 122                       | 84.0 - 156                     | 101           |
| Aldrin                   | 309-00-2   |                          | 1.41                   | 312                       | 316                       | 218 - 405                      | 101           |
| Chlordane, oxy-          | 27304-13-8 |                          | 1.52                   | 240                       | 238                       | 168 - 312                      | 99.1          |
| Chlordane, gamma (trans) | 5103-74-2  |                          | 1.24                   | 240                       | 237                       | 168 - 312                      | 98.6          |
| Chlordane, alpha (cis)   | 5103-71-9  |                          | 1.17                   | 241                       | 264                       | 168 - 313                      | 110           |
| Nonachlor, trans-        | 39765-80-5 |                          | 1.15                   | 204                       | 211                       | 143 - 265                      | 103           |
| Nonachlor, cis-          | 5103-73-1  |                          | 1.15                   | 240                       | 258                       | 168 - 312                      | 108           |
| 2,4'-DDD                 | 53-19-0    |                          | 1.52                   | 121                       | 132                       | 84.6 - 157                     | 110           |
| 4,4'-DDD                 | 72-54-8    |                          | 1.52                   | 145                       | 149                       | 102 - 189                      | 102           |
| 2,4'-DDE                 | 3424-82-6  |                          | 1.49                   | 121                       | 123                       | 84.8 - 158                     | 102           |
| 4,4'-DDE                 | 72-55-9    |                          | 1.51                   | 147                       | 147                       | 103 - 191                      | 100           |
| 2,4'-DDT                 | 789-02-6   |                          | 1.46                   | 120                       | 120                       | 83.8 - 156                     | 99.9          |
| 4,4'-DDT                 | 50-29-3    |                          | 1.56                   | 121                       | 125                       | 84.8 - 158                     | 103           |

(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.

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: CL92\_036B S: 12

Matrix: XAD

Lab Sample I.D.: WG67276-103 i (DUP WG67276-102)

Extraction Date: 07-Mar-2019

Analysis Date: 10-Apr-2019 Time: 17:37:58

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

| LABELLED COMPOUND            | CAS NO.     | LAB FLAG <sup>1</sup> | ION ABUND. RATIO | SPIKE CONC. (ng/mL) | CONC. FOUND (ng/mL) | OPR CONC. LIMITS (ng/mL) | % RECOVERY |
|------------------------------|-------------|-----------------------|------------------|---------------------|---------------------|--------------------------|------------|
| 13C-Hexachlorobenzene        | 93952-14-8  |                       | 1.35             | 243                 | 73.6                | 48.6-365                 | 30.3       |
| 13C-Aldrin                   |             | V                     | 1.55             | 240                 | 61.3                | 72.0-360                 | 25.6       |
| 13C-Chlordane, oxy           |             | V                     | 1.44             | 240                 | 48.6                | 72.0-480                 | 20.3       |
| 13C-Chlordane, gamma (trans) |             | V                     | 1.26             | 240                 | 70.2                | 72.0-480                 | 29.3       |
| 13C-Nonachlor, trans-        |             |                       | 1.19             | 240                 | 85.4                | 72.0-360                 | 35.6       |
| 13C-Nonachlor, cis-          |             |                       | 1.28             | 245                 | 82.1                | 73.4-367                 | 33.6       |
| 13C-2,4'-DDE                 |             |                       | 1.60             | 240                 | 98.4                | 96.0-360                 | 41.0       |
| 13C-4,4'-DDE                 | 201612-50-2 |                       | 1.57             | 246                 | 113                 | 98.4-369                 | 46.0       |
| 13C-4,4'-DDD                 |             | V                     | 1.57             | 242                 | 68.3                | 96.6-362                 | 28.3       |
| 13C-2,4'-DDT                 |             |                       | 1.62             | 240                 | 96.6                | 96.0-360                 | 40.2       |
| 13C-4,4'-DDT                 | 104215-84-1 | V                     | 1.57             | 242                 | 90.6                | 96.6-362                 | 37.5       |

(1) Where applicable, custom lab flags have been used on this report; V = surrogate recovery is not within method/contract control limits.

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: 16-Apr-2019 13:18:23; Application: XMLTransformer-1.17.7; Report Filename: Pest\_PEST\_HI\_E1HI\_WG67276-103\_Form8B\_SJ2545103.html; Workgroup: WG67276; Design ID: 3361 ]

SGS AXYS ANALYTICAL SERVICES

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

Contract No.: 4972

Client ID: Spiked Matrix

Concentration Units: ng/mL

| COMPOUND                 | WG67276-102 (A)       |             | WG67276-103           |             | MEAN | RELATIVE PERCENT DIFFERENCE |
|--------------------------|-----------------------|-------------|-----------------------|-------------|------|-----------------------------|
|                          | LAB FLAG <sup>1</sup> | CONC. FOUND | LAB FLAG <sup>1</sup> | CONC. FOUND |      |                             |
| Hexachlorobenzene        |                       | 123         |                       | 122         | 122  | 1.35                        |
| Aldrin                   |                       | 334         |                       | 316         | 325  | 5.56                        |
| Chlordane, oxy-          |                       | 249         |                       | 238         | 243  | 4.63                        |
| Chlordane, gamma (trans) |                       | 239         |                       | 237         | 238  | 1.13                        |
| Chlordane, alpha (cis)   |                       | 265         |                       | 264         | 265  | 0.576                       |
| Nonachlor, trans-        |                       | 218         |                       | 211         | 214  | 3.04                        |
| Nonachlor, cis-          |                       | 249         |                       | 258         | 253  | 3.90                        |
| 2,4'-DDD                 |                       | 138         |                       | 132         | 135  | 4.38                        |
| 4,4'-DDD                 |                       | 151         |                       | 149         | 150  | 1.62                        |
| 2,4'-DDE                 |                       | 126         |                       | 123         | 125  | 2.05                        |
| 4,4'-DDE                 |                       | 149         |                       | 147         | 148  | 0.724                       |
| 2,4'-DDT                 |                       | 121         |                       | 120         | 121  | 1.59                        |
| 4,4'-DDT                 |                       | 125         |                       | 125         | 125  | 0.067                       |

(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.

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: 10-Apr-2019

Instrument ID: HR GC/MS

GC Column ID: DB5

CS0 Data Filename: N/A

CS1 Data Filename: CL92\_036B S: 3

CS2 Data Filename: CL92\_036B S: 4

CS3 Data Filename: CL92\_036B S: 9

CS4 Data Filename: CL92\_036B S: 6

CS5 Data Filename: CL92\_036B S: 5

CS6 Data Filename: N/A

| COMPOUND                 | LAB<br>FLAG <sup>1</sup> | RELATIVE RESPONSE (RR) |      |      |      |      |      | MEAN<br>RR | CV<br>(%RSD) <sup>2</sup> |
|--------------------------|--------------------------|------------------------|------|------|------|------|------|------------|---------------------------|
|                          |                          | CS0                    | CS1  | CS2  | CS3  | CS4  | CS5  |            |                           |
| Hexachlorobenzene        |                          |                        | 1.24 | 1.15 | 1.10 | 1.13 | 1.14 | 1.15       | 4.58                      |
| Aldrin                   |                          |                        | 1.15 | 1.16 | 1.09 | 1.13 | 1.10 | 1.12       | 2.63                      |
| Chlordane, oxy-          |                          |                        | 1.08 | 1.01 | 1.05 | 1.10 | 0.97 | 1.04       | 4.81                      |
| Chlordane, gamma (trans) |                          |                        | 1.09 | 1.06 | 1.03 | 1.06 | 1.01 | 1.05       | 3.25                      |
| Chlordane, alpha (cis)   |                          |                        | 1.05 | 1.03 | 0.99 | 1.03 | 0.96 | 1.01       | 3.64                      |
| Nonachlor, trans-        |                          |                        | 1.11 | 1.04 | 1.03 | 1.04 | 0.95 | 1.04       | 5.27                      |
| Nonachlor, cis-          |                          |                        | 1.15 | 1.09 | 1.02 | 1.05 | 0.94 | 1.05       | 7.66                      |
| 2,4'-DDD                 |                          |                        | 1.57 | 1.42 | 1.40 | 1.37 | 1.27 | 1.40       | 7.71                      |
| 4,4'-DDD                 |                          |                        | 1.11 | 1.10 | 1.07 | 1.13 | 1.13 | 1.11       | 2.08                      |
| 2,4'-DDE                 |                          |                        | 1.12 | 1.06 | 1.07 | 1.08 | 1.08 | 1.08       | 2.06                      |
| 4,4'-DDE                 |                          |                        | 1.13 | 1.08 | 1.06 | 1.07 | 1.06 | 1.08       | 2.59                      |
| 2,4'-DDT                 |                          |                        | 1.14 | 1.09 | 1.05 | 1.06 | 1.10 | 1.09       | 3.29                      |
| 4,4'-DDT                 |                          |                        | 1.33 | 1.33 | 1.25 | 1.30 | 1.33 | 1.31       | 2.67                      |

(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: \_\_\_\_\_ Bjorn Arvi \_\_\_\_\_



**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:** 10-Apr-2019

**CS0 Data Filename:** N/A  
**CS1 Data Filename:** CL92\_036B S: 3  
**CS2 Data Filename:** CL92\_036B S: 4  
**CS3 Data Filename:** CL92\_036B S: 9  
**CS4 Data Filename:** CL92\_036B S: 6  
**CS5 Data Filename:** CL92\_036B S: 5  
**CS6 Data Filename:** N/A

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

| LABELLED COMPOUND            | LAB<br>FLAG <sup>1</sup> | RELATIVE RESPONSE (RR) |      |      |      |      |      | MEAN<br>RR | CV<br>(%RSD) <sup>2</sup> |
|------------------------------|--------------------------|------------------------|------|------|------|------|------|------------|---------------------------|
|                              |                          | CS0                    | CS1  | CS2  | CS3  | CS4  | CS5  |            |                           |
| 13C-Hexachlorobenzene        |                          |                        | 1.76 | 1.68 | 1.73 | 1.84 | 1.87 | 1.78       | 4.33                      |
| 13C-beta-HCH                 |                          |                        | 0.62 | 0.59 | 0.62 | 0.77 | 0.84 | 0.69       | 15.7                      |
| 13C-gamma-HCH                |                          |                        | 0.74 | 0.71 | 0.74 | 0.91 | 0.99 | 0.82       | 15.0                      |
| 13C-delta-HCH                |                          |                        | 0.62 | 0.59 | 0.62 | 0.80 | 0.84 | 0.70       | 17.1                      |
| 13C-Heptachlor               |                          |                        | 0.23 | 0.23 | 0.23 | 0.25 | 0.30 | 0.24       | 12.3                      |
| 13C-Aldrin                   |                          |                        | 0.53 | 0.50 | 0.51 | 0.58 | 0.63 | 0.55       | 9.62                      |
| 13C-Chlordane, oxy           |                          |                        | 0.10 | 0.10 | 0.10 | 0.11 | 0.15 | 0.11       | 18.9                      |
| 13C-Chlordane, gamma (trans) |                          |                        | 0.21 | 0.20 | 0.22 | 0.24 | 0.27 | 0.23       | 12.1                      |
| 13C-Nonachlor, trans-        |                          |                        | 0.16 | 0.16 | 0.17 | 0.18 | 0.21 | 0.18       | 12.1                      |
| 13C-Nonachlor, cis-          |                          |                        | 0.13 | 0.12 | 0.13 | 0.14 | 0.15 | 0.13       | 9.58                      |
| 13C-2,4'-DDE                 |                          |                        | 2.61 | 2.54 | 2.64 | 2.80 | 3.00 | 2.72       | 6.82                      |
| 13C-4,4'-DDE                 |                          |                        | 2.04 | 1.98 | 2.04 | 2.12 | 2.34 | 2.10       | 6.65                      |
| 13C-4,4'-DDD                 |                          |                        | 1.21 | 1.26 | 1.33 | 1.58 | 2.02 | 1.48       | 22.5                      |
| 13C-2,4'-DDT                 |                          |                        | 0.81 | 0.81 | 0.88 | 1.05 | 1.30 | 0.97       | 21.5                      |
| 13C-4,4'-DDT                 |                          |                        | 0.51 | 0.52 | 0.51 | 0.65 | 0.88 | 0.62       | 26.1                      |
| 13C-Mirex                    |                          |                        | 1.20 | 1.18 | 1.24 | 1.30 | 1.45 | 1.28       | 8.47                      |

(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: \_\_\_\_\_ Bjorn Arvi \_\_\_\_\_

**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:** 10-Apr-2019

**Instrument ID:** HR GC/MS

**GC Column ID:** DB5

**CS0 Data Filename:** N/A  
**CS1 Data Filename:** CL92\_036B S: 3  
**CS2 Data Filename:** CL92\_036B S: 4  
**CS3 Data Filename:** CL92\_036B S: 9  
**CS4 Data Filename:** CL92\_036B S: 6  
**CS5 Data Filename:** CL92\_036B S: 5  
**CS6 Data Filename:** N/A

| COMPOUND                 | LAB FLAG <sup>1</sup> | M/Z's FORMING RATIO | ION ABUNDANCE RATIO |      |      |      |      |      | QC LIMITS <sup>2</sup> |
|--------------------------|-----------------------|---------------------|---------------------|------|------|------|------|------|------------------------|
|                          |                       |                     | CS0                 | CS1  | CS2  | CS3  | CS4  | CS5  |                        |
| Hexachlorobenzene        |                       | 284/286             |                     | 1.27 | 1.29 | 1.28 | 1.28 | 1.28 | 1.00-1.50              |
| Aldrin                   |                       | 263/265             |                     | 1.38 | 1.43 | 1.46 | 1.42 | 1.43 | 1.24-1.86              |
| Chlordane, oxy-          |                       | 263/265             |                     | 1.44 | 1.37 | 1.42 | 1.42 | 1.45 | 1.24-1.86              |
| Chlordane, gamma (trans) |                       | 272/274             |                     | 1.20 | 1.20 | 1.26 | 1.24 | 1.24 | 0.99-1.49              |
| Chlordane, alpha (cis)   |                       | 272/274             |                     | 1.24 | 1.23 | 1.23 | 1.24 | 1.24 | 0.99-1.49              |
| Nonachlor, trans-        |                       | 272/274             |                     | 1.17 | 1.26 | 1.22 | 1.23 | 1.24 | 0.99-1.49              |
| Nonachlor, cis-          |                       | 272/274             |                     | 1.30 | 1.23 | 1.26 | 1.25 | 1.24 | 0.99-1.49              |
| 2,4'-DDD                 |                       | 235/237             |                     | 1.53 | 1.54 | 1.52 | 1.52 | 1.51 | 1.25-1.87              |
| 4,4'-DDD                 |                       | 235/237             |                     | 1.57 | 1.55 | 1.52 | 1.53 | 1.51 | 1.25-1.87              |
| 2,4'-DDE                 |                       | 246/248             |                     | 1.47 | 1.48 | 1.51 | 1.50 | 1.49 | 1.25-1.87              |
| 4,4'-DDE                 |                       | 246/248             |                     | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.25-1.87              |
| 2,4'-DDT                 |                       | 235/237             |                     | 1.45 | 1.41 | 1.52 | 1.48 | 1.45 | 1.25-1.87              |
| 4,4'-DDT                 |                       | 235/237             |                     | 1.63 | 1.52 | 1.51 | 1.50 | 1.49 | 1.25-1.87              |

(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: \_\_\_\_\_ Bjorn Arvi \_\_\_\_\_

**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:** 10-Apr-2019

**CS0 Data Filename:** N/A  
**CS1 Data Filename:** CL92\_036B S: 3  
**CS2 Data Filename:** CL92\_036B S: 4  
**CS3 Data Filename:** CL92\_036B S: 9  
**CS4 Data Filename:** CL92\_036B S: 6  
**CS5 Data Filename:** CL92\_036B S: 5  
**CS6 Data Filename:** N/A

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

| LABELED COMPOUND             | LAB FLAG <sup>1</sup> | M/Z's FORMING RATIO | ION ABUNDANCE RATIO |      |      |      |      |      | QC LIMITS <sup>2</sup> |           |
|------------------------------|-----------------------|---------------------|---------------------|------|------|------|------|------|------------------------|-----------|
|                              |                       |                     | CS0                 | CS1  | CS2  | CS3  | CS4  | CS5  |                        | CS6       |
| 13C-Hexachlorobenzene        |                       | 290/292             |                     | 1.34 | 1.35 | 1.29 | 1.35 | 1.34 |                        | 1.00-1.50 |
| 13C-beta-HCH                 |                       | 223/225             |                     | 0.76 | 0.79 | 0.76 | 0.74 | 0.79 |                        | 0.62-0.94 |
| 13C-gamma-HCH                |                       | 223/225             |                     | 0.80 | 0.77 | 0.75 | 0.76 | 0.78 |                        | 0.62-0.94 |
| 13C-delta-HCH                |                       | 223/225             |                     | 0.77 | 0.75 | 0.75 | 0.78 | 0.79 |                        | 0.62-0.94 |
| 13C-Heptachlor               |                       | 277/279             |                     | 1.24 | 1.39 | 1.27 | 1.32 | 1.31 |                        | 0.99-1.49 |
| 13C-Aldrin                   |                       | 270/272             |                     | 1.58 | 1.61 | 1.60 | 1.72 | 1.67 |                        | 1.24-1.86 |
| 13C-Chlordane, oxy           |                       | 270/272             |                     | 1.52 | 1.72 | 1.70 | 1.72 | 1.63 |                        | 1.09-2.02 |
| 13C-Chlordane, gamma (trans) |                       | 277/279             |                     | 1.29 | 1.21 | 1.28 | 1.22 | 1.28 |                        | 0.99-1.49 |
| 13C-Nonachlor, trans-        |                       | 277/279             |                     | 1.25 | 1.21 | 1.27 | 1.29 | 1.34 |                        | 0.99-1.49 |
| 13C-Nonachlor, cis-          |                       | 277/279             |                     | 1.30 | 1.21 | 1.25 | 1.33 | 1.43 |                        | 0.99-1.49 |
| 13C-2,4'-DDE                 |                       | 258/260             |                     | 1.59 | 1.58 | 1.60 | 1.61 | 1.60 |                        | 1.25-1.87 |
| 13C-4,4'-DDE                 |                       | 258/260             |                     | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 |                        | 1.25-1.87 |
| 13C-4,4'-DDD                 |                       | 247/249             |                     | 1.60 | 1.57 | 1.60 | 1.59 | 1.59 |                        | 1.25-1.87 |
| 13C-2,4'-DDT                 |                       | 247/249             |                     | 1.64 | 1.64 | 1.63 | 1.58 | 1.60 |                        | 1.25-1.87 |
| 13C-4,4'-DDT                 |                       | 247/249             |                     | 1.61 | 1.63 | 1.60 | 1.60 | 1.61 |                        | 1.25-1.87 |
| 13C-Mirex                    |                       | 277/279             |                     | 1.28 | 1.28 | 1.27 | 1.27 | 1.34 |                        | 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: \_\_\_\_\_ Bjorn Arvi \_\_\_\_\_

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: 10-Apr-2019      VER Data Filename: CL92\_036B S: 9  
Instrument ID: HR GC/MS      Analysis Date: 10-Apr-2019  
GC Column ID: DB5      Analysis Time: 15:45:34

| COMPOUND                 | CAS NO.    | LAB FLAG <sup>1</sup> | m/e ION CHANNELS | ION ABUND. RATIO | QC LIMITS | CONC. FOUND (ng/mL) | CONC. RANGE (ng/mL) |
|--------------------------|------------|-----------------------|------------------|------------------|-----------|---------------------|---------------------|
| Hexachlorobenzene        | 118-74-1   |                       | 284/286          | 1.28             | 1.00-1.50 | 76.7                | 64.0-96.0           |
| Aldrin                   | 309-00-2   |                       | 263/265          | 1.46             | 1.24-1.86 | 202                 | 166-249             |
| Chlordane, oxy-          | 27304-13-8 |                       | 263/265          | 1.42             | 1.24-1.86 | 161                 | 128-192             |
| Chlordane, gamma (trans) | 5103-74-2  |                       | 272/274          | 1.26             | 0.99-1.49 | 156                 | 128-192             |
| Chlordane, alpha (cis)   | 5103-71-9  |                       | 272/274          | 1.23             | 0.99-1.49 | 156                 | 104-217             |
| Nonachlor, trans-        | 39765-80-5 |                       | 272/274          | 1.22             | 0.99-1.49 | 136                 | 109-163             |
| Nonachlor, cis-          | 5103-73-1  |                       | 272/274          | 1.26             | 0.99-1.49 | 155                 | 128-192             |
| 2,4'-DDD                 | 53-19-0    |                       | 235/237          | 1.52             | 1.25-1.87 | 80.4                | 52.4-109            |
| 4,4'-DDD                 | 72-54-8    |                       | 235/237          | 1.52             | 1.25-1.87 | 93.9                | 77.6-116            |
| 2,4'-DDE                 | 3424-82-6  |                       | 246/248          | 1.51             | 1.25-1.87 | 80.1                | 64.6-97.0           |
| 4,4'-DDE                 | 72-55-9    |                       | 246/248          | 1.50             | 1.25-1.87 | 96.3                | 78.4-118            |
| 2,4'-DDT                 | 789-02-6   |                       | 235/237          | 1.52             | 1.25-1.87 | 77.2                | 63.8-95.8           |
| 4,4'-DDT                 | 50-29-3    |                       | 235/237          | 1.51             | 1.25-1.87 | 77.2                | 64.6-97.0           |

(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: \_\_\_\_\_ Eleanor Andaya \_\_\_\_\_

**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

|                                  |             |                           |                |
|----------------------------------|-------------|---------------------------|----------------|
| <b>Initial Calibration Date:</b> | 10-Apr-2019 | <b>VER Data Filename:</b> | CL92_036B S: 9 |
| <b>Instrument ID:</b>            | HR GC/MS    | <b>Analysis Date:</b>     | 10-Apr-2019    |
| <b>GC Column ID:</b>             | DB5         | <b>Analysis Time:</b>     | 15:45:34       |

| LABELLED COMPOUND            | CAS NO.     | LAB FLAG <sup>1</sup> | 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 | 79.0                |
| 13C-beta-HCH                 | 222966-68-9 |                       | 223/225          | 0.76             | 0.62-0.94 | 73.4                |
| 13C-gamma-HCH                | 104215-85-2 |                       | 223/225          | 0.75             | 0.62-0.94 | 72.5                |
| 13C-delta-HCH                |             |                       | 223/225          | 0.75             | 0.62-0.94 | 71.4                |
| 13C-Heptachlor               |             |                       | 277/279          | 1.27             | 0.99-1.49 | 74.4                |
| 13C-Aldrin                   |             |                       | 270/272          | 1.60             | 1.24-1.86 | 74.7                |
| 13C-Chlordane, oxy           |             |                       | 270/272          | 1.70             | 1.09-2.02 | 68.9                |
| 13C-Chlordane, gamma (trans) |             |                       | 277/279          | 1.28             | 0.99-1.49 | 77.2                |
| 13C-Nonachlor, trans-        |             |                       | 277/279          | 1.27             | 0.99-1.49 | 76.2                |
| 13C-Nonachlor, cis-          |             |                       | 277/279          | 1.25             | 0.99-1.49 | 81.8                |
| 13C-2,4'-DDE                 |             |                       | 258/260          | 1.60             | 1.25-1.87 | 77.7                |
| 13C-4,4'-DDE                 | 201612-50-2 |                       | 258/260          | 1.59             | 1.25-1.87 | 79.4                |
| 13C-4,4'-DDD                 |             |                       | 247/249          | 1.60             | 1.25-1.87 | 72.4                |
| 13C-2,4'-DDT                 |             |                       | 247/249          | 1.63             | 1.25-1.87 | 72.7                |
| 13C-4,4'-DDT                 | 104215-84-1 |                       | 247/249          | 1.60             | 1.25-1.87 | 66.6                |
| 13C-Mirex                    |             |                       | 277/279          | 1.27             | 1.00-1.50 | 78.1                |

(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: \_\_\_\_\_ Eleanor Andaya \_\_\_\_\_

For Axys Internal Use Only [ XSL Template: Pest4B.xsl; Created: 16-Apr-2019 13:18:23; Application: XMLTransformer-1.17.7; Report Filename: PestHR\_E1\_Pest\_CL92\_036BS9\_\_Form4B\_SJ2545098.html; Workgroup: WG67276; Design ID: 3361 ]

**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

|                                  |             |                           |                 |
|----------------------------------|-------------|---------------------------|-----------------|
| <b>Initial Calibration Date:</b> | 10-Apr-2019 | <b>VER Data Filename:</b> | CL92_036B S: 24 |
| <b>Instrument ID:</b>            | HR GC/MS    | <b>Analysis Date:</b>     | 11-Apr-2019     |
| <b>GC Column ID:</b>             | DB5         | <b>Analysis Time:</b>     | 01:07:02        |

| COMPOUND                 | CAS NO.    | LAB FLAG <sup>1</sup> | m/e ION CHANNELS | ION ABUND. RATIO | QC LIMITS | CONC. FOUND (ng/mL) | CONC. RANGE (ng/mL) |
|--------------------------|------------|-----------------------|------------------|------------------|-----------|---------------------|---------------------|
| Hexachlorobenzene        | 118-74-1   |                       | 284/286          | 1.31             | 1.00-1.50 | 76.8                | 64.0-96.0           |
| Aldrin                   | 309-00-2   |                       | 263/265          | 1.45             | 1.24-1.86 | 207                 | 166-249             |
| Chlordane, oxy-          | 27304-13-8 |                       | 263/265          | 1.49             | 1.24-1.86 | 161                 | 128-192             |
| Chlordane, gamma (trans) | 5103-74-2  |                       | 272/274          | 1.23             | 0.99-1.49 | 158                 | 128-192             |
| Chlordane, alpha (cis)   | 5103-71-9  |                       | 272/274          | 1.21             | 0.99-1.49 | 161                 | 104-217             |
| Nonachlor, trans-        | 39765-80-5 |                       | 272/274          | 1.24             | 0.99-1.49 | 139                 | 109-163             |
| Nonachlor, cis-          | 5103-73-1  |                       | 272/274          | 1.24             | 0.99-1.49 | 164                 | 128-192             |
| 2,4'-DDD                 | 53-19-0    |                       | 235/237          | 1.50             | 1.25-1.87 | 81.1                | 52.4-109            |
| 4,4'-DDD                 | 72-54-8    |                       | 235/237          | 1.52             | 1.25-1.87 | 94.0                | 77.6-116            |
| 2,4'-DDE                 | 3424-82-6  |                       | 246/248          | 1.49             | 1.25-1.87 | 78.6                | 64.6-97.0           |
| 4,4'-DDE                 | 72-55-9    |                       | 246/248          | 1.51             | 1.25-1.87 | 95.3                | 78.4-118            |
| 2,4'-DDT                 | 789-02-6   |                       | 235/237          | 1.50             | 1.25-1.87 | 81.9                | 63.8-95.8           |
| 4,4'-DDT                 | 50-29-3    |                       | 235/237          | 1.52             | 1.25-1.87 | 82.8                | 64.6-97.0           |

(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: \_\_\_\_\_ Eleanor Andaya \_\_\_\_\_

**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

|                                  |             |                           |                 |
|----------------------------------|-------------|---------------------------|-----------------|
| <b>Initial Calibration Date:</b> | 10-Apr-2019 | <b>VER Data Filename:</b> | CL92_036B S: 24 |
| <b>Instrument ID:</b>            | HR GC/MS    | <b>Analysis Date:</b>     | 11-Apr-2019     |
| <b>GC Column ID:</b>             | DB5         | <b>Analysis Time:</b>     | 01:07:02        |

| LABELLED COMPOUND            | CAS NO.     | LAB FLAG <sup>1</sup> | m/e ION CHANNELS | ION ABUND. RATIO | QC LIMITS | CONC. FOUND (ng/mL) |
|------------------------------|-------------|-----------------------|------------------|------------------|-----------|---------------------|
| 13C-Hexachlorobenzene        | 93952-14-8  |                       | 290/292          | 1.33             | 1.00-1.50 | 80.8                |
| 13C-beta-HCH                 | 222966-68-9 |                       | 223/225          | 0.79             | 0.62-0.94 | 70.9                |
| 13C-gamma-HCH                | 104215-85-2 |                       | 223/225          | 0.73             | 0.62-0.94 | 72.2                |
| 13C-delta-HCH                |             |                       | 223/225          | 0.79             | 0.62-0.94 | 71.2                |
| 13C-Heptachlor               |             |                       | 277/279          | 1.25             | 0.99-1.49 | 80.5                |
| 13C-Aldrin                   |             |                       | 270/272          | 1.59             | 1.24-1.86 | 76.3                |
| 13C-Chlordane, oxy           |             |                       | 270/272          | 1.49             | 1.09-2.02 | 70.8                |
| 13C-Chlordane, gamma (trans) |             |                       | 277/279          | 1.28             | 0.99-1.49 | 76.6                |
| 13C-Nonachlor, trans-        |             |                       | 277/279          | 1.31             | 0.99-1.49 | 76.7                |
| 13C-Nonachlor, cis-          |             |                       | 277/279          | 1.27             | 0.99-1.49 | 81.8                |
| 13C-2,4'-DDE                 |             |                       | 258/260          | 1.62             | 1.25-1.87 | 79.7                |
| 13C-4,4'-DDE                 | 201612-50-2 |                       | 258/260          | 1.60             | 1.25-1.87 | 79.8                |
| 13C-4,4'-DDD                 |             |                       | 247/249          | 1.70             | 1.25-1.87 | 74.9                |
| 13C-2,4'-DDT                 |             |                       | 247/249          | 1.54             | 1.25-1.87 | 73.2                |
| 13C-4,4'-DDT                 | 104215-84-1 |                       | 247/249          | 1.53             | 1.25-1.87 | 59.2                |
| 13C-Mirex                    |             |                       | 277/279          | 1.30             | 1.00-1.50 | 72.7                |

(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: \_\_\_\_\_ Eleanor Andaya \_\_\_\_\_

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### Accreditation Scope

SGS AXYS Analytical Services Ltd.  
file ref.: ACC-101 Rev. 41

| 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 | 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 ** |   |   |   |   |
|                     | BDE 99 2,2',4,4',5-pentabromodiphenylether | EPA 1614<br>SGS AXYS MLA-033  | MLA-033   |         | Y    | Y              |             |               |                |              |              | Y             |           |                |             | Y    |             |               |                |              |                |                    | Y    |                |             |               |                |              |              |                 |           |                  |                |             |   |   |   |   |
| PCB Aroclors        | *PCBs* category (CA only)                  | EPA 625<br>EPA 8270   | MLA-007<br>MLA-007                                  |         |      |                | Y           |               |                |              |              |               |           |                |             |      |             |               |                |              |                |                    | Y    |                |             |               |                |              |              |                 |           |                  |                |             |   |   |   |   |
|                     | PCB Aroclor 1016                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                | Y            | Y            |               | Y         |                |             |      |             |               |                |              |                |                    |      | Y              |             |               |                | Y            | Y            | Y               | Y         |                  |                |             |   |   |   |   |
|                     | PCB Aroclor 1016/1242                      | EPA 8270  | MLA-007   |         |      |                |             |               |                |              |              | Y             |           |                |             | Y    |             |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 |           |                  |                |             |   |   |   |   |
|                     | PCB Aroclor 1221                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              | Y            | Y             | Y         | Y              |             |      |             |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1232                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              |              |               | Y         | Y              |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1242                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              |              |               | Y         | Y              |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1248                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              |              |               | Y         | Y              |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1254                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              |              |               | Y         | Y              |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1260                           | EPA 1668<br>EPA 625<br>EPA 8270<br>SGS AXYS MLA-010<br>SGS AXYS MLA-007 | MLA-010<br>MLA-007<br>MLA-007<br>MLA-010<br>MLA-007 |         |      | Y              |             |               |                |              |              |               | Y         | Y              |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 | Y         | Y                |                |             |   |   |   |   |
|                     | PCB Aroclor 1268                           | SGS AXYS MLA-007  | MLA-007   |         |      | Y              |             |               |                |              |              |               |           |                |             |      | Y           |               |                |              |                |                    | Y    | Y              |             |               |                |              |              |                 |           |                  |                |             |   |   |   |   |
|                     | PCB congeners                              | PCB 1 2-Chlorobiphenyl  | EPA 1668  | MLA-010 |      |                | Y           |               | Y              | Y            | Y            | Y             | Y         | Y              | Y           |      |             |               |                |              |                | Y                  |      |                | Y           | Y             | Y              | Y            | Y            | Y               | 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 10 2,6-Dichlorobiphenyl   | EPA 1668  | MLA-010 |      |                |             | Y             |                | Y            | Y            | Y             | Y         | 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 |   |
|                     |  | PCB 100 2,2',4,4',6-Pentachlorobiphenyl                                 | EPA 1668  | MLA-010 |      |                |             | Y             |                | Y            | Y            | Y             | Y         | Y              | Y           | Y    |             |               |                |              |                |                    | Y    |                |             | Y             | Y              | Y            | Y            | Y               | Y         | 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 101 2,2',4,5,5'-Pentachlorobiphenyl                                 | EPA 1668  | MLA-010 |      |                | Y           |               | Y              | Y            | Y            | Y             | Y         | Y              | Y           |      |             |               |                |              |                |                    | Y    |                |             | Y             | Y              | Y            | Y            | Y               | Y         | Y                | Y              | Y           | Y | Y | Y |   |























































### Accreditation Scope

SGS AXYS Analytical Services Ltd.  
file ref.: ACC-101 Rev. 41

| Compound Class | Compound                                 | Accredited Method ID | SGS AXYS Method ID | Serum |  | Solids |  | Tissue |  | Urine |  | Water |  | Water, Non-Potable |  |
|----------------|--|----------------------|--------------------|-------|--|--------|--|--------|--|-------|--|-------|--|--------------------|--|
|                |  |                      |                    | CALA  |  | CALA   |  | CALA   |  | CALA  |  | CALA  |  | CALA               |  |
|                | lysoPhosphatidylcholine acyl C24:0       | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | lysoPhosphatidylcholine acyl C26:1       | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | lysoPhosphatidylcholine acyl C28:0       | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | lysoPhosphatidylcholine acyl C28:1       | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Methionine                               | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Methioninesulfoxide                      | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Methylglutaryl carnitine                 | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Nitrotyrosine                            | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Nonyl carnitine                          | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | octadecadienoic acid (linoleic acid)     | SGS AXYS MLM-001     | MLM-001            |       |  |        |  | Y      |  |       |  |       |  |                    |  |
|                | Octadecadienyl carnitine                 | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | octadecanoic acid (stearic acid)         | SGS AXYS MLM-001     | MLM-001            |       |  |        |  | Y      |  |       |  |       |  |                    |  |
|                | Octadecanoyl carnitine                   | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | octadecatrienoic acid (γ-linolenic acid) | SGS AXYS MLM-001     | MLM-001            |       |  |        |  | Y      |  |       |  |       |  |                    |  |
|                | Octadecenoyl carnitine                   | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Octanoyl carnitine                       | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Ornithine                                | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phenylalanine                            | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phenylethylamine                         | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C30:0     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C30:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C30:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C32:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C32:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C34:0     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C34:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C34:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C34:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:0     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:4     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C36:5     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:0     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:5     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C38:6     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:4     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:5     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C40:6     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:0     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:1     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:2     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:4     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C42:5     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C44:3     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C44:4     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C44:5     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine acyl-alkyl C44:6     | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine diacyl C24:0         | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |
|                | Phosphatidylcholine diacyl C26:0         | SGS AXYS MLM-001     | MLM-001            | Y     |  |        |  | Y      |  | Y     |  |       |  |                    |  |







**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)

