



## Supplemental Report 1

The original report has been revised to include the Level III deliverables package.



**WORK ORDER NUMBER: 17-03-1104**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Andersen Environmental

**Client Project Name:** Burbank Airport / 9836002041

**Attention:** Brian Martasin  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

A handwritten signature in black ink, appearing to read "S. Nowak".

Approved for release on 04/28/2017 by:  
Stephen Nowak  
Project Manager

ResultLink ▶

Email your PM ▶

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 Work Order Number: 17-03-1104

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## Work Order Narrative

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 03/14/17. They were assigned to Work Order 17-03-1104.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

## Sample Summary

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Client: Andersen Environmental | Work Order: 17-03-1104                     |
| 5261 West Imperial Highway     | Project Name: Burbank Airport / 9836002041 |
| Los Angeles, CA 90045-6231     | PO Number:                                 |
|                                | Date/Time Received: 03/14/17 18:04         |
|                                | Number of Containers: 33                   |

Attn: Brian Martasin

| Sample Identification | Lab Number    | Collection Date and Time | Number of Containers | Matrix |
|-----------------------|---------------|--------------------------|----------------------|--------|
| B-DU3-S-SG-07-03S     | 17-03-1104-1  | 03/02/17 12:40           | 1                    | Solid  |
| B-DU3-S-SG-08-03S     | 17-03-1104-2  | 03/02/17 13:22           | 1                    | Solid  |
| B-DU3-S-SG-09-3S      | 17-03-1104-3  | 03/06/17 10:25           | 1                    | Solid  |
| B-DU3-S-SG-10-3S      | 17-03-1104-4  | 03/06/17 12:15           | 1                    | Solid  |
| B-DU3-S-07-3          | 17-03-1104-5  | 03/06/17 13:17           | 1                    | Solid  |
| B-DU3-S-08-3          | 17-03-1104-6  | 03/06/17 13:40           | 1                    | Solid  |
| B-DU3-S-01-3          | 17-03-1104-7  | 03/07/17 10:55           | 1                    | Solid  |
| B-DU3-S-04-3          | 17-03-1104-8  | 03/07/17 08:30           | 1                    | Solid  |
| B-DU3-S-09-3          | 17-03-1104-9  | 03/07/17 08:05           | 1                    | Solid  |
| B-DU3-S-10-3          | 17-03-1104-10 | 03/07/17 07:10           | 1                    | Solid  |
| B-DU3-S-02-3          | 17-03-1104-11 | 03/14/17 13:50           | 1                    | Solid  |
| B-DU3-S-03-3          | 17-03-1104-12 | 03/14/17 14:30           | 1                    | Solid  |
| B-DU3-S-05-3          | 17-03-1104-13 | 03/14/17 10:00           | 1                    | Solid  |
| B-DU3-S-06-3          | 17-03-1104-14 | 03/14/17 10:30           | 1                    | Solid  |
| B-DU3-S-SG-01-3S      | 17-03-1104-15 | 03/14/17 13:15           | 1                    | Solid  |
| B-DU3-S-SG-02-3S      | 17-03-1104-16 | 03/14/17 11:15           | 1                    | Solid  |
| B-DU3-S-SG-03-3S      | 17-03-1104-17 | 03/14/17 12:35           | 1                    | Solid  |
| B-DU3-S-SG-04-3S      | 17-03-1104-18 | 03/14/17 09:15           | 1                    | Solid  |
| B-DU3-S-SG-05-3S      | 17-03-1104-19 | 03/14/17 08:48           | 1                    | Solid  |
| B-DU3-S-SG-06-3S      | 17-03-1104-20 | 03/14/17 07:25           | 1                    | Solid  |
| COMPOSITE             | 17-03-1104-21 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM1-3          | 17-03-1104-22 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM2-3          | 17-03-1104-23 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM3-3          | 17-03-1104-24 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM4-3          | 17-03-1104-25 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM1-3          | 17-03-1104-26 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM2-3          | 17-03-1104-27 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM3-3          | 17-03-1104-28 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM4-3          | 17-03-1104-29 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM1-3          | 17-03-1104-30 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM2-3          | 17-03-1104-31 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM3-3          | 17-03-1104-32 | 03/02/17 00:00           | 1                    | Solid  |
| B-DU3-ISM4-3          | 17-03-1104-33 | 03/02/17 00:00           | 1                    | Solid  |


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## Detections Summary

Client: Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Work Order: 17-03-1104  
Project Name: Burbank Airport / 9836002041  
Received: 03/14/17

Attn: Brian Martasin

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### Client SampleID

| <u>Analyte</u>               | <u>Result</u> | <u>Qualifiers</u> | <u>RL</u> | <u>Units</u> | <u>Method</u>      | <u>Extraction</u> |
|------------------------------|---------------|-------------------|-----------|--------------|--------------------|-------------------|
| B-DU3-ISM1-3 (17-03-1104-26) |               |                   |           |              |                    |                   |
| Moisture                     | 6.4           | BV,BU             | 0.10      | %            | ASTM D-2216 (M)    | N/A               |
| TPH as Diesel                | 28            | HD                | 5.3       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| TPH as Motor Oil             | 75            | HD                | 5.3       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| Benzo (g,h,i) Perylene       | 0.012         | ET                | 0.011     | mg/kg        | EPA 8270C SIM PAHs | EPA 3545          |
| B-DU3-ISM2-3 (17-03-1104-27) |               |                   |           |              |                    |                   |
| Moisture                     | 6.3           | BV,BU             | 0.10      | %            | ASTM D-2216 (M)    | N/A               |
| TPH as Diesel                | 33            | HD                | 5.2       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| TPH as Motor Oil             | 81            | HD                | 5.2       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| B-DU3-ISM3-3 (17-03-1104-28) |               |                   |           |              |                    |                   |
| Moisture                     | 6.1           | BV,BU             | 0.10      | %            | ASTM D-2216 (M)    | N/A               |
| TPH as Diesel                | 46            | HD                | 5.3       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| TPH as Motor Oil             | 90            | HD                | 5.3       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| B-DU3-ISM4-3 (17-03-1104-29) |               |                   |           |              |                    |                   |
| Moisture                     | 6.2           | BV,BU             | 0.10      | %            | ASTM D-2216 (M)    | N/A               |
| TPH as Diesel                | 44            | HD                | 5.2       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| TPH as Motor Oil             | 82            | HD                | 5.2       | mg/kg        | EPA 8015B (M)      | EPA 3550B         |
| B-DU3-ISM1-3 (17-03-1104-30) |               |                   |           |              |                    |                   |
| Arsenic                      | 2.08          |                   | 0.732     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Barium                       | 109           |                   | 0.488     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Chromium                     | 9.83          |                   | 0.244     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Cobalt                       | 8.18          |                   | 0.244     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Copper                       | 16.0          |                   | 0.488     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Lead                         | 9.88          |                   | 0.488     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Nickel                       | 7.74          |                   | 0.244     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Vanadium                     | 25.9          |                   | 0.244     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Zinc                         | 1190          |                   | 0.976     | mg/kg        | EPA 6010B          | EPA 3050B         |
| B-DU3-ISM2-3 (17-03-1104-31) |               |                   |           |              |                    |                   |
| Arsenic                      | 1.55          |                   | 0.728     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Barium                       | 113           |                   | 0.485     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Beryllium                    | 0.255         |                   | 0.243     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Chromium                     | 10.1          |                   | 0.243     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Cobalt                       | 8.40          |                   | 0.243     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Copper                       | 16.1          |                   | 0.485     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Lead                         | 10.3          |                   | 0.485     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Nickel                       | 8.11          |                   | 0.243     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Vanadium                     | 27.5          |                   | 0.243     | mg/kg        | EPA 6010B          | EPA 3050B         |
| Zinc                         | 1190          |                   | 0.971     | mg/kg        | EPA 6010B          | EPA 3050B         |

\* MDL is shown

## Detections Summary

Client: Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Work Order: 17-03-1104  
Project Name: Burbank Airport / 9836002041  
Received: 03/14/17

Attn: Brian Martasin

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### Client SampleID

| <u>Analyte</u>               | <u>Result</u> | <u>Qualifiers</u> | <u>RL</u> | <u>Units</u> | <u>Method</u> | <u>Extraction</u> |
|------------------------------|---------------|-------------------|-----------|--------------|---------------|-------------------|
| B-DU3-ISM3-3 (17-03-1104-32) |               |                   |           |              |               |                   |
| Arsenic                      | 2.00          |                   | 0.728     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Barium                       | 107           |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Beryllium                    | 0.246         |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Chromium                     | 10.0          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Cobalt                       | 8.37          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Copper                       | 14.4          |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Lead                         | 9.18          |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Nickel                       | 8.01          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Vanadium                     | 26.5          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Zinc                         | 996           |                   | 0.971     | mg/kg        | EPA 6010B     | EPA 3050B         |
| B-DU3-ISM4-3 (17-03-1104-33) |               |                   |           |              |               |                   |
| Arsenic                      | 2.04          |                   | 0.728     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Barium                       | 108           |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Chromium                     | 9.34          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Cobalt                       | 7.69          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Copper                       | 15.4          |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Lead                         | 11.1          |                   | 0.485     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Nickel                       | 7.60          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Vanadium                     | 25.4          |                   | 0.243     | mg/kg        | EPA 6010B     | EPA 3050B         |
| Zinc                         | 1400          |                   | 0.971     | mg/kg        | EPA 6010B     | EPA 3050B         |

Subcontracted analyses, if any, are not included in this summary.

\* MDL is shown

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: N/A  
 Method: ASTM D-2216 (M)  
 Units: %

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|------------------------|-----------------------|--------------|------------|-----------------|-----------------------|-------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-26-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>N/A</b> | <b>03/16/17</b> | <b>03/16/17 21:00</b> | <b>H0316MOIB3</b> |
| <u>Parameter</u>     |                        | <u>Result</u>         |              | <u>RL</u>  |                 | <u>DF</u>             | <u>Qualifiers</u> |
| Moisture             |                        | 6.4                   |              | 0.10       |                 | 1.00                  | BV,BU             |
| <b>B-DU3-ISM2-3</b>  | <b>17-03-1104-27-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>N/A</b> | <b>03/16/17</b> | <b>03/16/17 21:00</b> | <b>H0316MOIB3</b> |
| <u>Parameter</u>     |                        | <u>Result</u>         |              | <u>RL</u>  |                 | <u>DF</u>             | <u>Qualifiers</u> |
| Moisture             |                        | 6.3                   |              | 0.10       |                 | 1.00                  | BV,BU             |
| <b>B-DU3-ISM3-3</b>  | <b>17-03-1104-28-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>N/A</b> | <b>03/16/17</b> | <b>03/16/17 21:00</b> | <b>H0316MOIB3</b> |
| <u>Parameter</u>     |                        | <u>Result</u>         |              | <u>RL</u>  |                 | <u>DF</u>             | <u>Qualifiers</u> |
| Moisture             |                        | 6.1                   |              | 0.10       |                 | 1.00                  | BV,BU             |
| <b>B-DU3-ISM4-3</b>  | <b>17-03-1104-29-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>N/A</b> | <b>03/16/17</b> | <b>03/16/17 21:00</b> | <b>H0316MOIB3</b> |
| <u>Parameter</u>     |                        | <u>Result</u>         |              | <u>RL</u>  |                 | <u>DF</u>             | <u>Qualifiers</u> |
| Moisture             |                        | 6.2                   |              | 0.10       |                 | 1.00                  | BV,BU             |
| <b>Method Blank</b>  | <b>099-05-014-6788</b> | <b>N/A</b>            | <b>Solid</b> | <b>N/A</b> | <b>03/16/17</b> | <b>03/16/17 21:00</b> | <b>H0316MOIB3</b> |
| <u>Parameter</u>     |                        | <u>Result</u>         |              | <u>RL</u>  |                 | <u>DF</u>             | <u>Qualifiers</u> |
| Moisture             |                        | ND                    |              | 0.10       |                 | 1.00                  |                   |

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3550B  
Method: EPA 8015B (M)  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument   | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-26-C</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 49</b> | <b>03/16/17</b> | <b>03/20/17 14:31</b> | <b>170316B10</b> |

Comment(s):  
- Results are reported on a dry weight basis.  
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| TPH as Diesel    | 28            | 5.3       | 1.00      | HD                |
| TPH as Motor Oil | 75            | 5.3       | 1.00      | HD                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 104             | 61-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM2-3</b> | <b>17-03-1104-27-C</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 49</b> | <b>03/16/17</b> | <b>03/20/17 14:52</b> | <b>170316B10</b> |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|

Comment(s):  
- Results are reported on a dry weight basis.  
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| TPH as Diesel    | 33            | 5.2       | 1.00      | HD                |
| TPH as Motor Oil | 81            | 5.2       | 1.00      | HD                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 103             | 61-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM3-3</b> | <b>17-03-1104-28-C</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 49</b> | <b>03/16/17</b> | <b>03/20/17 15:13</b> | <b>170316B10</b> |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|

Comment(s):  
- Results are reported on a dry weight basis.  
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| TPH as Diesel    | 46            | 5.3       | 1.00      | HD                |
| TPH as Motor Oil | 90            | 5.3       | 1.00      | HD                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 102             | 61-145                |                   |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3550B  
Method: EPA 8015B (M)  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument   | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM4-3</b>  | <b>17-03-1104-29-C</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 49</b> | <b>03/16/17</b> | <b>03/20/17 15:54</b> | <b>170316B10</b> |

Comment(s):  
- Results are reported on a dry weight basis.  
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| TPH as Diesel    | 44            | 5.2       | 1.00      | HD                |
| TPH as Motor Oil | 82            | 5.2       | 1.00      | HD                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 103             | 61-145                |                   |

|                     |                      |            |              |              |                 |                       |                  |
|---------------------|----------------------|------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b> | <b>099-14-353-10</b> | <b>N/A</b> | <b>Solid</b> | <b>GC 49</b> | <b>03/16/17</b> | <b>03/17/17 11:49</b> | <b>170316B10</b> |
|---------------------|----------------------|------------|--------------|--------------|-----------------|-----------------------|------------------|

Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| TPH as Diesel    | ND            | 5.0       | 1.00      |                   |
| TPH as Motor Oil | ND            | 5.0       | 1.00      |                   |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 99              | 61-145                |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3050B  
 Method: EPA 6010B  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-30-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 13:12</b> | <b>170324L11</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.732     | 0.976     |                   |
| Arsenic          | 2.08          | 0.732     | 0.976     |                   |
| Barium           | 109           | 0.488     | 0.976     |                   |
| Beryllium        | ND            | 0.244     | 0.976     |                   |
| Cadmium          | ND            | 0.488     | 0.976     |                   |
| Chromium         | 9.83          | 0.244     | 0.976     |                   |
| Cobalt           | 8.18          | 0.244     | 0.976     |                   |
| Copper           | 16.0          | 0.488     | 0.976     |                   |
| Lead             | 9.88          | 0.488     | 0.976     |                   |
| Molybdenum       | ND            | 0.244     | 0.976     |                   |
| Nickel           | 7.74          | 0.244     | 0.976     |                   |
| Selenium         | ND            | 0.732     | 0.976     |                   |
| Silver           | ND            | 0.244     | 0.976     |                   |
| Thallium         | ND            | 0.732     | 0.976     |                   |
| Vanadium         | 25.9          | 0.244     | 0.976     |                   |
| Zinc             | 1190          | 0.976     | 0.976     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM2-3</b>  | <b>17-03-1104-31-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 13:13</b> | <b>170324L11</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.728     | 0.971     |                   |
| Arsenic          | 1.55          | 0.728     | 0.971     |                   |
| Barium           | 113           | 0.485     | 0.971     |                   |
| Beryllium        | 0.255         | 0.243     | 0.971     |                   |
| Cadmium          | ND            | 0.485     | 0.971     |                   |
| Chromium         | 10.1          | 0.243     | 0.971     |                   |
| Cobalt           | 8.40          | 0.243     | 0.971     |                   |
| Copper           | 16.1          | 0.485     | 0.971     |                   |
| Lead             | 10.3          | 0.485     | 0.971     |                   |
| Molybdenum       | ND            | 0.243     | 0.971     |                   |
| Nickel           | 8.11          | 0.243     | 0.971     |                   |
| Selenium         | ND            | 0.728     | 0.971     |                   |
| Silver           | ND            | 0.243     | 0.971     |                   |
| Thallium         | ND            | 0.728     | 0.971     |                   |
| Vanadium         | 27.5          | 0.243     | 0.971     |                   |
| Zinc             | 1190          | 0.971     | 0.971     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3050B  
 Method: EPA 6010B  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM3-3</b>  | <b>17-03-1104-32-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 13:14</b> | <b>170324L11</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.728     | 0.971     |                   |
| Arsenic          | 2.00          | 0.728     | 0.971     |                   |
| Barium           | 107           | 0.485     | 0.971     |                   |
| Beryllium        | 0.246         | 0.243     | 0.971     |                   |
| Cadmium          | ND            | 0.485     | 0.971     |                   |
| Chromium         | 10.0          | 0.243     | 0.971     |                   |
| Cobalt           | 8.37          | 0.243     | 0.971     |                   |
| Copper           | 14.4          | 0.485     | 0.971     |                   |
| Lead             | 9.18          | 0.485     | 0.971     |                   |
| Molybdenum       | ND            | 0.243     | 0.971     |                   |
| Nickel           | 8.01          | 0.243     | 0.971     |                   |
| Selenium         | ND            | 0.728     | 0.971     |                   |
| Silver           | ND            | 0.243     | 0.971     |                   |
| Thallium         | ND            | 0.728     | 0.971     |                   |
| Vanadium         | 26.5          | 0.243     | 0.971     |                   |
| Zinc             | 996           | 0.971     | 0.971     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM4-3</b>  | <b>17-03-1104-33-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 13:14</b> | <b>170324L12</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.728     | 0.971     |                   |
| Arsenic          | 2.04          | 0.728     | 0.971     |                   |
| Barium           | 108           | 0.485     | 0.971     |                   |
| Beryllium        | ND            | 0.243     | 0.971     |                   |
| Cadmium          | ND            | 0.485     | 0.971     |                   |
| Chromium         | 9.34          | 0.243     | 0.971     |                   |
| Cobalt           | 7.69          | 0.243     | 0.971     |                   |
| Copper           | 15.4          | 0.485     | 0.971     |                   |
| Lead             | 11.1          | 0.485     | 0.971     |                   |
| Molybdenum       | ND            | 0.243     | 0.971     |                   |
| Nickel           | 7.60          | 0.243     | 0.971     |                   |
| Selenium         | ND            | 0.728     | 0.971     |                   |
| Silver           | ND            | 0.243     | 0.971     |                   |
| Thallium         | ND            | 0.728     | 0.971     |                   |
| Vanadium         | 25.4          | 0.243     | 0.971     |                   |
| Zinc             | 1400          | 0.971     | 0.971     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3050B  
 Method: EPA 6010B  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number       | Date/Time Collected | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|-------------------------|---------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b>  | <b>097-01-002-24505</b> | <b>N/A</b>          | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 10:56</b> | <b>170324L11</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.725     | 0.966     |                   |
| Arsenic          | ND            | 0.725     | 0.966     |                   |
| Barium           | ND            | 0.483     | 0.966     |                   |
| Beryllium        | ND            | 0.242     | 0.966     |                   |
| Cadmium          | ND            | 0.483     | 0.966     |                   |
| Chromium         | ND            | 0.242     | 0.966     |                   |
| Cobalt           | ND            | 0.242     | 0.966     |                   |
| Copper           | ND            | 0.483     | 0.966     |                   |
| Lead             | ND            | 0.483     | 0.966     |                   |
| Molybdenum       | ND            | 0.242     | 0.966     |                   |
| Nickel           | ND            | 0.242     | 0.966     |                   |
| Selenium         | ND            | 0.725     | 0.966     |                   |
| Silver           | ND            | 0.242     | 0.966     |                   |
| Thallium         | ND            | 0.725     | 0.966     |                   |
| Vanadium         | ND            | 0.242     | 0.966     |                   |
| Zinc             | ND            | 0.966     | 0.966     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number       | Date/Time Collected | Matrix       | Instrument      | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|-------------------------|---------------------|--------------|-----------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b>  | <b>097-01-002-24504</b> | <b>N/A</b>          | <b>Solid</b> | <b>ICP 7300</b> | <b>03/24/17</b> | <b>03/27/17 10:58</b> | <b>170324L12</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.725     | 0.966     |                   |
| Arsenic          | ND            | 0.725     | 0.966     |                   |
| Barium           | ND            | 0.483     | 0.966     |                   |
| Beryllium        | ND            | 0.242     | 0.966     |                   |
| Cadmium          | ND            | 0.483     | 0.966     |                   |
| Chromium         | ND            | 0.242     | 0.966     |                   |
| Cobalt           | ND            | 0.242     | 0.966     |                   |
| Copper           | ND            | 0.483     | 0.966     |                   |
| Lead             | ND            | 0.483     | 0.966     |                   |
| Molybdenum       | ND            | 0.242     | 0.966     |                   |
| Nickel           | ND            | 0.242     | 0.966     |                   |
| Selenium         | ND            | 0.725     | 0.966     |                   |
| Silver           | ND            | 0.242     | 0.966     |                   |
| Thallium         | ND            | 0.725     | 0.966     |                   |
| Vanadium         | ND            | 0.242     | 0.966     |                   |
| Zinc             | ND            | 0.966     | 0.966     |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 7471A Total  
Method: EPA 7471A  
Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument        | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-26-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 18:04</b> | <b>170324L02</b> |

Comment(s): - Results are reported on a dry weight basis.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0937    | 1.00      |                   |

|                     |                        |                       |              |                   |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM2-3</b> | <b>17-03-1104-27-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 18:07</b> | <b>170324L02</b> |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|

Comment(s): - Results are reported on a dry weight basis.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0875    | 1.00      |                   |

|                     |                        |                       |              |                   |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM3-3</b> | <b>17-03-1104-28-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 18:09</b> | <b>170324L02</b> |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|

Comment(s): - Results are reported on a dry weight basis.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0859    | 1.00      |                   |

|                     |                        |                       |              |                   |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM4-3</b> | <b>17-03-1104-29-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 18:16</b> | <b>170324L02</b> |
|---------------------|------------------------|-----------------------|--------------|-------------------|-----------------|-----------------------|------------------|

Comment(s): - Results are reported on a dry weight basis.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0874    | 1.00      |                   |

|                     |                        |            |              |                   |                 |                       |                  |
|---------------------|------------------------|------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b> | <b>099-16-272-2902</b> | <b>N/A</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 15:47</b> | <b>170324L02</b> |
|---------------------|------------------------|------------|--------------|-------------------|-----------------|-----------------------|------------------|

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0833    | 1.00      |                   |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8082  
 Units: ug/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument   | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-30-B</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 18:08</b> | <b>170320L02</b> |

Comment(s): - Sample extracted outside recommended holding time.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Aroclor-1016     | ND            | 50        | 1.00      | ET                |
| Aroclor-1221     | ND            | 50        | 1.00      | ET                |
| Aroclor-1232     | ND            | 50        | 1.00      | ET                |
| Aroclor-1242     | ND            | 50        | 1.00      | ET                |
| Aroclor-1248     | ND            | 50        | 1.00      | ET                |
| Aroclor-1254     | ND            | 50        | 1.00      | ET                |
| Aroclor-1260     | ND            | 50        | 1.00      | ET                |
| Aroclor-1262     | ND            | 50        | 1.00      | ET                |
| Aroclor-1268     | ND            | 50        | 1.00      | ET                |

| <u>Surrogate</u>             | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------------|-----------------|-----------------------|-------------------|
| Decachlorobiphenyl           | 81              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 69              | 25-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM2-3</b> | <b>17-03-1104-31-B</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 18:26</b> | <b>170320L02</b> |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|

Comment(s): - Sample extracted outside recommended holding time.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Aroclor-1016     | ND            | 50        | 1.00      | ET                |
| Aroclor-1221     | ND            | 50        | 1.00      | ET                |
| Aroclor-1232     | ND            | 50        | 1.00      | ET                |
| Aroclor-1242     | ND            | 50        | 1.00      | ET                |
| Aroclor-1248     | ND            | 50        | 1.00      | ET                |
| Aroclor-1254     | ND            | 50        | 1.00      | ET                |
| Aroclor-1260     | ND            | 50        | 1.00      | ET                |
| Aroclor-1262     | ND            | 50        | 1.00      | ET                |
| Aroclor-1268     | ND            | 50        | 1.00      | ET                |

| <u>Surrogate</u>             | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------------|-----------------|-----------------------|-------------------|
| Decachlorobiphenyl           | 79              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 66              | 25-145                |                   |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3545  
Method: EPA 8082  
Units: ug/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument   | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM3-3</b>  | <b>17-03-1104-32-B</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 18:44</b> | <b>170320L02</b> |

Comment(s): - Sample extracted outside recommended holding time.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Aroclor-1016     | ND            | 50        | 1.00      | ET                |
| Aroclor-1221     | ND            | 50        | 1.00      | ET                |
| Aroclor-1232     | ND            | 50        | 1.00      | ET                |
| Aroclor-1242     | ND            | 50        | 1.00      | ET                |
| Aroclor-1248     | ND            | 50        | 1.00      | ET                |
| Aroclor-1254     | ND            | 50        | 1.00      | ET                |
| Aroclor-1260     | ND            | 50        | 1.00      | ET                |
| Aroclor-1262     | ND            | 50        | 1.00      | ET                |
| Aroclor-1268     | ND            | 50        | 1.00      | ET                |

| <u>Surrogate</u>             | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------------|-----------------|-----------------------|-------------------|
| Decachlorobiphenyl           | 84              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 72              | 25-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>B-DU3-ISM4-3</b> | <b>17-03-1104-33-B</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 19:02</b> | <b>170320L02</b> |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|

Comment(s): - Sample extracted outside recommended holding time.

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Aroclor-1016     | ND            | 50        | 1.00      | ET                |
| Aroclor-1221     | ND            | 50        | 1.00      | ET                |
| Aroclor-1232     | ND            | 50        | 1.00      | ET                |
| Aroclor-1242     | ND            | 50        | 1.00      | ET                |
| Aroclor-1248     | ND            | 50        | 1.00      | ET                |
| Aroclor-1254     | ND            | 50        | 1.00      | ET                |
| Aroclor-1260     | ND            | 50        | 1.00      | ET                |
| Aroclor-1262     | ND            | 50        | 1.00      | ET                |
| Aroclor-1268     | ND            | 50        | 1.00      | ET                |

| <u>Surrogate</u>             | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------------|-----------------|-----------------------|-------------------|
| Decachlorobiphenyl           | 79              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 68              | 25-145                |                   |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8082  
 Units: ug/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected | Matrix       | Instrument   | Date Prepared   | Date/Time Analyzed    | QC Batch ID      |
|----------------------|------------------------|---------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b>  | <b>099-12-535-4111</b> | <b>N/A</b>          | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 16:53</b> | <b>170320L02</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Aroclor-1016     | ND            | 50        | 1.00      |                   |
| Aroclor-1221     | ND            | 50        | 1.00      |                   |
| Aroclor-1232     | ND            | 50        | 1.00      |                   |
| Aroclor-1242     | ND            | 50        | 1.00      |                   |
| Aroclor-1248     | ND            | 50        | 1.00      |                   |
| Aroclor-1254     | ND            | 50        | 1.00      |                   |
| Aroclor-1260     | ND            | 50        | 1.00      |                   |
| Aroclor-1262     | ND            | 50        | 1.00      |                   |
| Aroclor-1268     | ND            | 50        | 1.00      |                   |

| <u>Surrogate</u>             | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------------|-----------------|-----------------------|-------------------|
| Decachlorobiphenyl           | 78              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 68              | 25-145                |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument       | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|------------------------|-----------------------|--------------|------------------|-----------------|-----------------------|-------------------|
| <b>B-DU3-ISM1-3</b>  | <b>17-03-1104-26-D</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/20/17 15:30</b> | <b>170317L004</b> |

Comment(s):  
 - Results are reported on a dry weight basis.  
 - Sample extracted outside recommended holding time.

| <u>Parameter</u>          | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------|---------------|-----------|-----------|-------------------|
| Naphthalene               | ND            | 0.011     | 1.00      | ET                |
| 2-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| 1-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| Acenaphthylene            | ND            | 0.011     | 1.00      | ET                |
| Acenaphthene              | ND            | 0.011     | 1.00      | ET                |
| Fluorene                  | ND            | 0.011     | 1.00      | ET                |
| Phenanthrene              | ND            | 0.011     | 1.00      | ET                |
| Anthracene                | ND            | 0.011     | 1.00      | ET                |
| Fluoranthene              | ND            | 0.011     | 1.00      | ET                |
| Pyrene                    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Anthracene      | ND            | 0.011     | 1.00      | ET                |
| Chrysene                  | ND            | 0.011     | 1.00      | ET                |
| Benzo (k) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (b) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Pyrene          | ND            | 0.011     | 1.00      | ET                |
| Indeno (1,2,3-c,d) Pyrene | ND            | 0.011     | 1.00      | ET                |
| Dibenz (a,h) Anthracene   | ND            | 0.011     | 1.00      | ET                |
| Benzo (g,h,i) Perylene    | 0.012         | 0.011     | 1.00      | ET                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| 2-Fluorobiphenyl | 39              | 13-127                |                   |
| Nitrobenzene-d5  | 42              | 17-137                |                   |
| p-Terphenyl-d14  | 64              | 4-160                 |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument       | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|------------------------|-----------------------|--------------|------------------|-----------------|-----------------------|-------------------|
| <b>B-DU3-ISM2-3</b>  | <b>17-03-1104-27-D</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/20/17 15:50</b> | <b>170317L004</b> |

Comment(s):  
 - Results are reported on a dry weight basis.  
 - Sample extracted outside recommended holding time.

| <u>Parameter</u>          | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------|---------------|-----------|-----------|-------------------|
| Naphthalene               | ND            | 0.011     | 1.00      | ET                |
| 2-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| 1-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| Acenaphthylene            | ND            | 0.011     | 1.00      | ET                |
| Acenaphthene              | ND            | 0.011     | 1.00      | ET                |
| Fluorene                  | ND            | 0.011     | 1.00      | ET                |
| Phenanthrene              | ND            | 0.011     | 1.00      | ET                |
| Anthracene                | ND            | 0.011     | 1.00      | ET                |
| Fluoranthene              | ND            | 0.011     | 1.00      | ET                |
| Pyrene                    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Anthracene      | ND            | 0.011     | 1.00      | ET                |
| Chrysene                  | ND            | 0.011     | 1.00      | ET                |
| Benzo (k) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (b) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Pyrene          | ND            | 0.011     | 1.00      | ET                |
| Indeno (1,2,3-c,d) Pyrene | ND            | 0.011     | 1.00      | ET                |
| Dibenz (a,h) Anthracene   | ND            | 0.011     | 1.00      | ET                |
| Benzo (g,h,i) Perylene    | ND            | 0.011     | 1.00      | ET                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| 2-Fluorobiphenyl | 39              | 13-127                |                   |
| Nitrobenzene-d5  | 47              | 17-137                |                   |
| p-Terphenyl-d14  | 63              | 4-160                 |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument       | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|------------------------|-----------------------|--------------|------------------|-----------------|-----------------------|-------------------|
| <b>B-DU3-ISM3-3</b>  | <b>17-03-1104-28-D</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/20/17 16:10</b> | <b>170317L004</b> |

Comment(s):  
 - Results are reported on a dry weight basis.  
 - Sample extracted outside recommended holding time.

| <u>Parameter</u>          | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------|---------------|-----------|-----------|-------------------|
| Naphthalene               | ND            | 0.011     | 1.00      | ET                |
| 2-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| 1-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| Acenaphthylene            | ND            | 0.011     | 1.00      | ET                |
| Acenaphthene              | ND            | 0.011     | 1.00      | ET                |
| Fluorene                  | ND            | 0.011     | 1.00      | ET                |
| Phenanthrene              | ND            | 0.011     | 1.00      | ET                |
| Anthracene                | ND            | 0.011     | 1.00      | ET                |
| Fluoranthene              | ND            | 0.011     | 1.00      | ET                |
| Pyrene                    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Anthracene      | ND            | 0.011     | 1.00      | ET                |
| Chrysene                  | ND            | 0.011     | 1.00      | ET                |
| Benzo (k) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (b) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Pyrene          | ND            | 0.011     | 1.00      | ET                |
| Indeno (1,2,3-c,d) Pyrene | ND            | 0.011     | 1.00      | ET                |
| Dibenz (a,h) Anthracene   | ND            | 0.011     | 1.00      | ET                |
| Benzo (g,h,i) Perylene    | ND            | 0.011     | 1.00      | ET                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| 2-Fluorobiphenyl | 34              | 13-127                |                   |
| Nitrobenzene-d5  | 39              | 17-137                |                   |
| p-Terphenyl-d14  | 70              | 4-160                 |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number      | Date/Time Collected   | Matrix       | Instrument       | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|------------------------|-----------------------|--------------|------------------|-----------------|-----------------------|-------------------|
| <b>B-DU3-ISM4-3</b>  | <b>17-03-1104-29-D</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/20/17 16:30</b> | <b>170317L004</b> |

Comment(s):  
 - Results are reported on a dry weight basis.  
 - Sample extracted outside recommended holding time.

| <u>Parameter</u>          | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------|---------------|-----------|-----------|-------------------|
| Naphthalene               | ND            | 0.011     | 1.00      | ET                |
| 2-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| 1-Methylnaphthalene       | ND            | 0.011     | 1.00      | ET                |
| Acenaphthylene            | ND            | 0.011     | 1.00      | ET                |
| Acenaphthene              | ND            | 0.011     | 1.00      | ET                |
| Fluorene                  | ND            | 0.011     | 1.00      | ET                |
| Phenanthrene              | ND            | 0.011     | 1.00      | ET                |
| Anthracene                | ND            | 0.011     | 1.00      | ET                |
| Fluoranthene              | ND            | 0.011     | 1.00      | ET                |
| Pyrene                    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Anthracene      | ND            | 0.011     | 1.00      | ET                |
| Chrysene                  | ND            | 0.011     | 1.00      | ET                |
| Benzo (k) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (b) Fluoranthene    | ND            | 0.011     | 1.00      | ET                |
| Benzo (a) Pyrene          | ND            | 0.011     | 1.00      | ET                |
| Indeno (1,2,3-c,d) Pyrene | ND            | 0.011     | 1.00      | ET                |
| Dibenz (a,h) Anthracene   | ND            | 0.011     | 1.00      | ET                |
| Benzo (g,h,i) Perylene    | ND            | 0.011     | 1.00      | ET                |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| 2-Fluorobiphenyl | 60              | 13-127                |                   |
| Nitrobenzene-d5  | 64              | 17-137                |                   |
| p-Terphenyl-d14  | 37              | 4-160                 |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: mg/kg

Project: Burbank Airport / 9836002041

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| Client Sample Number | Lab Sample Number     | Date/Time Collected | Matrix       | Instrument       | Date Prepared   | Date/Time Analyzed    | QC Batch ID       |
|----------------------|-----------------------|---------------------|--------------|------------------|-----------------|-----------------------|-------------------|
| <b>Method Blank</b>  | <b>099-14-035-384</b> | <b>N/A</b>          | <b>Solid</b> | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/17/17 19:49</b> | <b>170317L004</b> |

| <u>Parameter</u>          | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------|---------------|-----------|-----------|-------------------|
| Naphthalene               | ND            | 0.010     | 1.00      |                   |
| 2-Methylnaphthalene       | ND            | 0.010     | 1.00      |                   |
| 1-Methylnaphthalene       | ND            | 0.010     | 1.00      |                   |
| Acenaphthylene            | ND            | 0.010     | 1.00      |                   |
| Acenaphthene              | ND            | 0.010     | 1.00      |                   |
| Fluorene                  | ND            | 0.010     | 1.00      |                   |
| Phenanthrene              | ND            | 0.010     | 1.00      |                   |
| Anthracene                | ND            | 0.010     | 1.00      |                   |
| Fluoranthene              | ND            | 0.010     | 1.00      |                   |
| Pyrene                    | ND            | 0.010     | 1.00      |                   |
| Benzo (a) Anthracene      | ND            | 0.010     | 1.00      |                   |
| Chrysene                  | ND            | 0.010     | 1.00      |                   |
| Benzo (k) Fluoranthene    | ND            | 0.010     | 1.00      |                   |
| Benzo (b) Fluoranthene    | ND            | 0.010     | 1.00      |                   |
| Benzo (a) Pyrene          | ND            | 0.010     | 1.00      |                   |
| Indeno (1,2,3-c,d) Pyrene | ND            | 0.010     | 1.00      |                   |
| Dibenz (a,h) Anthracene   | ND            | 0.010     | 1.00      |                   |
| Benzo (g,h,i) Perylene    | ND            | 0.010     | 1.00      |                   |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| 2-Fluorobiphenyl | 76              | 13-127                |                   |
| Nitrobenzene-d5  | 80              | 17-137                |                   |
| p-Terphenyl-d14  | 90              | 4-160                 |                   |

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                   | Matrix | Instrument | Date Prepared | Date Analyzed  | MS/MSD Batch Number |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| B-DU3-ISM3-3              | Sample                 | Solid  | GC 49      | 03/16/17      | 03/20/17 15:13 | 170316S10           |
| B-DU3-ISM3-3              | Matrix Spike           | Solid  | GC 49      | 03/16/17      | 03/20/17 16:15 | 170316S10           |
| B-DU3-ISM3-3              | Matrix Spike Duplicate | Solid  | GC 49      | 03/16/17      | 03/20/17 16:36 | 170316S10           |

| Parameter     | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|---------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| TPH as Diesel | 42.81        | 400.0       | 412.3    | 92       | 433.4     | 98        | 61-145   | 5   | 0-25   |            |

  
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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                   | Matrix | Instrument | Date Prepared | Date Analyzed  | MS/MSD Batch Number |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-1114-1              | Sample                 | Solid  | ICP 7300   | 03/24/17      | 03/27/17 12:54 | 170324S11           |
| 17-03-1114-1              | Matrix Spike           | Solid  | ICP 7300   | 03/24/17      | 03/27/17 12:54 | 170324S11           |
| 17-03-1114-1              | Matrix Spike Duplicate | Solid  | ICP 7300   | 03/24/17      | 03/27/17 12:57 | 170324S11           |

| Parameter  | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Antimony   | 7.917        | 25.00       | 24.44    | 66       | 18.33     | 42        | 50-115   | 29  | 0-20   | 3,4        |
| Arsenic    | 2.654        | 25.00       | 24.65    | 88       | 25.34     | 91        | 75-125   | 3   | 0-20   |            |
| Barium     | 3852         | 25.00       | 4335     | 4X       | 3503      | 4X        | 75-125   | 4X  | 0-20   | Q          |
| Beryllium  | ND           | 25.00       | 23.56    | 94       | 24.01     | 96        | 75-125   | 2   | 0-20   |            |
| Cadmium    | 101.2        | 25.00       | 91.77    | 4X       | 89.10     | 4X        | 75-125   | 4X  | 0-20   | Q          |
| Chromium   | 506.0        | 25.00       | 443.1    | 4X       | 463.7     | 4X        | 75-125   | 4X  | 0-20   | Q          |
| Cobalt     | ND           | 25.00       | 23.59    | 94       | 24.83     | 99        | 75-125   | 5   | 0-20   |            |
| Copper     | 119.8        | 25.00       | 103.7    | 4X       | 96.08     | 4X        | 75-125   | 4X  | 0-20   | Q          |
| Lead       | 62.66        | 25.00       | 58.96    | 0        | 60.29     | 0         | 75-125   | 2   | 0-20   | 3          |
| Molybdenum | 29.40        | 25.00       | 45.12    | 63       | 39.29     | 40        | 75-125   | 14  | 0-20   | 3          |
| Nickel     | 8.949        | 25.00       | 30.42    | 86       | 35.62     | 107       | 75-125   | 16  | 0-20   |            |
| Selenium   | ND           | 25.00       | 22.97    | 92       | 21.84     | 87        | 75-125   | 5   | 0-20   |            |
| Silver     | 4.294        | 12.50       | 15.76    | 92       | 15.74     | 92        | 75-125   | 0   | 0-20   |            |
| Thallium   | ND           | 25.00       | 5.255    | 21       | 25.38     | 102       | 75-125   | 131 | 0-20   | 3,4        |
| Vanadium   | ND           | 25.00       | 20.70    | 83       | 21.11     | 84        | 75-125   | 2   | 0-20   |            |
| Zinc       | 711.4        | 25.00       | 587.5    | 4X       | 614.5     | 4X        | 75-125   | 4X  | 0-20   | Q          |

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                   | Matrix | Instrument | Date Prepared | Date Analyzed  | MS/MSD Batch Number |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-1115-1              | Sample                 | Solid  | ICP 7300   | 03/24/17      | 03/27/17 12:58 | 170324S12           |
| 17-03-1115-1              | Matrix Spike           | Solid  | ICP 7300   | 03/24/17      | 03/27/17 12:59 | 170324S12           |
| 17-03-1115-1              | Matrix Spike Duplicate | Solid  | ICP 7300   | 03/24/17      | 03/27/17 13:00 | 170324S12           |

| Parameter  | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Antimony   | 2.812        | 25.00       | 15.39    | 50       | 17.30     | 58        | 50-115   | 12  | 0-20   |            |
| Arsenic    | ND           | 25.00       | 15.52    | 62       | 17.83     | 71        | 75-125   | 14  | 0-20   | 3          |
| Barium     | 1.861        | 25.00       | 14.98    | 52       | 17.38     | 62        | 75-125   | 15  | 0-20   | 3          |
| Beryllium  | ND           | 25.00       | 13.51    | 54       | 15.39     | 62        | 75-125   | 13  | 0-20   | 3          |
| Cadmium    | ND           | 25.00       | 17.44    | 70       | 20.36     | 81        | 75-125   | 15  | 0-20   | 3          |
| Chromium   | 0.3483       | 25.00       | 13.38    | 52       | 15.70     | 61        | 75-125   | 16  | 0-20   | 3          |
| Cobalt     | ND           | 25.00       | 13.57    | 54       | 15.74     | 63        | 75-125   | 15  | 0-20   | 3          |
| Copper     | ND           | 25.00       | 14.73    | 59       | 17.13     | 69        | 75-125   | 15  | 0-20   | 3          |
| Lead       | ND           | 25.00       | 17.07    | 68       | 19.59     | 78        | 75-125   | 14  | 0-20   | 3          |
| Molybdenum | ND           | 25.00       | 14.05    | 56       | 16.20     | 65        | 75-125   | 14  | 0-20   | 3          |
| Nickel     | ND           | 25.00       | 13.35    | 53       | 15.41     | 62        | 75-125   | 14  | 0-20   | 3          |
| Selenium   | ND           | 25.00       | 15.67    | 63       | 18.12     | 72        | 75-125   | 14  | 0-20   | 3          |
| Silver     | ND           | 12.50       | 9.394    | 75       | 10.36     | 83        | 75-125   | 10  | 0-20   |            |
| Thallium   | ND           | 25.00       | 10.56    | 42       | 15.04     | 60        | 75-125   | 35  | 0-20   | 3,4        |
| Vanadium   | ND           | 25.00       | 12.68    | 51       | 14.93     | 60        | 75-125   | 16  | 0-20   | 3          |
| Zinc       | 7.305        | 25.00       | 30.61    | 93       | 34.14     | 107       | 75-125   | 11  | 0-20   |            |

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 7471A Total  
Method: EPA 7471A

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                   | Matrix   | Instrument | Date Prepared | Date Analyzed  | MS/MSD Batch Number |
|---------------------------|------------------------|----------|------------|---------------|----------------|---------------------|
| 17-03-0879-1              | Sample                 | Sediment | Mercury 07 | 03/24/17      | 03/24/17 15:52 | 170324S02           |
| 17-03-0879-1              | Matrix Spike           | Sediment | Mercury 07 | 03/24/17      | 03/24/17 15:54 | 170324S02           |
| 17-03-0879-1              | Matrix Spike Duplicate | Sediment | Mercury 07 | 03/24/17      | 03/24/17 15:56 | 170324S02           |

| Parameter | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|-----------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Mercury   | 1.257        | 0.8350      | 1.601    | 41       | 1.663     | 49        | 71-137   | 4   | 0-14   | 3          |

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3545  
Method: EPA 8082

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                          | Matrix       | Instrument   | Date Prepared   | Date Analyzed         | MS/MSD Batch Number |
|---------------------------|-------------------------------|--------------|--------------|-----------------|-----------------------|---------------------|
| <b>B-DU3-ISM1-3</b>       | <b>Sample</b>                 | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 18:08</b> | <b>170320S02</b>    |
| <b>B-DU3-ISM1-3</b>       | <b>Matrix Spike</b>           | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 17:32</b> | <b>170320S02</b>    |
| <b>B-DU3-ISM1-3</b>       | <b>Matrix Spike Duplicate</b> | <b>Solid</b> | <b>GC 58</b> | <b>03/20/17</b> | <b>03/20/17 17:50</b> | <b>170320S02</b>    |

| <u>Parameter</u> | <u>Sample Conc.</u> | <u>Spike Added</u> | <u>MS Conc.</u> | <u>MS %Rec.</u> | <u>MSD Conc.</u> | <u>MSD %Rec.</u> | <u>%Rec. CL</u> | <u>RPD</u> | <u>RPD CL</u> | <u>Qualifiers</u> |
|------------------|---------------------|--------------------|-----------------|-----------------|------------------|------------------|-----------------|------------|---------------|-------------------|
| Aroclor-1016     | ND                  | 100.0              | 86.00           | 86              | 87.00            | 87               | 50-135          | 1          | 0-20          |                   |
| Aroclor-1260     | ND                  | 100.0              | 85.00           | 85              | 82.50            | 82               | 50-135          | 3          | 0-20          |                   |

  
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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3545  
Method: EPA 8270C SIM PAHs

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type                   | Matrix | Instrument | Date Prepared | Date Analyzed  | MS/MSD Batch Number |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-1220-2              | Sample                 | Solid  | GC/MS EEE  | 03/17/17      | 03/17/17 21:30 | 170317S004          |
| 17-03-1220-2              | Matrix Spike           | Solid  | GC/MS EEE  | 03/17/17      | 03/17/17 22:51 | 170317S004          |
| 17-03-1220-2              | Matrix Spike Duplicate | Solid  | GC/MS EEE  | 03/17/17      | 03/17/17 23:12 | 170317S004          |

| Parameter                 | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|---------------------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Naphthalene               | ND           | 0.1000      | 0.07501  | 75       | 0.07439   | 74        | 20-150   | 1   | 0-33   |            |
| 2-Methylnaphthalene       | ND           | 0.1000      | 0.08873  | 89       | 0.08749   | 87        | 29-137   | 1   | 0-31   |            |
| 1-Methylnaphthalene       | ND           | 0.1000      | 0.07660  | 77       | 0.07581   | 76        | 34-136   | 1   | 0-29   |            |
| Acenaphthylene            | ND           | 0.1000      | 0.06213  | 62       | 0.06146   | 61        | 29-131   | 1   | 0-32   |            |
| Acenaphthene              | ND           | 0.1000      | 0.06414  | 64       | 0.06387   | 64        | 29-137   | 0   | 0-28   |            |
| Fluorene                  | ND           | 0.1000      | 0.06462  | 65       | 0.06442   | 64        | 36-132   | 0   | 0-27   |            |
| Phenanthrene              | ND           | 0.1000      | 0.07565  | 76       | 0.07538   | 75        | 20-144   | 0   | 0-27   |            |
| Anthracene                | ND           | 0.1000      | 0.07528  | 75       | 0.07567   | 76        | 26-134   | 1   | 0-27   |            |
| Fluoranthene              | ND           | 0.1000      | 0.07161  | 72       | 0.07067   | 71        | 20-151   | 1   | 0-26   |            |
| Pyrene                    | ND           | 0.1000      | 0.07508  | 75       | 0.07520   | 75        | 20-150   | 0   | 0-32   |            |
| Benzo (a) Anthracene      | ND           | 0.1000      | 0.07108  | 71       | 0.06936   | 69        | 24-150   | 2   | 0-24   |            |
| Chrysene                  | ND           | 0.1000      | 0.07212  | 72       | 0.07085   | 71        | 25-145   | 2   | 0-28   |            |
| Benzo (k) Fluoranthene    | ND           | 0.1000      | 0.07042  | 70       | 0.06999   | 70        | 28-148   | 1   | 0-26   |            |
| Benzo (b) Fluoranthene    | ND           | 0.1000      | 0.06998  | 70       | 0.06719   | 67        | 21-153   | 4   | 0-26   |            |
| Benzo (a) Pyrene          | ND           | 0.1000      | 0.07075  | 71       | 0.06997   | 70        | 29-149   | 1   | 0-22   |            |
| Indeno (1,2,3-c,d) Pyrene | ND           | 0.1000      | 0.06552  | 66       | 0.06488   | 65        | 20-154   | 1   | 0-25   |            |
| Dibenz (a,h) Anthracene   | ND           | 0.1000      | 0.06699  | 67       | 0.06688   | 67        | 20-132   | 0   | 0-26   |            |
| Benzo (g,h,i) Perylene    | ND           | 0.1000      | 0.06926  | 69       | 0.06851   | 69        | 20-148   | 1   | 0-27   |            |

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RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - PDS/PDSD

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type         | Matrix      | Instrument | Date Prepared  | Date Analyzed  | PDS/PDSD Batch Number |          |     |        |            |
|---------------------------|--------------|-------------|------------|----------------|----------------|-----------------------|----------|-----|--------|------------|
| 17-03-1114-1              | Sample       | Solid       | ICP 7300   | 03/24/17 00:00 | 03/27/17 12:54 | 170324S11             |          |     |        |            |
| 17-03-1114-1              | PDS          | Solid       | ICP 7300   | 03/24/17 00:00 | 03/27/17 15:43 | 170324S11             |          |     |        |            |
| 17-03-1114-1              | PDSD         | Solid       | ICP 7300   | 03/24/17 00:00 | 03/27/17 15:43 | 170324S11             |          |     |        |            |
| Parameter                 | Sample Conc. | Spike Added | PDS Conc.  | PDS %Rec.      | PDSD Conc.     | PDSD %Rec.            | %Rec. CL | RPD | RPD CL | Qualifiers |
| Antimony                  | 7.917        | 25.00       | 30.07      | 89             | 29.97          | 88                    | 75-125   | 0   | 0-20   |            |
| Arsenic                   | 2.654        | 25.00       | 25.35      | 91             | 25.27          | 90                    | 75-125   | 0   | 0-20   |            |
| Barium                    | 3852         | 25.00       | 3964       | 4X             | 4000           | 4X                    | 75-125   | 4X  | 0-20   | Q          |
| Beryllium                 | ND           | 25.00       | 23.18      | 93             | 23.23          | 93                    | 75-125   | 0   | 0-20   |            |
| Cadmium                   | 101.2        | 25.00       | 125.0      | 4X             | 125.1          | 4X                    | 75-125   | 4X  | 0-20   | Q          |
| Chromium                  | 506.0        | 25.00       | 540.8      | 4X             | 541.2          | 4X                    | 75-125   | 4X  | 0-20   | Q          |
| Cobalt                    | ND           | 25.00       | 23.55      | 94             | 23.44          | 94                    | 75-125   | 0   | 0-20   |            |
| Copper                    | 119.8        | 25.00       | 146.2      | 4X             | 146.1          | 4X                    | 75-125   | 4X  | 0-20   | Q          |
| Lead                      | 62.66        | 25.00       | 87.31      | 99             | 87.26          | 98                    | 75-125   | 0   | 0-20   |            |
| Molybdenum                | 29.40        | 25.00       | 53.68      | 97             | 53.60          | 97                    | 75-125   | 0   | 0-20   |            |
| Nickel                    | 8.949        | 25.00       | 32.45      | 94             | 32.41          | 94                    | 75-125   | 0   | 0-20   |            |
| Selenium                  | ND           | 25.00       | 22.62      | 90             | 22.44          | 90                    | 75-125   | 1   | 0-20   |            |
| Silver                    | 4.294        | 12.50       | 15.38      | 89             | 15.32          | 88                    | 75-125   | 0   | 0-20   |            |
| Thallium                  | ND           | 25.00       | 22.77      | 91             | 22.45          | 90                    | 75-125   | 1   | 0-20   |            |
| Vanadium                  | ND           | 25.00       | 19.60      | 78             | 19.61          | 78                    | 75-125   | 0   | 0-20   |            |
| Zinc                      | 711.4        | 25.00       | 742.4      | 4X             | 745.3          | 4X                    | 75-125   | 4X  | 0-20   | Q          |

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Sample Duplicate

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: N/A  
Method: ASTM D-2216 (M)

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type             | Matrix | Instrument | Date Prepared  | Date Analyzed  | Duplicate Batch Number |
|---------------------------|------------------|--------|------------|----------------|----------------|------------------------|
| B-DU3-ISM1-3              | Sample           | Solid  | N/A        | 03/16/17 00:00 | 03/16/17 21:00 | H0316MOID3             |
| B-DU3-ISM1-3              | Sample Duplicate | Solid  | N/A        | 03/16/17 00:00 | 03/16/17 21:00 | H0316MOID3             |

| <u>Parameter</u> | <u>Sample Conc.</u> | <u>DUP Conc.</u> | <u>RPD</u> | <u>RPD CL</u> | <u>Qualifiers</u> |
|------------------|---------------------|------------------|------------|---------------|-------------------|
| Moisture         | 6.400               | 6.400            | 0          | 0-10          |                   |

  
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RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3550B  
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type       | Matrix             | Instrument             | Date Prepared    | Date Analyzed         | LCS Batch Number  |
|---------------------------|------------|--------------------|------------------------|------------------|-----------------------|-------------------|
| <b>099-14-353-10</b>      | <b>LCS</b> | <b>Solid</b>       | <b>GC 49</b>           | <b>03/16/17</b>  | <b>03/17/17 12:10</b> | <b>170316B10</b>  |
| <u>Parameter</u>          |            | <u>Spike Added</u> | <u>Conc. Recovered</u> | <u>LCS %Rec.</u> | <u>%Rec. CL</u>       | <u>Qualifiers</u> |
| TPH as Diesel             |            | 400.0              | 392.7                  | 98               | 61-145                |                   |

## Quality Control - LCS

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type        | Matrix          | Instrument | Date Prepared | Date Analyzed  | LCS Batch Number |
|---------------------------|-------------|-----------------|------------|---------------|----------------|------------------|
| 097-01-002-24505          | LCS         | Solid           | ICP 7300   | 03/24/17      | 03/27/17 10:57 | 170324L11        |
| Parameter                 | Spike Added | Conc. Recovered | LCS %Rec.  | %Rec. CL      | ME CL          | Qualifiers       |
| Antimony                  | 25.00       | 22.20           | 89         | 80-120        | 73-127         |                  |
| Arsenic                   | 25.00       | 22.10           | 88         | 80-120        | 73-127         |                  |
| Barium                    | 25.00       | 25.13           | 101        | 80-120        | 73-127         |                  |
| Beryllium                 | 25.00       | 22.44           | 90         | 80-120        | 73-127         |                  |
| Cadmium                   | 25.00       | 23.24           | 93         | 80-120        | 73-127         |                  |
| Chromium                  | 25.00       | 24.05           | 96         | 80-120        | 73-127         |                  |
| Cobalt                    | 25.00       | 24.45           | 98         | 80-120        | 73-127         |                  |
| Copper                    | 25.00       | 24.71           | 99         | 80-120        | 73-127         |                  |
| Lead                      | 25.00       | 24.60           | 98         | 80-120        | 73-127         |                  |
| Molybdenum                | 25.00       | 23.45           | 94         | 80-120        | 73-127         |                  |
| Nickel                    | 25.00       | 24.02           | 96         | 80-120        | 73-127         |                  |
| Selenium                  | 25.00       | 22.41           | 90         | 80-120        | 73-127         |                  |
| Silver                    | 12.50       | 11.77           | 94         | 80-120        | 73-127         |                  |
| Thallium                  | 25.00       | 24.05           | 96         | 80-120        | 73-127         |                  |
| Vanadium                  | 25.00       | 23.03           | 92         | 80-120        | 73-127         |                  |
| Zinc                      | 25.00       | 23.87           | 95         | 80-120        | 73-127         |                  |

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass


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## Quality Control - LCS

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type               | Matrix                 | Instrument       | Date Prepared   | Date Analyzed         | LCS Batch Number  |
|---------------------------|--------------------|------------------------|------------------|-----------------|-----------------------|-------------------|
| <b>097-01-002-24504</b>   | <b>LCS</b>         | <b>Solid</b>           | <b>ICP 7300</b>  | <b>03/24/17</b> | <b>03/27/17 10:59</b> | <b>170324L12</b>  |
| <u>Parameter</u>          | <u>Spike Added</u> | <u>Conc. Recovered</u> | <u>LCS %Rec.</u> | <u>%Rec. CL</u> | <u>ME CL</u>          | <u>Qualifiers</u> |
| Antimony                  | 25.00              | 23.01                  | 92               | 80-120          | 73-127                |                   |
| Arsenic                   | 25.00              | 22.69                  | 91               | 80-120          | 73-127                |                   |
| Barium                    | 25.00              | 25.19                  | 101              | 80-120          | 73-127                |                   |
| Beryllium                 | 25.00              | 22.96                  | 92               | 80-120          | 73-127                |                   |
| Cadmium                   | 25.00              | 23.36                  | 93               | 80-120          | 73-127                |                   |
| Chromium                  | 25.00              | 24.02                  | 96               | 80-120          | 73-127                |                   |
| Cobalt                    | 25.00              | 24.33                  | 97               | 80-120          | 73-127                |                   |
| Copper                    | 25.00              | 24.63                  | 99               | 80-120          | 73-127                |                   |
| Lead                      | 25.00              | 24.49                  | 98               | 80-120          | 73-127                |                   |
| Molybdenum                | 25.00              | 23.86                  | 95               | 80-120          | 73-127                |                   |
| Nickel                    | 25.00              | 24.08                  | 96               | 80-120          | 73-127                |                   |
| Selenium                  | 25.00              | 22.84                  | 91               | 80-120          | 73-127                |                   |
| Silver                    | 12.50              | 11.85                  | 95               | 80-120          | 73-127                |                   |
| Thallium                  | 25.00              | 24.59                  | 98               | 80-120          | 73-127                |                   |
| Vanadium                  | 25.00              | 23.00                  | 92               | 80-120          | 73-127                |                   |
| Zinc                      | 25.00              | 23.89                  | 96               | 80-120          | 73-127                |                   |

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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## Quality Control - LCS

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type       | Matrix       | Instrument        | Date Prepared   | Date Analyzed         | LCS Batch Number |
|---------------------------|------------|--------------|-------------------|-----------------|-----------------------|------------------|
| <b>099-16-272-2902</b>    | <b>LCS</b> | <b>Solid</b> | <b>Mercury 07</b> | <b>03/24/17</b> | <b>03/24/17 15:49</b> | <b>170324L02</b> |

| <u>Parameter</u> | <u>Spike Added</u> | <u>Conc. Recovered</u> | <u>LCS %Rec.</u> | <u>%Rec. CL</u> | <u>Qualifiers</u> |
|------------------|--------------------|------------------------|------------------|-----------------|-------------------|
| Mercury          | 0.8350             | 0.8521                 | 102              | 85-121          |                   |

## Quality Control - LCS

Andersen Environmental  
5261 West Imperial Highway  
Los Angeles, CA 90045-6231

Date Received: 03/14/17  
Work Order: 17-03-1104  
Preparation: EPA 3545  
Method: EPA 8082

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type       | Matrix             | Instrument             | Date Prepared    | Date Analyzed         | LCS Batch Number  |
|---------------------------|------------|--------------------|------------------------|------------------|-----------------------|-------------------|
| <b>099-12-535-4111</b>    | <b>LCS</b> | <b>Solid</b>       | <b>GC 58</b>           | <b>03/20/17</b>  | <b>03/20/17 17:11</b> | <b>170320L02</b>  |
| <u>Parameter</u>          |            | <u>Spike Added</u> | <u>Conc. Recovered</u> | <u>LCS %Rec.</u> | <u>%Rec. CL</u>       | <u>Qualifiers</u> |
| Aroclor-1016              |            | 100.0              | 88.00                  | 88               | 50-135                |                   |
| Aroclor-1260              |            | 100.0              | 91.00                  | 91               | 50-135                |                   |

## Quality Control - LCS

Andersen Environmental  
 5261 West Imperial Highway  
 Los Angeles, CA 90045-6231

Date Received: 03/14/17  
 Work Order: 17-03-1104  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

Project: Burbank Airport / 9836002041

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| Quality Control Sample ID | Type        | Matrix          | Instrument       | Date Prepared   | Date Analyzed         | LCS Batch Number  |
|---------------------------|-------------|-----------------|------------------|-----------------|-----------------------|-------------------|
| <b>099-14-035-384</b>     | <b>LCS</b>  | <b>Solid</b>    | <b>GC/MS EEE</b> | <b>03/17/17</b> | <b>03/17/17 20:09</b> | <b>170317L004</b> |
| Parameter                 | Spike Added | Conc. Recovered | LCS %Rec.        | %Rec. CL        | ME CL                 | Qualifiers        |
| Naphthalene               | 0.1000      | 0.1010          | 101              | 51-129          | 38-142                |                   |
| 2-Methylnaphthalene       | 0.1000      | 0.1230          | 123              | 50-127          | 37-140                |                   |
| 1-Methylnaphthalene       | 0.1000      | 0.1075          | 108              | 54-132          | 41-145                |                   |
| Acenaphthylene            | 0.1000      | 0.08448         | 84               | 50-123          | 38-135                |                   |
| Acenaphthene              | 0.1000      | 0.08883         | 89               | 53-125          | 41-137                |                   |
| Fluorene                  | 0.1000      | 0.08967         | 90               | 55-127          | 43-139                |                   |
| Phenanthrene              | 0.1000      | 0.1028          | 103              | 50-122          | 38-134                |                   |
| Anthracene                | 0.1000      | 0.09697         | 97               | 50-132          | 36-146                |                   |
| Fluoranthene              | 0.1000      | 0.1005          | 101              | 55-127          | 43-139                |                   |
| Pyrene                    | 0.1000      | 0.09908         | 99               | 50-134          | 36-148                |                   |
| Benzo (a) Anthracene      | 0.1000      | 0.09393         | 94               | 50-133          | 36-147                |                   |
| Chrysene                  | 0.1000      | 0.09799         | 98               | 51-129          | 38-142                |                   |
| Benzo (k) Fluoranthene    | 0.1000      | 0.09899         | 99               | 49-150          | 32-167                |                   |
| Benzo (b) Fluoranthene    | 0.1000      | 0.09724         | 97               | 50-142          | 35-157                |                   |
| Benzo (a) Pyrene          | 0.1000      | 0.09223         | 92               | 50-134          | 36-148                |                   |
| Indeno (1,2,3-c,d) Pyrene | 0.1000      | 0.09202         | 92               | 50-148          | 34-164                |                   |
| Dibenz (a,h) Anthracene   | 0.1000      | 0.09609         | 96               | 50-133          | 36-147                |                   |
| Benzo (g,h,i) Perylene    | 0.1000      | 0.09917         | 99               | 50-130          | 37-143                |                   |

Total number of LCS compounds: 18

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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**Sample Analysis Summary Report**

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| <u>Method</u>      | <u>Extraction</u> | <u>Chemist ID</u> | <u>Instrument</u> | <u>Analytical Location</u> |
|--------------------|-------------------|-------------------|-------------------|----------------------------|
| ASTM D-2216 (M)    | N/A               | 1050              | N/A               | 1                          |
| EPA 6010B          | EPA 3050B         | 935               | ICP 7300          | 1                          |
| EPA 7471A          | EPA 7471A Total   | 868               | Mercury 07        | 1                          |
| EPA 8015B (M)      | EPA 3550B         | 972               | GC 49             | 1                          |
| EPA 8082           | EPA 3545          | 944               | GC 58             | 1                          |
| EPA 8270C SIM PAHs | EPA 3545          | 907               | GC/MS EEE         | 1                          |

## Glossary of Terms and Qualifiers

Work Order: 17-03-1104

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| <u>Qualifiers</u> | <u>Definition</u>                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *                 | See applicable analysis comment.                                                                                                                                                                                                                                                                                                                                                    |
| <                 | Less than the indicated value.                                                                                                                                                                                                                                                                                                                                                      |
| >                 | Greater than the indicated value.                                                                                                                                                                                                                                                                                                                                                   |
| 1                 | Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.                                                                                                                                                                                                                            |
| 2                 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.                                                                                                                                                          |
| 3                 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.                                                                                                                                                                                                     |
| 4                 | The MS/MSD RPD was out of control due to suspected matrix interference.                                                                                                                                                                                                                                                                                                             |
| 5                 | The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.                                                                                                                                                                                                                                                             |
| 6                 | Surrogate recovery below the acceptance limit.                                                                                                                                                                                                                                                                                                                                      |
| 7                 | Surrogate recovery above the acceptance limit.                                                                                                                                                                                                                                                                                                                                      |
| B                 | Analyte was present in the associated method blank.                                                                                                                                                                                                                                                                                                                                 |
| BU                | Sample analyzed after holding time expired.                                                                                                                                                                                                                                                                                                                                         |
| BV                | Sample received after holding time expired.                                                                                                                                                                                                                                                                                                                                         |
| CI                | See case narrative.                                                                                                                                                                                                                                                                                                                                                                 |
| E                 | Concentration exceeds the calibration range.                                                                                                                                                                                                                                                                                                                                        |
| ET                | Sample was extracted past end of recommended max. holding time.                                                                                                                                                                                                                                                                                                                     |
| HD                | The chromatographic pattern was inconsistent with the profile of the reference fuel standard.                                                                                                                                                                                                                                                                                       |
| HDH               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).                                                                                                                                                                                                                  |
| HDL               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).                                                                                                                                                                                                                  |
| J                 | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.                                                                                                                                                                                                                                     |
| JA                | Analyte positively identified but quantitation is an estimate.                                                                                                                                                                                                                                                                                                                      |
| ME                | LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).                                                                                                                                                                                                                                                                            |
| ND                | Parameter not detected at the indicated reporting limit.                                                                                                                                                                                                                                                                                                                            |
| Q                 | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.                                                                                                                                                                                                       |
| SG                | The sample extract was subjected to Silica Gel treatment prior to analysis.                                                                                                                                                                                                                                                                                                         |
| X                 | % Recovery and/or RPD out-of-range.                                                                                                                                                                                                                                                                                                                                                 |
| Z                 | Analyte presence was not confirmed by second column or GC/MS analysis.                                                                                                                                                                                                                                                                                                              |
|                   | Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.                                                                                                                                                                                                           |
|                   | Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time. |
|                   | A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.                                                                                           |

# 17-03-1104

| LAB_SDG    | LAB_SAMPLE_NUMBER | FIELD_SAMPLE      | SAMPLING_DATE | SAMPLING_TIME | MATRIX | DEPTH | PROJECT_ID                   |
|------------|-------------------|-------------------|---------------|---------------|--------|-------|------------------------------|
| 17-03-0218 | 17-03-0218-1      | B-DU3-S-SG-07-03S | 20170302      | 12:40:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0218 | 17-03-0218-4      | B-DU3-S-SG-08-03S | 20170302      | 13:22:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0445 | 17-03-0445-1      | B-DU3-S-SG-09-3S  | 20170306      | 10:25:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0445 | 17-03-0445-5      | B-DU3-S-SG-10-3S  | 20170306      | 12:15:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0445 | 17-03-0445-10     | B-DU3-S-SG-07-3   | 20170306      | 13:17:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0445 | 17-03-0445-13     | B-DU3-S-SG-08-3   | 20170306      | 13:40:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0532 | 17-03-0532-1      | B-DU3-S-SG-01-3   | 20170307      | 10:55:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0532 | 17-03-0532-4      | B-DU3-S-SG-04-3   | 20170307      | 08:30:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0532 | 17-03-0532-7      | B-DU3-S-SG-09-3   | 20170307      | 08:05:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-0532 | 17-03-0532-10     | B-DU3-S-SG-10-3   | 20170307      | 07:10:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-1      | B-DU3-S-SG-02-3   | 20170314      | 13:50:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-4      | B-DU3-S-SG-03-3   | 20170314      | 14:30:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-7      | B-DU3-S-SG-05-3   | 20170314      | 10:00:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-10     | B-DU3-S-SG-06-3   | 20170314      | 10:30:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-12     | B-DU3-S-SG-01-3S  | 20170314      | 13:15:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-15     | B-DU3-S-SG-02-3S  | 20170314      | 11:15:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-18     | B-DU3-S-SG-03-3S  | 20170314      | 12:35:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-21     | B-DU3-S-SG-04-3S  | 20170314      | 09:15:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-24     | B-DU3-S-SG-05-3S  | 20170314      | 08:48:00      | Soil   | 3     | Burbank Airport / 9836002041 |
| 17-03-1059 | 17-03-1059-27     | B-DU3-S-SG-06-3S  | 20170314      | 07:25:00      | Soil   | 3     | Burbank Airport / 9836002041 |

B-DU3-ISM1-3  
 B-DU3-ISM2-3  
 B-DU3-ISM3-3  
 B-DU3-ISM4-3



EFI Global  
5261 West Imperial Highway, Los Angeles CA 90045  
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# Chain-of-Custody Record

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17-03-1104

|                        |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
|------------------------|---------------|----------------------------------------------------|-----------|------------------|--------------|----------------------|---------------------|----------|--|------|--|-------------------------------------------------------|--|
| Analytical Laboratory: |               | Calsciencie                                        |           | Job # 9836002041 |              |                      |                     |          |  |      |  |                                                       |  |
| Project Name:          |               | Burbank Airport                                    |           | NA               |              |                      |                     |          |  |      |  |                                                       |  |
| Project Address:       |               | 2627 N. Hollywood Way, Burbank                     |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Project Manager:       |               | B. Martasin                                        |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Sampled by:            |               | G. Baader                                          |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Phone/Email:           |               | 310-854-6300, brian_martasin@efiglobal.com         |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Phone/Email:           |               | Robert Cheung, 510-529-5948, RCheung@Geosyntec.com |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Number                 | Sample ID     | Lab ID                                             | Type      | Matrix           | Preservative | Sampling Information |                     |          |  |      |  |                                                       |  |
|                        |               |                                                    | Grab      | Water            | Other        | NaHSO4               | HCl                 |          |  |      |  |                                                       |  |
|                        |               |                                                    | Composite | Soil             | Vapor        |                      |                     |          |  |      |  |                                                       |  |
| 1                      | B-DU3-ISM1-3  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 2                      | B-DU3-ISM2-3  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 3                      | B-DU3-ISM3-3  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 4                      | B-DU3-ISM4-3  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 5                      | B-DU3-ISM1-8  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 6                      | B-DU3-ISM2-8  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 7                      | B-DU3-ISM3-8  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 8                      | B-DU3-ISM4-8  |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 9                      | B-DU3-ISM1-15 |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 10                     | B-DU3-ISM2-15 |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 11                     | B-DU3-ISM3-15 |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 12                     | B-DU3-ISM4-15 |                                                    | X         | X                |              | X                    | 3/2, 3/6, 3/7, 3/14 |          |  |      |  |                                                       |  |
| 13                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 14                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 15                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 16                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 17                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 18                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 19                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| 20                     |               |                                                    |           |                  |              |                      |                     |          |  |      |  |                                                       |  |
| Relinquished by        |               | Date                                               |           | Time             |              | Received by          |                     | Date     |  | Time |  | Remarks                                               |  |
| Handwritten Signature  |               | 03/14/17                                           |           |                  |              |                      |                     | 03/14/17 |  |      |  | Sample condition (circle): Chilled Intact             |  |
|                        |               |                                                    |           |                  |              |                      |                     |          |  |      |  | 15-footers on hold pending results of shallow samples |  |
|                        |               |                                                    |           |                  |              |                      |                     |          |  |      |  | Original samples for ISM previously submitted         |  |



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# Chain-of-Custody Record

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| Analytical Laboratory:           |                   | Calscience                                         |                    | Job # 9836002041 |        |         |              |       |             |      |                      |        |       |
|----------------------------------|-------------------|----------------------------------------------------|--------------------|------------------|--------|---------|--------------|-------|-------------|------|----------------------|--------|-------|
| Project Name:                    |                   | Burbank Airport                                    |                    | NA               |        |         |              |       |             |      |                      |        |       |
| Project Address:                 |                   | 2627 N. Hollywood Way, Burbank                     |                    |                  |        |         |              |       |             |      |                      |        |       |
| Project Manager:                 |                   | B. Martasin                                        |                    |                  |        |         |              |       |             |      |                      |        |       |
| Sampled by:                      |                   | G. Baader                                          |                    |                  |        |         |              |       |             |      |                      |        |       |
| Phone/Email:                     |                   | 310-854-6300, brian_martasin@efiglobal.com         |                    |                  |        |         |              |       |             |      |                      |        |       |
| Phone/Email:                     |                   | Robert Cheung, 510-529-5948, RCheung@Geosyntec.com |                    |                  |        |         |              |       |             |      |                      |        |       |
| Number                           | Sample ID         | Lab ID                                             | Type               |                  | Matrix |         | Preservative |       |             |      | Sampling Information |        |       |
|                                  |                   |                                                    | Grab               | Discrete         | Water  | Soil    | Vapor        | Other | Cold (4° C) | HNO3 | NaHSO4               | HCl    | Date  |
| 1                                | B-DU3-S-SG-07035  | 1                                                  | X                  | X                | X      |         |              |       |             |      |                      | 3/2/17 | 12:40 |
| 2                                | -085              | 2                                                  | X                  | X                | X      |         |              |       |             |      |                      | "      | 12:44 |
| 3                                | -155              | 3                                                  | X                  | X                | X      |         |              |       |             |      |                      | "      | 12:49 |
| 4                                | B-DU3-S-SG-08-035 | 4                                                  | X                  | X                | X      |         |              |       |             |      |                      | "      | 13:22 |
| 5                                | -085              | 5                                                  | X                  | X                | X      |         |              |       |             |      |                      | "      | 13:32 |
| 6                                | -155              | 6                                                  | X                  | X                | X      |         |              |       |             |      |                      | "      | 13:38 |
| 7                                |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 8                                |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 9                                |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 10                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 11                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 12                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 13                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 14                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 15                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 16                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 17                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 18                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 19                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 20                               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Method                           | Container         | Turnaround Time                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| VOCS, EPA Method 8260B           |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| PAHs, EPA Method 8270C SIM       |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Metals, EPA Method 6010B/7471A   |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Lead, EPA Method 6010B           |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Arsenic, EPA Method 6010B        |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| STLC Lead EPA Method             |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| TCLP Lead EPA Method             |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| PCBs, EPA Method 8082            |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| TPH full chain, EPA Method 8015M |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| TPHd, TPHmo, EPA Method 8015M    |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Composite                        |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Hold                             |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 4- or 8-ounce Glass              |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 250-ml Poly Bottle               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| EZ Draw (EPA 5035)               |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Acetate Liner                    |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 1-l Amber Bottle                 |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 24 hours                         |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| 48 hours                         |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Normal                           |                   |                                                    |                    |                  |        |         |              |       |             |      |                      |        |       |
| Relinquished by                  | Date              | Time                                               | Received by        | Date             | Time   | Remarks |              |       |             |      |                      |        |       |
| <i>[Signature]</i>               | 3/2/17            | 1545                                               | <i>[Signature]</i> | 3/2/17           | 1545   |         |              |       |             |      |                      |        |       |
| <i>[Signature]</i>               | 3/2/17            | 1734                                               | <i>[Signature]</i> | 3/2/17           | 1734   |         |              |       |             |      |                      |        |       |

# SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 2 / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 1.8 °C (w/ CF): 1.8 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 1091

## CUSTODY SEAL:

Cooler ☒ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A

Checked by: 1091

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 300

## SAMPLE CONDITION:

|                                                                                                                                                                                                                                                                                                                                                     | Yes                                 | No                       | N/A                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| Chain-of-Custody (COC) document(s) received with samples .....                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| COC document(s) received complete .....                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers<br><input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time |                                     |                          |                                     |
| Sampler's name indicated on COC .....                                                                                                                                                                                                                                                                                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sample container label(s) consistent with COC .....                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sample container(s) intact and in good condition .....                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Proper containers for analyses requested .....                                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sufficient volume/mass for analyses requested .....                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Samples received within holding time .....                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Aqueous samples for certain analyses received within 15-minute holding time                                                                                                                                                                                                                                                                         |                                     |                          |                                     |
| <input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen .....                                                                                                                                                                                   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Proper preservation chemical(s) noted on COC and/or sample container .....                                                                                                                                                                                                                                                                          | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Unpreserved aqueous sample(s) received for certain analyses                                                                                                                                                                                                                                                                                         |                                     |                          |                                     |
| <input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals                                                                                                                                                                                                                          |                                     |                          |                                     |
| Container(s) for certain analysis free of headspace .....                                                                                                                                                                                                                                                                                           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)                                                                                                                                                                                                   |                                     |                          |                                     |
| <input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)                                                                                                                                                                                                  |                                     |                          |                                     |
| Tedlar™ bag(s) free of condensation .....                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## CONTAINER TYPE:

(Trip Blank Lot Number: \_\_\_\_\_)

Aqueous: ☐ VOA ☐ VOA<sub>h</sub> ☐ VOAn<sub>2</sub> ☐ 100PJ ☐ 100PJna<sub>2</sub> ☐ 125AGB ☐ 125AGB<sub>h</sub> ☐ 125AGB<sub>p</sub> ☐ 125PB  
☐ 125PBz<sub>nn</sub> ☐ 250AGB ☐ 250CGB ☐ 250CGB<sub>s</sub> ☐ 250PB ☐ 250PB<sub>n</sub> ☐ 500AGB ☐ 500AGJ ☐ 500AGJ<sub>s</sub>  
☐ 500PB ☐ 1AGB ☐ 1AGBna<sub>2</sub> ☐ 1AGB<sub>s</sub> ☐ 1PB ☐ 1PBna ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve (P) ☐ EnCores® (\_\_\_\_) ☐ TerraCores® (\_\_\_\_) ☐ \_\_\_\_\_

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ \_\_\_\_\_ Other Matrix (\_\_\_\_): ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: 300

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>·H<sub>2</sub>O, z<sub>nn</sub> = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 300

## Chain-of-Custody Record

[illegible]

Take sample from vial of live  
bottle & freeze indicated on se

# SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI GLOBAL

DATE: 03 / 6 / 2017

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 37 °C (w/ CF): 3.7 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: )

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 678

**CUSTODY SEAL:**

Cooler ☒ Present and Intact

☐ Present but Not Intact

☐ Not Present

☐ N/A

Checked by: 678

Sample(s) ☐ Present and Intact

☐ Present but Not Intact

☒ Not Present

☐ N/A

Checked by: 1053

**SAMPLE CONDITION:**

Chain-of-Custody (COC) document(s) received with samples ..... ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ..... ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ..... ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ..... ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ..... ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ..... ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ..... ☒ Yes ☐ No ☐ N/A

Samples received within holding time ..... ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ..... ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ..... ☐ Yes ☐ No ☒ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

Container(s) for certain analysis free of headspace ..... ☐ Yes ☐ No ☒ N/A

☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ..... ☐ Yes ☐ No ☒ N/A

**CONTAINER TYPE:**

(Trip Blank Lot Number: )

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna<sub>2</sub> ☐ 100PJ ☐ 100PJna<sub>2</sub> ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBz<sub>2</sub>na ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☐ 1AGB ☐ 1AGBna<sub>2</sub> ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ ☐ ☐ ☐

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve (P) ☐ EnCores® ( ) ☐ TerraCores® ( ) ☐

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ ☐ Other Matrix ( ): ☐ ☐

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: 1053

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, z<sub>2</sub>na = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 678

| Analytical Laboratory:     |             | Calscience                                                |      | Job # 9836002041 |              | Method |       |                        |                            |                                |                        |                           |                      |                      |                       | Container                        |                               | Turnaround Time |      |                     |                    |                    |               |                  |          |          |        |
|----------------------------|-------------|-----------------------------------------------------------|------|------------------|--------------|--------|-------|------------------------|----------------------------|--------------------------------|------------------------|---------------------------|----------------------|----------------------|-----------------------|----------------------------------|-------------------------------|-----------------|------|---------------------|--------------------|--------------------|---------------|------------------|----------|----------|--------|
| Project Name:              |             | Burbank Airport                                           |      | NA               |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Project Address:           |             | 2627 N. Hollywood Way, Burbank                            |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Project Manager:           |             | B. Martasin                                               |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Sampled by:                |             | G. Baader                                                 |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Phone/Email:               |             | 310-854-6300, brian_martasin@efiglobal.com                |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Phone/Email:               |             | Robert Cheung, 510-529-5948, RCheung@Geosyntec.com        |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Number                     | Sample ID   | Lab ID                                                    | Type | Matrix           | Preservative | Date   | Time  | OCPs, EPA Method 8081A | PAHs, EPA Method 8270C SIM | Metals, EPA Method 6010B/7471A | Lead, EPA Method 6010B | Arsenic, EPA Method 6010B | STLC Lead EPA Method | TCLP Lead EPA Method | PCBs, EPA Method 8082 | TPH full chain, EPA Method 8015M | TPHd, TPHmo, EPA Method 8015M | Composite       | Hold | 4- or 8-ounce Glass | 250-ml Poly Bottle | EZ Draw (EPA 5035) | Acetate Liner | 1-l Amber Bottle | 24 hours | 48 hours | Normal |
| 1                          | B-DU3-501-3 | 1                                                         | Grab | Discrete         |              | 3/2/17 | 10:55 |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 2                          | -8          | 2                                                         | Grab | Discrete         |              | 3/2/17 | 11:00 |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 3                          | -15         | 3                                                         | Grab | Discrete         |              | 3/2/17 | 11:10 |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 4                          | B-DU3-504-3 | 4                                                         | Grab | Discrete         |              | 3/2/17 | 8:30  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 5                          | -8          | 5                                                         | Grab | Discrete         |              | 3/2/17 | 8:33  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 6                          | -175        | 6                                                         | Grab | Discrete         |              | 3/2/17 | 8:55  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 7                          | B-DU3-507-3 | 7                                                         | Grab | Discrete         |              | 3/2/17 | 8:05  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 8                          | -8          | 8                                                         | Grab | Discrete         |              | 3/2/17 | 8:12  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 9                          | -15         | 9                                                         | Grab | Discrete         |              | 3/2/17 | 8:23  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 10                         | B-DU3-510-3 | 10                                                        | Grab | Discrete         |              | 3/2/17 | 7:10  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 11                         | -8          | 11                                                        | Grab | Discrete         |              | 3/2/17 | 7:13  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| 12                         | -15         | 12                                                        | Grab | Discrete         |              | 3/2/17 | 7:20  |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Relinquished by:           |             | A. Garcia                                                 |      | 3/2/17           |              | 1600   |       | 3/2/17                 |                            | 1600                           |                        | 3/2/17                    |                      | 1600                 |                       | 3/2/17                           |                               | 1600            |      | 3/2/17              |                    | 1600               |               | 3/2/17           |          | 1600     |        |
| Received by:               |             | G. Baader                                                 |      | 3/2/17           |              | 1750   |       | 3/2/17                 |                            | 1750                           |                        | 3/2/17                    |                      | 1750                 |                       | 3/2/17                           |                               | 1750            |      | 3/2/17              |                    | 1750               |               | 3/2/17           |          | 1750     |        |
| Remarks:                   |             | Hold until all B-DU3 samples received for 15h composited. |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |
| Sample condition (circle): |             | Chilled Intact                                            |      |                  |              |        |       |                        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |                 |      |                     |                    |                    |               |                  |          |          |        |

Take sample from back of Cuvettes otherwise indicated on liner.

# SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 7 / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 2.2 °C (w/ CF): 2.2 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☒ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 1091

## CUSTODY SEAL:

Cooler ☒ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A

Checked by: 1091

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 1110

## SAMPLE CONDITION:

|                                                                                                                                                                                      | Yes                                 | No                       | N/A                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| Chain-of-Custody (COC) document(s) received with samples .....                                                                                                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| COC document(s) received complete .....                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers                          |                                     |                          |                                     |
| <input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time |                                     |                          |                                     |
| Sampler's name indicated on COC .....                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sample container label(s) consistent with COC .....                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sample container(s) intact and in good condition .....                                                                                                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Proper containers for analyses requested .....                                                                                                                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Sufficient volume/mass for analyses requested .....                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Samples received within holding time .....                                                                                                                                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Aqueous samples for certain analyses received within 15-minute holding time                                                                                                          |                                     |                          |                                     |
| <input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen .....                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Proper preservation chemical(s) noted on COC and/or sample container .....                                                                                                           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Unpreserved aqueous sample(s) received for certain analyses                                                                                                                          |                                     |                          |                                     |
| <input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals                                                           |                                     |                          |                                     |
| Container(s) for certain analysis free of headspace .....                                                                                                                            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)                                    |                                     |                          |                                     |
| <input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)                                   |                                     |                          |                                     |
| Tedlar™ bag(s) free of condensation .....                                                                                                                                            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## CONTAINER TYPE:

(Trip Blank Lot Number: \_\_\_\_\_)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna<sub>2</sub> ☐ 100PJ ☐ 100PJna<sub>2</sub> ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznnna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☐ 1AGB ☐ 1AGBna<sub>2</sub> ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve ☐ EnCores® (\_\_\_\_\_) ☐ TerraCores® (\_\_\_\_\_) ☐ \_\_\_\_\_

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ \_\_\_\_\_ Other Matrix (\_\_\_\_\_) ☐ \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>,

Labeled/Checked by: 1110

s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, znnna = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 1091

| Analytical Laboratory: |                  | Calscience                                         |      | Job # 9836002041 |              | Container                |                                  | Turnaround Time     |                  |
|------------------------|------------------|----------------------------------------------------|------|------------------|--------------|--------------------------|----------------------------------|---------------------|------------------|
| Project Name:          |                  | Burbank Airport                                    |      | NA               |              | 17-03-1059               |                                  |                     |                  |
| Project Address:       |                  | 2627 N. Hollywood Way, Burbank                     |      |                  |              |                          |                                  |                     |                  |
| Project Manager:       |                  | B. Martasin                                        |      |                  |              |                          |                                  |                     |                  |
| Sampled by:            |                  | G. Baader                                          |      |                  |              |                          |                                  |                     |                  |
| Phone/Email:           |                  | 310-854-6300, brian_martasin@efiglobal.com         |      |                  |              |                          |                                  |                     |                  |
| Phone/Email:           |                  | Robert Cheung, 510-529-5948, RCheung@Geosyntec.com |      |                  |              |                          |                                  |                     |                  |
| Number                 | Sample ID        | Lab ID                                             | Type | Matrix           | Preservative | Sampling Information     | Method                           | Container           | Turnaround Time  |
| 1                      | B-DU3-S-02-3     |                                                    | Grab | Water            |              | 3/14/17 13:50            | PAHs, EPA Method 8270C SIM       | 4- or 8-ounce Glass | Normal           |
| 2                      | -8               |                                                    | Grab | Water            |              | 3/14/17 14:00            | Metals, EPA Method 6010B/7471A   | 250-ml Poly Bottle  | 48 hours         |
| 3                      | -15              |                                                    | Grab | Water            |              | 3/14/17 14:10            | Lead, EPA Method 6010B           | Acetate Liner       | 24 hours         |
| 4                      | B-DU3-S-03-3     |                                                    | Grab | Water            |              | 3/14/17 14:30            | TPH full chain, EPA Method 8015M | EZ Draw (EPA 5035)  | 1-1 Amber Bottle |
| 5                      | -8               |                                                    | Grab | Water            |              | 3/14/17 14:35            | PCBs, EPA Method 8082            |                     |                  |
| 6                      | -15              |                                                    | Grab | Water            |              | 3/14/17 14:40            | STLC Lead EPA Method             |                     |                  |
| 7                      | B-DU3-S-05-3     |                                                    | Grab | Water            |              | 3/14/17 10:00            | TPH, TPHmo, EPA Method 8015M     |                     |                  |
| 8                      | -8               |                                                    | Grab | Water            |              | 3/14/17 10:05            | TPH full chain, EPA Method 8015M |                     |                  |
| 9                      | -15              |                                                    | Grab | Water            |              | 3/14/17 10:15            | PCBs, EPA Method 8082            |                     |                  |
| 10                     | B-DU3-S-06-3     |                                                    | Grab | Water            |              | 3/14/17 10:30            | STLC Lead EPA Method             |                     |                  |
| 11                     | -8               |                                                    | Grab | Water            |              | 3/14/17 10:40            | TPH full chain, EPA Method 8015M |                     |                  |
| 12                     | B-DU3-S-06-3     |                                                    | Grab | Water            |              | 3/14/17 13:15            | TPH, TPHmo, EPA Method 8015M     |                     |                  |
| 13                     | -8               |                                                    | Grab | Water            |              | 3/14/17 13:20            | PCBs, EPA Method 8082            |                     |                  |
| 14                     | -15              |                                                    | Grab | Water            |              | 3/14/17 13:30            | STLC Lead EPA Method             |                     |                  |
| 15                     | B-DU3-S-06-02-35 |                                                    | Grab | Water            |              | 3/14/17 11:11            | TPH full chain, EPA Method 8015M |                     |                  |
| 16                     | -8               |                                                    | Grab | Water            |              | 3/14/17 12:00            | PCBs, EPA Method 8082            |                     |                  |
| 17                     | -15              |                                                    | Grab | Water            |              | 3/14/17 12:11            | STLC Lead EPA Method             |                     |                  |
| 18                     | B-DU3-S-06-03-35 |                                                    | Grab | Water            |              | 3/14/17 12:21            | TPH full chain, EPA Method 8015M |                     |                  |
| 19                     | -8               |                                                    | Grab | Water            |              | 3/14/17 12:40            | PCBs, EPA Method 8082            |                     |                  |
| 20                     | -15              |                                                    | Grab | Water            |              | 3/14/17 12:50            | STLC Lead EPA Method             |                     |                  |
| Relinquished by        |                  | 3/14/17 15:55                                      |      | Received by      |              | 3/14/17 15:55            |                                  | Time                |                  |
| Signature              |                  | Signature                                          |      | Signature        |              | Signature                |                                  | Time                |                  |
| Date                   |                  | Date                                               |      | Date             |              | Date                     |                                  | Time                |                  |
| 3/14/17                |                  | 3/14/17                                            |      | 3/14/17          |              | 3/14/17                  |                                  | 15:55               |                  |
| 1804                   |                  | 1804                                               |      | 1804             |              | 1804                     |                                  | 1804                |                  |
| Remarks                |                  | Sample condition (circle): Chilled                 |      | Intact           |              | See note on Page 2 of 2. |                                  |                     |                  |

**Analytical Laboratory:** Calscience Job # 9836002041

**Project Name:** Burbank Airport

**Project Address:** 2627 N. Hollywood Way, Burbank

**Project Manager:** B. Martasin

**Sampled by:** G. Baader

**Phone/Email:** 310-854-6300, brian\_martasin@efiglobal.com

**Phone/Email:** Robert Cheung, 510-529-5948, RCheung@Geosyntec.com

| Analytical Laboratory: |                  |        |      |          |        |      |       |       |              | Calscience                                         |        | Job # 9836002041 |         | Method |                            |                                |                        |                           |                      |                      |                       |                                  |                               | Container |      | Turnaround Time |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Project Name:          |                  |        |      |          |        |      |       |       |              | Burbank Airport                                    |        | NA               |         | 1059   |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Address:       |                  |        |      |          |        |      |       |       |              | 2627 N. Hollywood Way, Burbank                     |        |                  |         |        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Manager:       |                  |        |      |          |        |      |       |       |              | B. Martasin                                        |        |                  |         |        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampled by:            |                  |        |      |          |        |      |       |       |              | G. Baader                                          |        |                  |         |        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Phone/Email:           |                  |        |      |          |        |      |       |       |              | 310-854-6300, brian_martasin@efiglobal.com         |        |                  |         |        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Phone/Email:           |                  |        |      |          |        |      |       |       |              | Robert Cheung, 510-529-5948, RCheung@Geosyntec.com |        |                  |         |        |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Number                 | Sample ID        | Lab ID | Type |          | Matrix |      |       |       | Preservative |                                                    |        |                  | Date    | Time   | Remarks                    |                                |                        |                           |                      |                      |                       |                                  |                               |           | Time | Remarks         |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |                  |        | Grab | Discrete | Water  | Soil | Vapor | Other | Cold (4° C)  | HNO3                                               | NaHSO4 | HCl              |         |        | PAHs, EPA Method 8270C SIM | Metals, EPA Method 6010B/7471A | Lead, EPA Method 6010B | Arsenic, EPA Method 6010B | STLC Lead EPA Method | TCLP Lead EPA Method | PCBs, EPA Method 8082 | TPH full chain, EPA Method 8015M | TPHd, TPHmo, EPA Method 8015M | Composite |      |                 | Hold | 4- or 8-ounce Glass | 250-ml Poly Bottle | EZ Draw (EPA 5035) | Acetate Liner | 1-l Amber Bottle | 24 hours | 48 hours | Normal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21                     | B-DU3-S-56-04-35 |        | X    |          | X      |      |       |       |              |                                                    |        |                  | 3/14/17 | 9:15   |                            |                                |                        |                           |                      |                      |                       |                                  |                               |           |      |                 |      |                     |                    |                    |               |                  |          |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Relinquished by:** [Signature] **Date:** 3/14/17 **Time:** 15:55 **Received by:** [Signature] **Date:** 3/14/17 **Time:** 15:55

**Remarks:** Sample condition (circle): Chilled Intact  
Take sample from center of liner unless otherwise indicated.

**Hold all samples until all for DU received, analysis on separate COC.**

Hold all 15 samples for further analysis & see dec.

## SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFL

DATE: 03 / 14 / 2017

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 3.3 °C (w/ CF): 3.3 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ Filter

Checked by: 804

**CUSTODY SEAL:**Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 804

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 778

**SAMPLE CONDITION:**Chain-of-Custody (COC) document(s) received with samples ..... ☒ Yes ☐ No ☐ N/ACOC document(s) received complete ..... ☒ Yes ☐ No ☐ N/A☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished timeSampler's name indicated on COC ..... ☒ Yes ☐ No ☐ N/ASample container label(s) consistent with COC ..... ☒ Yes ☐ No ☐ N/ASample container(s) intact and in good condition ..... ☒ Yes ☐ No ☐ N/AProper containers for analyses requested ..... ☒ Yes ☐ No ☐ N/ASufficient volume/mass for analyses requested ..... ☒ Yes ☐ No ☐ N/ASamples received within holding time ..... ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ..... ☐ Yes ☐ No ☒ N/AProper preservation chemical(s) noted on COC and/or sample container ..... ☐ Yes ☐ No ☒ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved MetalsContainer(s) for certain analysis free of headspace ..... ☐ Yes ☐ No ☒ N/A☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)Tedlar™ bag(s) free of condensation ..... ☐ Yes ☐ No ☒ N/A**CONTAINER TYPE:**

(Trip Blank Lot Number: \_\_\_\_\_)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna<sub>2</sub> ☐ 100PJ ☐ 100PJna<sub>2</sub> ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB☐ 125PBznnna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs☐ 500PB ☐ 1AGB ☐ 1AGBna<sub>2</sub> ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve (P) ☐ EnCores® (\_\_\_\_\_) ☐ TerraCores® (\_\_\_\_\_) ☐ \_\_\_\_\_Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ \_\_\_\_\_ Other Matrix (\_\_\_\_\_) ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO<sub>3</sub>, na = NaOH, na<sub>2</sub> = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, p = H<sub>3</sub>PO<sub>4</sub>, Labeled/Checked by: 778s = H<sub>2</sub>SO<sub>4</sub>, u = ultra-pure, x = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, znnna = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 1053

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

### CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (20) solid samples on March 2; 6-7; 14, 2017. A total of (20) containers were received in good condition and at temperatures of 1.8°C, 3.7°C, 2.2°C and 3.3°C, which were within the recommended temperature of 0°C – 6°C.

| Client Sample ID  | Lab Sample ID | Date & Time Sampled | Date & Time Received |
|-------------------|---------------|---------------------|----------------------|
| B-DU3-S-SG-07-03S | 17-03-1104-1  | 03/02/17 12:40      | 03/14/17 18:04       |
| B-DU3-S-SG-08-03S | 17-03-1104-2  | 03/02/17 13:22      | 03/14/17 18:04       |
| B-DU3-S-SG-09-3S  | 17-03-1104-3  | 03/06/17 10:25      | 03/14/17 18:04       |
| B-DU3-S-SG-10-3S  | 17-03-1104-4  | 03/06/17 12:15      | 03/14/17 18:04       |
| B-DU3-S-07-3      | 17-03-1104-5  | 03/06/17 13:17      | 03/14/17 18:04       |
| B-DU3-S-08-3      | 17-03-1104-6  | 03/06/17 13:40      | 03/14/17 18:04       |
| B-DU3-S-01-3      | 17-03-1104-7  | 03/07/17 10:55      | 03/14/17 18:04       |
| B-DU3-S-04-3      | 17-03-1104-8  | 03/07/17 08:30      | 03/14/17 18:04       |
| B-DU3-S-09-3      | 17-03-1104-9  | 03/07/17 08:05      | 03/14/17 18:04       |
| B-DU3-S-10-3      | 17-03-1104-10 | 03/07/17 07:10      | 03/14/17 18:04       |
| B-DU3-S-02-3      | 17-03-1104-11 | 03/14/17 13:50      | 03/14/17 18:04       |
| B-DU3-S-03-3      | 17-03-1104-12 | 03/14/17 14:30      | 03/14/17 18:04       |
| B-DU3-S-05-3      | 17-03-1104-13 | 03/14/17 10:00      | 03/14/17 18:04       |
| B-DU3-S-06-3      | 17-03-1104-14 | 03/14/17 10:30      | 03/14/17 18:04       |
| B-DU3-S-SG-01-3S  | 17-03-1104-15 | 03/14/17 13:15      | 03/14/17 18:04       |
| B-DU3-S-SG-02-3S  | 17-03-1104-16 | 03/14/17 11:15      | 03/14/17 18:04       |
| B-DU3-S-SG-03-3S  | 17-03-1104-17 | 03/14/17 12:35      | 03/14/17 18:04       |
| B-DU3-S-SG-04-3S  | 17-03-1104-18 | 03/14/17 09:15      | 03/14/17 18:04       |
| B-DU3-S-SG-05-3S  | 17-03-1104-19 | 03/14/17 08:48      | 03/14/17 18:04       |
| B-DU3-S-SG-06-3S  | 17-03-1104-20 | 03/14/17 07:25      | 03/14/17 18:04       |
| COMPOSITE         | 17-03-1104-21 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM1-3      | 17-03-1104-22 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM2-3      | 17-03-1104-23 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM3-3      | 17-03-1104-24 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM4-3      | 17-03-1104-25 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM1-3      | 17-03-1104-26 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM2-3      | 17-03-1104-27 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM3-3      | 17-03-1104-28 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM4-3      | 17-03-1104-29 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM1-3      | 17-03-1104-30 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM2-3      | 17-03-1104-31 | 03/02/17 00:00      | 03/14/17 18:04       |
| B-DU3-ISM3-3      | 17-03-1104-32 | 03/02/17 00:00      | 03/14/17 18:04       |

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

| Client Sample ID | Lab Sample ID | Date & Time Sampled | Date & Time Received |
|------------------|---------------|---------------------|----------------------|
| B-DU3-ISM4-3     | 17-03-1104-33 | 03/02/17 00:00      | 03/14/17 18:04       |

### **DATA SUMMARY:**

As per the chain of custody (COC), the samples were analyzed using one or more of the following methodologies:

- ASTM D-2216 (M) Moisture Content (Solid)
- EPA 6010B Title 22 Metals (Solid)
- EPA 7471A Mercury (Solid)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Solid)
- EPA 8082 PCB Aroclors (Solid)
- EPA 8270C SIM PAHs (Solid)

The samples were analyzed within the suggested EPA holding time for the requested methods unless otherwise noted.

Sample results were reported in the RL format.

The sample data is reported in dry weight. The instrument printouts do not reflect the correction for dry weight.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Manual integrations made to the data will be noted in the following narrative. The before and amended chromatograms have been included in the data package.

All sample and analytical QC are within acceptance criteria unless otherwise noted.

### **ASTM D-2216 (M) Moisture Content (Solid):**

Samples -26 through -29 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/16/17 in batch #s H0316MOIB3 / H0316MOID3.

The samples were extracted and analyzed after recommended holding time.

### **Balance Calibration/Verification:**

All values were within acceptance criteria.

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

### Sample and QC:

Sample -26 was used as the sample duplicate for quality control. The method blank was non-detect and the duplicate analysis was within acceptance criteria.

### **EPA 6010B Title 22 Metals (Solid):**

Samples -30 through -33 were analyzed for Metals by EPA 6010B. The samples were prepared on 03/24/17 and analyzed on 03/27/17 in batch #s 170324L11 / 170324S11 and 170324L12 / 170324S12 on ICP 7300.

### Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were /within acceptance criteria.

### Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

### ICS A/AB:

All values were within acceptance criteria.

### Sample and QC:

- QC Batch #s 170324L11 / 170324S11: (Associated with samples -30 through -32)

The method blank was non-detect and the LCS was within acceptance criteria.

A non-client sample was used for the MS/MSD and PDS/PDSD; refer to the MS/MSD and PDS/PDSD summary forms for further information.

- QC Batch #s 170324L12 / 170324S12: (Associated with sample -33)

The method blank was non-detect and the LCS was within acceptance criteria.

A non-client sample was used for the MS/MSD and PDS/PDSD; refer to the MS/MSD and PDS/PDSD summary forms for further information.

### **EPA 7471A Mercury (Solid):**

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

Samples -26 through -29 were analyzed for Mercury by EPA 7471A. The samples were prepared and analyzed on 03/24/17 in batch #s 170324L02 / 170324S02 on Mercury 07.

### Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

### Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

### Sample and QC:

The method blank was non-detect and the LCS was within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

### **EPA 8015B (M) Diesel and Motor Oil Ranges (Solid):**

Samples -26 through -29 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/16/17 and analyzed on 03/20/17 in batch #s 170316B10 / 170316S10 on GC 49.

### Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/15/17 on GC 49. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

For the Diesel and Motor Oil Ranges, Diesel is used for the initial calibration and spiking standards. The surrogate recoveries for the samples and QC were calculated from the 5-point surrogate curve analyzed with the Diesel ICAL.

### Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

### Sample and QC:

Sample -28 was used for the MS/MSD. The method blank was non-detect; the LCS, MS/MSD and all surrogate recoveries were within acceptance criteria.

## **Case Narrative**

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

Manual integration was performed on (1) or more samples, MS and MSD to correct the peak and/or baseline integration.

For samples -26 through -29, the sample chromatographic pattern did not match the TPH Diesel and Motor Oil standards. Quantitation of the unknown hydrocarbons in the samples was based upon the specified Diesel standard.

### **EPA 8082 PCB Aroclors (Solid):**

Samples -30 through -33 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared and analyzed on 03/20/17 in batch #s 170320L02 / 170320S02 on GC 58.

The samples were extracted outside recommended holding time.

#### **Initial Calibration and Initial Calibration Verification:**

The initial calibration was performed on 03/14/17 on GC 58. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260. Single point response factors were generated for all other Aroclors.

#### **Continuing Calibration Verification:**

All values were within the 15% D acceptance criteria.

#### **Sample and QC:**

Sample -30 was used for the MS/MSD. The method blank was non-detect; the LCS, MS/MSD and all surrogate recoveries were within acceptance criteria.

### **EPA 8270C SIM PAHs (Solid):**

Samples -26 through -29 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/17/17 and analyzed on 03/20/17 in batch #s 170317L004 / 170317S004 on GC/MS EEE.

The samples were extracted outside recommended holding time.

#### **Initial Calibration and Initial Calibration Verification:**

## **Case Narrative**

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1104

The initial calibration was performed on 03/13/17 on GC/MS EEE. The ICAL was within the 15% RSD acceptance criteria and the ICV was within the 20% D acceptance criteria.

### Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

### Tuning Standards:

All instrument tuning standards (DFTPP) were within acceptance criteria.

### Sample and QC:

The method blank was non-detect; the LCS, all surrogate and internal standard recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

# ASTM D-2216 (M)

## Moisture Content

### (Solid)

RAW DATA

**RAW DATA SHEET  
FOR METHOD: ASTM D-2216 (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:07

**# 26**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

|                      |            |                                |                  |
|----------------------|------------|--------------------------------|------------------|
| <b>LCS/MB BATCH:</b> | H0316MOIB3 | <b>SAMPLE VOLUME / WEIGHT:</b> | DEFAULT: 1.00 g  |
| <b>MS/MSD BATCH:</b> | H0316MOID3 | <b>FINAL VOLUME / WEIGHT:</b>  | DEFAULT: 1.00 ml |
| <b>UNITS:</b>        | %          | <b>ADJUSTMENT RATIO TO PF:</b> | 1.00             |

**COMMENT:**

| <b>COMPOUND</b> | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Moisture        | 6.40               | 1.00      | 6.40        | 0.10      | 7c          |

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**RAW DATA SHEET  
FOR METHOD: ASTM D-2216 (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:07

**# 27**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

|                      |            |                                |                  |
|----------------------|------------|--------------------------------|------------------|
| <b>LCS/MB BATCH:</b> | H0316MOIB3 | <b>SAMPLE VOLUME / WEIGHT:</b> | DEFAULT: 1.00 g  |
| <b>MS/MSD BATCH:</b> | H0316MOID3 | <b>FINAL VOLUME / WEIGHT:</b>  | DEFAULT: 1.00 ml |
| <b>UNITS:</b>        | %          | <b>ADJUSTMENT RATIO TO PF:</b> | 1.00             |

**COMMENT:**

| <b>COMPOUND</b> | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Moisture        | 6.30               | 1.00      | 6.30        | 0.10      | 7c          |

**RAW DATA SHEET  
FOR METHOD: ASTM D-2216 (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:07

**# 28**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

|                      |            |                                |                  |
|----------------------|------------|--------------------------------|------------------|
| <b>LCS/MB BATCH:</b> | H0316MOIB3 | <b>SAMPLE VOLUME / WEIGHT:</b> | DEFAULT: 1.00 g  |
| <b>MS/MSD BATCH:</b> | H0316MOID3 | <b>FINAL VOLUME / WEIGHT:</b>  | DEFAULT: 1.00 ml |
| <b>UNITS:</b>        | %          | <b>ADJUSTMENT RATIO TO PF:</b> | 1.00             |

**COMMENT:**

| <b>COMPOUND</b> | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Moisture        | 6.10               | 1.00      | 6.10        | 0.10      | 7c          |

**RAW DATA SHEET  
FOR METHOD: ASTM D-2216 (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:08

**DATA FILE:** NONE

**# 29**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM4-3

|                      |            |                                |                  |
|----------------------|------------|--------------------------------|------------------|
| <b>LCS/MB BATCH:</b> | H0316MOIB3 | <b>SAMPLE VOLUME / WEIGHT:</b> | DEFAULT: 1.00 g  |
| <b>MS/MSD BATCH:</b> | H0316MOID3 | <b>FINAL VOLUME / WEIGHT:</b>  | DEFAULT: 1.00 ml |
| <b>UNITS:</b>        | %          | <b>ADJUSTMENT RATIO TO PF:</b> | 1.00             |

**COMMENT:**

| <b>COMPOUND</b> | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Moisture        | 6.20               | 1.00      | 6.20        | 0.10      | 7c          |

**METHOD BLANK ASSOCIATION SUMMARY**  
**FOR METHOD: ASTM D-2216 (M)**

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**MB SAMPLE ID:** 099-05-014-6788  
**MB BATCH ID:** H0316MOIB3  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:07  
**MATRIX:** Soil

**DATA FILE:** NONE

**CLIENT WORK ORDER: 17-03-1104**

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u> |
|-----------|-----------------|-------------------------|---------------------|------------------|
| 26        | B-DU3-ISM1-3    |                         | 2017-03-16 21:00    | NONE             |
| 27        | B-DU3-ISM2-3    |                         | 2017-03-16 21:00    | NONE             |
| 28        | B-DU3-ISM3-3    |                         | 2017-03-16 21:00    | NONE             |
| 29        | B-DU3-ISM4-3    |                         | 2017-03-16 21:00    | NONE             |

**RAW DATA SHEET  
FOR METHOD: ASTM D-2216 (M)**

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**WORK ORDER:** 099-05-014  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-16 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,050  
**D/T ANALYZED:** 2017-03-16 21:00  
**REVIEWED BY:** 1,050  
**D/T REVIEWED:** 2017-03-29 15:07

**# MB**      **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** H0316MOIB3      **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1.00 g  
**MS/MSD BATCH:**      **FINAL VOLUME / WEIGHT:** DEFAULT: 1.00 ml  
**UNITS:** %      **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Moisture        | 0.000              | 1.00      | ND          | 0.10      |             |

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DUPLICATE REPORT  
FOR METHOD: ASTM D-2216 (M)

DUP SAMPLE ID: 17-03-1104-26  
DUP BATCH: H0316MOID3  
INSTRUMENTS: N/A  
SAMPLE: N/A  
DUP SAMPLE: N/A

EXTRACTION: N/A  
D/T EXTRACTED:  
SAMPLE: 2017-03-16 00:00  
DUP SAMPLE: 2017-03-16 00:00

ANALYZED BY: 1,050  
D/T ANALYZED  
SAMPLE: 2017-03-16 21:00  
DUP SAMPLE: 2017-03-16 21:00  
REVIEWED BY: 1,050  
D/T REVIEWED 2017-03-29 15:07

| COMPOUND | SAMPLE CONC | DUP CONC | %RPD | CONTROL LIMIT | STATUS | QUALIFIERS |
|----------|-------------|----------|------|---------------|--------|------------|
| Moisture | 6.400       | 6.400    | 0    | 0-10          | PASS   |            |

Data Files:

| TYPE | DATA FILE | DATA FILE PATH |
|------|-----------|----------------|
| SDP  | NONE      |                |

| METHOD        | MATRIX                                    | DATE                 | ANALYST(S) | BATCH NUMBER           |
|---------------|-------------------------------------------|----------------------|------------|------------------------|
| ASTM D2216(M) | <input checked="" type="checkbox"/> Solid | Preparation: 3/16/17 | 1050/1009  | MB: H0316 M01B3        |
|               | <input type="checkbox"/> Other: _____     | Analysis: ↓          | ↓          | Sample Duplicate: 4 D3 |

| CEL ID # | MASS (g) |          |          | % MOISTURE | RL (%) | COMMENTS | ALUMINUM DISH SUPPLY ID |
|----------|----------|----------|----------|------------|--------|----------|-------------------------|
|          | DISH     | DRY DISH | MOISTURE |            |        |          |                         |
| MB       | 1.85     | 1.85     | 0.00     | 0.00       | 0.10   |          | 6007-66-15              |

| CEL ID #                 | % MOISTURE | RPD | CONTROL LIMIT | OVEN ID                        | THERMOMETER ID / CF (°C)              | OVEN TEMP (°C) | BATCH PREP TIME (hh:mm) |
|--------------------------|------------|-----|---------------|--------------------------------|---------------------------------------|----------------|-------------------------|
|                          |            |     |               |                                |                                       |                |                         |
| Duplicate 17-03-1104-26A | 6.4        |     |               | <input type="checkbox"/> IO 08 | <input type="checkbox"/> TSS IO8A CF: | End: 103       | End: 2000 2100          |

Instructions: CEL: ID consists of Work Order Number and Container ID

[illegible]

## Drying / Weighing Cycle Raw Data Logbook

[illegible]

## BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 3/16/17 Initials: lll

| ID | Class 2<br>Weight (g) | Reading<br>(g) | Acceptance<br>Range  | Pass?<br>(circle one)              | Comment<br>(If not passed, note removal or corrective action) |
|----|-----------------------|----------------|----------------------|------------------------------------|---------------------------------------------------------------|
| 25 | 1                     | 1.01           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 100.005        | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 499.91         | 498.00 - 502.00      | <input checked="" type="radio"/> N |                                                               |
| 62 | 0.002                 | .0018          | 0.00180 - 0.00220    | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 1                     | 0.9992         | 0.99900 - 1.00100    | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.9960        | 99.90000 - 100.10000 | <input checked="" type="radio"/> N |                                                               |
| 26 | 1                     | 1.01           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 100.000        | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
| 55 | 1                     | 1.01           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 99.98          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 499.91         | 498.00 - 502.00      | <input checked="" type="radio"/> N |                                                               |
| 11 | 1                     | 1.01           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 100.02         | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
| 66 | 0.002                 | .0018          | 0.00180 - 0.00220    | <input checked="" type="radio"/> N | Metals                                                        |
|    | 1                     | .99            | 0.99900 - 1.00100    | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.02         | 99.90000 - 100.10000 | <input checked="" type="radio"/> N |                                                               |
| 53 | 0.1                   | .09            | 0.09 - 0.11          | Y N                                | Extractions                                                   |
|    | 1                     | .99            | 0.98 - 1.02          | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.00         | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 500.01         | 498 - 502            | <input checked="" type="radio"/> N |                                                               |
| 20 | 1                     | 1.00           | 0.98 - 1.02          | <input checked="" type="radio"/> N | Extractions                                                   |
| 70 | 100                   | 99.83          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 499.17         | 498.00 - 502.00      | <input checked="" type="radio"/> N |                                                               |
| 57 | 100                   | 100.0          | 98.0-102.0           | <input checked="" type="radio"/> N | Extractions                                                   |
|    | 1000                  | 1000.0         | 998.0-1002.0         | <input checked="" type="radio"/> N |                                                               |
|    | 2000                  | 2000.0         | 1998.0-2002.0        | <input checked="" type="radio"/> N |                                                               |
| 52 | 0.002                 | .0018          | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | Extractions                                                   |
|    | 1                     | .9993          | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.9964        | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 71 | 0.002                 | .0020          | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | BOD Room                                                      |
|    | 1                     | .9994          | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.9967        | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 63 | 0.1                   | .09            | 0.09 - 0.11          | <input checked="" type="radio"/> N | BOD Room                                                      |
|    | 100                   | 99.99          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
| 64 | 1                     | 1.00           | 0.98 - 1.02          | <input checked="" type="radio"/> N | Metals Clean Room                                             |
|    | 10                    | 10.00          | 9.8 - 10.2           | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.00         | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
| 72 | 0.002                 | .0019          | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | Oil & Grease Room                                             |
|    | 1                     | .9995          | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.0011       | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 30 | 1                     |                | 0.98 - 1.02          | Y N                                | Oil & Grease Room                                             |
|    | 100                   |                | 98.00 - 102.00       | Y N                                | Not connected or<br>in use.                                   |

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# EPA 8015B (M) Diesel + Motor Oil

## RAW DATA

**EPA 8015B (M)**  
**Diesel + Motor Oil**  
**INITIAL CALIBRATION**

INITIAL CALIBRATION QUALITY CONTROL SUMMARY  
FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-14-354-39-5901  
ICAL BATCH ID: 1703151003  
INSTRUMENT: GC 49

ANALYZED BY: 682  
ICAL D/T ANALYZED: 2017-03-15 14:40  
REVIEWED BY: 1,027  
D/T REVIEWED: 2017-03-21 11:23

| COMPOUND      | COMP. TYPE | CALIB. MODEL | 1         | 2       | 3       | 4       | 5       | 6 | 7 | 8 | 9 | Avg. RF | Min. RF | %RSD CL | R or R <sup>2</sup> CL | STATUS |
|---------------|------------|--------------|-----------|---------|---------|---------|---------|---|---|---|---|---------|---------|---------|------------------------|--------|
| TPH as Diesel | C          | Avg RF       | 1,099.623 | 926.110 | 910.084 | 938.965 | 922.917 |   |   |   |   | 959.5   | 0.00    | 8       | 0-20                   | PASS   |
|               |            |              |           |         |         |         |         |   |   |   |   | 40      |         |         |                        |        |

Data Files:

| Level # | D/T Analyzed     | Data File                                                     |
|---------|------------------|---------------------------------------------------------------|
| 1       | 2017-03-15 14:40 | S:\GC_49\GC_49_data\2017\170315\17031505.d\Report.txt17031505 |
| 2       | 2017-03-15 15:00 | S:\GC_49\GC_49_data\2017\170315\17031506.d\Report.txt17031506 |
| 3       | 2017-03-15 15:21 | S:\GC_49\GC_49_data\2017\170315\17031507.d\Report.txt17031507 |
| 4       | 2017-03-15 15:42 | S:\GC_49\GC_49_data\2017\170315\17031508.d\Report.txt17031508 |
| 5       | 2017-03-15 16:03 | S:\GC_49\GC_49_data\2017\170315\17031509.d\Report.txt17031509 |

# INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-354-39-5901

INITIAL BATCH: 170315I003

INSTRUMENT: GC 49

ANALYZED BY: 682

D/T ANALYZED:

INITIAL:

ICV:

REVIEWED BY:

D/T REVIEWED:

2017-03-15 14:40

2017-03-15 16:23

1,027

2017-03-21 11:23

DATA FILE: S:\GC\_49\data\2017\170315\17031510.d\Report.txt\17031510

| COMPOUND NAME | COMP TYPE | CALIB MODEL |  | MIN RF | AVG RF  | ICV RF  | AMOUNT | ICV CONC | ICV %D | ICV %D CL | STATUS |
|---------------|-----------|-------------|--|--------|---------|---------|--------|----------|--------|-----------|--------|
|               |           |             |  |        |         |         |        |          |        |           |        |
| TPH as Diesel | C         | Avg Resp    |  | 0.00   | 959.540 | 908.665 |        |          | 5      | 0-30      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Report Date : 16-Mar-2017 11:21

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15  
 End Cal Date : 15-MAR-2017 20:19  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Cal Date : 16-Mar-2017 11:21 umd6  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem1/SVOA/GC\_49.i/170315.b/17031517.d  
 Level 2: /chem1/SVOA/GC\_49.i/170315.b/17031518.d  
 Level 3: /chem1/SVOA/GC\_49.i/170315.b/17031519.d  
 Level 4: /chem1/SVOA/GC\_49.i/170315.b/17031520.d  
 Level 5: /chem1/SVOA/GC\_49.i/170315.b/17031521.d

|                       | 5.000   | 200.000 | 400.000 | 800.000 | 1600.000 |        |       |
|-----------------------|---------|---------|---------|---------|----------|--------|-------|
| Compound              | Level 1 | Level 2 | Level 3 | Level 4 | Level 5  | RRF    | % RSD |
| =====                 | =====   | =====   | =====   | =====   | =====    | =====  | ===== |
| S 1 TPH as Jet A rf   | 886434  | 816845  | 849166  | 1193052 | 863474   | 921794 | 17    |
| S 4 TPH as JP5 rf     | 822008  | 830452  | 736341  | 726438  | 850947   | 793237 | 7     |
| S 7 TPH Gas/Diesel rf | 680407  | 736825  | 739485  | 764573  | 759730   | 736204 | 5     |
| S 14 TPH as Diesel rf | 1099623 | 926110  | 910084  | 938965  | 922917   | 959540 | 8     |

Report Date : 16-Mar-2017 11:21

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15  
 End Cal Date : 15-MAR-2017 20:19  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Cal Date : 16-Mar-2017 11:21 umd6  
 Curve Type : Average

|                               | 5.000   | 200.000 | 400.000 | 800.000 | 1600.000 |        |       |
|-------------------------------|---------|---------|---------|---------|----------|--------|-------|
| Compound                      | Level 1 | Level 2 | Level 3 | Level 4 | Level 5  | RRF    | % RSD |
| =====                         | =====   | =====   | =====   | =====   | =====    | =====  | ===== |
| 18 TPH as Diesel (C6-C28)     | +++++   | +++++   | +++++   | +++++   | 8368     | 8368   | 0     |
| S 26 Diesel Range Organics rf | 991346  | 849923  | 843605  | 871178  | 856237   | 882458 | 7     |
| S 31 Oil Range Organics rf    | 670790  | 671675  | 659566  | 660552  | 629634   | 658444 | 3     |
| S 35 TPH as Motor Oil rf      | 699444  | 676875  | 662693  | 663714  | 632255   | 666996 | 4     |
| 36 TPH as Motor Oil Range     | +++++   | +++++   | +++++   | +++++   | 14874    | 14874  | 0     |

Report Date : 16-Mar-2017 11:29

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15  
 End Cal Date : 15-MAR-2017 20:19  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Cal Date : 16-Mar-2017 11:27 umd6  
 Curve Type : Average

|                                 | 5.000   | 200.000 | 400.000 | 800.000 | 1600.000 |        |       |
|---------------------------------|---------|---------|---------|---------|----------|--------|-------|
| Compound                        | Level 1 | Level 2 | Level 3 | Level 4 | Level 5  | RRF    | % RSD |
| S 274 Micro-TPH as Motor Oil rf | 531070  | 608933  | 689551  | 700484  | 707426   | 647493 | 12    |
| S 200 NWTPH_Diesel rf           | 838068  | 650960  | 682751  | 690067  | 691436   | 710656 | 10    |
| S 268 NWTPH_Disel Range rf      | 838068  | 650960  | 682751  | 690067  | 691436   | 710656 | 10    |
| S 201 NWTPH_Motor Oil rf        | 386163  | 394983  | 425714  | 434936  | 389269   | 406213 | 6     |
| \$ 92 n-Octacosane              | 1027693 | 967893  | 945977  | 964911  | 950550   | 971405 | 3     |
| \$ 93 C28 n-Octacosane          | 340990  | 511509  | 511646  | 496028  | 456324   | 463300 | 16    |

Data File: /chem1/SVOA/GC\_49.i/170315.b/17031510.d  
 Report Date: 03/16/2017 10:51

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_49.i                      Injection Date and Time: 15-MAR-2017 16:23  
 Sample Name: ICV D400 C28 50 L102516G      Initial Calibration Date(s): 09-NOV-2016 15-MAR-2017  
 Sublist used: CCV\_D-DRO.sub              Initial Calibration Time(s): 21:15 19:16  
 Method used: /chem1/SVOA/GC\_49.i/170315.b/8015d.m

| Target Compounds      | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| Diesel Range Organics | 882457.968            | 862592.935 | 0.00        | 2              | 15              | Averaged   |
| TPH as Diesel         | 959539.736            | 908665.145 | 0.00        | 5              | 15              | Averaged   |
| Surrogate Standards   | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
| n-Octacosane          | 971404.651            | 963377.780 | 0.00        | 1              | 20              | Averaged   |

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Data File: /chem1/SVOA/GC\_49.i/170315.b/17031505.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031505.d  
 Lab Smp Id:  
 Inj Date : 15-MAR-2017 14:40  
 Operator : 682  
 Smp Info : ICAL D5 C28 0.625 L102516B  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Meth Date : 15-Mar-2017 17:57 d2ef  
 Cal Date : 25-JAN-2017 00:58  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i  
 Quant Type: ESTD  
 Cal File: 17012441.d  
 Calibration Sample, Level: 1  
 Compound Sublist: ICAL\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|----------|-------------------|------------------|
|                            |             |        |        |          | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====    | =====             | =====            |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 5498115  | 5.00000           | 5.729            |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 4956730  | 5.00000           | 5.616            |
| \$ 92 n-Octacosane         | 7.745       | 7.745  | 0.000  | 642308   | 0.62500           | 0.661            |

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Data File: /chem1/SVDA/GC\_49.i/170315.b/17031505.d

Date : 15-MAR-2017 14:40

Client ID:

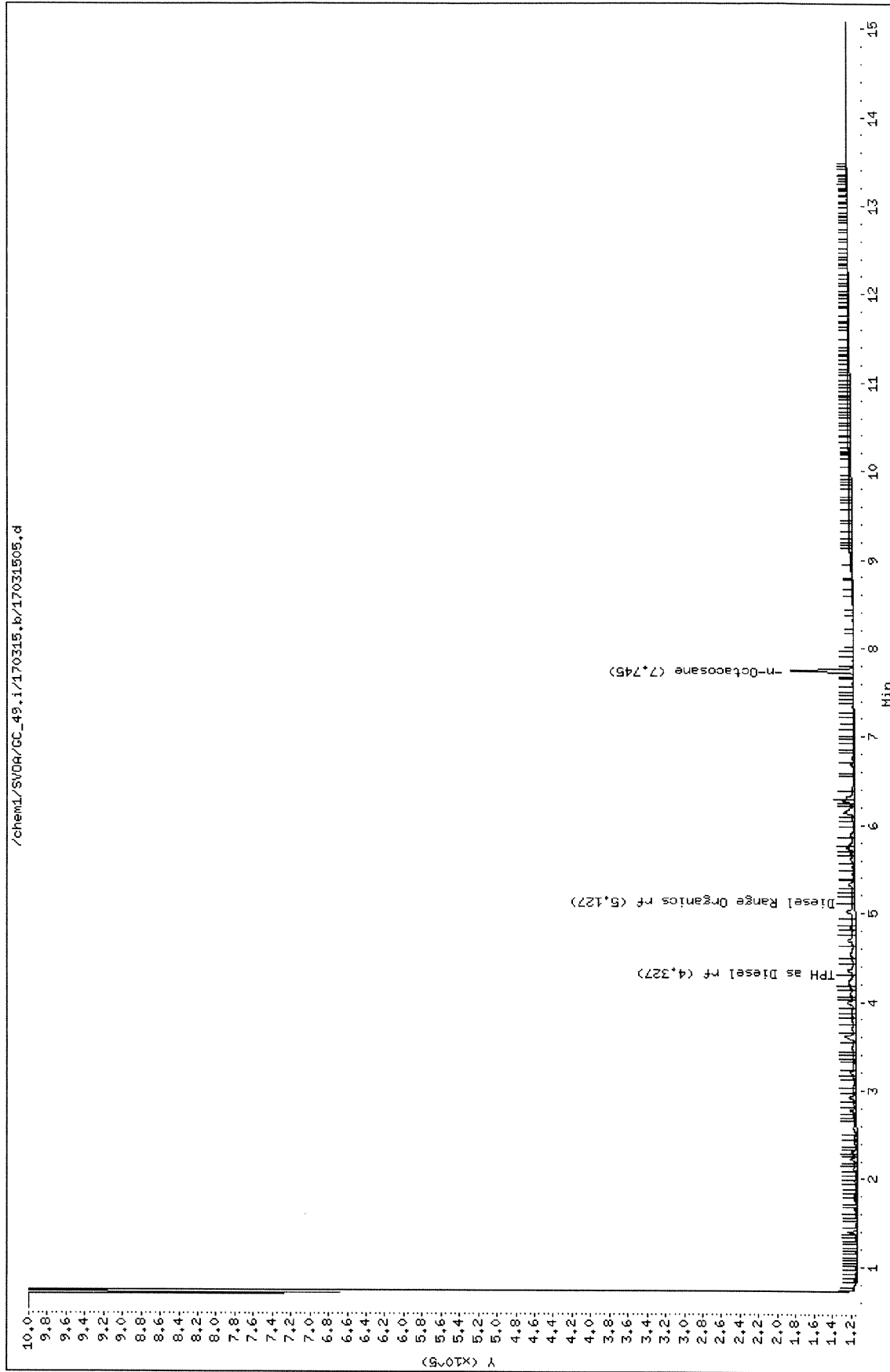
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_49.i/170315.b/17031506.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031506.d  
 Lab Smp Id:  
 Inj Date : 15-MAR-2017 15:00  
 Operator : 682  
 Smp Info : ICAL D200 C28 25 L102516C  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Meth Date : 15-Mar-2017 17:57 d2ef  
 Cal Date : 25-JAN-2017 01:19  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i  
 Quant Type: ESTD  
 Cal File: 17012442.d  
 Calibration Sample, Level: 2  
 Compound Sublist: ICAL\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 185222018 | 200.000           | 193.032          |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 169984668 | 200.000           | 192.626          |
| \$ 92 n-Octacosane         | 7.748       | 7.748  | 0.000  | 24197319  | 25.0000           | 24.909           |

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Data File: /chem1/SVDA/GC\_49.i/170315.b/17031506.d

Date : 15-MAR-2017 15:00

Client ID:

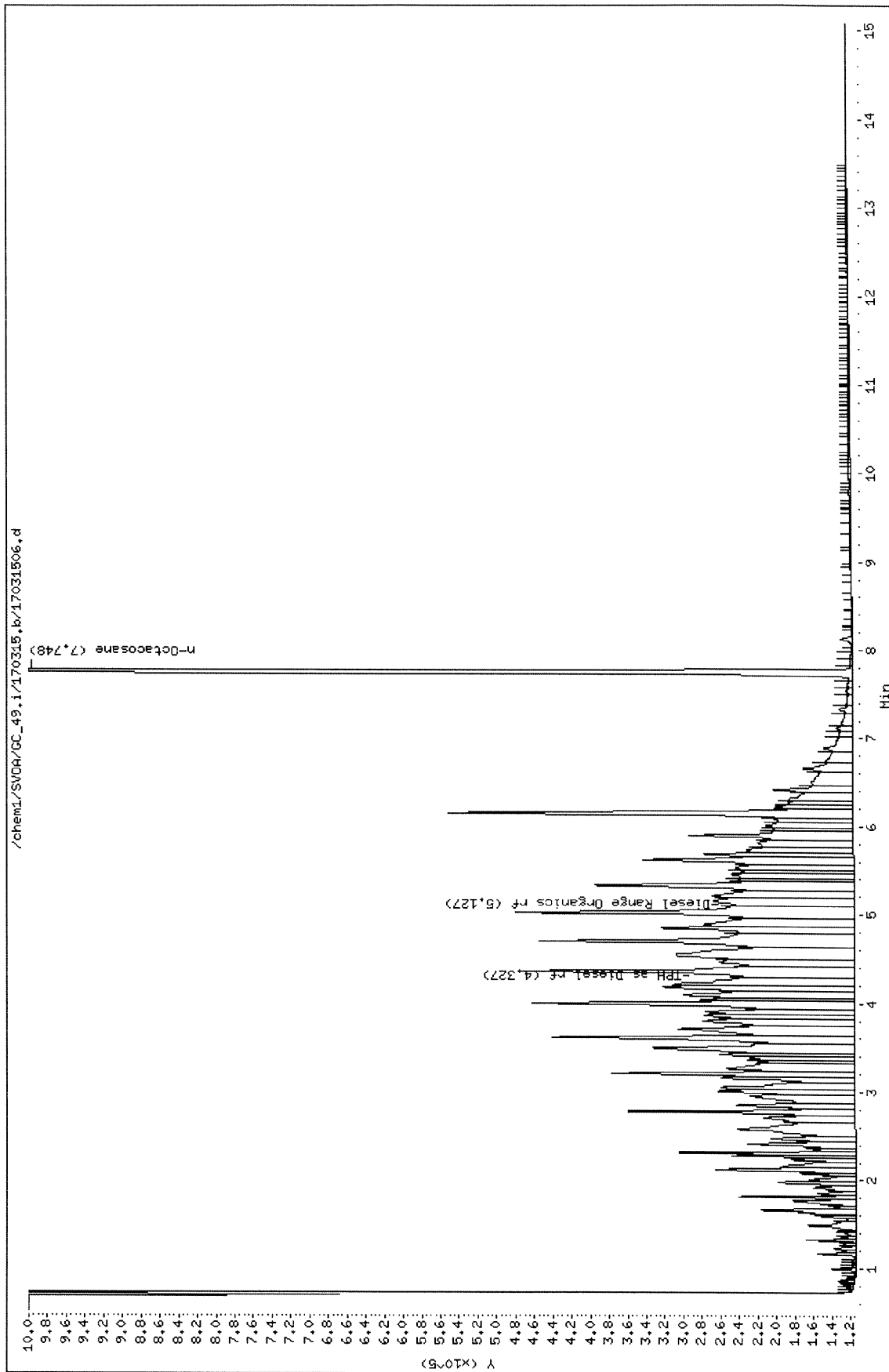
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_49.i/170315.b/17031507.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031507.d

Lab Smp Id:

Inj Date : 15-MAR-2017 15:21

Operator : 682

Inst ID: GC\_49.i

Smp Info : ICAL D400 C28 50 L102516D

Misc Info :

Comment :

Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m

Meth Date : 15-Mar-2017 17:57 d2ef

Quant Type: ESTD

Cal Date : 25-JAN-2017 01:41

Cal File: 17012443.d

Als bottle: 7

Calibration Sample, Level: 3

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: ICAL\_D-DRO.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 364033443 | 400.000           | 379.383          |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 337441946 | 400.000           | 382.388          |
| S 92 n-Octacosane          | 7.751       | 7.751  | 0.000  | 47298825  | 50.0000           | 48.691           |

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Data File: /chem1/SV04/GC\_49.i/170315.b/17031507.d

Date : 15-MAR-2017 15:21

Client ID:

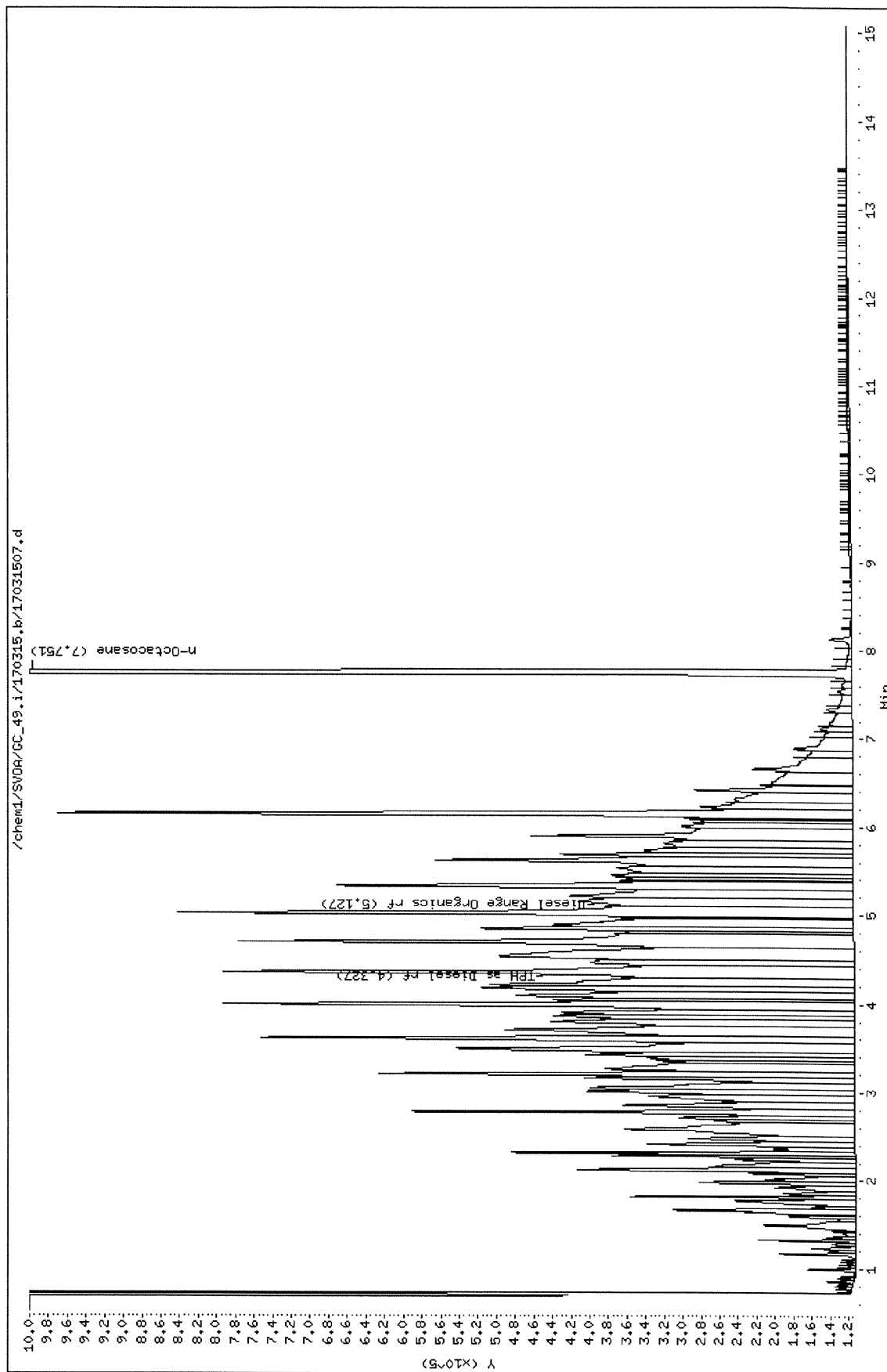
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_49.i/170315.b/17031508.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031508.d  
 Lab Smp Id:  
 Inj Date : 15-MAR-2017 15:42  
 Operator : 682  
 Smp Info : ICAL D800 C28 100 L102516E  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Meth Date : 15-Mar-2017 17:57 d2ef  
 Cal Date : 25-JAN-2017 02:02  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i  
 Quant Type: ESTD  
 Cal File: 17012444.d  
 Calibration Sample, Level: 4  
 Compound Sublist: ICAL\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====     | =====             | =====            |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 751172141 | 800.000           | 782.846          |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 696942778 | 800.000           | 789.774          |
| \$ 92 n-Octacosane         | 7.758       | 7.758  | 0.000  | 96491101  | 100.000           | 99.331           |

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Data File: /chem1/SV04/GC\_49.i/170315.b/17031508.d

Date : 15-MAR-2017 15:42

Client ID:

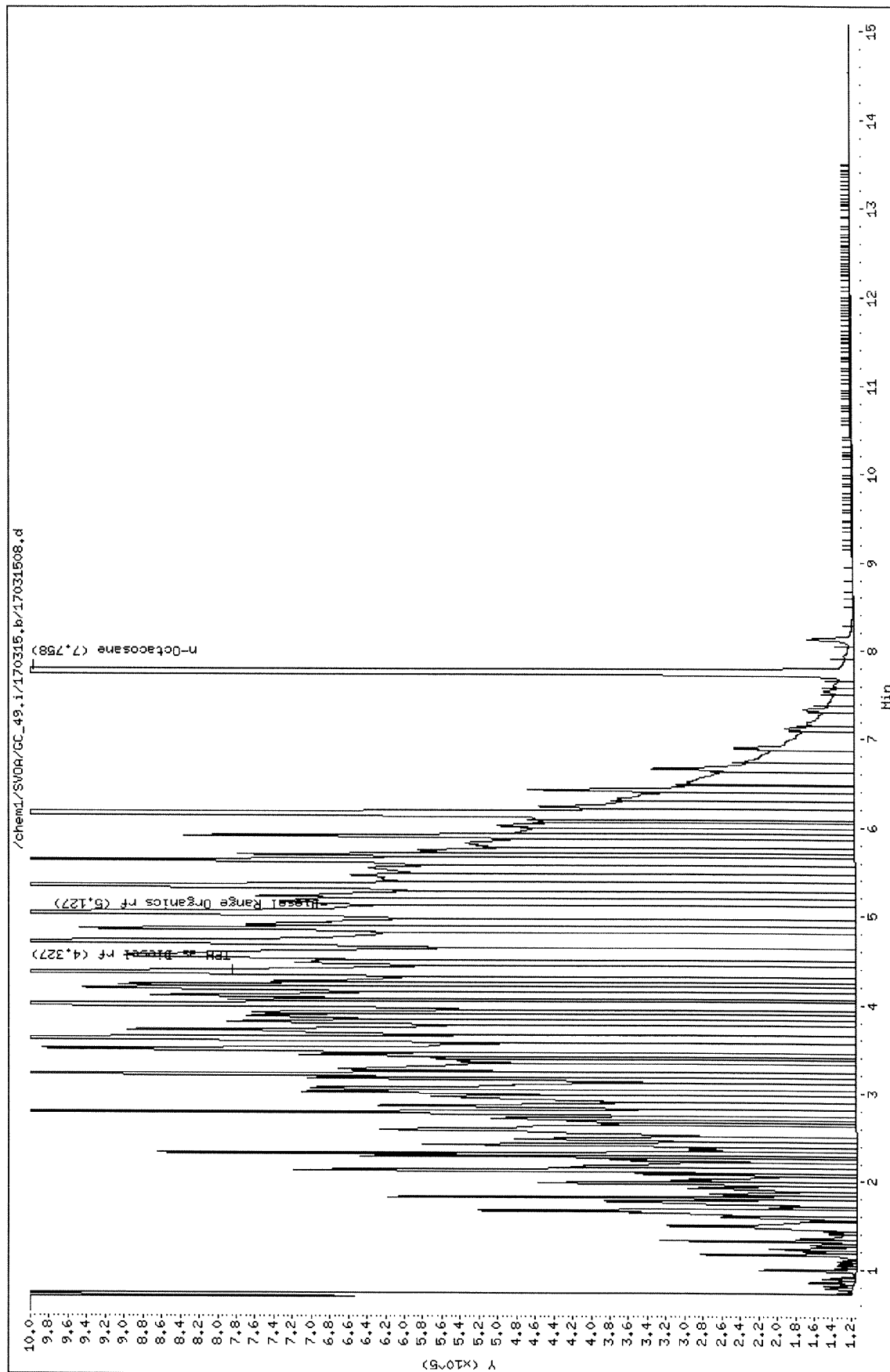
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_49.i/170315.b/17031509.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031509.d

Lab Smp Id:

Inj Date : 15-MAR-2017 16:03

Operator : 682

Inst ID: GC\_49.i

Smp Info : ICAL D1600 C28 200 L102516F

Misc Info :

Comment :

Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m

Meth Date : 15-Mar-2017 17:57 d2ef

Quant Type: ESTD

Cal Date : 25-JAN-2017 02:23

Cal File: 17012445.d

Als bottle: 9

Calibration Sample, Level: 5

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: ICAL\_D-DRO.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE   | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|------------|-------------------|------------------|
|                            |             |        |        |            | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 1476666887 | 1600.00           | 1538.932         |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 1369979459 | 1600.00           | 1552.458         |
| S 92 n-Octacosane          | 7.771       | 7.771  | 0.000  | 190110037  | 200.000           | 195.706          |

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Data File: /chem1/SV04/GC\_49.i/170315.b/17031509.d

Date : 15-MAR-2017 16:03

Client ID:

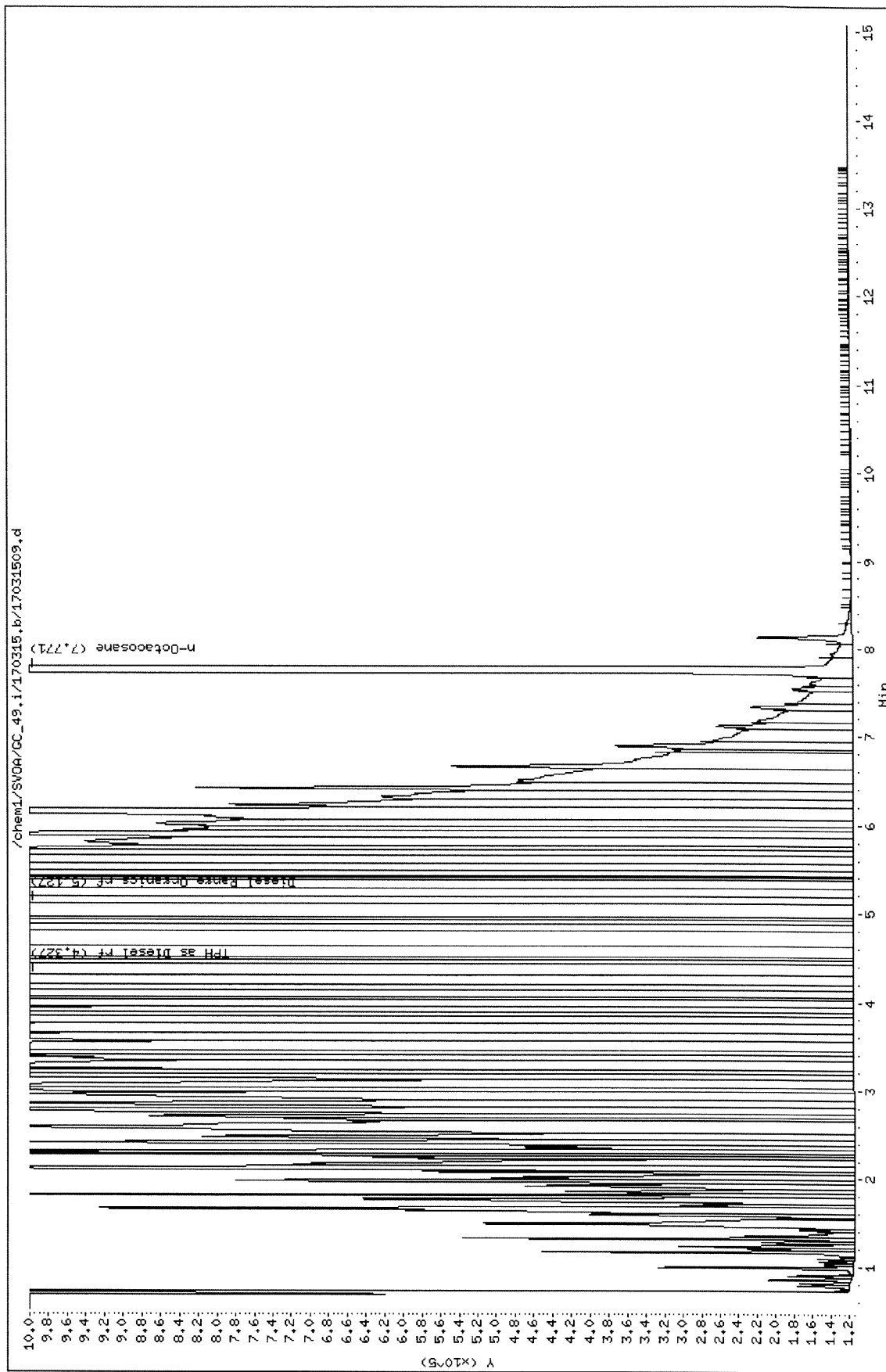
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_49.i/170315.b/17031510.d  
 Report Date: 15-Mar-2017 17:57

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170315.b/17031510.d  
 Lab Smp Id:  
 Inj Date : 15-MAR-2017 16:23  
 Operator : 682  
 Smp Info : ICV D400 C28 50 L102516G  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170315.b/8015d.m  
 Meth Date : 15-Mar-2017 17:57 d2ef  
 Cal Date : 25-JAN-2017 02:23  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i  
 Quant Type: ESTD  
 Cal File: 17012445.d  
 Continuing Calibration Sample  
 Compound Sublist: CCV\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

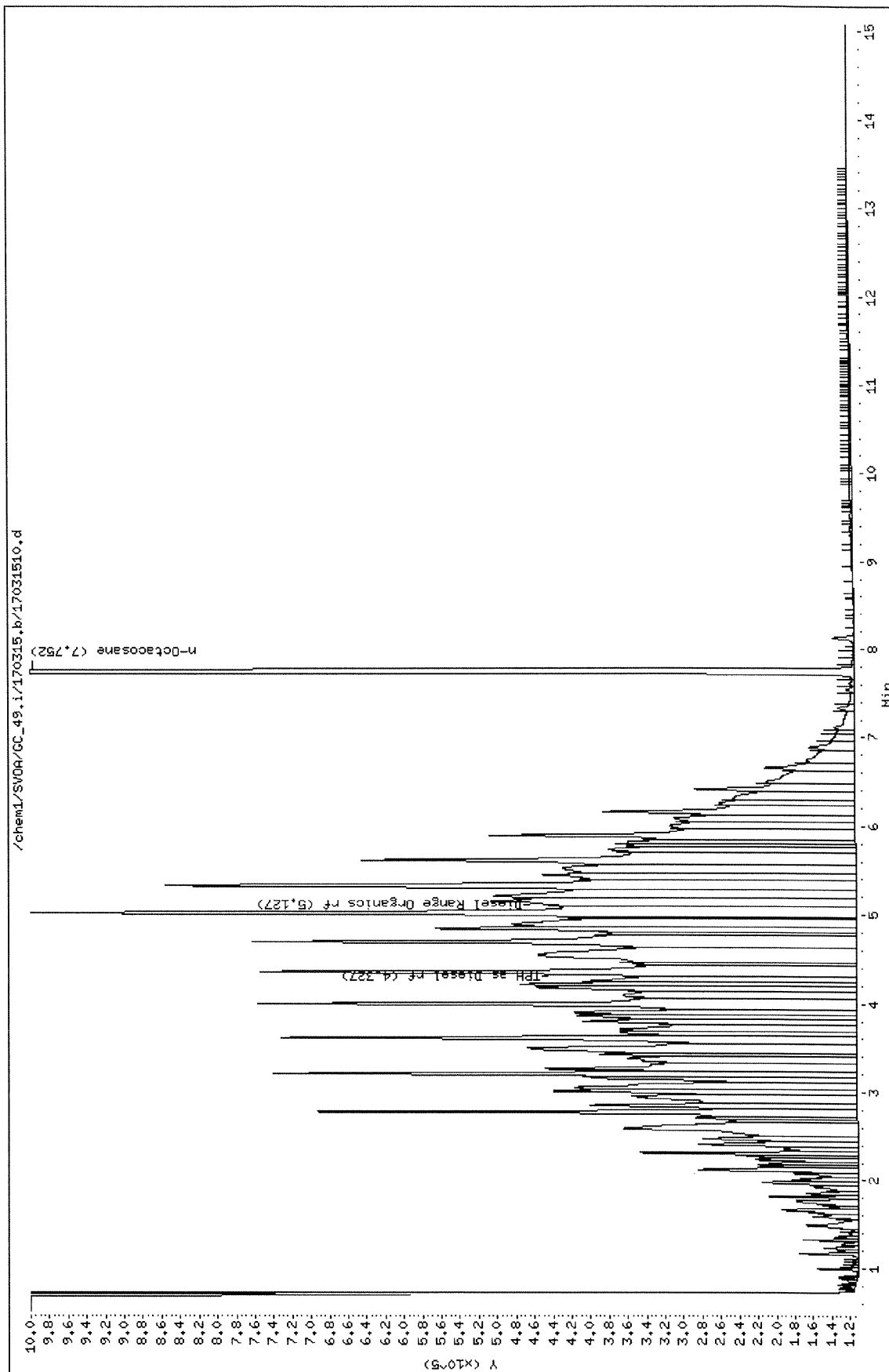
| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====     | =====             | =====            |
| S 14 TPH as Diesel         | 0.710-7.945 |        |        | 363466058 | 400.000           | 378.792          |
| S 26 Diesel Range Organics | 2.309-7.945 |        |        | 345037174 | 400.000           | 390.995          |
| \$ 92 n-Octacosane         | 7.752       | 7.752  | 0.000  | 48168889  | 50.0000           | 49.586           |

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Data File: /chem1/SV0A/GC\_49.i/170315.b/17031510.d  
Date : 15-MAR-2017 16:23  
Client ID:  
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC\_49.i  
Operator: 682  
Column diameter: 2.00

Column phase:

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170315/17031502.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 2  
 Instrument : GC 49 Injection Number : 2  
 Sample Name : C6-C44 L110816A Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 15 MAR 17 12:39  
 Report Created on: 16-MAR-17 11:22 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170315.b/17031502.d

| RT Range | Exp RT | DLT RT | Response    | ppm   | Compound              |
|----------|--------|--------|-------------|-------|-----------------------|
| 0.710    | 7.850  | 7.140  | 1725246.00  | 0.00  | C6-Hexane             |
| 0.892    | 7.850  | 6.958  | 4229459.00  | 0.00  | C7-Heptane            |
| 1.321    | 7.850  | 6.529  | 9379566.00  | 0.00  | C8-Octane             |
| 1.812    | 7.850  | 6.038  | 8348198.00  | 0.00  | C9-Nonane             |
| 2.309    | 7.850  | 5.541  | 9247136.00  | 0.00  | C10-Decane            |
| 2.775    | 7.850  | 5.075  | 9595844.00  | 0.00  | C11-Undecane          |
| 3.208    | 7.850  | 4.642  | 9587885.00  | 0.00  | C12-Dodecane          |
| 3.613    | 7.850  | 4.237  | 10694823.00 | 0.00  | C13-Tridecane         |
| 3.995    | 7.850  | 3.855  | 9633301.00  | 0.00  | C14-Tetradecane       |
| 4.355    | 7.850  | 3.495  | 10620901.00 | 0.00  | C15-pentadecane       |
| 4.694    | 7.850  | 3.156  | 12907796.00 | 0.00  | C16-Hexadecane        |
| 5.017    | 7.850  | 2.833  | 14689279.00 | 0.00  | C17-Heptadecane       |
| 5.324    | 7.850  | 2.526  | 15643068.00 | 0.00  | C18-Octadecane        |
| 5.616    | 7.850  | 2.234  | 15640513.00 | 0.00  | C19-Nonadecane        |
| 5.894    | 7.850  | 1.956  | 16281885.00 | 0.00  | C20-Eicosane          |
| 6.160    | 7.850  | 1.690  | 16253708.00 | 0.00  | C21-Heneicosane       |
| 6.416    | 7.850  | 1.434  | 16861443.00 | 0.00  | C22-Docosane          |
| 6.660    | 7.850  | 1.190  | 16948602.00 | 0.00  | C23-Tricosane         |
| 6.895    | 7.850  | 0.955  | 16902474.00 | 0.00  | C24-Tetracosane       |
| 7.121    | 7.850  | 0.729  | 16999893.00 | 0.00  | C25-Pentacosane       |
| 7.338    | 7.850  | 0.512  | 17852373.00 | 0.00  | C26-Hexacosane        |
| 7.548    | 7.850  | 0.302  | 16901615.00 | 0.00  | C27-Heptacosane       |
| 7.750    | 7.850  | 0.100  | 17085911.00 | 26.81 | n-Octacosane          |
| 7.945    | 7.850  | -0.095 | 16170720.00 | 0.00  | C29-Nonacosane        |
| 8.134    | 7.850  | -0.284 | 14560802.00 | 0.00  | C30-Triacontane       |
| 8.317    | 7.850  | -0.467 | 11203518.00 | 0.00  | C31-Hentriacontane    |
| 8.493    | 7.850  | -0.643 | 7395071.00  | 0.00  | C32-Dotriacontane     |
| 8.664    | 7.850  | -0.814 | 3928559.00  | 0.00  | C33-Tritriacontane    |
| 8.831    | 7.850  | -0.981 | 1771584.00  | 0.00  | C34-Tetratriacontane  |
| 8.993    | 7.850  | -1.143 | 850126.00   | 0.00  | C35-Pentatriacontane  |
| 9.151    | 7.850  | -1.301 | 641152.00   | 0.00  | C36-Hexatriacontane   |
| 9.327    | 7.850  | -1.477 | 566322.00   | 0.00  | C37-Heptatriacontane  |
| 9.531    | 7.850  | -1.681 | 456273.00   | 0.00  | C38-Octatriacontane   |
| 9.768    | 7.850  | -1.918 | 489213.00   | 0.00  | C39-Nonatriacontane   |
| 10.046   | 7.850  | -2.196 | 558981.00   | 0.00  | C40-Tetracontane      |
| 11.752   | 7.850  | -3.902 | 1064858.00  | 0.00  | C44-Tetratetracontane |

End of File

Page 1

Data File: /chem1/SVDA/GC\_49.i/170315.b/17031502.d

Date : 15-MAR-2017 12:39

Client ID:

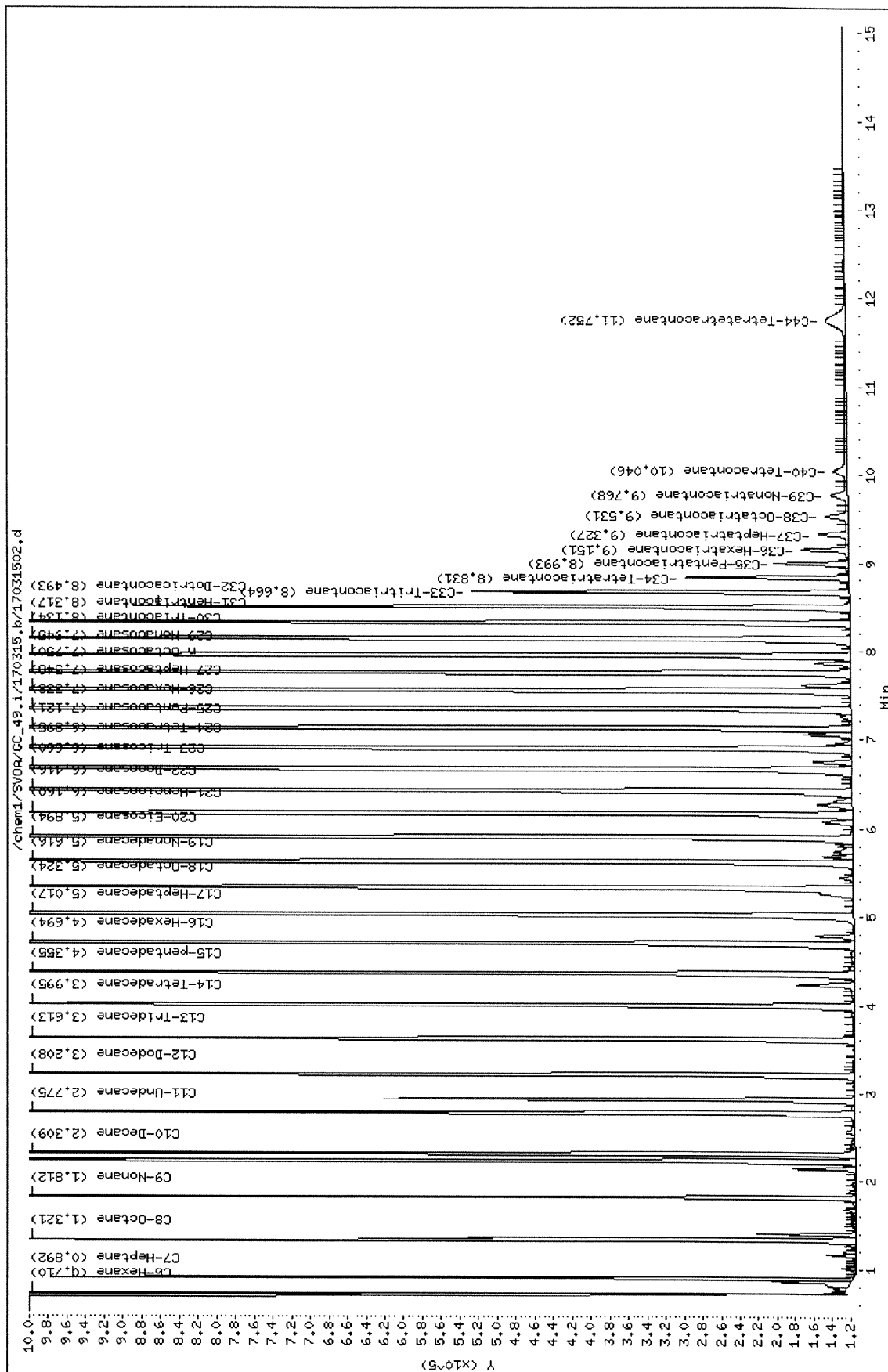
Sample Info: C6-C44 L110816A

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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# EPA 8015B (M) Diesel + Motor Oil

## SAMPLE DATA

**RAW DATA SHEET  
FOR METHOD: EPA 8015B (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-20 14:31  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170320\17032010.d\Report.txt17032010

**# 26**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170316B10 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 10.00 g / ACTUAL: 10.00 g  |
| <b>MS/MSD BATCH:</b> 170316S10 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 ml |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 1.00                                |

**COMMENT:**

| <u>COMPOUND</u>  | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 26.6               | 1.00      | 26.6        | 5.0       | b           |
| TPH as Motor Oil | 70.0               | 1.00      | 70.0        | 5.0       | b           |

## =====

## External Standard Report

## =====

Data File Name : /chem1/SVOA/GC\_49/170320/17032010.d  
Page Number :  
Operator : 682 Vial Number : Vial 10  
Instrument : GC 49 Injection Number : 10  
Sample Name : 17-03-1104-26 Sequence Line : 0  
Instrument Method: 8015d.m  
Acquired on : 20 MAR 17 14:31  
Report Created on: 21-MAR-17 11:11 Compound Sublist : all  
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032010.d

| RT Range     | Exp RT | DLT RT | Response    | ppm   | Compound         |
|--------------|--------|--------|-------------|-------|------------------|
| 7.733        | 7.850  | 0.117  | 50733070.00 | 52.23 | n-Octacosane     |
| 2.301- 7.924 |        |        | 25508729.44 | 26.58 | TPH as Diesel    |
| 5.004-11.698 |        |        | 67157235.91 | 69.99 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV0A/GC\_49.i/170320.b/17032010.d

Date : 20-MAR-2017 14:31

Client ID:

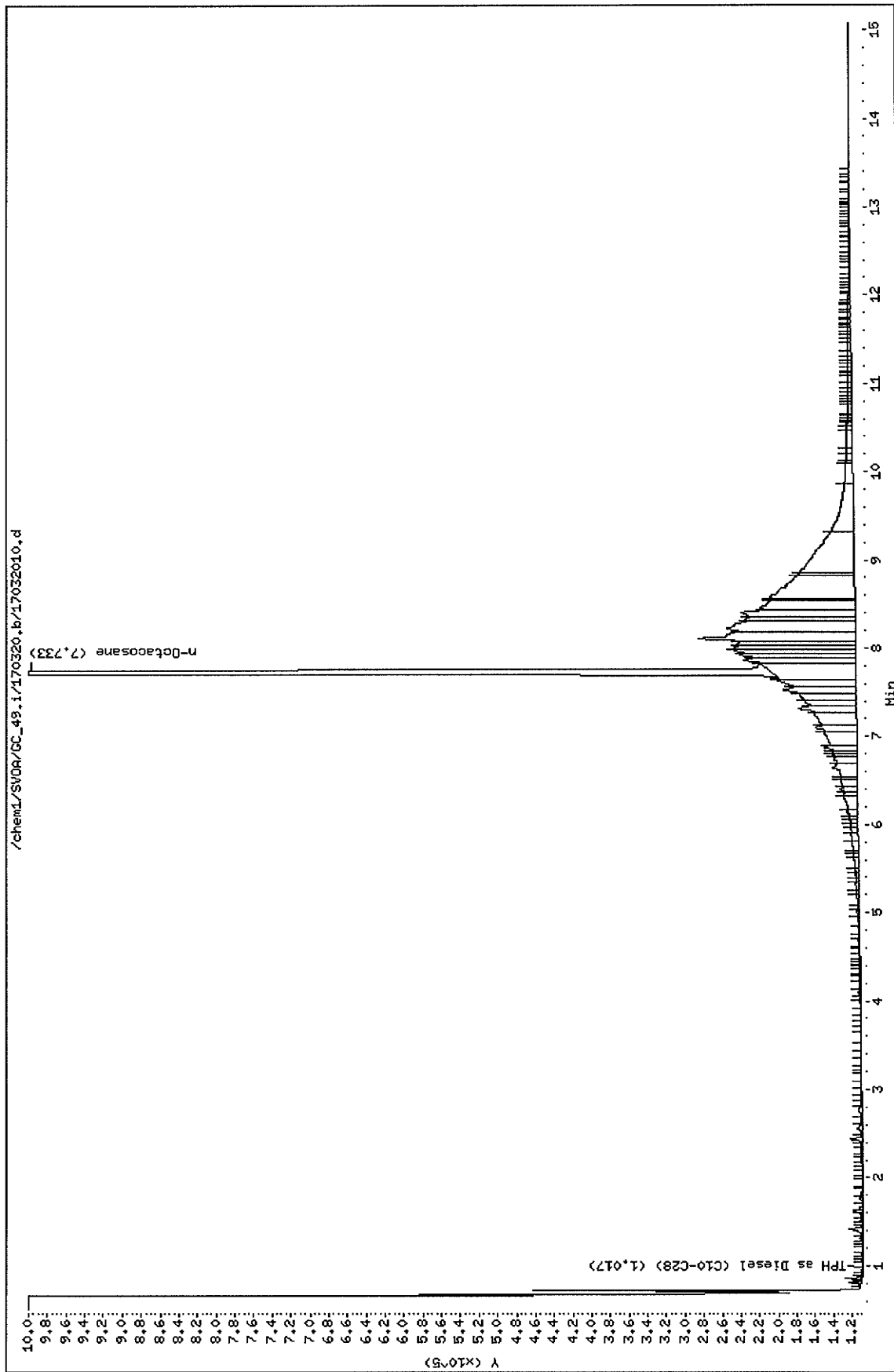
Sample Info: 17-03-1104-26

Instrument: GC\_49.i

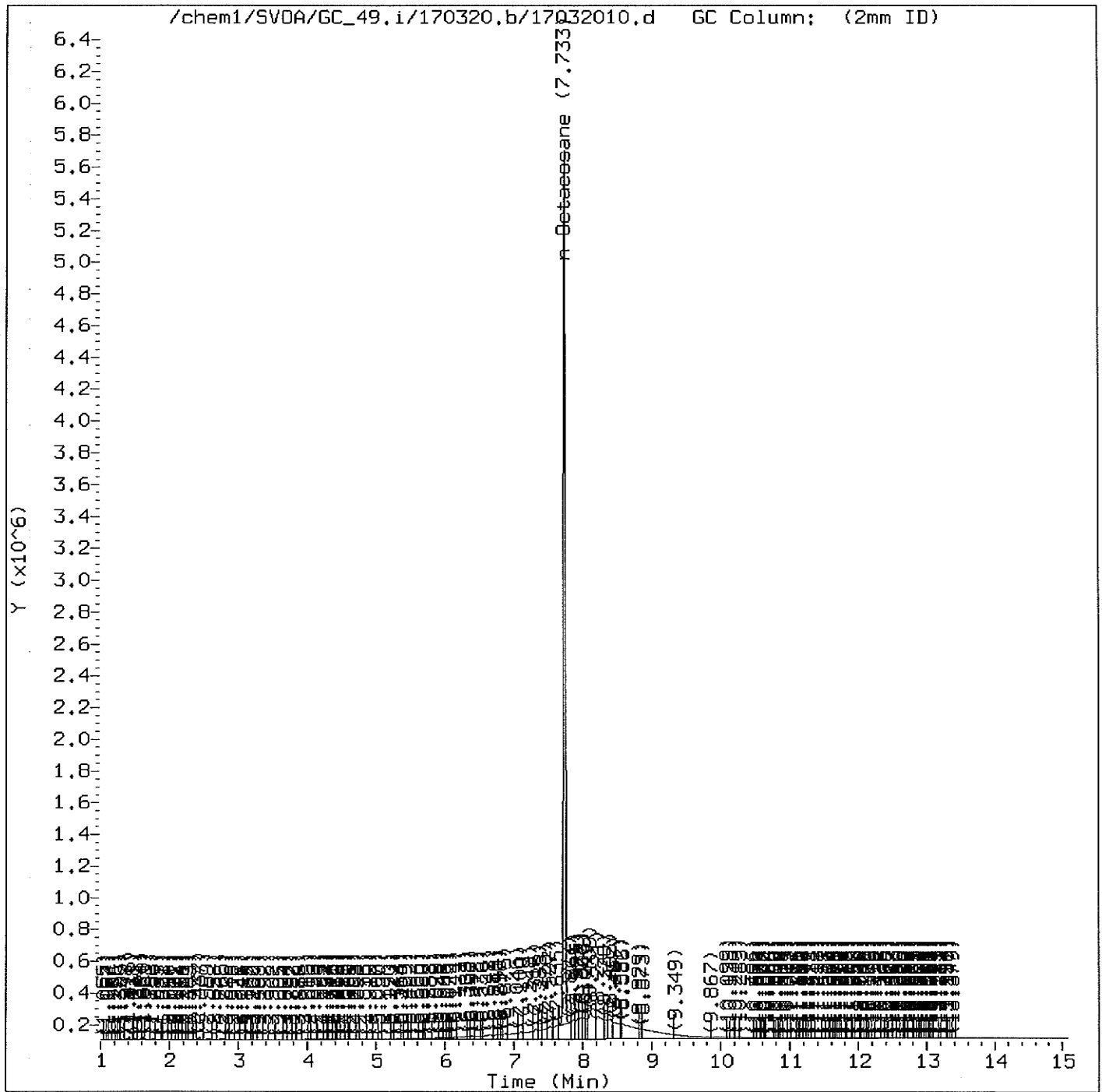
Operator: 682

Column diameter: 2.00

Column phase:



## Manually Integrated Data File



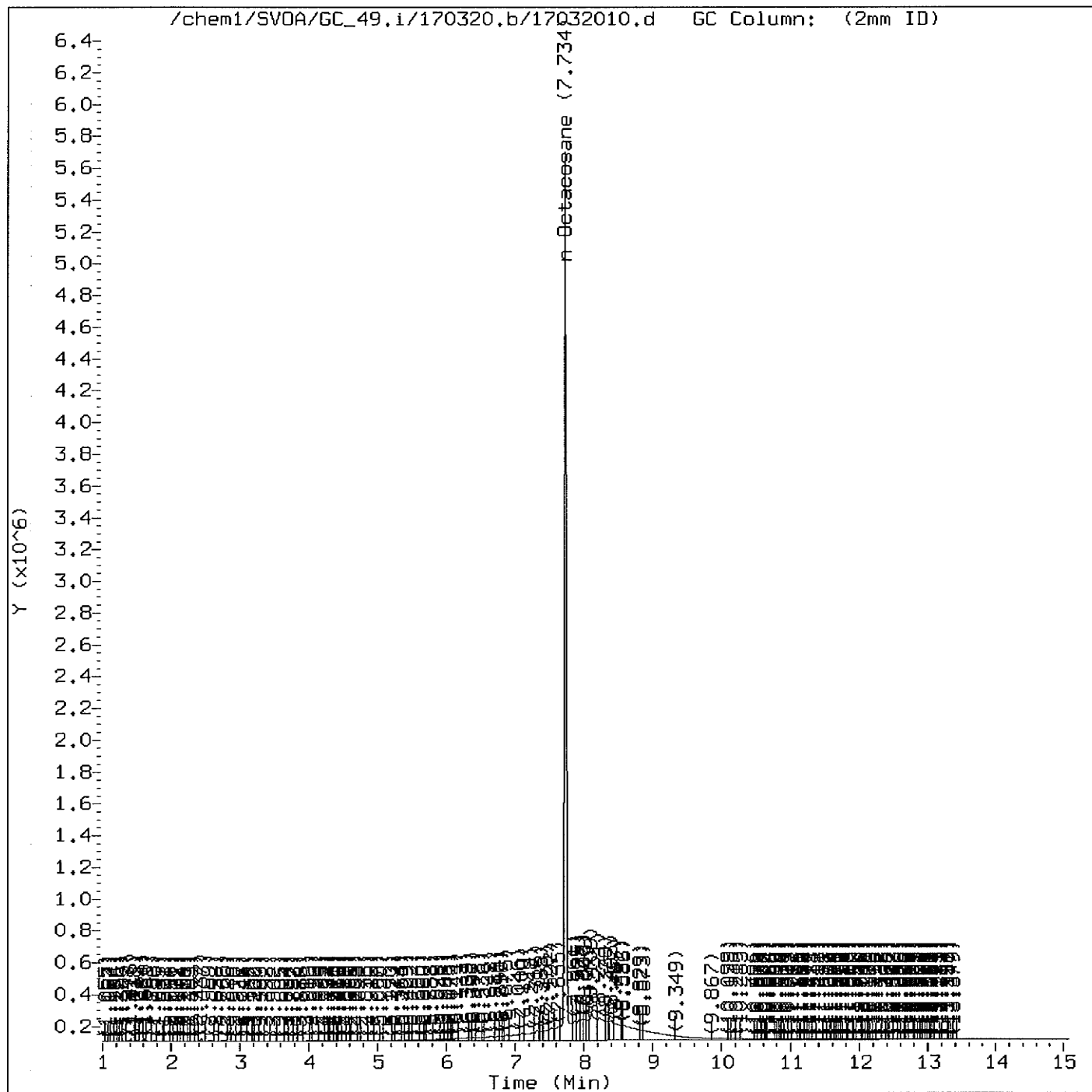
Return to Contents

Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan  
 Analyst responsible for change: on 03/21/2017 at 11:11.  
 Target 3.5 esignature user ID: umd6

Audit/management approval: 1027

## Original Data File



**RAW DATA SHEET  
FOR METHOD: EPA 8015B (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-20 14:52  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170320\17032011.d\Report.txt17032011

**# 27**

**CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

**LCS/MB BATCH:** 170316B10  
**MS/MSD BATCH:** 170316S10  
**UNITS:** mg/kg

**SAMPLE VOLUME / WEIGHT:**  
**FINAL VOLUME / WEIGHT:**  
**ADJUSTMENT RATIO TO PF:**

DEFAULT: 10.00 g / ACTUAL: 10.20 g  
DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
0.98

**COMMENT:**

| <u>COMPOUND</u>  | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 32.0               | 1.00      | 31.4        | 4.9       | b           |
| TPH as Motor Oil | 77.1               | 1.00      | 75.6        | 4.9       | b           |

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032011.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 11  
 Instrument : GC 49 Injection Number : 11  
 Sample Name : 17-03-1104-27 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 20 MAR 17 14:52  
 Report Created on: 21-MAR-17 11:12 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032011.d

| RT Range     | Exp RT | DLT RT | Response    | ppm   | Compound         |
|--------------|--------|--------|-------------|-------|------------------|
| 7.733        | 7.850  | 0.117  | 50148001.00 | 51.62 | n-Octacosane     |
| 2.301- 7.924 |        |        | 30686753.82 | 31.98 | TPH as Diesel    |
| 5.004-11.698 |        |        | 74001653.19 | 77.12 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV0A/GC\_49.i/170320.b/17032011.d

Date : 20-MAR-2017 14:52

Client ID:

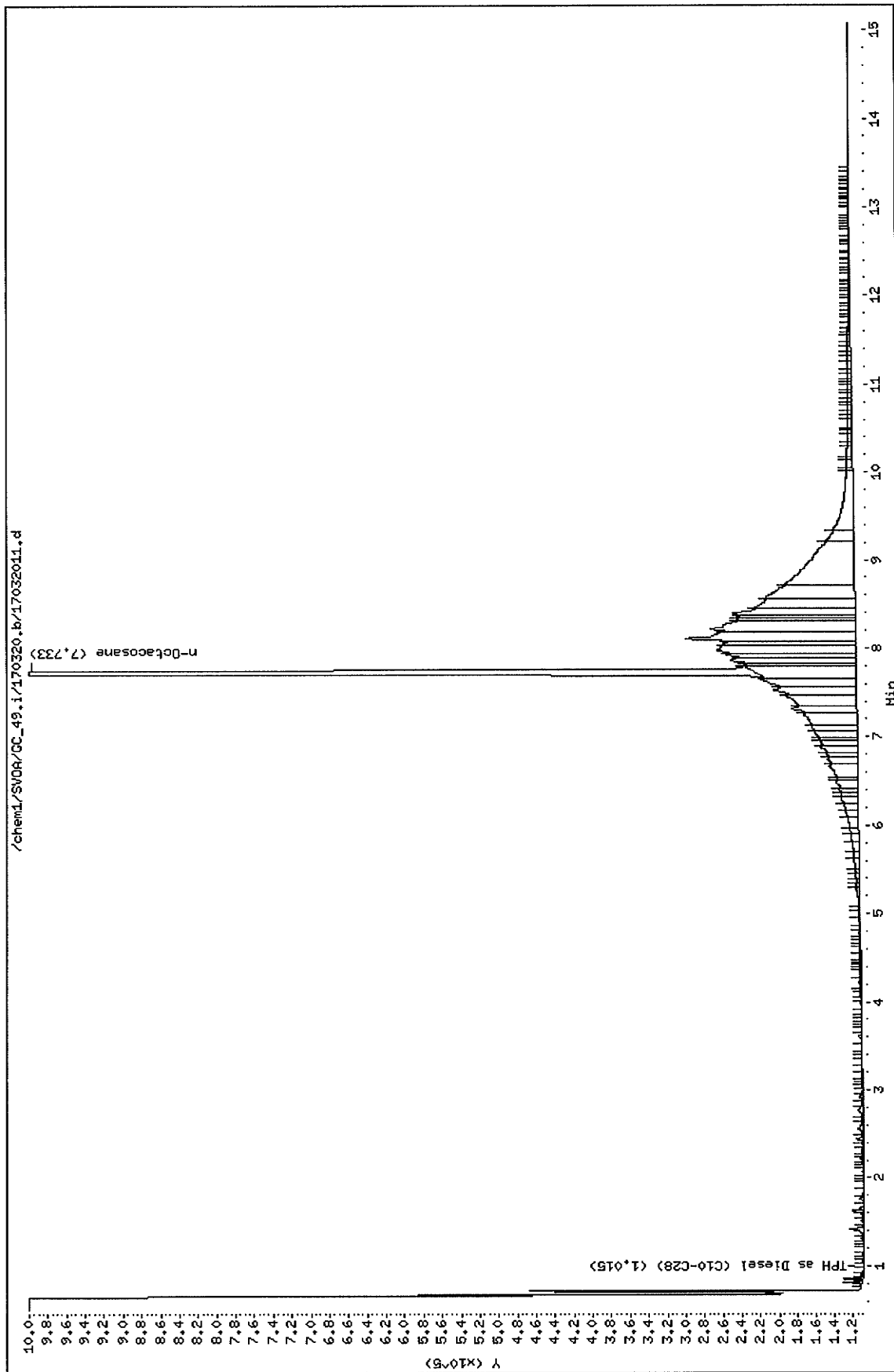
Sample Info: 17-03-1104-27

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

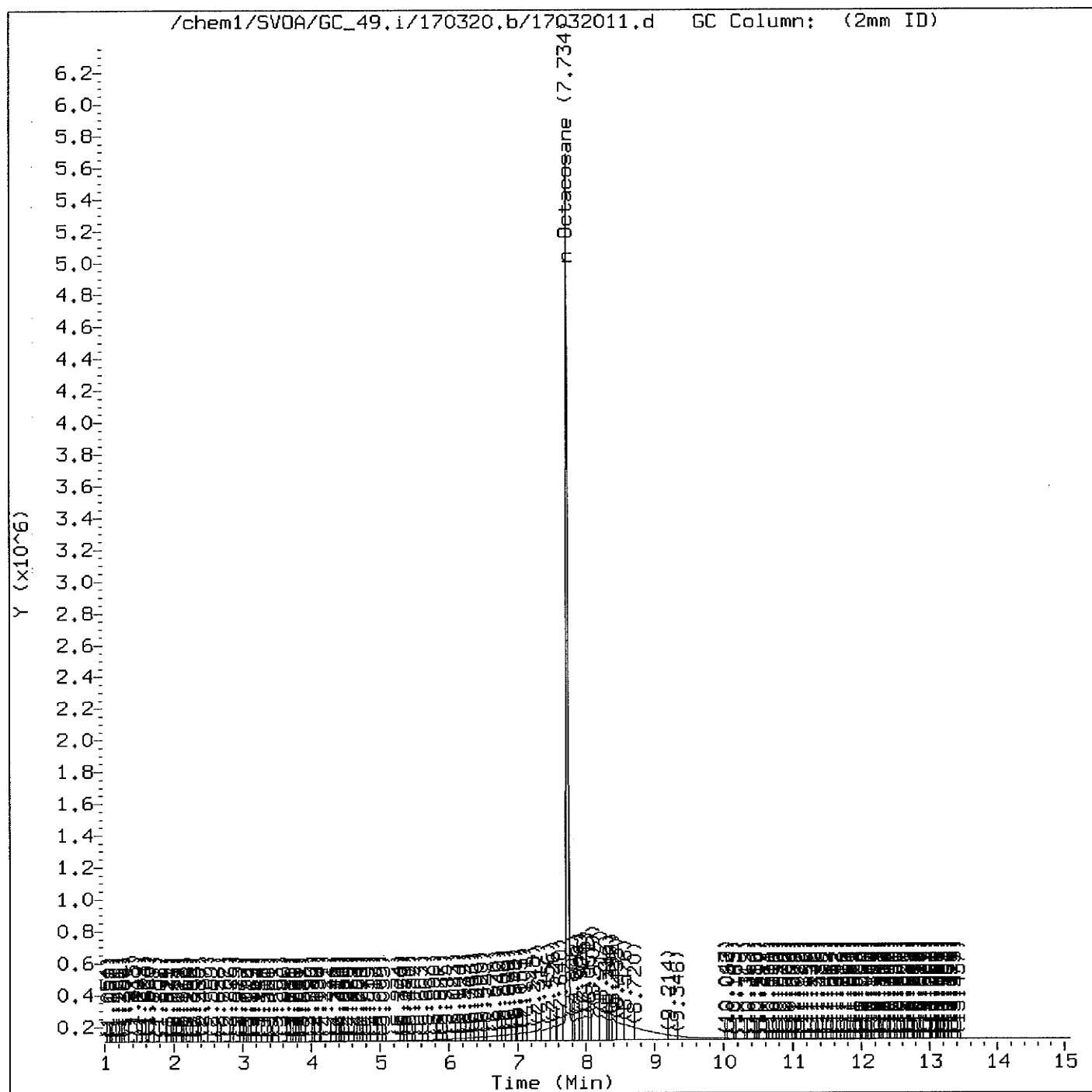
Column phase:





Audit/management approval: \_\_\_\_\_ 1027

## Original Data File



**RAW DATA SHEET  
FOR METHOD: EPA 8015B (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-20 15:13  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170320\17032012.d\Report.txt17032012

**# 28**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170316B10 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 10.00 g / ACTUAL: 10.10 g  |
| <b>MS/MSD BATCH:</b> 170316S10 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 ml |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 0.99                                |

**COMMENT:**

| <b>COMPOUND</b>  | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 43.2               | 1.00      | 42.8        | 5.0       | b           |
| TPH as Motor Oil | 85.0               | 1.00      | 84.2        | 5.0       | b           |

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032012.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 12  
 Instrument : GC 49 Injection Number : 12  
 Sample Name : 17-03-1104-28 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 20 MAR 17 15:13  
 Report Created on: 21-MAR-17 11:12 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032012.d

| RT Range     | Exp RT | DLT RT | Response    | ppm   | Compound         |
|--------------|--------|--------|-------------|-------|------------------|
| 7.733        | 7.850  | 0.117  | 49709504.00 | 51.17 | n-Octacosane     |
| 2.301- 7.924 |        |        | 41490877.11 | 43.24 | TPH as Diesel    |
| 5.004-11.698 |        |        | 81556602.11 | 85.00 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV0A/GC\_49.i/170320.b/17032012.d

Date : 20-HAR-2017 15:13

Client ID:

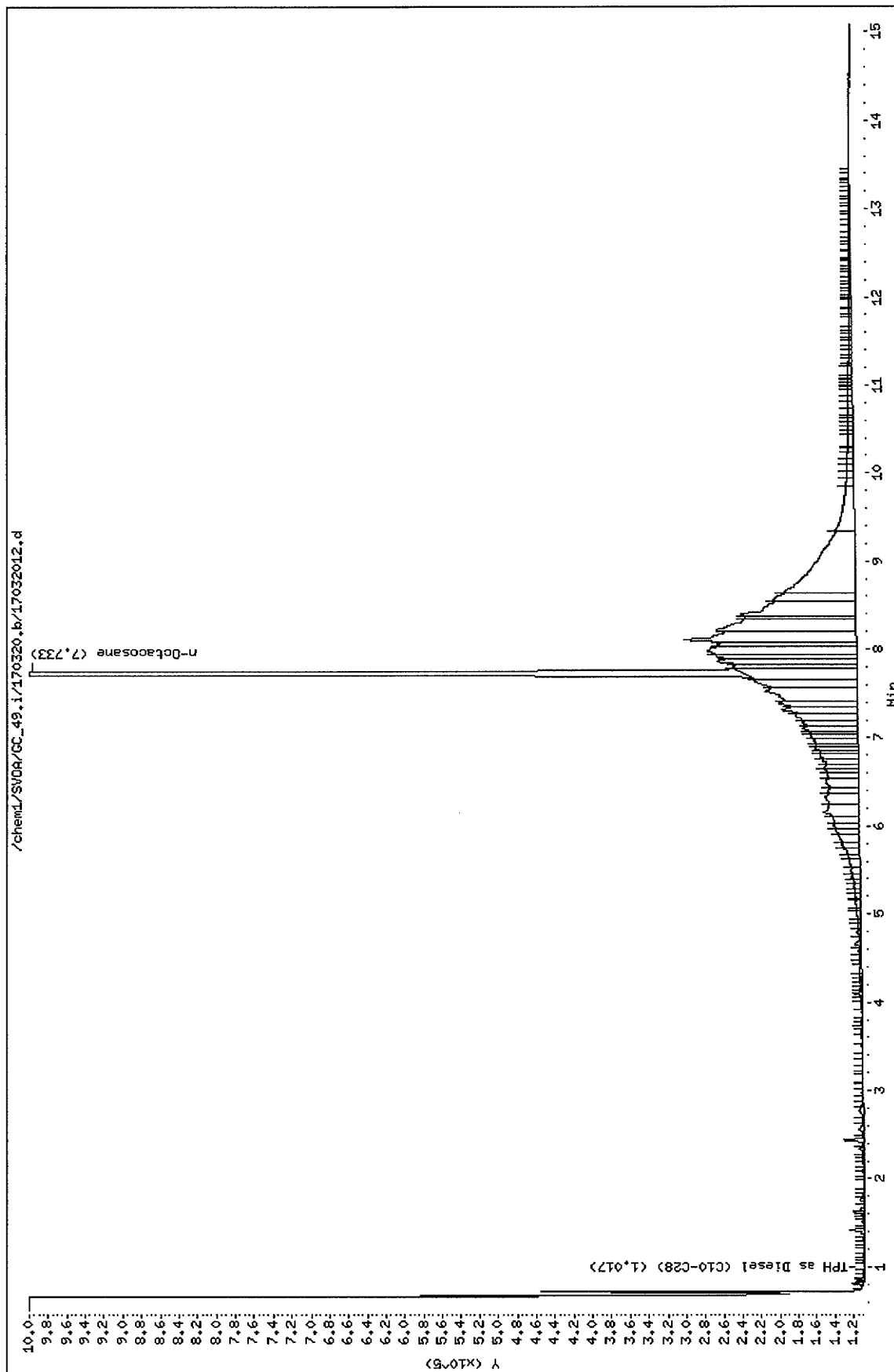
Sample Info: 17-03-1104-28

Instrument: GC\_49.i

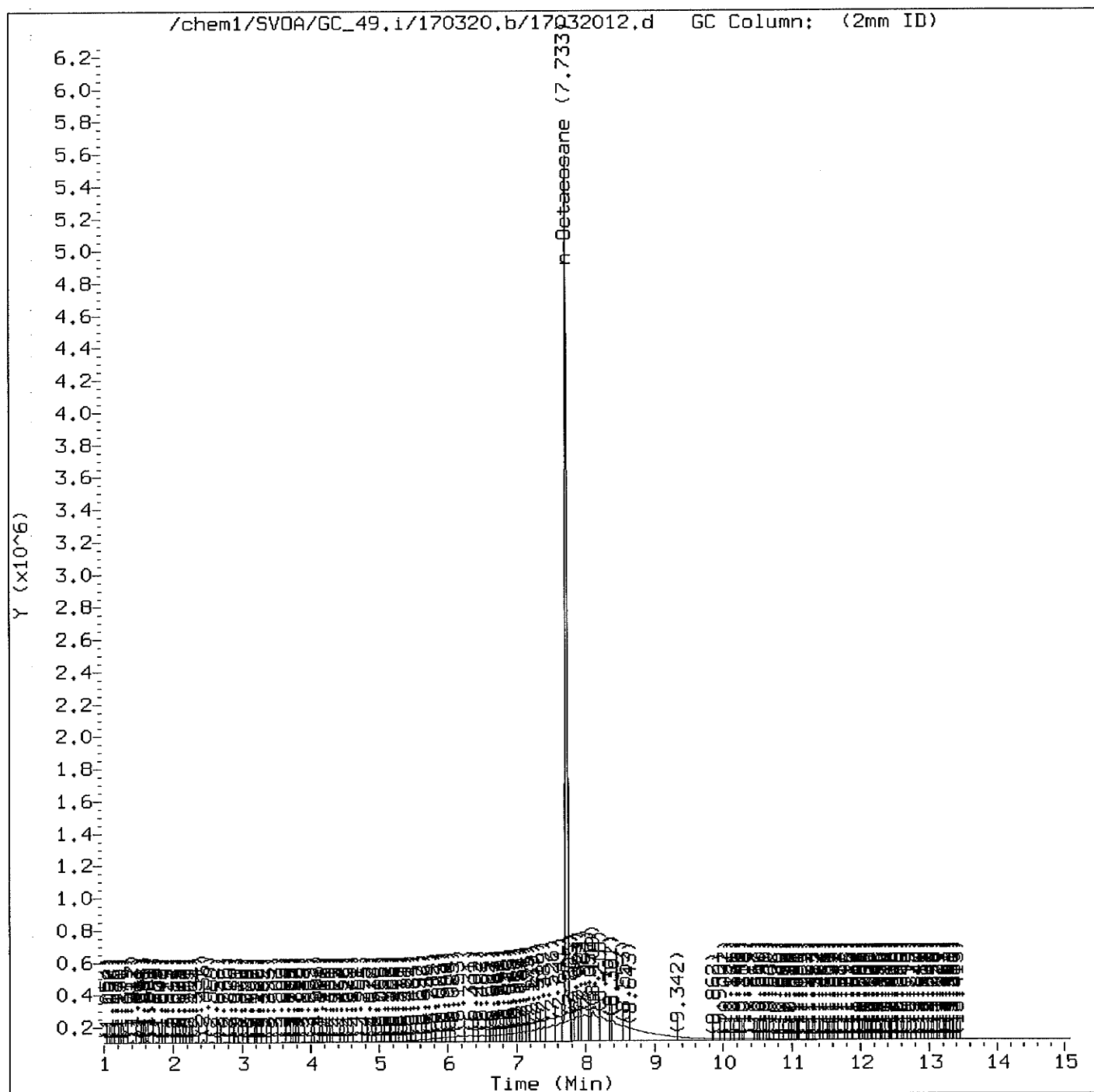
Operator: 682

Column diameter: 2.00

Column phase:



## Manually Integrated Data File

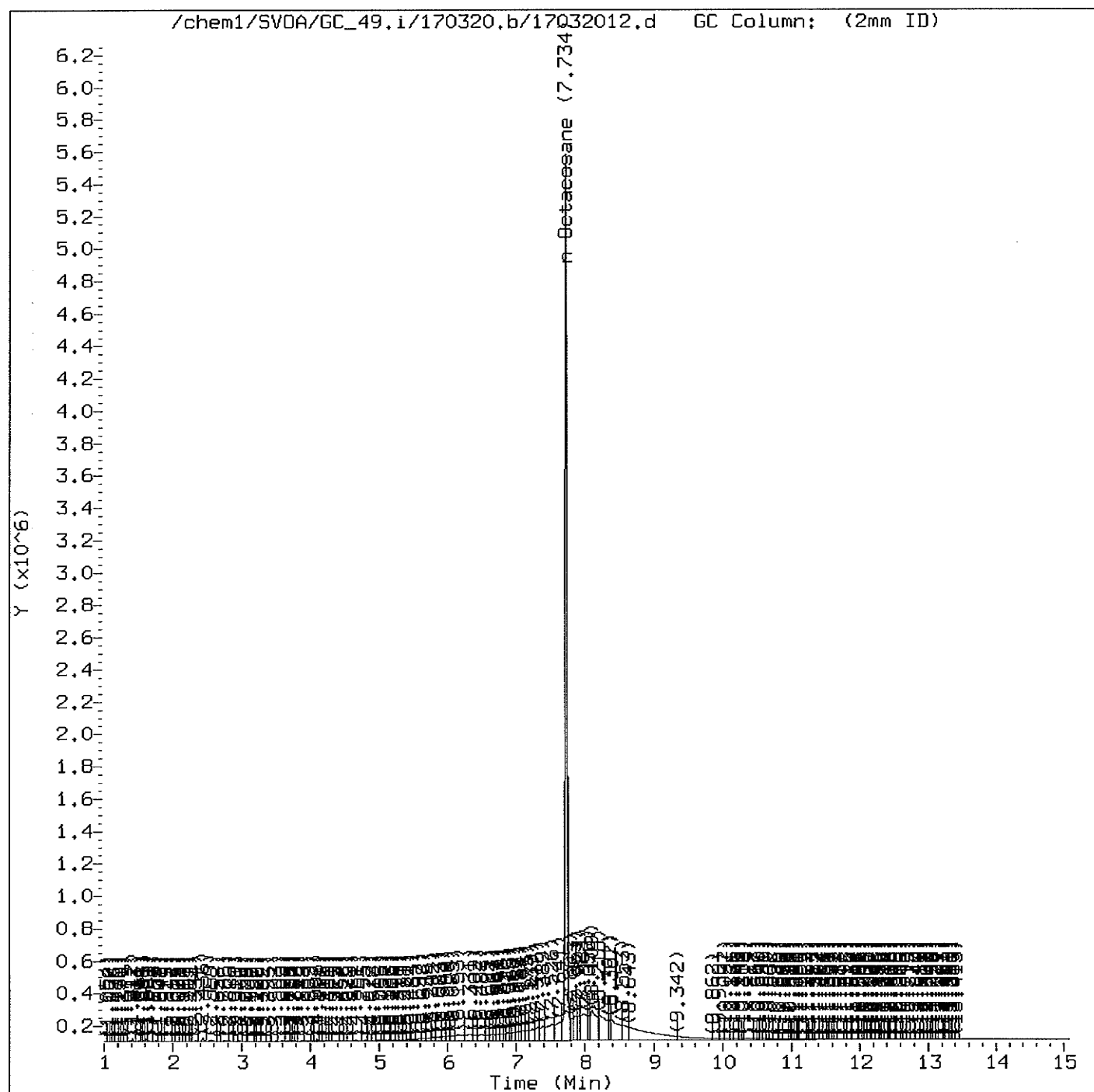


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan  
on 03/21/2017 at 11:12.  
Target 3.5 esignature user ID: umd6

Audit/management approval: 1027

## Original Data File



**RAW DATA SHEET  
FOR METHOD: EPA 8015B (M)**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-20 15:54  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170320\17032013.d\Report.txt17032013

**# 29**

**CLIENT SAMPLE NUMBER:** B-DU3-ISM4-3

**LCS/MB BATCH:** 170316B10  
**MS/MSD BATCH:** 170316S10  
**UNITS:** mg/kg

**SAMPLE VOLUME / WEIGHT:** DEFAULT: 10.00 g / ACTUAL: 10.20 g  
**FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
**ADJUSTMENT RATIO TO PF:** 0.98

**COMMENT:**

| <u>COMPOUND</u>  | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 41.8               | 1.00      | 41.0        | 4.9       | b           |
| TPH as Motor Oil | 78.6               | 1.00      | 77.1        | 4.9       | b           |

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032013.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 13  
 Instrument : GC 49 Injection Number : 13  
 Sample Name : 17-03-1104-29 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 20 MAR 17 15:54  
 Report Created on: 21-MAR-17 10:10 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032013.d

| RT Range     | Exp RT | DLT RT | Response    | ppm   | Compound         |
|--------------|--------|--------|-------------|-------|------------------|
| 7.733        | 7.850  | 0.117  | 50086585.00 | 51.56 | n-Octacosane     |
| 2.301- 7.924 |        |        | 40088220.55 | 41.78 | TPH as Diesel    |
| 5.004-11.698 |        |        | 75470593.11 | 78.65 | TPH as Motor Oil |

End of File

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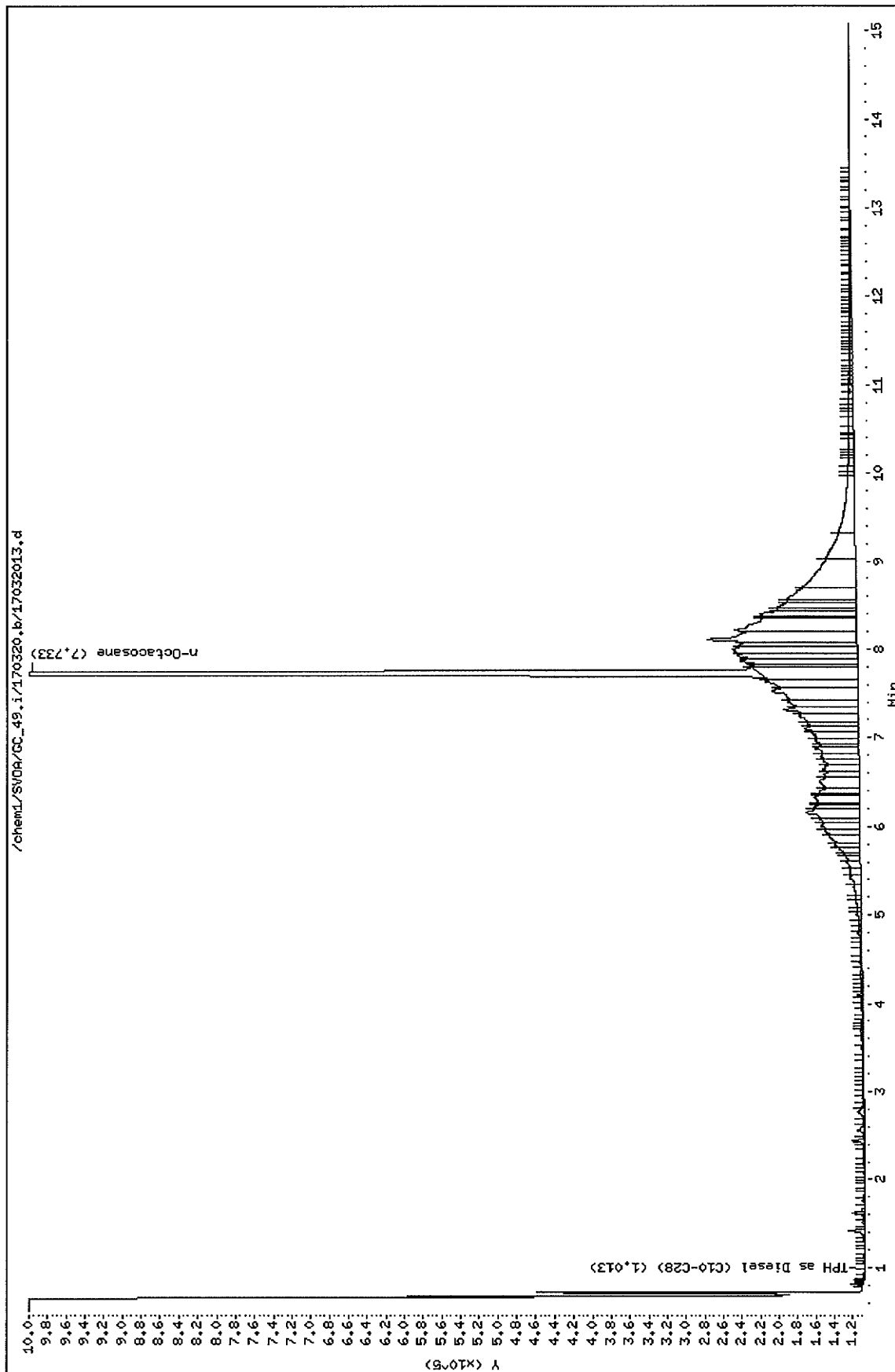
Data File: /chem1/SV0A/GC\_49.i/170320.b/17032013.d  
Date : 20-MAR-2017 15:54  
Client ID:  
Sample Info: 17-03-1104-29

Instrument: GC\_49.i

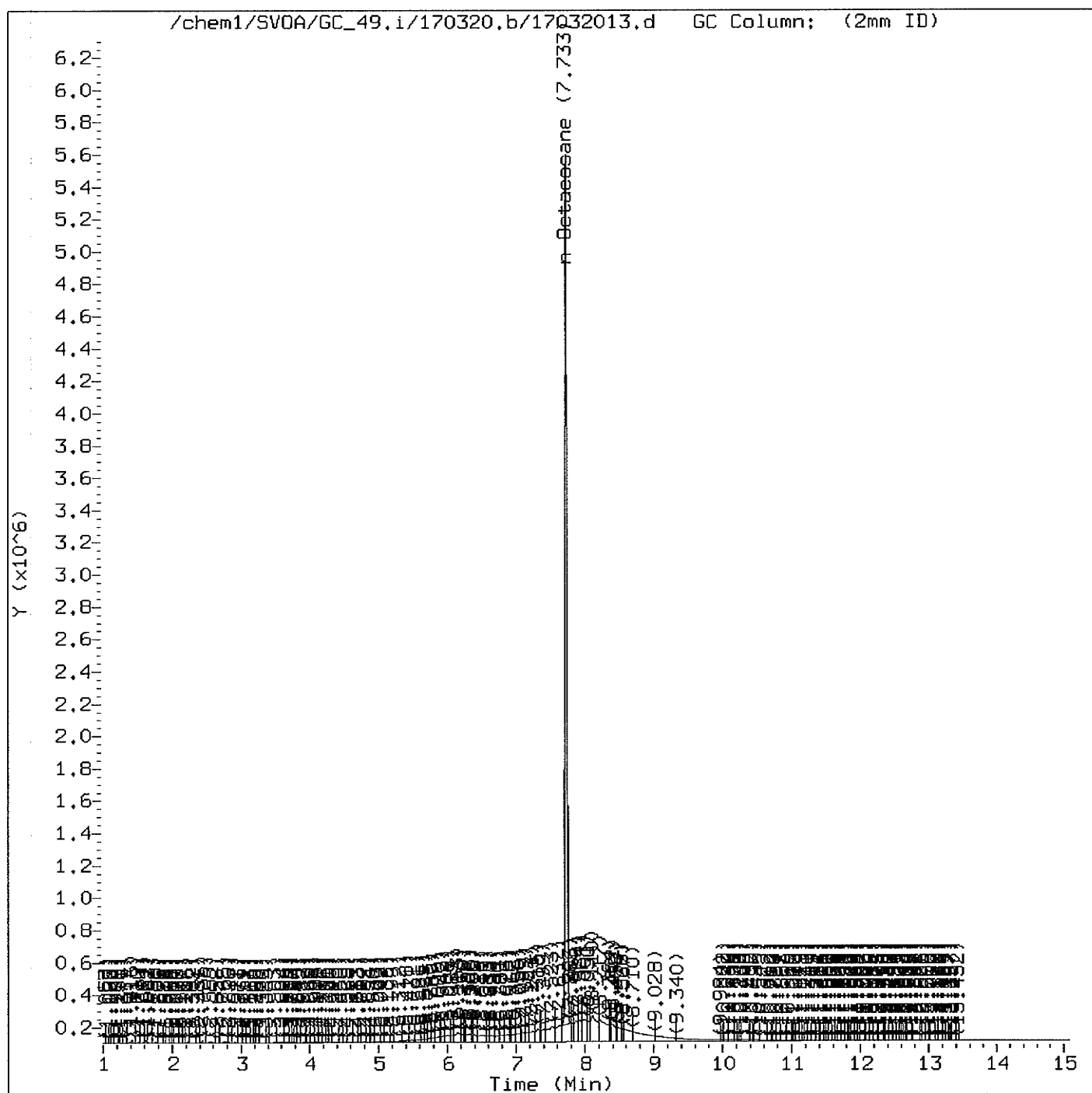
Operator: 682

Column diameter: 2.00

Column phase:

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## Manually Integrated Data File

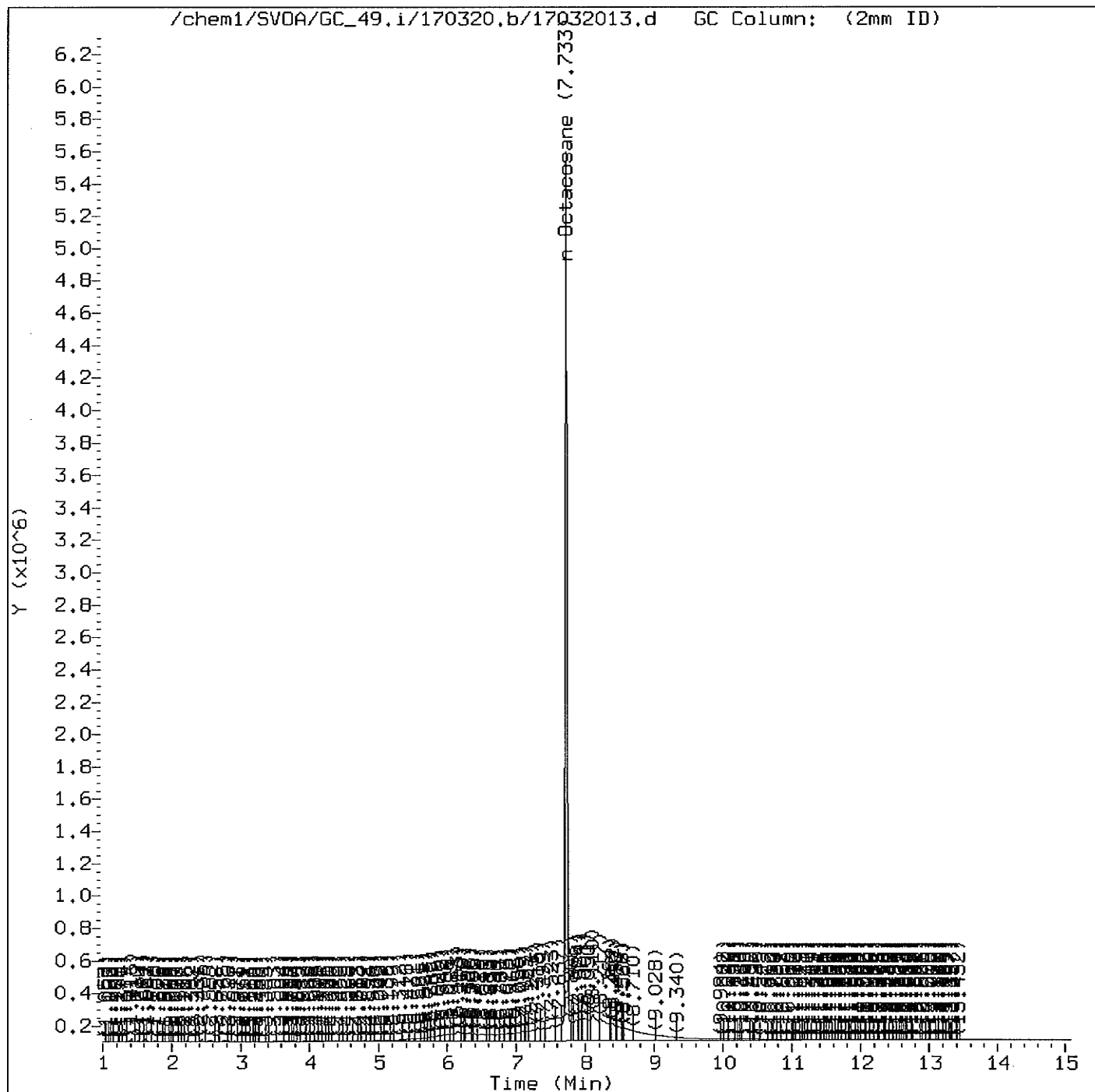


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan  
on 03/21/2017 at 10:10.  
Target 3.5 esignature user ID: umd6

Audit/management approval: \_\_\_\_\_ 1027

## Original Data File



EPA 8015B (M)  
Diesel + Motor Oil  
QUALITY CONTROL  
Method Blank  
LCS/LCSD  
MS/MSD

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 8015B (M)

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**MB SAMPLE ID:** 099-14-353-10  
**MB BATCH ID:** 170316B10  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-17 11:49  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170317\17031707.d\Report.txt17031707

### CLIENT WORK ORDER: 17-03-1104

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-----------|-----------------|-------------------------|---------------------|---------------------------------------------------------------|
| 26        | B-DU3-ISM1-3    |                         | 2017-03-20 14:31    | T:\GC_49\GC_49_data\2017\170320\17032010.d\Report.txt17032010 |
| 27        | B-DU3-ISM2-3    |                         | 2017-03-20 14:52    | T:\GC_49\GC_49_data\2017\170320\17032011.d\Report.txt17032011 |
| 28        | B-DU3-ISM3-3    |                         | 2017-03-20 15:13    | T:\GC_49\GC_49_data\2017\170320\17032012.d\Report.txt17032012 |
| 29        | B-DU3-ISM4-3    |                         | 2017-03-20 15:54    | T:\GC_49\GC_49_data\2017\170320\17032013.d\Report.txt17032013 |

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**RAW DATA SHEET  
FOR METHOD: EPA 8015B (M)**

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**WORK ORDER:** 099-14-353  
**INSTRUMENT:** GC 49  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-17 11:49  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** T:\GC\_49\GC\_49\_data\2017\170317\17031707.d\Report.txt17031707

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** 170316B10 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 10.00 g / ACTUAL: 10.00 g  
**MS/MSD BATCH:** **FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u>  | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 0.380              | 1.00      | ND          | 5.0       |             |
| TPH as Motor Oil | 0.510              | 1.00      | ND          | 5.0       |             |

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# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

LCS SAMPLE ID: 099-14-353-10  
LCS/MB BATCH ID: 170316B10  
INSTRUMENT: GC 49

EXTRACTION: EPA 3550B  
D/T EXTRACTED: 2017-03-16 00:00

ANALYZED BY: 972  
D/T ANALYZED: 2017-03-17 12:10  
REVIEWED BY:  
D/T REVIEWED:

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170317\17031708.d\Report.txt17031708

| <u>COMPOUND NAME</u> | <u>CONC ADDED</u> | <u>CONC REC</u> | <u>%RECOVERY</u> | <u>%REC CONTROL LIMIT</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|----------------------|-------------------|-----------------|------------------|---------------------------|---------------|-------------------|
| TPH as Diesel        | 400.0             | 392.7           | 98               | 61-145                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET

FOR METHOD: EPA 8015B (M)

**SPIKED SAMPLE ID:** 17-03-1104-28  
**MS/MSD BATCH:** 170316S10  
**INSTRUMENTS:**  
    **SAMPLE:** GC 49  
    **MS:** GC 49  
    **MSD:** GC 49

**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:**  
    **SAMPLE:** 2017-03-16 00:00  
    **MS:** 2017-03-16 00:00  
    **MSD:** 2017-03-16 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:**  
    **SAMPLE:** 2017-03-20 15:13  
    **MS:** 2017-03-20 16:15  
    **MSD:** 2017-03-20 16:36  
**REVIEWED BY:**  
**D/T REVIEWED:**

**COMMENT:**

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| TPH as Diesel | 42.81  | 400.0   | 400.0 | 412.3   | 92       | 433.4    | 98        | 61-145   | 5   | 0-25   | PASS   |            |

**Data Files:**

| TYPE | DATA FILE | DATA FILE PATH                                        |
|------|-----------|-------------------------------------------------------|
| MS   | 17032014  | T:\GC_49\GC_49_data\2017\170320\17032014.d\Report.txt |
| MSD  | 17032015  | T:\GC_49\GC_49_data\2017\170320\17032015.d\Report.txt |

## SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1104

BATCH ID:

LCS/MB: 170316B10MS: 170316S10EXTRACTION: EPA 3550BREVIEWED BY:D/T REVIEWED:# 26 CLIENT SAMPLE NUMBER : B-DU3-ISM1-3INSTRUMENT: GC 49D/T EXTRACTED: 2017-03-16 00:00DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032010.d\Report.txt17032010ANALYZED BY: 972D/T ANALYZED 2017-03-20 14:31COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 104          | 61-145          | PASS          |                   |

# 27 CLIENT SAMPLE NUMBER : B-DU3-ISM2-3INSTRUMENT: GC 49D/T EXTRACTED: 2017-03-16 00:00DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032011.d\Report.txt17032011ANALYZED BY: 972D/T ANALYZED 2017-03-20 14:52COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 103          | 61-145          | PASS          |                   |

# 28 CLIENT SAMPLE NUMBER : B-DU3-ISM3-3INSTRUMENT: GC 49D/T EXTRACTED: 2017-03-16 00:00DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032012.d\Report.txt17032012ANALYZED BY: 972D/T ANALYZED 2017-03-20 15:13COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 102          | 61-145          | PASS          |                   |

# 29 CLIENT SAMPLE NUMBER : B-DU3-ISM4-3INSTRUMENT: GC 49D/T EXTRACTED: 2017-03-16 00:00DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032013.d\Report.txt17032013ANALYZED BY: 972D/T ANALYZED 2017-03-20 15:54COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 103          | 61-145          | PASS          |                   |

**SURROGATE RECOVERIES  
FOR METHOD: EPA 8015B (M)**

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WORK ORDER: 17-03-1104

BATCH ID:

LCS/MB: 170316B10

MS:

EXTRACTION: EPA 3550B

REVIEWED BY:

D/T REVIEWED:

**# MB      CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC 49

D/T EXTRACTED: 2017-03-16 00:00

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170317\17031707.d\Report.txt17031707

ANALYZED BY: 972

D/T ANALYZED 2017-03-17 11:49

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 99           | 61-145          | PASS          |                   |

**# LCS      CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC 49

D/T EXTRACTED: 2017-03-16 00:00

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170317\17031708.d\Report.txt17031708

ANALYZED BY: 972

D/T ANALYZED 2017-03-17 12:10

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 100          | 61-145          | PASS          |                   |

**# MS      CLIENT SAMPLE NUMBER : Matrix Spike**

INSTRUMENT: GC 49

D/T EXTRACTED: 2017-03-16 00:00

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032014.d\Report.txt17032014

ANALYZED BY: 972

D/T ANALYZED 2017-03-20 16:15

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 100          | 61-145          | PASS          |                   |

**# MSD      CLIENT SAMPLE NUMBER : Matrix Spike Duplicate**

INSTRUMENT: GC 49

D/T EXTRACTED: 2017-03-16 00:00

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170320\17032015.d\Report.txt17032015

ANALYZED BY: 972

D/T ANALYZED 2017-03-20 16:36

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 94           | 61-145          | PASS          |                   |

=====  
External Standard Report  
=====

Data File Name : /chem1/SVOA/GC\_49/170317/17031707.d  
Page Number :  
Operator : 682 Vial Number : Vial 7  
Instrument : GC 49 Injection Number : 7  
Sample Name : MB 17031610 Sequence Line : 0  
Instrument Method: 8015d.m  
Acquired on : 17 MAR 17 11:49  
Report Created on: 20-MAR-17 10:44 Compound Sublist : all  
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170317.b/17031707.d

| RT Range     | Exp RT | DLT RT | Response    | ppm   | Compound         |
|--------------|--------|--------|-------------|-------|------------------|
| 7.740        | 7.850  | 0.110  | 48033375.00 | 49.45 | n-Octacosane     |
| 2.305- 7.934 |        |        | 362742.53   | 0.38  | TPH as Diesel    |
| 5.010-11.717 |        |        | 486893.00   | 0.51  | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV04/GC\_49.i/170317.b/17031707.d

Date : 17-MAR-2017 11:49

Client ID:

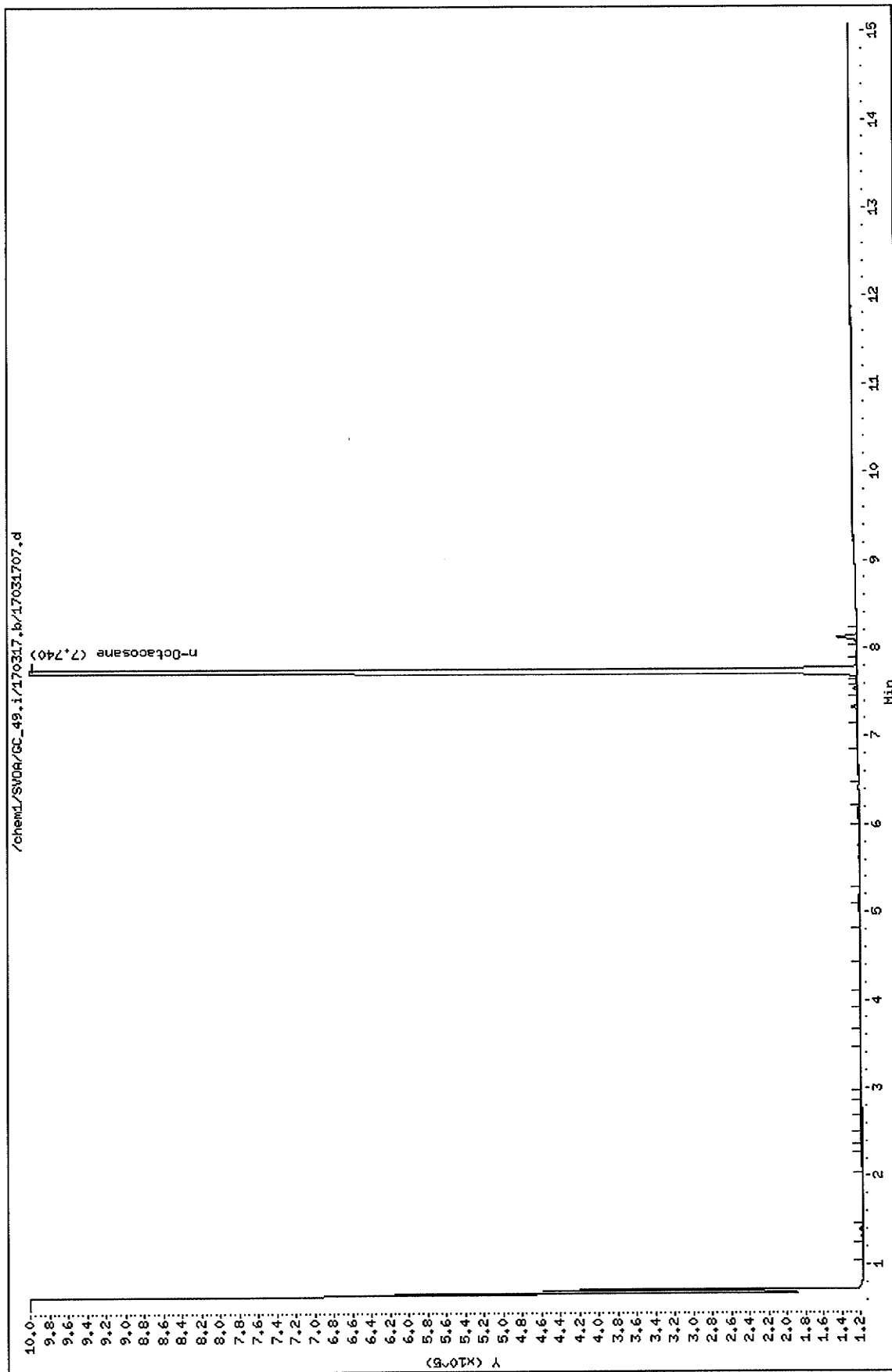
Sample Info: MB 17031610

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

```

=====
External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170317/17031708.d
Page Number      :
Operator         : 682
Instrument        : GC 49
Sample Name      : LCS 17031610
Vial Number      : Vial 8
Injection Number  : 8
Sequence Line    : 0
Instrument Method: 8015d.m

```

```

Acquired on      : 17 MAR 17 12:10
Report Created on: 20-MAR-17 10:44
Software Revision: Target 3.50
Compound Sublist : all

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170317.b/17031708.d

```

| RT Range     | Exp RT | DLT RT | Response     | ppm    | Compound              |
|--------------|--------|--------|--------------|--------|-----------------------|
| 7.742        | 7.850  | 0.108  | 48760621.00  | 50.20  | n-Octacosane          |
| 0.710- 7.934 |        |        | 376837157.48 | 392.73 | TPH as Diesel         |
| 2.305- 7.934 |        |        | 358213221.95 | 405.93 | Diesel Range Organics |

End of File

Page 1

Data File: /chem1/SVDR/GC\_49.i/170317.b/17031708.d

Date : 17-MAR-2017 12:10

Client ID:

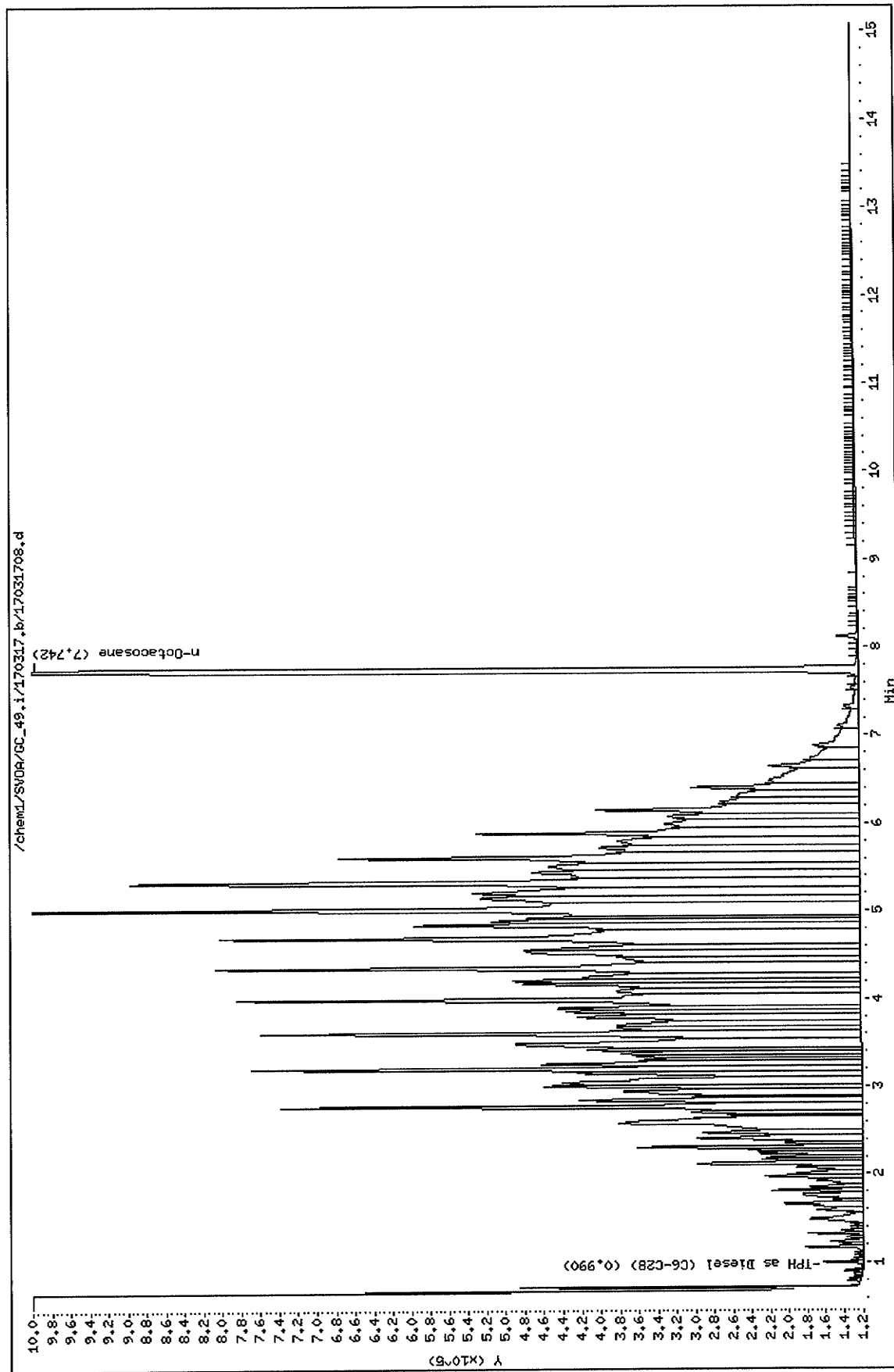
Sample Info: LCS 17031610

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032014.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 14  
 Instrument : GC 49 Injection Number : 14  
 Sample Name : MS 17-03-1104-28 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 20 MAR 17 16:15  
 Report Created on: 21-MAR-17 10:11 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032014.d

| RT Range     | Exp RT | DLT RT | Response     | ppm    | Compound         |
|--------------|--------|--------|--------------|--------|------------------|
| 7.733        | 7.850  | 0.117  | 48631238.00  | 50.06  | n-Octacosane     |
| 2.301- 7.924 |        |        | 403550158.18 | 420.57 | TPH as Diesel    |
| 5.004-11.698 |        |        | 215140433.21 | 224.21 | TPH as Motor Oil |

End of File

Date : 20-MAR-2017 16:15

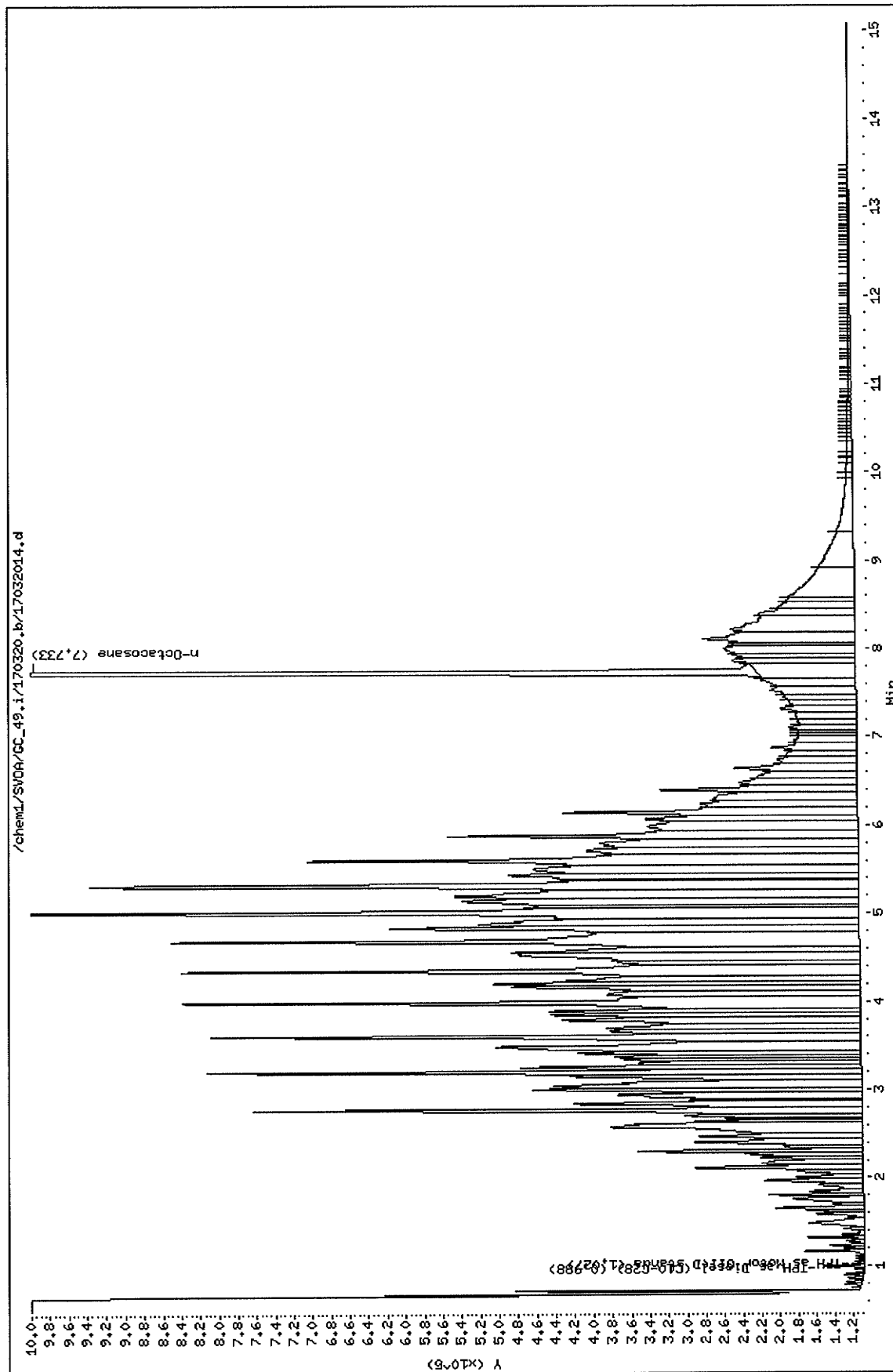
Sample Info: MS 17-03-1104-28

Instrument: GC\_49.i

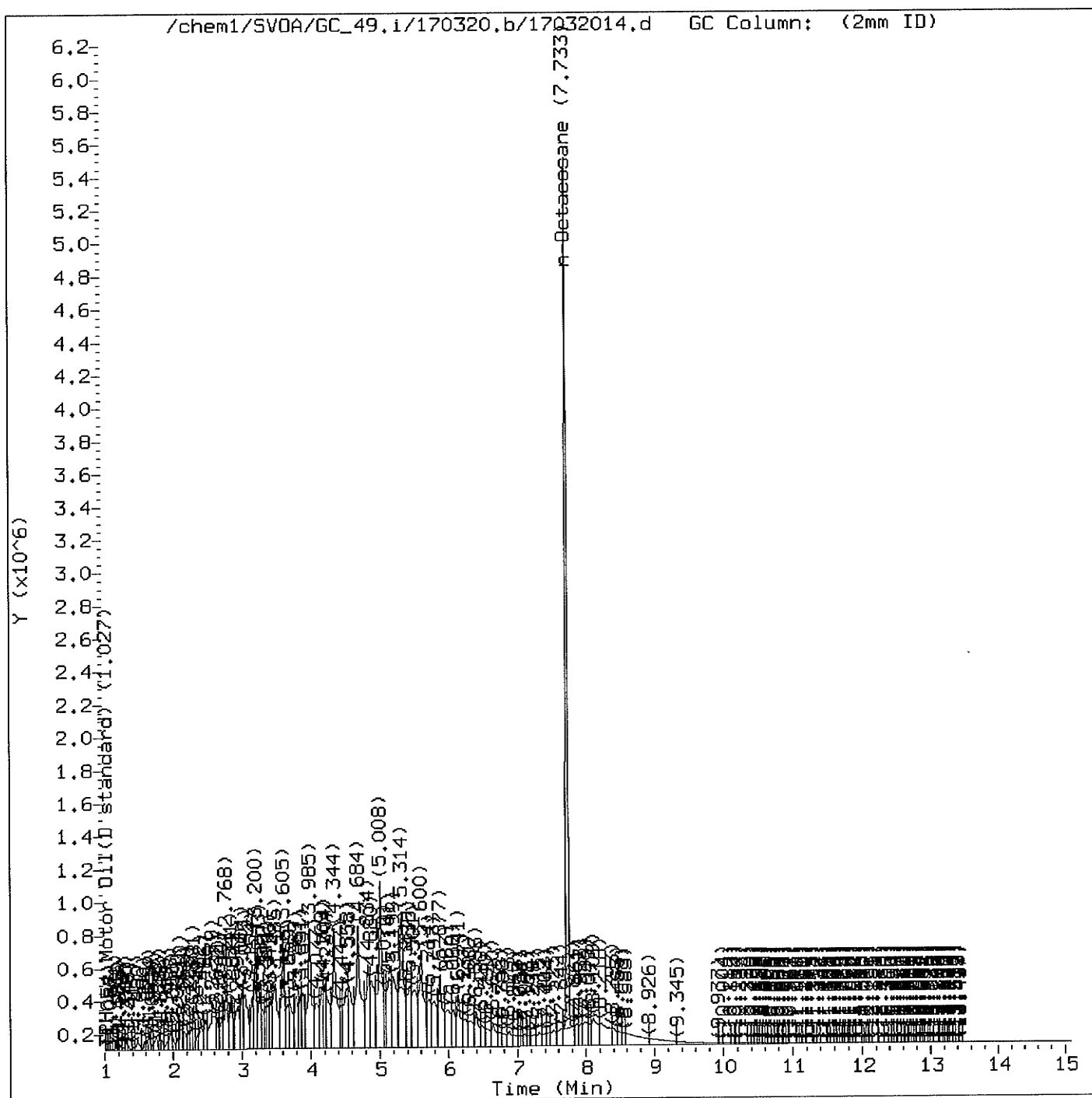
Operator: 682

Column diameter: 2.00

Column phase:



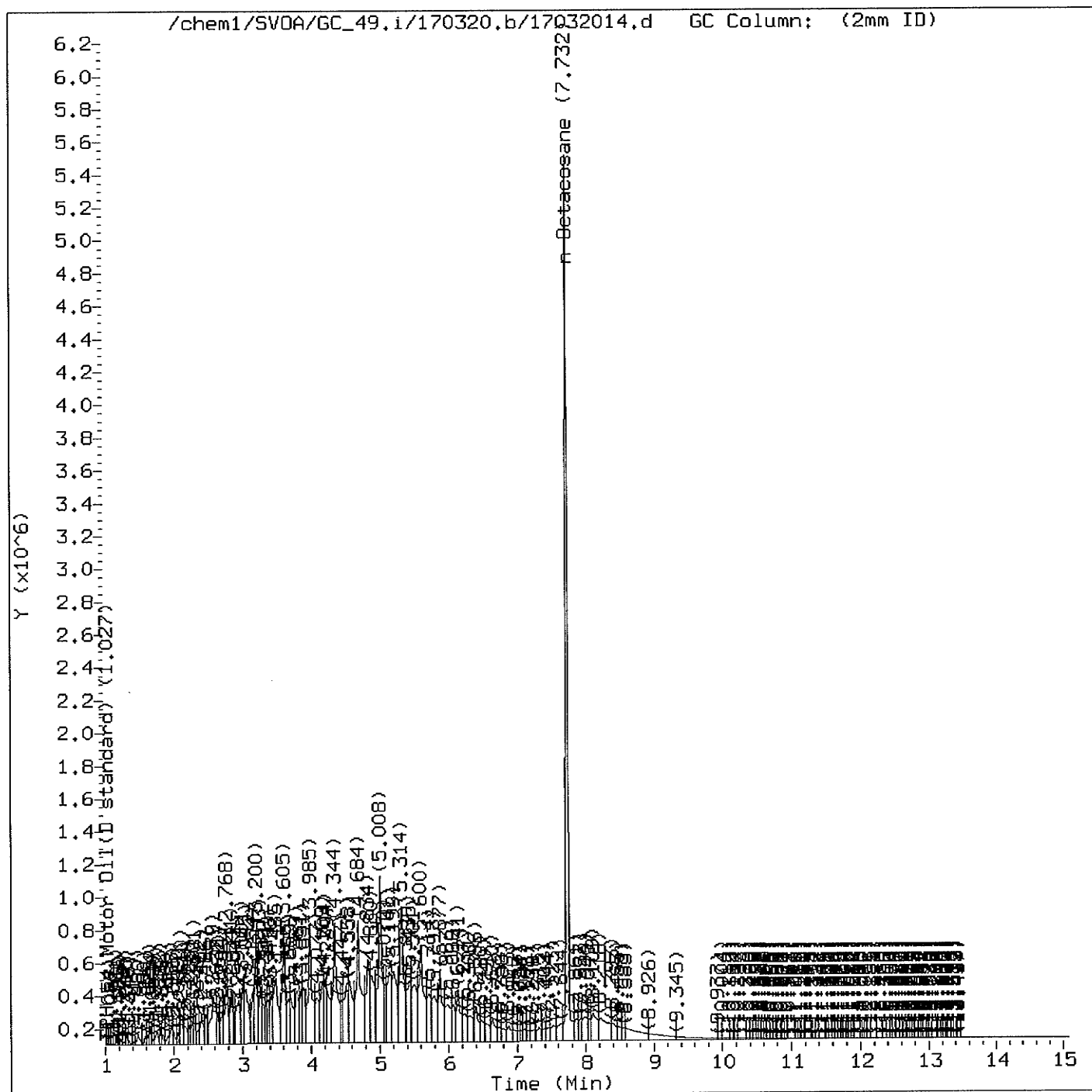
## Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan  
on 03/21/2017 at 10:10.  
Target 3.5 esignature user ID: umd6

Audit/management approval: JD



=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032015.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 15  
 Instrument : GC 49 Injection Number : 15  
 Sample Name : MSD 17-03-1104-28 Sequence Line : 0  
 Instrument Method: 8015d.m

Acquired on : 20 MAR 17 16:36  
 Report Created on: 21-MAR-17 10:11 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032015.d

| RT Range     | Exp RT | DLT RT | Response     | ppm    | Compound         |
|--------------|--------|--------|--------------|--------|------------------|
| 7.733        | 7.850  | 0.117  | 45480703.00  | 46.82  | n-Octacosane     |
| 2.301- 7.924 |        |        | 411687119.78 | 429.05 | TPH as Diesel    |
| 5.004-11.698 |        |        | 213548179.56 | 222.55 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV04/GC\_49.i/170320.b/17032015.d

Date : 20-MAR-2017 16:36

Client ID:

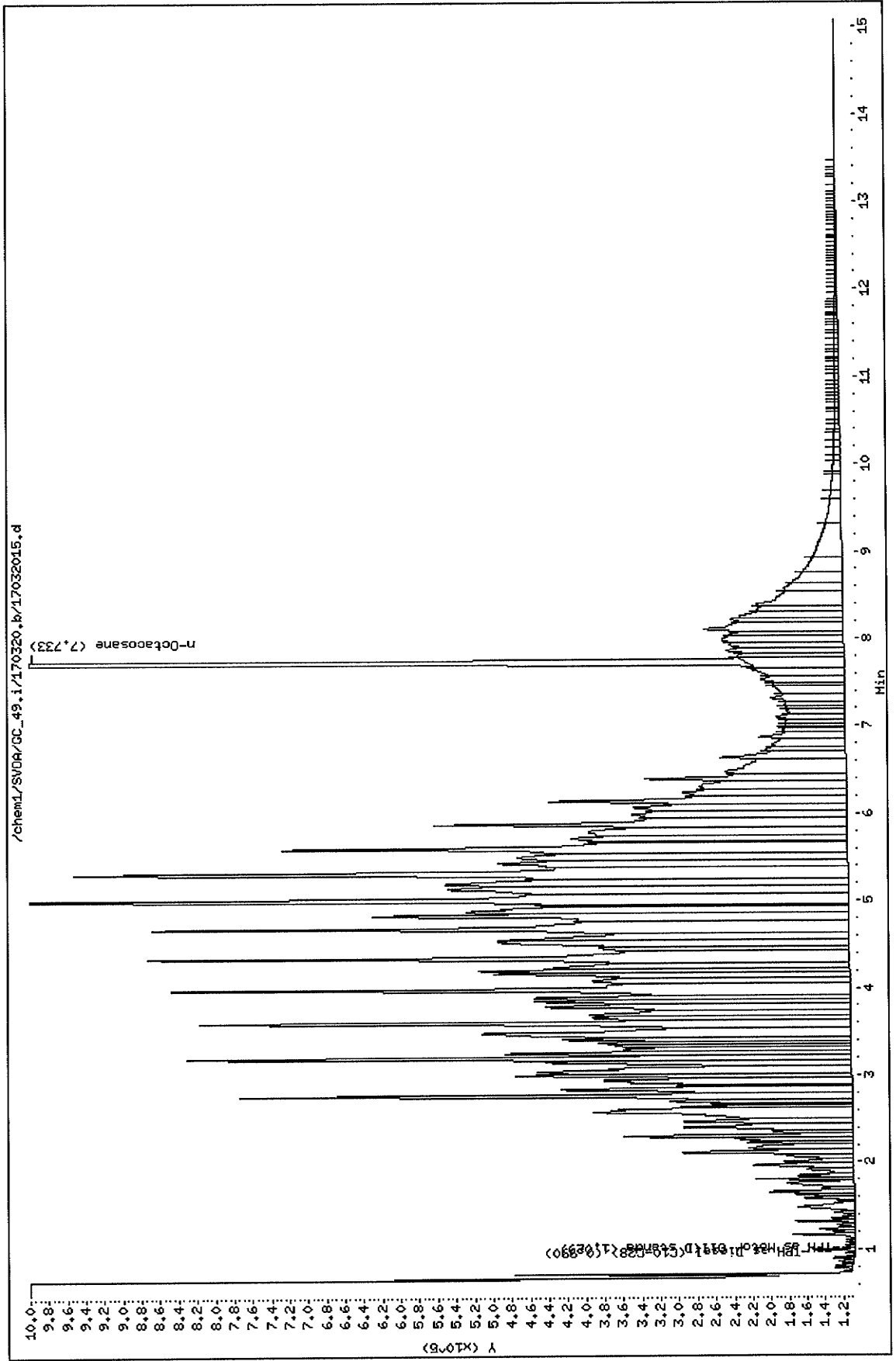
Sample Info: MSD 17-03-1104-28

Instrument: GC\_49.i

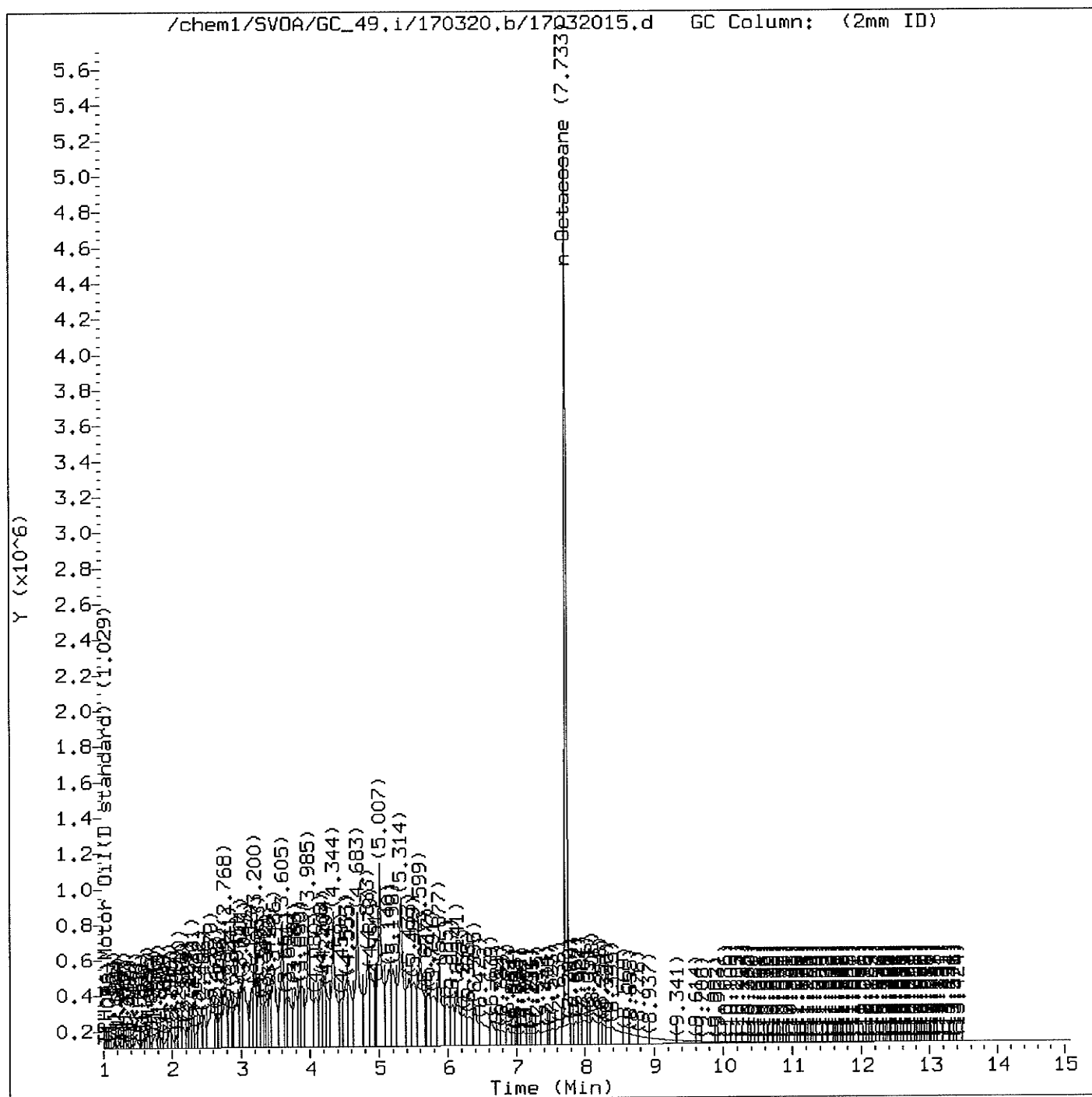
Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

## Manually Integrated Data File

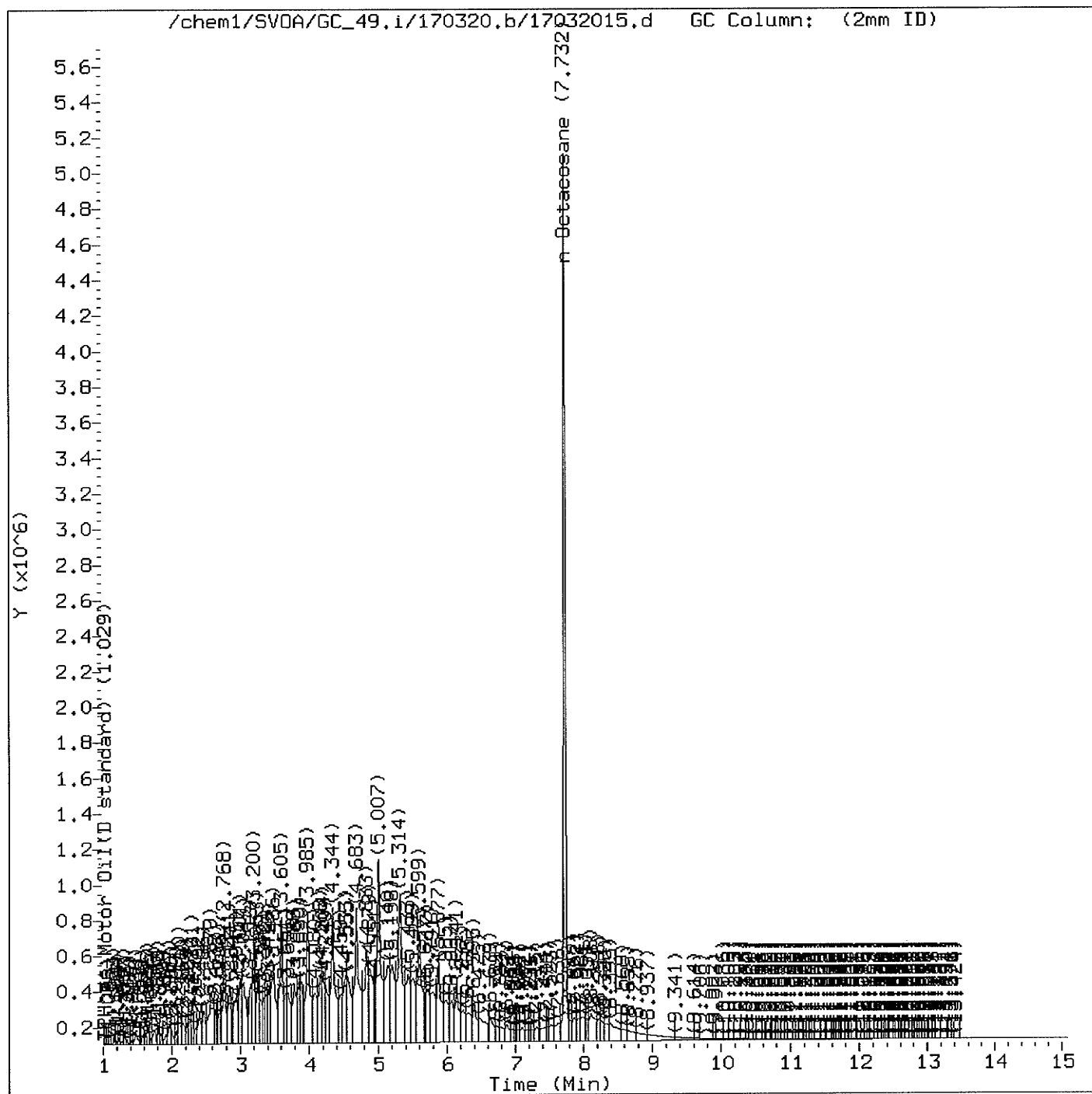


Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan  
 Analyst responsible for change: on 03/21/2017 at 10:11.  
 Target 3.5 esignature user ID: umd6

Audit/management approval: JD

## Original Data File



# EPA 8015B (M)

## Diesel + Motor Oil

### CONTINUING CALIBRATION

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-43-5901

BATCH ID:

170315I003

170317A051

GC 49

INITIAL:

2017-03-15 14:40

2017-03-17 10:16

CCV:

INSTRUMENT:

ANALYZED BY:

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

DATA FILE: T:\GC\_49\GC\_49\_data\2017\170317\17031703.d\Report.txt17031703

| COMPOUND NAME | TYPE | CALIB MODEL | MIN RF | AVG RF  | CCV RF  | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------|------|-------------|--------|---------|---------|--------|----------|--------|-----------|--------|
| TPH as Diesel | C    | Avg Resp    | 0.00   | 959.540 | 919.816 |        |          | 4      | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_49.i/170317.b/17031703.d  
 Report Date: 03/20/2017 10:39

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_49.i                      Injection Date and Time: 17-MAR-2017 10:16  
 Sample Name: CCV D400 C28 50 L102516D      Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017  
 Sublist used: CCV\_D-DRO.sub              Initial Calibration Time(s): 21:15 15:11  
 Method used: /chem1/SVOA/GC\_49.i/170317.b/8015d.m

| Target Compounds      | ICAL RRF or<br>Amount | ICV<br>RRF  | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|-----------------------|-----------------------|-------------|-------------|----------------|-----------------|------------|
| Diesel Range Organics | 882457.968            | 845256.338  | 0.00        | 4              | 15              | Averaged   |
| TPH as Diesel         | 959539.736            | 919815.510  | 0.00        | 4              | 15              | Averaged   |
| Surrogate Standards   | ICAL RRF or<br>Amount | ICV<br>RRF  | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
| n-Octacosane          | 971404.651            | 1002929.420 | 0.00        | -3             | 20              | Averaged   |

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Data File: /chem1/SVOA/GC\_49.i/170317.b/17031703.d  
 Report Date: 20-Mar-2017 10:29

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170317.b/17031703.d  
 Lab Smp Id:  
 Inj Date : 17-MAR-2017 10:16  
 Operator : 682  
 Smp Info : CCV D400 C28 50 L102516D  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170317.b/8015d.m  
 Meth Date : 20-Mar-2017 10:29 umd6  
 Cal Date : 16-MAR-2017 15:11  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i  
 Quant Type: ESTD  
 Cal File: 17031609.d  
 Continuing Calibration Sample  
 Compound Sublist: CCV\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  |             |        |        |           | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            | RT          | EXP RT | DLT RT | RESPONSE  | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====     | =====             | =====            |
| S 14 TPH as Diesel         | 0.710-7.934 |        |        | 367926204 | 400.000           | 383.440          |
| S 26 Diesel Range Organics | 2.305-7.934 |        |        | 338102535 | 400.000           | 383.137          |
| \$ 92 n-Octacosane         | 7.743       | 7.743  | 0.000  | 50146471  | 50.0000           | 51.622           |

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Data File: /chem1/SVDA/GC\_49.i/170317.b/17031703.d

Date : 17-MAR-2017 10:16

Client ID:

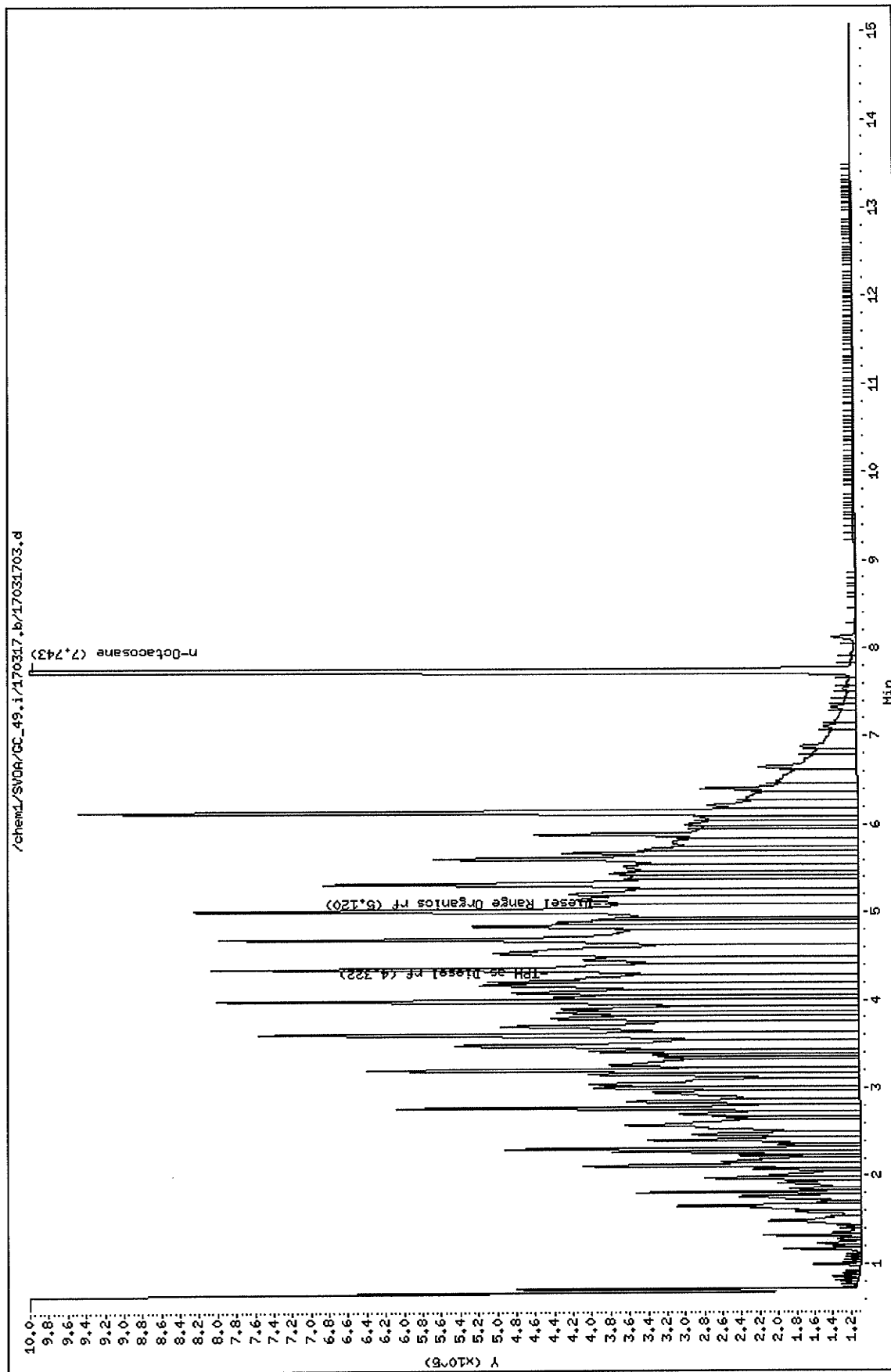
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_49.i/170317.b/17031720.d  
 Report Date: 03/20/2017 10:47

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_49.i      Injection Date and Time: 17-MAR-2017 16:26  
 Sample Name: CCV D400 C28 50 L102516D      Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017  
 Sublist used: CCV\_D-DRO.sub      Initial Calibration Time(s): 21:15 15:11  
 Method used: /chem1/SVOA/GC\_49.i/170317.b/8015d.m

| Target Compounds      | ICAL RRF or<br>Amount | ICV<br>RRF  | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|-----------------------|-----------------------|-------------|-------------|----------------|-----------------|------------|
| Diesel Range Organics | 882457.968            | 830704.340  | 0.00        | 6              | 15              | Averaged   |
| TPH as Diesel         | 959539.736            | 904777.643  | 0.00        | 6              | 15              | Averaged   |
| Surrogate Standards   | ICAL RRF or<br>Amount | ICV<br>RRF  | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
| n-Octacosane          | 971404.651            | 1008598.280 | 0.00        | -4             | 20              | Averaged   |

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Data File: /chem1/SVOA/GC\_49.i/170317.b/17031720.d  
 Report Date: 20-Mar-2017 10:32

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170317.b/17031720.d  
 Lab Smp Id:  
 Inj Date : 17-MAR-2017 16:26  
 Operator : 682  
 Smp Info : CCV D400 C28 50 L102516D  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_49.i/170317.b/8015d.m  
 Meth Date : 20-Mar-2017 10:32 umd6  
 Cal Date : 16-MAR-2017 15:11  
 Als bottle: 20  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_49.i

Quant Type: ESTD

Cal File: 17031609.d

Continuing Calibration Sample

Compound Sublist: CCV\_D-DRO.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| S 14 TPH as Diesel         | 0.710-7.934 |        |        | 361911057 | 400.000           | 377.171          |
| S 26 Diesel Range Organics | 2.305-7.934 |        |        | 332281736 | 400.000           | 376.541          |
| \$ 92 n-Octacosane         | 7.741       | 7.741  | 0.000  | 50429914  | 50.0000           | 51.914           |

Page 1

Data File: /chem1/SV04/GC\_49.i/170317.b/17031720.d

Date : 17-MAR-2017 16:26

Client ID:

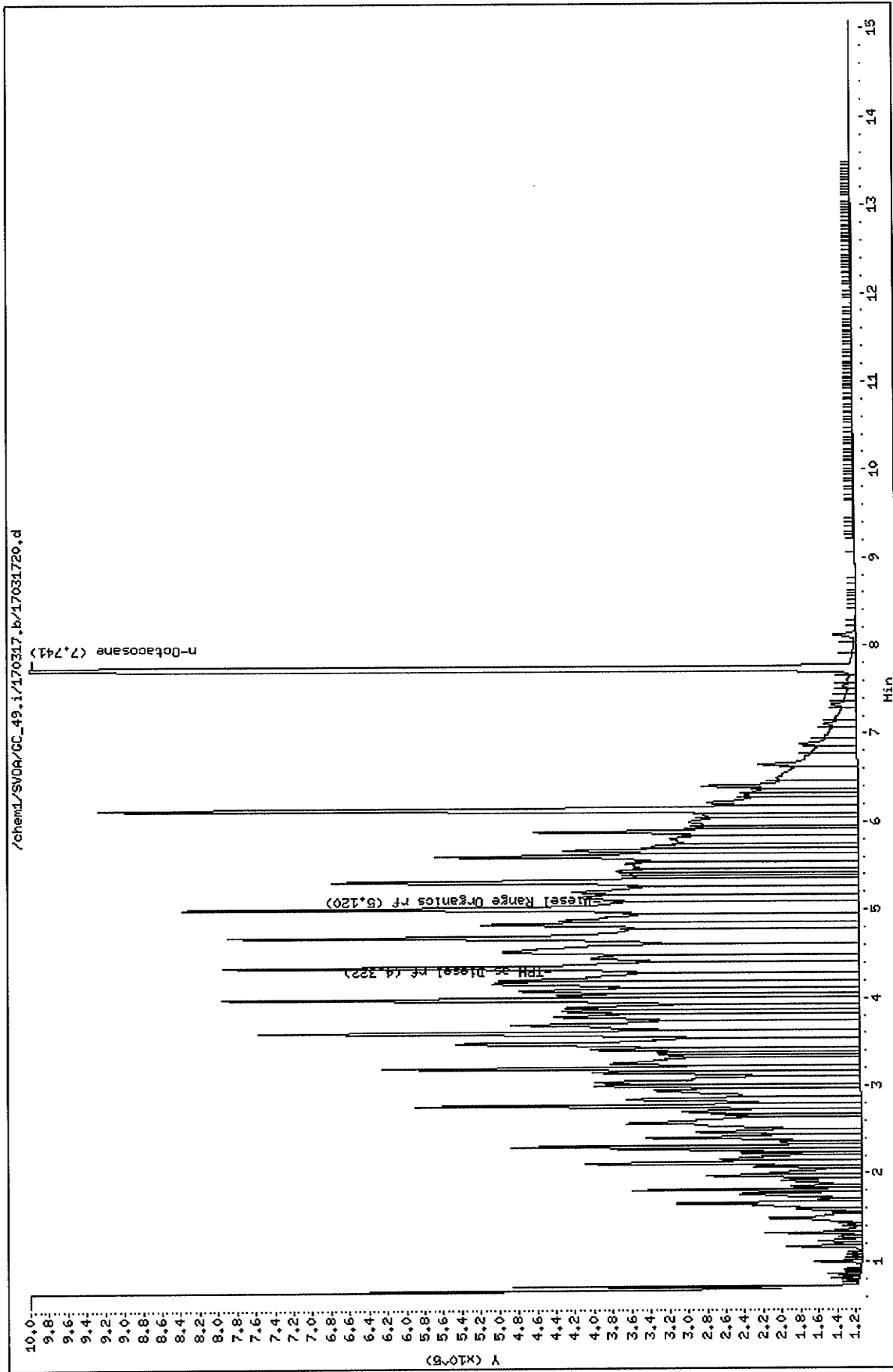
Sample Info: CCV B400 C28 50 L102516D

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



# CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8015B (M)

**BATCH ID:** 170320A027  
**INSTRUMENT:** GC 49

**ANALYZED BY:** 972

**WORK ORDER:** 099-14-354  
**MATRIX:** Water

**REVIEWED BY:** 1,027  
**D/T REVIEWED:** 2017-03-22 12:45

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-------------------------|-------------------------|---------------------|---------------------------------------------------------------|
| 44                      | Daily Calibration       | 2017-03-20 12:27    | T:\GC_49\GC_49_data\2017\170320\17032003.d\Report.txt17032003 |

**WORK ORDER:** 17-03-1104  
**MATRIX:** Soil

**REVIEWED BY:** 1,027  
**D/T REVIEWED:** 2017-03-22 12:46

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-------------------------|-------------------------|---------------------|---------------------------------------------------------------|
| 26                      | B-DU3-ISM1-3            | 2017-03-20 14:31    | T:\GC_49\GC_49_data\2017\170320\17032010.d\Report.txt17032010 |
| 27                      | B-DU3-ISM2-3            | 2017-03-20 14:52    | T:\GC_49\GC_49_data\2017\170320\17032011.d\Report.txt17032011 |
| 28                      | B-DU3-ISM3-3            | 2017-03-20 15:13    | T:\GC_49\GC_49_data\2017\170320\17032012.d\Report.txt17032012 |
| 28                      | B-DU3-ISM3-3            | 2017-03-20 16:15    | T:\GC_49\GC_49_data\2017\170320\17032014.d\Report.txt17032014 |
| 28                      | B-DU3-ISM3-3            | 2017-03-20 16:36    | T:\GC_49\GC_49_data\2017\170320\17032015.d\Report.txt17032015 |
| 29                      | B-DU3-ISM4-3            | 2017-03-20 15:54    | T:\GC_49\GC_49_data\2017\170320\17032013.d\Report.txt17032013 |

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-44-5901

BATCH ID:

170315I003

170320A027

GC 49

INITIAL:

CCV:

INSTRUMENT:

DATA FILE:

T:\GC\_49\GC\_49\_data\2017\170320\17032003.d\Report.txt\17032003

ANALYZED BY: 972

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2017-03-15 14:40

2017-03-20 12:27

| COMPOUND NAME | TYPE | CALIB MODEL | MIN RF | AVG RF  | CCV RF  | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------|------|-------------|--------|---------|---------|--------|----------|--------|-----------|--------|
| TPH as Diesel | C    | Avg Resp    | 0.00   | 959.540 | 889.645 |        |          | 7      | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_49.i/170320.b/17032003.d  
 Report Date: 03/20/2017 13:34

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_49.i                      Injection Date and Time: 20-MAR-2017 12:27  
 Sample Name: CCV D400 C28 50 L102516D      Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017  
 Sublist used: CCV\_D-DRO.sub              Initial Calibration Time(s): 21:15 15:11  
 Method used: /chem1/SVOA/GC\_49.i/170320.b/8015d.m

| Target Compounds      | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| Diesel Range Organics | 882457.968            | 816283.448 | 0.00        | 7              | 15              | Averaged   |
| TPH as Diesel         | 959539.736            | 889645.448 | 0.00        | 7              | 15              | Averaged   |
| Surrogate Standards   |                       |            |             |                |                 |            |
| n-Octacosane          | 971404.651            | 963206.780 | 0.00        | 1              | 20              | Averaged   |

page 1

Data File: /chem1/SVOA/GC\_49.i/170320.b/17032003.d  
 Report Date: 20-Mar-2017 13:34

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## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170320.b/17032003.d

Lab Smp Id:

Inj Date : 20-MAR-2017 12:27

Operator : 682

Inst ID: GC\_49.i

Smp Info : CCV D400 C28 50 L102516D

Misc Info :

Comment :

Method : /chem1/SVOA/GC\_49.i/170320.b/8015d.m

Meth Date : 20-Mar-2017 13:33 n5y3

Quant Type: ESTD

Cal Date : 16-MAR-2017 15:11

Cal File: 17031609.d

Als bottle: 3

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: CCV\_D-DRO.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====     | =====             | =====            |
| S 14 TPH as Diesel         | 0.703-7.924 |        |        | 355858179 | 400.000           | 370.863          |
| S 26 Diesel Range Organics | 2.301-7.924 |        |        | 326513379 | 400.000           | 370.004          |
| \$ 92 n-Octacosane         | 7.734       | 7.734  | 0.000  | 48160339  | 50.0000           | 49.578           |

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Data File: /chem1/SV04/GC\_49.i/170320.b/17032003.d

Date : 20-MAR-2017 12:27

Client ID:

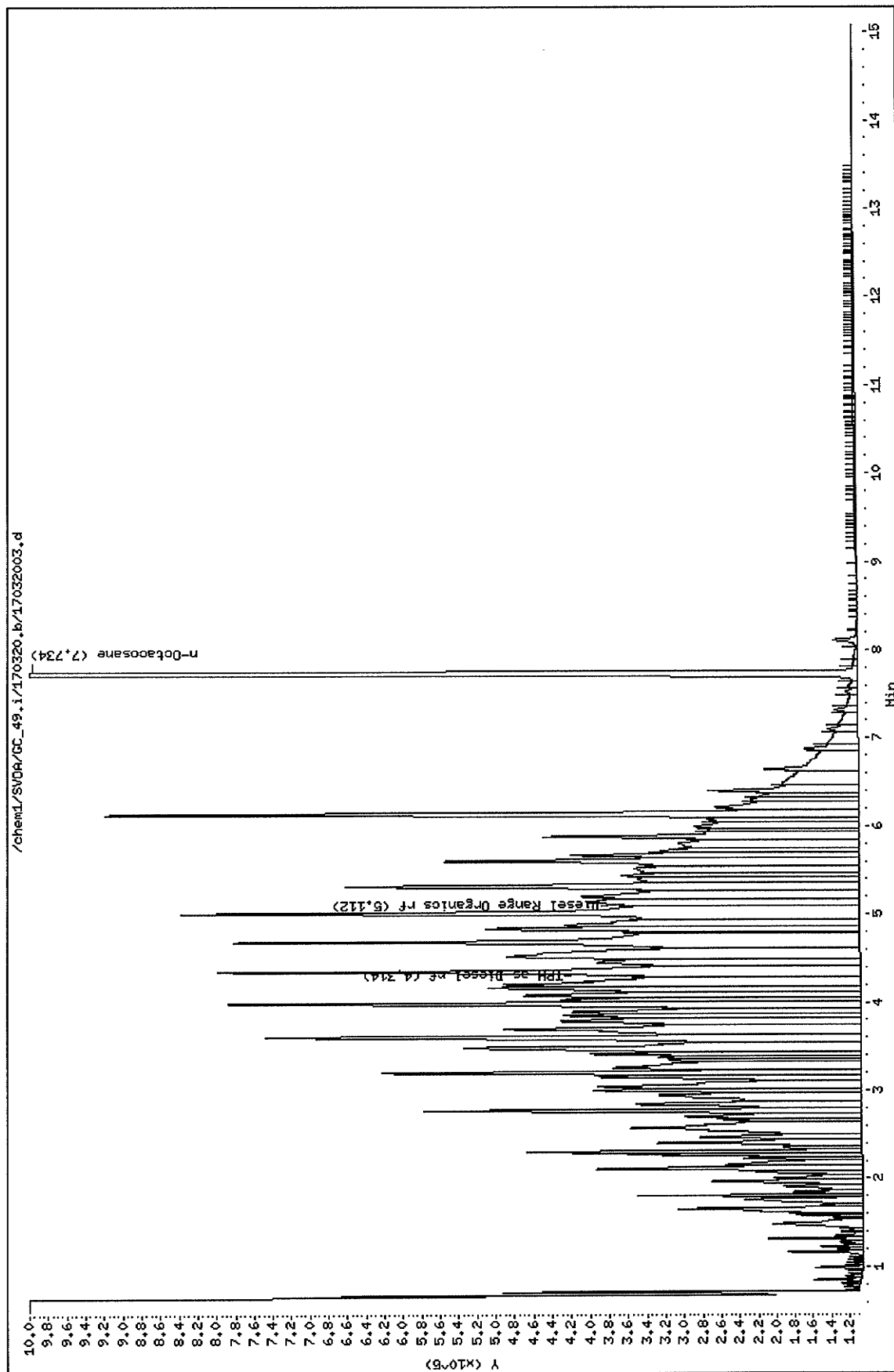
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_49.i/170320.b/17032018.d  
 Report Date: 03/21/2017 10:17

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_49.i                      Injection Date and Time: 20-MAR-2017 17:18  
 Sample Name: CCV D400 C28 50 L102516D      Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017  
 Sublist used: CCV\_D-DRO.sub              Initial Calibration Time(s): 21:15 15:11  
 Method used: /chem1/SVOA/GC\_49.i/170320.b/8015d.m

| Target Compounds      | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| Diesel Range Organics | 882457.968            | 825534.525 | 0.00        | 6              | 15              | Averaged   |
| TPH as Diesel         | 959539.736            | 902764.105 | 0.00        | 6              | 15              | Averaged   |
| Surrogate Standards   | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
| n-Octacosane          | 971404.651            | 951733.220 | 0.00        | 2              | 20              | Averaged   |

page 1

Data File: /chem1/SVOA/GC\_49.i/170320.b/17032018.d  
 Report Date: 21-Mar-2017 10:14

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_49.i/170320.b/17032018.d

Lab Smp Id:

Inj Date : 20-MAR-2017 17:18

Operator : 682

Inst ID: GC\_49.i

Smp Info : CCV D400 C28 50 L102516D

Misc Info :

Comment :

Method : /chem1/SVOA/GC\_49.i/170320.b/8015d.m

Meth Date : 21-Mar-2017 10:14 umd6

Quant Type: ESTD

Cal Date : 16-MAR-2017 15:11

Cal File: 17031609.d

Als bottle: 18

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: CCV\_D-DRO.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds                  | RT          | EXP RT | DLT RT | RESPONSE  | AMOUNTS           |                  |
|----------------------------|-------------|--------|--------|-----------|-------------------|------------------|
|                            |             |        |        |           | CAL-AMT<br>( ppm) | ON-COL<br>( ppm) |
| =====                      | ==          | =====  | =====  | =====     | =====             | =====            |
| S 14 TPH as Diesel         | 0.703-7.924 |        |        | 361105642 | 400.000           | 376.332          |
| S 26 Diesel Range Organics | 2.301-7.924 |        |        | 330213810 | 400.000           | 374.197          |
| \$ 92 n-Octacosane         | 7.730       | 7.730  | 0.000  | 47586661  | 50.0000           | 48.987           |

Page 1

Data File: /chem1/SV0A/GC\_49.i/170320.b/17032018.d

Date : 20-MAR-2017 17:18

Client ID:

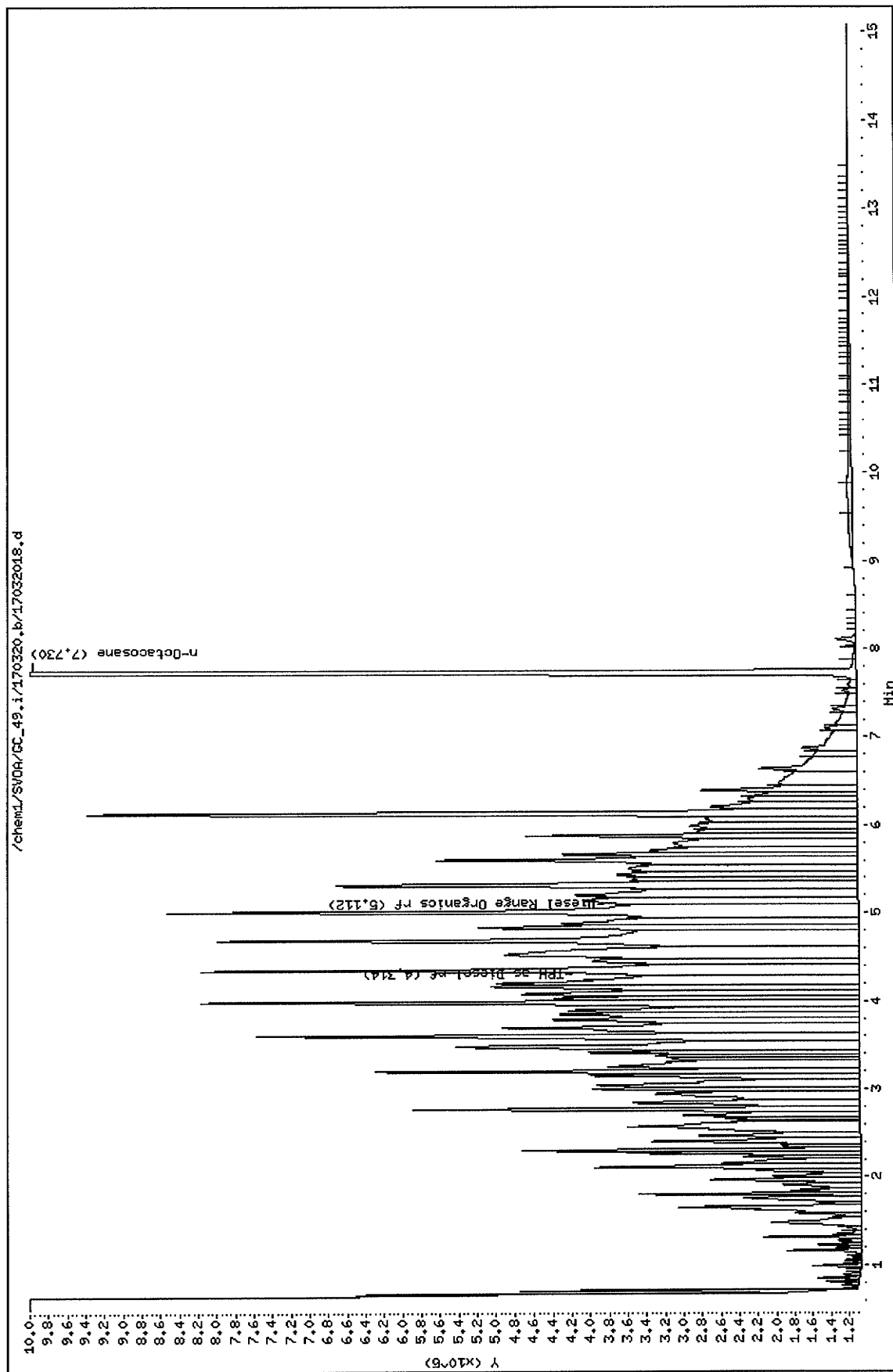
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170317/17031702.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 2  
 Instrument : GC 49 Injection Number : 2  
 Sample Name : C6-C44 L110816A Sequence Line : 0  
 Instrument Method: 8015d.m

Acquired on : 17 MAR 17 09:55  
 Report Created on: 20-MAR-17 10:24  
 Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC\_49.i/170317.b/17031702.d

| RT Range | Exp RT | DLT RT | Response    | ppm   | Compound              |
|----------|--------|--------|-------------|-------|-----------------------|
| 0.710    | 7.850  | 7.140  | 1765975.00  | 0.00  | C6-Hexane             |
| 0.893    | 7.850  | 6.957  | 4770337.00  | 0.00  | C7-Heptane            |
| 1.320    | 7.850  | 6.530  | 9306331.00  | 0.00  | C8-Octane             |
| 1.807    | 7.850  | 6.043  | 12119362.00 | 0.00  | C9-Nonane             |
| 2.305    | 7.850  | 5.545  | 14317022.00 | 0.00  | C10-Decane            |
| 2.769    | 7.850  | 5.081  | 14998641.00 | 0.00  | C11-Undecane          |
| 3.203    | 7.850  | 4.647  | 14939313.00 | 0.00  | C12-Dodecane          |
| 3.608    | 7.850  | 4.242  | 17944081.00 | 0.00  | C13-Tridecane         |
| 3.988    | 7.850  | 3.862  | 16649058.00 | 0.00  | C14-Tetradecane       |
| 4.348    | 7.850  | 3.502  | 19720619.00 | 0.00  | C15-pentadecane       |
| 4.688    | 7.850  | 3.162  | 21777173.00 | 0.00  | C16-Hexadecane        |
| 5.010    | 7.850  | 2.840  | 23048882.00 | 0.00  | C17-Heptadecane       |
| 5.316    | 7.850  | 2.534  | 23964311.00 | 0.00  | C18-Octadecane        |
| 5.608    | 7.850  | 2.242  | 23793247.00 | 0.00  | C19-Nonadecane        |
| 5.886    | 7.850  | 1.964  | 24638126.00 | 0.00  | C20-Eicosane          |
| 6.153    | 7.850  | 1.697  | 24470418.00 | 0.00  | C21-Heneicosane       |
| 6.407    | 7.850  | 1.443  | 25404546.00 | 0.00  | C22-Docosane          |
| 6.651    | 7.850  | 1.199  | 25571848.00 | 0.00  | C23-Tricosane         |
| 6.885    | 7.850  | 0.965  | 25938455.00 | 0.00  | C24-Tetracosane       |
| 7.111    | 7.850  | 0.739  | 25630118.00 | 0.00  | C25-Pentacosane       |
| 7.328    | 7.850  | 0.522  | 26926910.00 | 0.00  | C26-Hexacosane        |
| 7.537    | 7.850  | 0.313  | 25779861.00 | 0.00  | C27-Heptacosane       |
| 7.739    | 7.850  | 0.111  | 26085711.00 | 26.85 | n-Octacosane          |
| 7.934    | 7.850  | -0.084 | 25222526.00 | 0.00  | C29-Nonacosane        |
| 8.123    | 7.850  | -0.273 | 23990494.00 | 0.00  | C30-Triacontane       |
| 8.305    | 7.850  | -0.455 | 20436420.00 | 0.00  | C31-Hentriacontane    |
| 8.481    | 7.850  | -0.631 | 15875374.00 | 0.00  | C32-Dotriacontane     |
| 8.652    | 7.850  | -0.802 | 10377166.00 | 0.00  | C33-Tritriacontane    |
| 8.818    | 7.850  | -0.968 | 5548746.00  | 0.00  | C34-Tetratriacontane  |
| 8.980    | 7.850  | -1.130 | 2593365.00  | 0.00  | C35-Pentatriacontane  |
| 9.137    | 7.850  | -1.287 | 1394291.00  | 0.00  | C36-Hexatriacontane   |
| 9.310    | 7.850  | -1.460 | 869790.00   | 0.00  | C37-Heptatriacontane  |
| 9.512    | 7.850  | -1.662 | 677533.00   | 0.00  | C38-Octatriacontane   |
| 9.747    | 7.850  | -1.897 | 586083.00   | 0.00  | C39-Nonatriacontane   |
| 10.022   | 7.850  | -2.172 | 571195.00   | 0.00  | C40-Tetracontane      |
| 11.717   | 7.850  | -3.867 | 1404333.00  | 0.00  | C44-Tetratetracontane |

End of File

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Data File: /chem1/SV06/GC\_49.i/170317.b/17031702.d

Date : 17-MAR-2017 09:55

Client ID:

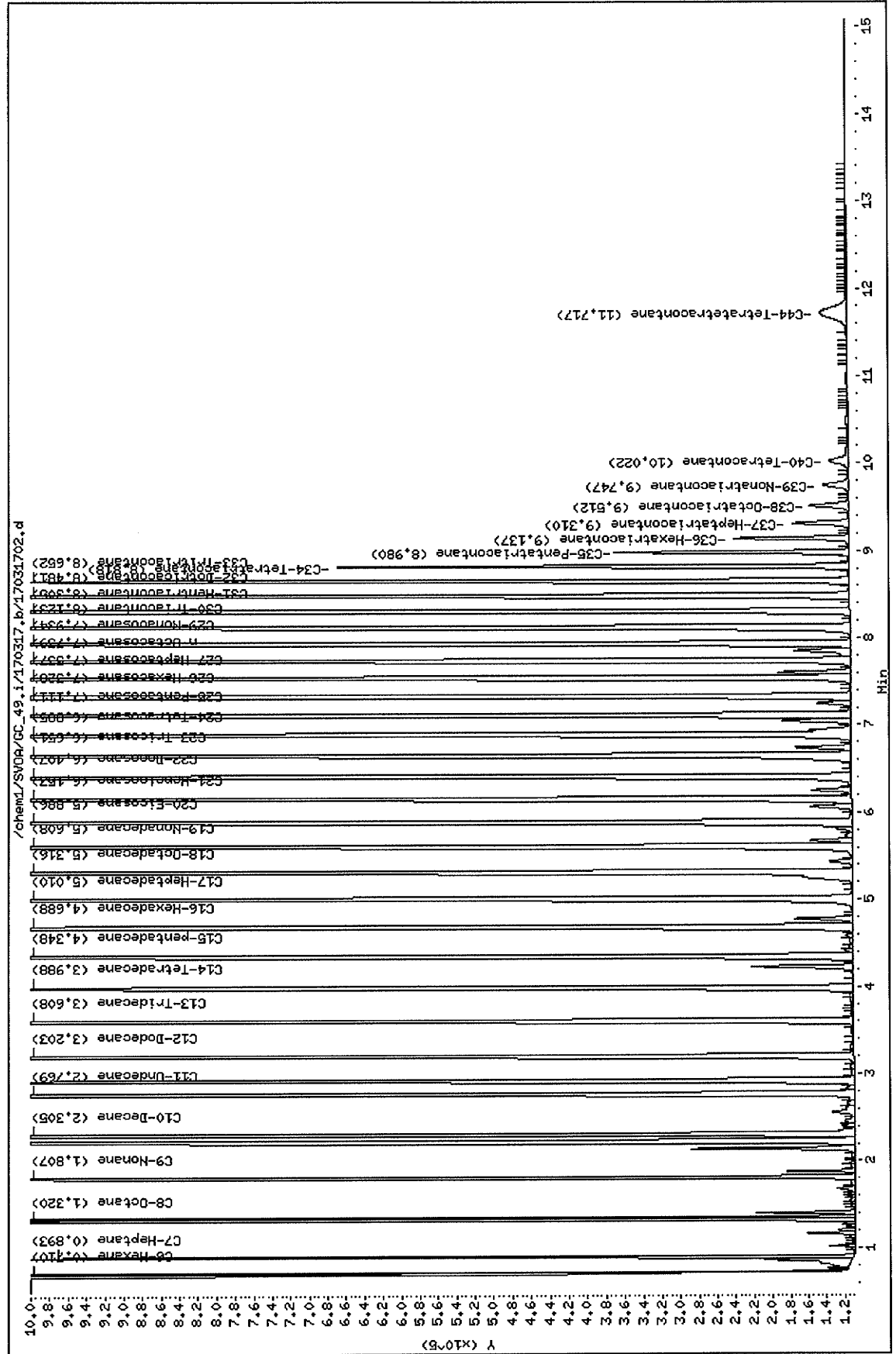
Sample Info: C6-C44 L110816A

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_49/170320/17032002.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 2  
 Instrument : GC 49 Injection Number : 2  
 Sample Name : C6-C44 L110816A Sequence Line : 0  
 Instrument Method: 8015d.m

Acquired on : 20 MAR 17 12:07  
 Report Created on: 21-MAR-17 09:53  
 Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC\_49.i/170320.b/17032002.d

| RT Range | Exp RT | DLT RT | Response    | ppm   | Compound              |
|----------|--------|--------|-------------|-------|-----------------------|
| 0.703    | 7.850  | 7.147  | 1842454.00  | 0.00  | C6-Hexane             |
| 0.887    | 7.850  | 6.963  | 4411259.00  | 0.00  | C7-Heptane            |
| 1.313    | 7.850  | 6.537  | 9964354.00  | 0.00  | C8-Octane             |
| 1.802    | 7.850  | 6.048  | 8194124.00  | 0.00  | C9-Nonane             |
| 2.301    | 7.850  | 5.549  | 9074286.00  | 0.00  | C10-Decane            |
| 2.767    | 7.850  | 5.083  | 9431334.00  | 0.00  | C11-Undecane          |
| 3.199    | 7.850  | 4.651  | 9446949.00  | 0.00  | C12-Dodecane          |
| 3.604    | 7.850  | 4.246  | 10375661.00 | 0.00  | C13-Tridecane         |
| 3.985    | 7.850  | 3.865  | 9704202.00  | 0.00  | C14-Tetradecane       |
| 4.344    | 7.850  | 3.506  | 10016278.00 | 0.00  | C15-pentadecane       |
| 4.683    | 7.850  | 3.167  | 10204068.00 | 0.00  | C16-Hexadecane        |
| 5.004    | 7.850  | 2.846  | 10386896.00 | 0.00  | C17-Heptadecane       |
| 5.309    | 7.850  | 2.541  | 10574795.00 | 0.00  | C18-Octadecane        |
| 5.601    | 7.850  | 2.249  | 10505825.00 | 0.00  | C19-Nonadecane        |
| 5.878    | 7.850  | 1.972  | 10730411.00 | 0.00  | C20-Eicosane          |
| 6.144    | 7.850  | 1.706  | 10701923.00 | 0.00  | C21-Heneicosane       |
| 6.398    | 7.850  | 1.452  | 10935362.00 | 0.00  | C22-Docosane          |
| 6.643    | 7.850  | 1.207  | 10888247.00 | 0.00  | C23-Tricosane         |
| 6.876    | 7.850  | 0.974  | 10959558.00 | 0.00  | C24-Tetracosane       |
| 7.102    | 7.850  | 0.748  | 10935723.00 | 0.00  | C25-Pentacosane       |
| 7.318    | 7.850  | 0.532  | 11320372.00 | 0.00  | C26-Hexacosane        |
| 7.527    | 7.850  | 0.323  | 10934265.00 | 0.00  | C27-Heptacosane       |
| 7.729    | 7.850  | 0.121  | 11243361.00 | 11.57 | n-Octacosane          |
| 7.924    | 7.850  | -0.074 | 11104694.00 | 0.00  | C29-Nonacosane        |
| 8.112    | 7.850  | -0.262 | 11048594.00 | 0.00  | C30-Triacontane       |
| 8.295    | 7.850  | -0.445 | 10458758.00 | 0.00  | C31-Hentriacontane    |
| 8.471    | 7.850  | -0.621 | 9708766.00  | 0.00  | C32-Dotricacantane    |
| 8.642    | 7.850  | -0.792 | 8309862.00  | 0.00  | C33-Tritriacontane    |
| 8.809    | 7.850  | -0.959 | 6350736.00  | 0.00  | C34-Tetratriacontane  |
| 8.970    | 7.850  | -1.120 | 4333983.00  | 0.00  | C35-Pentatriacontane  |
| 9.127    | 7.850  | -1.277 | 2905881.00  | 0.00  | C36-Hexatriacontane   |
| 9.298    | 7.850  | -1.448 | 1655536.00  | 0.00  | C37-Heptatriacontane  |
| 9.499    | 7.850  | -1.649 | 1036884.00  | 0.00  | C38-Octatriacontane   |
| 9.732    | 7.850  | -1.882 | 630025.00   | 0.00  | C39-Nonatriacontane   |
| 10.005   | 7.850  | -2.155 | 515535.00   | 0.00  | C40-Tetracontane      |
| 11.698   | 7.850  | -3.848 | 614982.00   | 0.00  | C44-Tetratetracontane |

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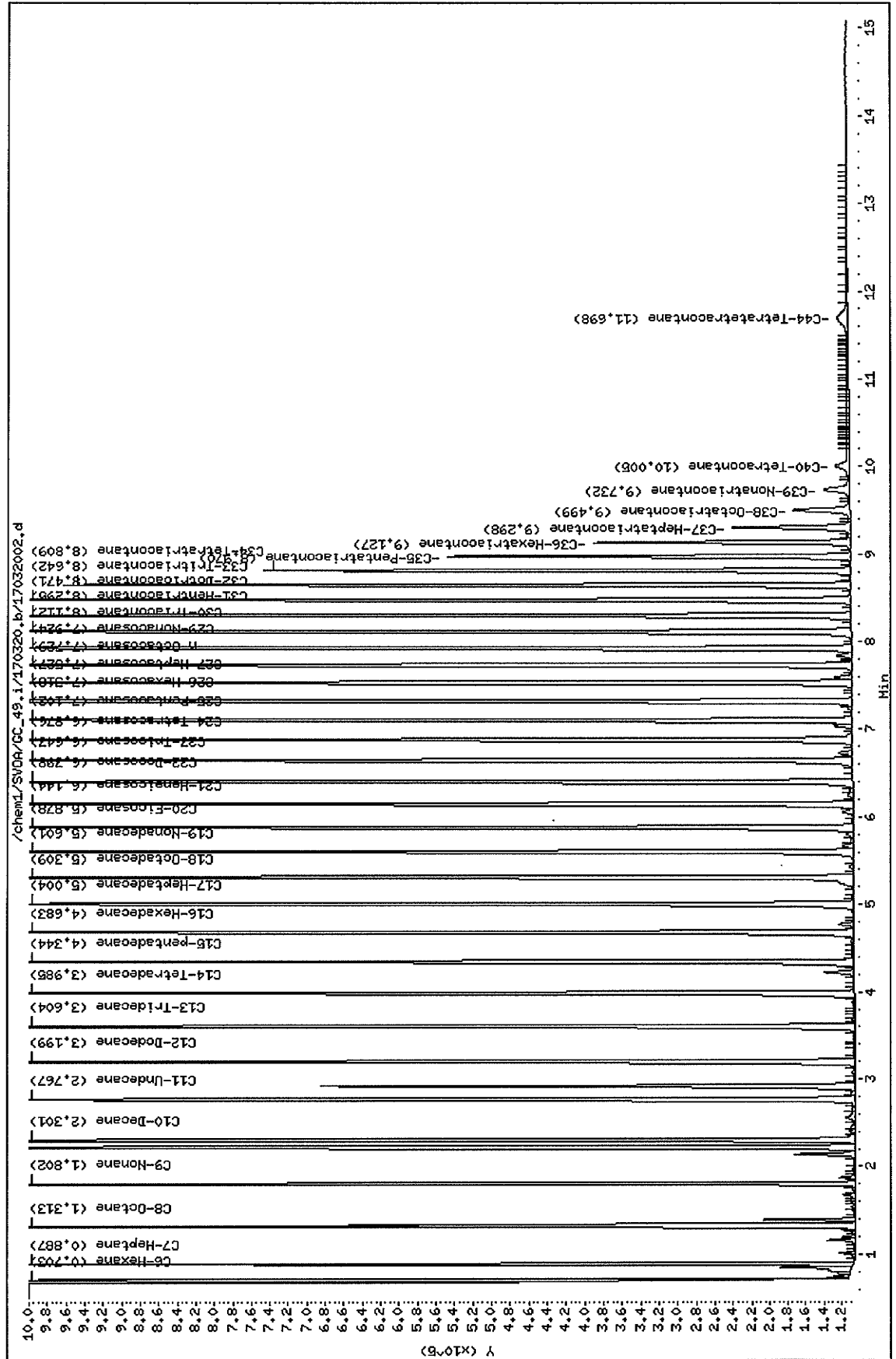
Data File: /chem1/SVDA/GC\_49.i/170320.b/17032002.d  
Date : 20-MAR-2017 12:07  
Client ID:  
Sample Info: C6-C44 L110816A

Instrument: GC\_49.i

Operator: 682

Column diameter: 2.00

Column phase:

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# EPA 8015B (M) Diesel + Motor Oil RUN LOGS

| Line | Vial | File       | Name                        | Method | InjVolume | Acquired            |
|------|------|------------|-----------------------------|--------|-----------|---------------------|
| 1    | 1    | 17031500   | BLK                         | 8015D  |           | 15-Mar-17, 10:55:17 |
| 2    | 1    | 17031501   | BLK                         | 8015D  |           | 15-Mar-17, 12:18:41 |
| 3    | 2    | 17031502   | C6-C44 L110816A             | 8015D  |           | 15-Mar-17, 12:39:15 |
| 4    | 3    | 17031503   | CCV D400 C28 50 L102516D    | 8015D  |           | 15-Mar-17, 13:00:13 |
| 5    | 4    | 17031504   | CCV MO400 L030317D          | 8015D  |           | 15-Mar-17, 13:21:25 |
| 6    | 1    | 1703150101 | BLK                         | 8015D  |           | 15-Mar-17, 13:59:20 |
| 7    | 1    | 1703150102 | BLK                         | 8015D  |           | 15-Mar-17, 14:19:48 |
| 8    | 5    | 17031505   | ICAL D5 C28 0.625 L102516B  | 8015D  |           | 15-Mar-17, 14:40:12 |
| 9    | 6    | 17031506   | ICAL D200 C28 25 L102516C   | 8015D  |           | 15-Mar-17, 15:00:54 |
| 10   | 7    | 17031507   | ICAL D400 C28 50 L102516D   | 8015D  |           | 15-Mar-17, 15:21:44 |
| 11   | 8    | 17031508   | ICAL D800 C28 100 L102516E  | 8015D  |           | 15-Mar-17, 15:42:39 |
| 12   | 9    | 17031509   | ICAL D1600 C28 200 L102516F | 8015D  |           | 15-Mar-17, 16:03:21 |
| 13   | 10   | 17031510   | ICV D400 C28 50 L102516G    | 8015D  |           | 15-Mar-17, 16:23:50 |
| 14   | 11   | 17031511   | ICAL MO25 L030317B          | 8015D  |           | 15-Mar-17, 16:44:45 |
| 15   | 12   | 17031512   | ICAL MO200 L030317C         | 8015D  |           | 15-Mar-17, 17:06:01 |
| 16   | 13   | 17031513   | ICAL MO400 L030317D         | 8015D  |           | 15-Mar-17, 17:26:43 |
| 17   | 14   | 17031514   | ICAL MO600 L030317E         | 8015D  |           | 15-Mar-17, 17:47:14 |
| 18   | 15   | 17031515   | ICAL MO800 L030317F         | 8015D  |           | 15-Mar-17, 18:07:56 |
| 19   | 16   | 17031516   | ICV MO400 L030317G          | 8015D  |           | 15-Mar-17, 18:28:52 |
| 20   | 17   | 17031517   | ICAL GD5 L031017B           | 8015D  |           | 15-Mar-17, 18:56:10 |
| 21   | 18   | 17031518   | ICAL GD200 L031017C         | 8015D  |           | 15-Mar-17, 19:16:43 |
| 22   | 19   | 17031519   | ICAL GD400 L031017D         | 8015D  |           | 15-Mar-17, 19:37:45 |
| 23   | 20   | 17031520   | ICAL GD800 L031017E         | 8015D  |           | 15-Mar-17, 19:58:35 |
| 24   | 21   | 17031521   | ICAL GD1600 L031017F        | 8015D  |           | 15-Mar-17, 20:19:12 |
| 25   | 22   | 17031522   | ICV GD400 L031017G          | 8015D  |           | 15-Mar-17, 20:39:35 |
| 26   | 23   | 17031523   | CCV D400 C28 50 L102516D    | 8015D  |           | 15-Mar-17, 21:00:22 |
| 27   | 24   | 17031524   | CCV MO400 L030317D          | 8015D  |           | 15-Mar-17, 21:21:48 |
| 28   | 25   | 17031525   | CCV GD400 L031017D          | 8015D  |           | 15-Mar-17, 21:42:23 |
| 29   | 26   | 17031526   | MB 17031507                 | 8015D  |           | 15-Mar-17, 22:02:46 |
| 30   | 27   | 17031527   | GDLCS 17031507              | 8015D  |           | 15-Mar-17, 22:23:44 |
| 31   | 28   | 17031528   | MS 17-03-0952-1             | 8015D  |           | 15-Mar-17, 22:44:36 |
| 32   | 29   | 17031529   | MSD 17-03-0952-1            | 8015D  |           | 15-Mar-17, 23:05:33 |
| 33   | 30   | 17031530   | 17-03-0952-1                | 8015D  |           | 15-Mar-17, 23:26:09 |
| 34   | 31   | 17031531   | 17-03-0952-2                | 8015D  |           | 15-Mar-17, 23:46:38 |
| 35   | 32   | 17031532   | 17-03-0952-3                | 8015D  |           | 16-Mar-17, 00:07:00 |
| 36   | 33   | 17031533   | 17-03-0952-4                | 8015D  |           | 16-Mar-17, 00:27:41 |
| 37   | 34   | 17031534   | 17-03-0952-5                | 8015D  |           | 16-Mar-17, 00:48:24 |
| 38   | 35   | 17031535   | 17-03-0952-6                | 8015D  |           | 16-Mar-17, 01:09:15 |
| 39   | 36   | 17031536   | 17-03-0952-7                | 8015D  |           | 16-Mar-17, 01:30:22 |
| 40   | 37   | 17031537   | 17-03-0952-8                | 8015D  |           | 16-Mar-17, 01:51:34 |
| 41   | 38   | 17031538   | 17-03-0952-9                | 8015D  |           | 16-Mar-17, 02:12:32 |
| 42   | 39   | 17031539   | 17-03-0952-10               | 8015D  |           | 16-Mar-17, 02:33:05 |
| 43   | 40   | 17031540   | CCV GD400 L031017D          | 8015D  |           | 16-Mar-17, 02:53:34 |
| 44   | 41   | 17031541   | CCV D400 C28 50 L102516D    | 8015D  |           | 16-Mar-17, 11:36:46 |

I003

A053

|                                 |         |
|---------------------------------|---------|
| Revised/Assign to Logbook Date: | 3/16/17 |
| Analysis                        | 8015    |
| Chemist ID                      | 682     |
| Logbook Page                    | 85      |
| Instrument ID                   | 49      |

Sequence: C:\CHEM32\1\SEQUENCE\170317.S

Table: Rear DataPath: W:\GC\_49\DATA\GC49\2017\170317\

| Line | Vial | File       | Name                          | Method | InjVolume | Acquired            |
|------|------|------------|-------------------------------|--------|-----------|---------------------|
| 1    | 1    | 17031701   | BLK                           | 8015D  |           | 17-Mar-17, 09:34:04 |
| 2    | 2    | 17031702   | C6-C44 L110816A               | 8015D  |           | 17-Mar-17, 09:55:25 |
| 3    | 3    | 17031703   | CCV D400 C28 50 L102516D A051 | 8015D  |           | 17-Mar-17, 10:16:16 |
| 4    | 4    | 17031704   | CCV MO400 L030317D            | 8015D  |           | 17-Mar-17, 10:36:53 |
| 5    | 5    | 17031705   | CCV MS400 L122916D            | 8015D  |           | 17-Mar-17, 10:57:25 |
| 6    | 6    | 17031706   | MSLCS 17031603 RB             | 8015D  |           | 17-Mar-17, 11:18:02 |
| 7    | 7    | 17031707   | MB 17031610                   | 8015D  |           | 17-Mar-17, 11:49:52 |
| 8    | 8    | 17031708   | LCS 17031610                  | 8015D  |           | 17-Mar-17, 12:10:23 |
| 9    | 9    | 17031709   | MS 17-03-1104-28 5X           | 8015D  |           | 17-Mar-17, 12:31:00 |
| 10   | 10   | 17031710   | MSD 17-03-1104-28 5X          | 8015D  |           | 17-Mar-17, 12:51:29 |
| 11   | 11   | 17031711   | 17-03-1104-26 5X              | 8015D  |           | 17-Mar-17, 13:12:00 |
| 12   | 12   | 17031712   | 17-03-1104-27 5X              | 8015D  |           | 17-Mar-17, 13:32:46 |
| 13   | 13   | 17031713   | 17-03-1104-28 5X              | 8015D  |           | 17-Mar-17, 13:53:58 |
| 14   | 14   | 17031714   | 17-03-1104-29 5X              | 8015D  |           | 17-Mar-17, 14:15:05 |
| 15   | 15   | 17031715   | CARRY OVER BLK                | 8015D  |           | 17-Mar-17, 14:36:03 |
| 16   | 16   | 17031716   | 17-03-1105-26                 | 8015D  |           | 17-Mar-17, 14:56:47 |
| 17   | 17   | 17031717   | 17-03-1105-27                 | 8015D  |           | 17-Mar-17, 15:17:22 |
| 18   | 18   | 17031718   | 17-03-1105-28                 | 8015D  |           | 17-Mar-17, 15:45:32 |
| 19   | 19   | 17031719   | 17-03-1105-29                 | 8015D  |           | 17-Mar-17, 16:06:12 |
| 20   | 20   | 17031720   | CCV D400 C28 50 L102516D A052 | 8015D  |           | 17-Mar-17, 16:26:46 |
| 21   | 21   | 17031721   | CCV MS400 L122916D            | 8015D  |           | 17-Mar-17, 16:47:28 |
| 22   | 27   | 17031727   | MB 17031701                   | 8015D  |           | 17-Mar-17, 17:10:42 |
| 23   | 28   | 17031728   | LCS 17031701                  | 8015D  |           | 17-Mar-17, 17:31:43 |
| 24   | 29   | 17031729   | LCSD 17031701                 | 8015D  |           | 17-Mar-17, 17:52:30 |
| 25   | 50   | 17031750   | 17-03-1306-1 50X              | 8015D  |           | 17-Mar-17, 18:13:00 |
| 26   | 30   | 17031730   | 17-03-1220-7                  | 8015D  |           | 17-Mar-17, 18:33:35 |
| 27   | 31   | 17031731   | 17-03-1282-1                  | 8015D  |           | 17-Mar-17, 18:54:33 |
| 28   | 32   | 17031732   | 17-03-1153-2 @ File missing   | 8015D  |           |                     |
| 29   | 33   | 17031733   | 17-03-1153-3                  | 8015D  |           | 17-Mar-17, 19:15:36 |
| 30   | 34   | 17031734   | 17-03-1153-4                  | 8015D  |           | 17-Mar-17, 19:36:14 |
| 31   | 35   | 17031735   | 17-03-1153-5                  | 8015D  |           | 17-Mar-17, 19:56:51 |
| 32   | 36   | 17031736   | 17-03-1153-6                  | 8015D  |           | 17-Mar-17, 20:17:32 |
| 33   | 37   | 17031737   | 17-03-1153-7                  | 8015D  |           | 17-Mar-17, 20:38:42 |
| 34   | 38   | 17031738   | 17-03-1153-8                  | 8015D  |           | 17-Mar-17, 20:59:38 |
| 35   | 2    | 1703170201 | C6-C44 L110816A               | 8015D  |           | 17-Mar-17, 21:20:21 |
| 36   | 39   | 17031739   | CCV D400 C28 50 L102516D A053 | 8015D  |           | 17-Mar-17, 21:40:53 |
| 37   | 40   | 17031740   | 17-03-1153-9                  | 8015D  |           | 17-Mar-17, 22:01:54 |
| 38   | 41   | 17031741   | 17-03-1153-10                 | 8015D  |           | 17-Mar-17, 22:22:51 |
| 39   | 42   | 17031742   | 17-03-1153-11                 | 8015D  |           | 17-Mar-17, 22:43:59 |
| 40   | 43   | 17031743   | 17-03-1153-12                 | 8015D  |           | 17-Mar-17, 23:05:14 |
| 41   | 44   | 17031744   | 17-03-1153-13                 | 8015D  |           | 17-Mar-17, 23:25:53 |
| 42   | 45   | 17031745   | 17-03-1153-14                 | 8015D  |           | 17-Mar-17, 23:46:25 |
| 43   | 46   | 17031746   | 17-03-1153-15                 | 8015D  |           | 18-Mar-17, 00:07:16 |
| 44   | 47   | 17031747   | 17-03-1153-16                 | 8015D  |           | 18-Mar-17, 00:28:15 |
| 45   | 48   | 17031748   | 17-03-1153-17                 | 8015D  |           | 18-Mar-17, 00:49:20 |
| 46   | 49   | 17031749   | CCV D400 C28 50 L102516D A054 | 8015D  |           | 18-Mar-17, 01:10:38 |
| 47   | 22   | 17031722   | 17-03-1106-26                 | 8015D  |           | 18-Mar-17, 01:31:38 |
| 48   | 23   | 17031723   | 17-03-1106-27                 | 8015D  |           | 18-Mar-17, 01:52:15 |
| 49   | 24   | 17031724   | 17-03-1106-28                 | 8015D  |           | 18-Mar-17, 02:12:53 |
| 50   | 25   | 17031725   | 17-03-1106-29                 | 8015D  |           | 18-Mar-17, 02:33:33 |
| 51   | 26   | 17031726   | 17-03-1320-1 5X @ 10X         | 8015D  |           | 18-Mar-17, 02:54:21 |
| 52   | 51   | 17031751   | CCV D400 C28 50 L102516D A055 | 8015D  |           | 18-Mar-17, 03:15:38 |
| 53   | 52   | 17031752   | CCV GD400 L031017D            | 8015D  |           | 18-Mar-17, 03:36:37 |
| 54   | 53   | 17031753   | MB 17031712/13                | 8015D  |           | 18-Mar-17, 03:57:18 |
| 55   | 54   | 17031754   | LCS 17031712                  | 8015D  |           | 18-Mar-17, 04:17:53 |
| 56   | 55   | 17031755   | LCSD 17031712                 | 8015D  |           | 18-Mar-17, 04:38:28 |
| 57   | 56   | 17031756   | GDLCS 17031713                | 8015D  |           | 18-Mar-17, 04:59:20 |
| 58   | 57   | 17031757   | GDLCS 17031713                | 8015D  |           | 18-Mar-17, 05:20:24 |
| 59   | 58   | 17031758   | 17-03-1246-1                  | 8015D  |           | 18-Mar-17, 05:41:34 |
| 60   | 59   | 17031759   | 17-03-1366-1                  | 8015D  |           | 18-Mar-17, 06:02:30 |

Reviewed/signed by Logbook Date: 3/24/17  
 Analyst: 8015  
 Chemist ID: 682  
 Instrument ID: 49

Sequence: C:\CHEM32\1\SEQUENCE\170320.S

Table: Rear DataPath: W:\GC\_49\DATA\GC49\2017\170320\

| Line | Vial | File     | Name                          | Method | InjVolume | Acquired            |
|------|------|----------|-------------------------------|--------|-----------|---------------------|
| 1    | 1    | 17032000 | BLK                           | 8015D  |           | 20-Mar-17, 11:24:57 |
| 2    | 1    | 17032001 | BLK                           | 8015D  |           | 20-Mar-17, 11:45:56 |
| 3    | 2    | 17032002 | C6-C44 L110816A               | 8015D  |           | 20-Mar-17, 12:07:01 |
| 4    | 3    | 17032003 | CCV D400 C28 50 L102516D A027 | 8015D  |           | 20-Mar-17, 12:27:32 |
| 5    | 4    | 17032004 | CCV MO400 L030317D            | 8015D  |           | 20-Mar-17, 12:48:04 |
| 6    | 6    | 17032006 | LCS 17031701                  | 8015D  |           | 20-Mar-17, 13:09:03 |
| 7    | 7    | 17032007 | LCSD 17031701                 | 8015D  |           | 20-Mar-17, 13:30:02 |
| 8    | 8    | 17032008 | 17-03-1153-2 RB               | 8015D  |           | 20-Mar-17, 13:50:28 |
| 9    | 9    | 17032009 | 17-03-1320-1 50X RB           | 8015D  |           | 20-Mar-17, 14:10:57 |
| 10   | 10   | 17032010 | 17-03-1104-26                 | 8015D  |           | 20-Mar-17, 14:31:36 |
| 11   | 11   | 17032011 | 17-03-1104-27                 | 8015D  |           | 20-Mar-17, 14:52:33 |
| 12   | 12   | 17032012 | 17-03-1104-28                 | 8015D  |           | 20-Mar-17, 15:13:29 |
| 13   | 16   | 17032016 | 17-03-1320-1 200X RB          | 8015D  |           | 20-Mar-17, 15:34:13 |
| 14   | 13   | 17032013 | 17-03-1104-29                 | 8015D  |           | 20-Mar-17, 15:54:45 |
| 15   | 14   | 17032014 | MS 17-03-1104-28              | 8015D  |           | 20-Mar-17, 16:15:10 |
| 16   | 15   | 17032015 | MSD 17-03-1104-28             | 8015D  |           | 20-Mar-17, 16:36:01 |
| 17   | 17   | 17032017 | 17-03-1153-9 RB               | 8015D  |           | 20-Mar-17, 16:57:23 |
| 18   | 18   | 17032018 | CCV D400 C28 50 L102516D A047 | 8015D  |           | 20-Mar-17, 17:18:22 |
| 19   | 19   | 17032019 | CCV MO400 L030317D            | 8015D  |           | 20-Mar-17, 18:41:31 |
| 20   | 20   | 17032020 | MB 17032008/09                | 8015D  |           | 20-Mar-17, 19:01:49 |
| 21   | 21   | 17032021 | LCS 17032008                  | 8015D  |           | 20-Mar-17, 19:22:13 |
| 22   | 22   | 17032022 | MOLCS 17032009                | 8015D  |           | 20-Mar-17, 19:43:01 |
| 23   | 23   | 17032023 | MS 17-03-1313-8               | 8015D  |           | 20-Mar-17, 20:09:00 |
| 24   | 24   | 17032024 | MSD 17-03-1313-8              | 8015D  |           | 20-Mar-17, 20:29:32 |
| 25   | 25   | 17032025 | MOMS 17-03-1313-8 2X          | 8015D  |           | 20-Mar-17, 20:50:18 |
| 26   | 26   | 17032026 | MOMSD 17-03-1313-8 2X         | 8015D  |           | 20-Mar-17, 21:11:42 |
| 27   | 27   | 17032027 | 17-03-1313-1                  | 8015D  |           | 20-Mar-17, 21:32:33 |
| 28   | 28   | 17032028 | 17-03-1313-2 5X               | 8015D  |           | 20-Mar-17, 21:53:13 |
| 29   | 29   | 17032029 | 17-03-1313-3 5X @5X           | 8015D  |           | 20-Mar-17, 22:13:50 |
| 30   | 30   | 17032030 | 17-03-1313-4 10X              | 8015D  |           | 20-Mar-17, 22:34:54 |
| 31   | 31   | 17032031 | 17-03-1313-5 5X               | 8015D  |           | 20-Mar-17, 22:56:02 |
| 32   | 32   | 17032032 | 17-03-1313-6 5X               | 8015D  |           | 20-Mar-17, 23:17:19 |
| 33   | 33   | 17032033 | 17-03-1313-7 5X @5X 25X (MO)  | 8015D  |           | 20-Mar-17, 23:38:05 |
| 34   | 34   | 17032034 | 17-03-1313-8                  | 8015D  |           | 20-Mar-17, 23:58:34 |
| 35   | 35   | 17032035 | 17-03-1444-1                  | 8015D  |           | 21-Mar-17, 00:19:14 |
| 36   | 36   | 17032036 | 17-03-1444-2 2X               | 8015D  |           | 21-Mar-17, 00:39:49 |
| 37   | 37   | 17032037 | CCV D400 C28 50 L102516D A048 | 8015D  |           | 21-Mar-17, 01:00:46 |
| 38   | 38   | 17032038 | CCV MO400 L030317D            | 8015D  |           | 21-Mar-17, 01:21:55 |
| 39   | 39   | 17032039 | 17-03-1313-9 5X               | 8015D  |           | 21-Mar-17, 01:42:55 |
| 40   | 40   | 17032040 | 17-03-1313-10 10X @5X         | 8015D  |           | 21-Mar-17, 02:03:35 |
| 41   | 41   | 17032041 | 17-03-1313-11 2X              | 8015D  |           | 21-Mar-17, 02:24:02 |
| 42   | 42   | 17032042 | 17-03-1313-12 2X              | 8015D  |           | 21-Mar-17, 02:44:45 |
| 43   | 43   | 17032043 | 17-03-1236-1 5X               | 8015D  |           | 21-Mar-17, 03:05:36 |
| 44   | 44   | 17032044 | 17-03-1353-1                  | 8015D  |           | 21-Mar-17, 03:26:47 |
| 45   | 45   | 17032045 | 17-03-1353-2                  | 8015D  |           | 21-Mar-17, 03:48:13 |
| 46   | 46   | 17032046 | 17-03-1353-3                  | 8015D  |           | 21-Mar-17, 04:09:07 |
| 47   | 47   | 17032047 | 17-03-1353-4                  | 8015D  |           | 21-Mar-17, 04:29:44 |
| 48   | 48   | 17032048 | 17-03-1353-5                  | 8015D  |           | 21-Mar-17, 04:50:30 |
| 49   | 49   | 17032049 | CCV D400 C28 50 L102516D      | 8015D  |           | 21-Mar-17, 05:11:10 |
| 50   | 50   | 17032050 | CCV MO400 L030317D            | 8015D  |           | 21-Mar-17, 05:31:59 |

Reviewed/Design to Logbook Page 3/24/17  
 Analyte 8015 Chemical ID 682  
 Logbook Page 90 Instrument ID 49

# **EPA 8015B (M)**

## **Diesel + Motor Oil**

### **PREPARATION LOGS**



# EPA 6010B ICP Metals (Solid)

## RAW DATA

# EPA 6010B ICP Metals (Solid)

## Initial Calibration

ICV/ICB  
CCV/CCB  
ICSA/B

Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte Name | Initial Calibration Verification |          |    |         |         |
|--------------|----------------------------------|----------|----|---------|---------|
|              | True                             | ICV-1    |    | Control | Comment |
|              |                                  | Observed | %D | Limit   |         |
| Silver       | 0.500000                         | 0.500357 | 0  | +/-10   |         |
| Arsenic      | 5.000000                         | 4.834695 | 3  | +/-10   |         |
| Barium       | 1.000000                         | 1.005901 | -1 | +/-10   |         |
| Beryllium    | 0.500000                         | 0.490830 | 2  | +/-10   |         |
| Cadmium      | 1.500000                         | 1.494008 | 0  | +/-10   |         |
| Cobalt       | 1.000000                         | 1.033697 | -3 | +/-10   |         |
| Chromium     | 0.400000                         | 0.399803 | 0  | +/-10   |         |
| Copper       | 1.000000                         | 1.002841 | 0  | +/-10   |         |
| Molybdenum   | 2.500000                         | 2.416513 | 3  | +/-10   |         |
| Nickel       | 0.400000                         | 0.400544 | 0  | +/-10   |         |
| Lead         | 5.000000                         | 5.026459 | -1 | +/-10   |         |
| Antimony     | 2.000000                         | 1.911162 | 4  | +/-10   |         |
| Selenium     | 2.000000                         | 1.935959 | 3  | +/-10   |         |
| Thallium     | 2.000000                         | 1.964579 | 2  | +/-10   |         |
| Vanadium     | 1.000000                         | 0.991621 | 1  | +/-10   |         |
| Zinc         | 1.500000                         | 1.519846 | -1 | +/-10   |         |

Report Time: 3/30/2017 12:01:27 PM

ICV-1 File: ICV-M072816C

Analysis Time: 3/27/2017 10:28:54 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



**EPA Method 6010B**  
**Initial Calibration Blank**

Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Initial Calibration Blank |          |         |
|------------|---------------------------|----------|---------|
|            | ICB-1                     | RL       | Comment |
| Silver     | -0.000044                 | 0.005000 |         |
| Arsenic    | 0.004998                  | 0.010000 |         |
| Barium     | 0.000400                  | 0.010000 |         |
| Beryllium  | 0.000083                  | 0.010000 |         |
| Cadmium    | 0.000778                  | 0.010000 |         |
| Cobalt     | 0.000304                  | 0.010000 |         |
| Chromium   | -0.001059                 | 0.010000 |         |
| Copper     | 0.000816                  | 0.010000 |         |
| Molybdenum | 0.002511                  | 0.010000 |         |
| Nickel     | 0.000718                  | 0.010000 |         |
| Lead       | 0.002367                  | 0.010000 |         |
| Antimony   | -0.004058                 | 0.015000 |         |
| Selenium   | 0.002176                  | 0.015000 |         |
| Thallium   | 0.008088                  | 0.015000 |         |
| Vanadium   | 0.000317                  | 0.010000 |         |
| Zinc       | 0.000888                  | 0.010000 |         |

Report Time: 3/30/2017 12:01:27 PM

ICB-1 File: ICB-R12091601

Analysis Time: 3/27/2017 10:29:52 AM

01/22/2014 Revision

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Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Interference Check |               |          |          |    |               | Comment |
|------------|--------------------|---------------|----------|----------|----|---------------|---------|
|            | ICS-A-1            |               | ICS-AB-1 |          |    |               |         |
|            | Observed           | Control Limit | True     | Observed | %D | Control Limit |         |
| Silver     | -0.000318          | 0.005000      | 0.300000 | 0.313916 | -5 | +/-20         |         |
| Arsenic    | 0.006482           | 0.010000      | 1.000000 | 1.039814 | -4 | +/-20         |         |
| Barium     | 0.002535           | 0.010000      | 0.300000 | 0.312295 | -4 | +/-20         |         |
| Beryllium  | -0.000066          | 0.010000      | 0.100000 | 0.104752 | -5 | +/-20         |         |
| Cadmium    | 0.001642           | 0.010000      | 0.300000 | 0.302166 | -1 | +/-20         |         |
| Cobalt     | 0.000204           | 0.010000      | 0.300000 | 0.309391 | -3 | +/-20         |         |
| Chromium   | -0.001434          | 0.010000      | 0.300000 | 0.307472 | -2 | +/-20         |         |
| Copper     | -0.000989          | 0.010000      | 0.300000 | 0.316121 | -5 | +/-20         |         |
| Molybdenum | 0.000784           | 0.010000      | 0.300000 | 0.306430 | -2 | +/-20         |         |
| Nickel     | 0.000938           | 0.010000      | 0.300000 | 0.310928 | -4 | +/-20         |         |
| Lead       | -0.006614          | 0.010000      | 1.000000 | 1.001134 | 0  | +/-20         |         |
| Antimony   | -0.006608          | 0.015000      | 1.000000 | 0.974164 | 3  | +/-20         |         |
| Selenium   | -0.012261          | 0.015000      | 0.500000 | 0.524749 | -5 | +/-20         |         |
| Thallium   | -0.011331          | 0.015000      | 1.000000 | 1.022944 | -2 | +/-20         |         |
| Vanadium   | 0.000617           | 0.010000      | 0.300000 | 0.302776 | -1 | +/-20         |         |
| Zinc       | 0.001299           | 0.010000      | 0.300000 | 0.309852 | -3 | +/-20         |         |

Report Time: 3/30/2017 12:01:27 PM

ICS-A-1 File: ICS\_A - M110116B

Analysis Time: 3/27/2017 10:30:53 AM

ICS-AB-1 File: ICS\_AB - M110116A

Analysis Time: 3/27/2017 10:31:44 AM

01/22/2014 Revision

Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               |         |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-1    |    | CCV-2    |    | Control Limit | Comment |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.360686 | 4  | 0.361753 | 4  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.456497 | 8  | 3.514828 | 6  | +/-10         |         |
| Barium     | 7.500000                            | 7.364745 | 2  | 7.368384 | 2  | +/-10         |         |
| Beryllium  | 0.562500                            | 0.542875 | 3  | 0.536913 | 5  | +/-10         |         |
| Cadmium    | 0.750000                            | 0.716185 | 5  | 0.715595 | 5  | +/-10         |         |
| Cobalt     | 1.875000                            | 1.824814 | 3  | 1.829645 | 2  | +/-10         |         |
| Chromium   | 0.600000                            | 0.579874 | 3  | 0.579980 | 3  | +/-10         |         |
| Copper     | 0.937500                            | 0.914106 | 2  | 0.912098 | 3  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.578555 | 4  | 0.585786 | 2  | +/-10         |         |
| Nickel     | 0.600000                            | 0.568468 | 5  | 0.578262 | 4  | +/-10         |         |
| Lead       | 3.750000                            | 3.579487 | 5  | 3.575267 | 5  | +/-10         |         |
| Antimony   | 4.500000                            | 4.219215 | 6  | 4.282683 | 5  | +/-10         |         |
| Selenium   | 1.500000                            | 1.393474 | 7  | 1.426390 | 5  | +/-10         |         |
| Thallium   | 1.500000                            | 1.435172 | 4  | 1.470187 | 2  | +/-10         |         |
| Vanadium   | 1.875000                            | 1.818270 | 3  | 1.815687 | 3  | +/-10         |         |
| Zinc       | 2.500000                            | 2.362966 | 5  | 2.345537 | 6  | +/-10         |         |

Report Time: 3/30/2017 12:01:27 PM

CCV-1 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 10:54:30 AM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 11:05:40 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision

Return to Contents

Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |           |          |           |
|------------------------------|-----------|-----------|----------|-----------|
| Analyte                      | CCB-1     | CCB-2     | RL       | Qualifier |
| Silver                       | 0.000346  | 0.000551  | 0.005000 |           |
| Arsenic                      | 0.002122  | -0.000239 | 0.010000 |           |
| Barium                       | 0.002855  | 0.002591  | 0.010000 |           |
| Beryllium                    | 0.000207  | 0.000204  | 0.010000 |           |
| Cadmium                      | 0.000521  | 0.000666  | 0.010000 |           |
| Cobalt                       | 0.001174  | 0.000537  | 0.010000 |           |
| Chromium                     | -0.000427 | -0.000231 | 0.010000 |           |
| Copper                       | 0.000850  | 0.001447  | 0.010000 |           |
| Molybdenum                   | 0.000422  | 0.000027  | 0.010000 |           |
| Nickel                       | 0.000864  | 0.000938  | 0.010000 |           |
| Lead                         | 0.002686  | 0.002320  | 0.010000 |           |
| Antimony                     | -0.003083 | 0.004534  | 0.015000 |           |
| Selenium                     | 0.007717  | 0.006429  | 0.015000 |           |
| Thallium                     | 0.007041  | 0.001058  | 0.015000 |           |
| Vanadium                     | 0.001205  | 0.000559  | 0.010000 |           |
| Zinc                         | 0.002026  | 0.002075  | 0.010000 |           |

Report Time: 3/30/2017 12:01:27 PM

CCB-1 File: CCB-R12091601

Analysis Time: 3/27/2017 10:55:23 AM

CCB-2 File: CCB-R12091601

Analysis Time: 3/27/2017 11:06:32 AM

01/22/2014 Revision

Return to Contents



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               |         |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-3    |    | CCV-4    |    | Control Limit | Comment |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.361576 | 4  | 0.362985 | 3  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.586006 | 4  | 3.604740 | 4  | +/-10         |         |
| Barium     | 7.500000                            | 7.429100 | 1  | 7.479374 | 0  | +/-10         |         |
| Beryllium  | 0.562500                            | 0.542505 | 4  | 0.547782 | 3  | +/-10         |         |
| Cadmium    | 0.750000                            | 0.729189 | 3  | 0.733660 | 2  | +/-10         |         |
| Cobalt     | 1.875000                            | 1.855606 | 1  | 1.848333 | 1  | +/-10         |         |
| Chromium   | 0.600000                            | 0.583828 | 3  | 0.592817 | 1  | +/-10         |         |
| Copper     | 0.937500                            | 0.916513 | 2  | 0.918472 | 2  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.591171 | 1  | 0.594840 | 1  | +/-10         |         |
| Nickel     | 0.600000                            | 0.582053 | 3  | 0.590575 | 2  | +/-10         |         |
| Lead       | 3.750000                            | 3.666566 | 2  | 3.664942 | 2  | +/-10         |         |
| Antimony   | 4.500000                            | 4.318157 | 4  | 4.351888 | 3  | +/-10         |         |
| Selenium   | 1.500000                            | 1.452041 | 3  | 1.463731 | 2  | +/-10         |         |
| Thallium   | 1.500000                            | 1.486628 | 1  | 1.475860 | 2  | +/-10         |         |
| Vanadium   | 1.875000                            | 1.831115 | 2  | 1.836239 | 2  | +/-10         |         |
| Zinc       | 2.500000                            | 2.402540 | 4  | 2.423439 | 3  | +/-10         |         |

Report Time: 3/30/2017 12:01:27 PM

CCV-3 File: CCV= STD3x0.5

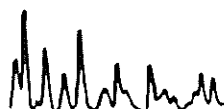
Analysis Time: 3/27/2017 12:43:04 PM

CCV-4 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 12:55:50 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |           |          |           |
|------------------------------|-----------|-----------|----------|-----------|
| Analyte                      | CCB-3     | CCB-4     | RL       | Qualifier |
| Silver                       | -0.000768 | 0.001411  | 0.005000 |           |
| Arsenic                      | 0.002682  | -0.000814 | 0.010000 |           |
| Barium                       | 0.002984  | 0.005325  | 0.010000 |           |
| Beryllium                    | 0.000226  | 0.000313  | 0.010000 |           |
| Cadmium                      | 0.000517  | 0.001038  | 0.010000 |           |
| Cobalt                       | 0.000573  | 0.001197  | 0.010000 |           |
| Chromium                     | -0.000546 | -0.000014 | 0.010000 |           |
| Copper                       | 0.000841  | 0.000662  | 0.010000 |           |
| Molybdenum                   | 0.001496  | 0.000972  | 0.010000 |           |
| Nickel                       | 0.000650  | 0.000213  | 0.010000 |           |
| Lead                         | 0.002046  | 0.001630  | 0.010000 |           |
| Antimony                     | 0.005012  | 0.000499  | 0.015000 |           |
| Selenium                     | 0.003946  | 0.000604  | 0.015000 |           |
| Thallium                     | -0.003525 | 0.004063  | 0.015000 |           |
| Vanadium                     | 0.000545  | 0.001012  | 0.010000 |           |
| Zinc                         | 0.003539  | 0.006090  | 0.010000 |           |

Report Time: 3/30/2017 12:01:27 PM

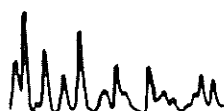
CCB-3 File: CCB-R12091601

Analysis Time: 3/27/2017 12:44:02 PM

CCB-4 File: CCB-R12091601

Analysis Time: 3/27/2017 12:56:44 PM

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               |         |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-5    |    | CCV-6    |    | Control Limit | Comment |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.363845 | 3  | 0.367841 | 2  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.636198 | 3  | 3.612714 | 4  | +/-10         |         |
| Barium     | 7.500000                            | 7.463737 | 0  | 7.515437 | 0  | +/-10         |         |
| Beryllium  | 0.562500                            | 0.546016 | 3  | 0.554021 | 2  | +/-10         |         |
| Cadmium    | 0.750000                            | 0.730415 | 3  | 0.738349 | 2  | +/-10         |         |
| Cobalt     | 1.875000                            | 1.858353 | 1  | 1.880851 | 0  | +/-10         |         |
| Chromium   | 0.600000                            | 0.588571 | 2  | 0.596449 | 1  | +/-10         |         |
| Copper     | 0.937500                            | 0.921422 | 2  | 0.929416 | 1  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.597818 | 0  | 0.595368 | 1  | +/-10         |         |
| Nickel     | 0.600000                            | 0.594494 | 1  | 0.587953 | 2  | +/-10         |         |
| Lead       | 3.750000                            | 3.658192 | 2  | 3.671371 | 2  | +/-10         |         |
| Antimony   | 4.500000                            | 4.365653 | 3  | 4.353959 | 3  | +/-10         |         |
| Selenium   | 1.500000                            | 1.469949 | 2  | 1.474904 | 2  | +/-10         |         |
| Thallium   | 1.500000                            | 1.497048 | 0  | 1.495634 | 0  | +/-10         |         |
| Vanadium   | 1.875000                            | 1.835921 | 2  | 1.859157 | 1  | +/-10         |         |
| Zinc       | 2.500000                            | 2.418467 | 3  | 2.451737 | 2  | +/-10         |         |

Report Time: 3/30/2017 12:01:27 PM

CCV-5 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 1:06:20 PM

CCV-6 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 1:16:19 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |           |          |           |
|------------------------------|-----------|-----------|----------|-----------|
| Analyte                      | CCB-5     | CCB-6     | RL       | Qualifier |
| Silver                       | 0.000799  | 0.001381  | 0.005000 |           |
| Arsenic                      | 0.003434  | 0.002267  | 0.010000 |           |
| Barium                       | 0.005243  | 0.004653  | 0.010000 |           |
| Beryllium                    | 0.000289  | 0.000297  | 0.010000 |           |
| Cadmium                      | 0.000802  | 0.000645  | 0.010000 |           |
| Cobalt                       | 0.001638  | 0.001357  | 0.010000 |           |
| Chromium                     | -0.001104 | 0.000178  | 0.010000 |           |
| Copper                       | 0.001238  | 0.001197  | 0.010000 |           |
| Molybdenum                   | 0.000290  | 0.000599  | 0.010000 |           |
| Nickel                       | 0.001647  | 0.001030  | 0.010000 |           |
| Lead                         | 0.003308  | 0.002975  | 0.010000 |           |
| Antimony                     | 0.003269  | 0.001008  | 0.015000 |           |
| Selenium                     | 0.009516  | 0.003549  | 0.015000 |           |
| Thallium                     | -0.000548 | -0.001167 | 0.015000 |           |
| Vanadium                     | 0.000881  | -0.000048 | 0.010000 |           |
| Zinc                         | 0.007415  | 0.008046  | 0.010000 |           |

Report Time: 3/30/2017 12:01:27 PM

CCB-5 File: CCB-R12091601

Analysis Time: 3/27/2017 1:07:13 PM

CCB-6 File: CCB-R12091601

Analysis Time: 3/27/2017 1:17:12 PM

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               |         |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-7    |    | CCV-8    |    | Control Limit | Comment |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.378746 | -1 | 0.369442 | 1  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.837600 | -2 | 3.651269 | 3  | +/-10         |         |
| Barium     | 7.500000                            | 7.686169 | -2 | 7.607164 | -1 | +/-10         |         |
| Beryllium  | 0.562500                            | 0.569376 | -1 | 0.557382 | 1  | +/-10         |         |
| Cadmium    | 0.750000                            | 0.769982 | -3 | 0.748034 | 0  | +/-10         |         |
| Cobalt     | 1.875000                            | 1.921737 | -2 | 1.887604 | -1 | +/-10         |         |
| Chromium   | 0.600000                            | 0.608785 | -1 | 0.601534 | 0  | +/-10         |         |
| Copper     | 0.937500                            | 0.957341 | -2 | 0.936765 | 0  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.611606 | -2 | 0.599268 | 0  | +/-10         |         |
| Nickel     | 0.600000                            | 0.620296 | -3 | 0.596049 | 1  | +/-10         |         |
| Lead       | 3.750000                            | 3.858464 | -3 | 3.718024 | 1  | +/-10         |         |
| Antimony   | 4.500000                            | 4.531815 | -1 | 4.394253 | 2  | +/-10         |         |
| Selenium   | 1.500000                            | 1.556780 | -4 | 1.469055 | 2  | +/-10         |         |
| Thallium   | 1.500000                            | 1.556722 | -4 | 1.501005 | 0  | +/-10         |         |
| Vanadium   | 1.875000                            | 1.882374 | 0  | 1.867288 | 0  | +/-10         |         |
| Zinc       | 2.500000                            | 2.598175 | -4 | 2.489129 | 0  | +/-10         |         |

Report Time: 3/30/2017 12:04:37 PM

CCV-7 File: CCV= STD3x0.5

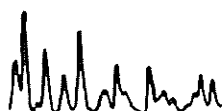
Analysis Time: 3/27/2017 3:36:17 PM

CCV-8 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 3:44:47 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |          |          |           |
|------------------------------|-----------|----------|----------|-----------|
| Analyte                      | CCB-7     | CCB-8    | RL       | Qualifier |
| Silver                       | -0.000093 | 0.001586 | 0.005000 |           |
| Arsenic                      | 0.000534  | 0.000997 | 0.010000 |           |
| Barium                       | 0.003563  | 0.004120 | 0.010000 |           |
| Beryllium                    | 0.000244  | 0.000242 | 0.010000 |           |
| Cadmium                      | 0.000412  | 0.000945 | 0.010000 |           |
| Cobalt                       | 0.000572  | 0.000630 | 0.010000 |           |
| Chromium                     | 0.000106  | 0.000535 | 0.010000 |           |
| Copper                       | 0.001554  | 0.002681 | 0.010000 |           |
| Molybdenum                   | 0.000271  | 0.000898 | 0.010000 |           |
| Nickel                       | 0.000915  | 0.000509 | 0.010000 |           |
| Lead                         | 0.000964  | 0.002375 | 0.010000 |           |
| Antimony                     | 0.005729  | 0.001470 | 0.015000 |           |
| Selenium                     | 0.003863  | 0.011215 | 0.015000 |           |
| Thallium                     | 0.000204  | 0.003472 | 0.015000 |           |
| Vanadium                     | 0.001241  | 0.001166 | 0.010000 |           |
| Zinc                         | 0.001244  | 0.004866 | 0.010000 |           |

Report Time: 3/30/2017 12:04:37 PM

CCB-7 File: CCB-R12091601

Analysis Time: 3/27/2017 3:37:11 PM

CCB-8 File: CCB-R12091601

Analysis Time: 3/27/2017 3:45:40 PM

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               | Comment |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-9    |    | CCV-10   |    | Control Limit |         |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.371821 | 1  | 0.374743 | 0  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.721119 | 1  | 3.678666 | 2  | +/-10         |         |
| Barium     | 7.500000                            | 7.592464 | -1 | 7.673635 | -2 | +/-10         |         |
| Beryllium  | 0.562500                            | 0.555066 | 1  | 0.559557 | 1  | +/-10         |         |
| Cadmium    | 0.750000                            | 0.747987 | 0  | 0.748900 | 0  | +/-10         |         |
| Cobalt     | 1.875000                            | 1.883311 | 0  | 1.913778 | -2 | +/-10         |         |
| Chromium   | 0.600000                            | 0.601589 | 0  | 0.603862 | -1 | +/-10         |         |
| Copper     | 0.937500                            | 0.938661 | 0  | 0.948781 | -1 | +/-10         |         |
| Molybdenum | 0.600000                            | 0.611041 | -2 | 0.607431 | -1 | +/-10         |         |
| Nickel     | 0.600000                            | 0.605861 | -1 | 0.601518 | 0  | +/-10         |         |
| Lead       | 3.750000                            | 3.731833 | 0  | 3.764684 | 0  | +/-10         |         |
| Antimony   | 4.500000                            | 4.469288 | 1  | 4.439909 | 1  | +/-10         |         |
| Selenium   | 1.500000                            | 1.513946 | -1 | 1.483130 | 1  | +/-10         |         |
| Thallium   | 1.500000                            | 1.537085 | -2 | 1.512794 | -1 | +/-10         |         |
| Vanadium   | 1.875000                            | 1.882445 | 0  | 1.895674 | -1 | +/-10         |         |
| Zinc       | 2.500000                            | 2.459149 | 2  | 2.515782 | -1 | +/-10         |         |

Report Time: 3/30/2017 12:04:37 PM

CCV-9 File: CCV= STD3x0.5

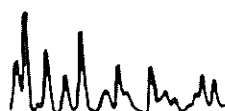
Analysis Time: 3/27/2017 4:18:08 PM

CCV-10 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 5:07:05 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1104

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |          |          |           |
|------------------------------|-----------|----------|----------|-----------|
| Analyte                      | CCB-9     | CCB-10   | RL       | Qualifier |
| Silver                       | 0.000246  | 0.000645 | 0.005000 |           |
| Arsenic                      | 0.004050  | 0.000782 | 0.010000 |           |
| Barium                       | 0.006904  | 0.003330 | 0.010000 |           |
| Beryllium                    | 0.000505  | 0.000241 | 0.010000 |           |
| Cadmium                      | 0.000749  | 0.000359 | 0.010000 |           |
| Cobalt                       | 0.001501  | 0.000824 | 0.010000 |           |
| Chromium                     | 0.001063  | 0.000193 | 0.010000 |           |
| Copper                       | 0.002052  | 0.001238 | 0.010000 |           |
| Molybdenum                   | 0.000568  | 0.001110 | 0.010000 |           |
| Nickel                       | 0.000934  | 0.001078 | 0.010000 |           |
| Lead                         | 0.003167  | 0.002329 | 0.010000 |           |
| Antimony                     | -0.000301 | 0.002409 | 0.015000 |           |
| Selenium                     | 0.004286  | 0.002813 | 0.015000 |           |
| Thallium                     | 0.003196  | 0.004529 | 0.015000 |           |
| Vanadium                     | 0.001811  | 0.000514 | 0.010000 |           |
| Zinc                         | 0.003355  | 0.004165 | 0.010000 |           |

Report Time: 3/30/2017 12:04:37 PM

CCB-9 File: CCB-R12091601

Analysis Time: 3/27/2017 4:19:02 PM

CCB-10 File: CCB-R12091601

Analysis Time: 3/27/2017 5:07:57 PM

01/22/2014 Revision



=====  
Analysis Begun

Start Time: 3/27/2017 10:26:48 AM  
 Logged In Analyst: Oscar Gomez 935  
 Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/27/2017 10:23:22 AM  
 Technique: ICP Continuous  
 Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\  
 17032701.sif

Batch ID:  
 Results Data Set: 170327C 1  
 Results Library: W:\pe\7300\Results\results.mdb

=====  
 Sequence No.: 1  
 Sample ID: Cal blankR12091601\_935  
 Analyst:  
 Initial Sample Wt:  
 Dilution:  
 Wash Time:

Autosampler Location: 1  
 Date Collected: 3/27/2017 10:27:02 AM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

-----  
Mean Data: Cal blankR12091601\_935

| Analyte      | Mean Corrected<br>Intensity | Std.Dev. | RSD     | Conc.  | Units |
|--------------|-----------------------------|----------|---------|--------|-------|
| Tb 384       | 81813.0                     | 1234.30  | 1.51%   | 100.0  | %     |
| Tb 350       | 132490.7                    | 2416.94  | 1.82%   | 100.0  | %     |
| Ag 328.068*† | -1204.5                     | 95.00    | 7.89%   | [0.00] | mg/L  |
| Al 308.215*† | -2124.7                     | 17.57    | 0.83%   | [0.00] | mg/L  |
| As 188.979†  | 4.3                         | 3.02     | 69.57%  | [0.00] | mg/L  |
| As 193.696*† | 1.8                         | 4.62     | 262.03% | [0.00] | mg/L  |
| B 249.677*†  | -1109.7                     | 19.70    | 1.77%   | [0.00] | mg/L  |
| Ba 233.527*† | -374.8                      | 0.19     | 0.05%   | [0.00] | mg/L  |
| Be 313.042*† | -1124.4                     | 225.51   | 20.06%  | [0.00] | mg/L  |
| Ca 317.933*† | 112.9                       | 9.46     | 8.38%   | [0.00] | mg/L  |
| Cd 226.502*† | 2.8                         | 8.71     | 306.51% | [0.00] | mg/L  |
| Cd 228.802†  | -1.0                        | 16.86    | >999.9% | [0.00] | mg/L  |
| Co 228.616*† | -94.4                       | 11.85    | 12.55%  | [0.00] | mg/L  |
| Cr 267.716*† | 549.9                       | 292.14   | 53.12%  | [0.00] | mg/L  |
| Cu 324.752*† | 1900.6                      | 42.57    | 2.24%   | [0.00] | mg/L  |
| Fe 273.955*† | -411.4                      | 13.28    | 3.23%   | [0.00] | mg/L  |
| K 766.490*†  | 1063.2                      | 301.90   | 28.39%  | [0.00] | mg/L  |
| Mg 279.077*† | -8390.3                     | 98.50    | 1.17%   | [0.00] | mg/L  |
| Mn 257.610*† | -333.9                      | 49.30    | 14.77%  | [0.00] | mg/L  |
| Mo 202.031*† | -53.6                       | 2.56     | 4.78%   | [0.00] | mg/L  |
| Na 589.592*† | 430.3                       | 18.71    | 4.35%   | [0.00] | mg/L  |
| Ni 231.604*† | -84.6                       | 0.86     | 1.02%   | [0.00] | mg/L  |
| P 213.617*†  | -183.9                      | 11.95    | 6.50%   | [0.00] | mg/L  |
| P 214.914†   | -41.8                       | 7.73     | 18.52%  | [0.00] | mg/L  |
| Pb 220.353*† | -59.1                       | 1.53     | 2.59%   | [0.00] | mg/L  |
| Sb 206.836†  | 27.0                        | 4.94     | 18.33%  | [0.00] | mg/L  |
| Sb 217.582*† | -4.9                        | 5.78     | 117.10% | [0.00] | mg/L  |
| Se 196.026*† | -3.1                        | 7.46     | 237.28% | [0.00] | mg/L  |
| Si 251.611*† | 1367.3                      | 30.73    | 2.25%   | [0.00] | mg/L  |
| Sn 189.927*† | -127.0                      | 10.64    | 8.37%   | [0.00] | mg/L  |
| Sn 242.170†  | -435.8                      | 24.78    | 5.69%   | [0.00] | mg/L  |
| Sr 407.771*† | 341.9                       | 24.93    | 7.29%   | [0.00] | mg/L  |
| Ti 334.940†  | 30324.3                     | 45.17    | 0.15%   | [0.00] | mg/L  |
| Ti 336.121*† | -1461.3                     | 263.87   | 18.06%  | [0.00] | mg/L  |
| Tl 190.801*† | -0.8                        | 1.23     | 154.78% | [0.00] | mg/L  |
| V 292.402†   | 214.4                       | 132.02   | 61.58%  | [0.00] | mg/L  |
| Zn 206.200*† | -310.4                      | 12.13    | 3.91%   | [0.00] | mg/L  |
| Zn 213.857*† | -169.0                      | 0.81     | 0.48%   | [0.00] | mg/L  |

Sequence No.: 2

Sample ID: STD3-M111116A\_935\_ICP7300

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 2

Date Collected: 3/27/2017 10:28:08 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: STD3-M111116A\_935\_ICP7300

| Analyte      | Mean Corrected Intensity | Std.Dev. | RSD   | Conc. Units  |
|--------------|--------------------------|----------|-------|--------------|
| Tb 384       | 71544.9                  | 1069.11  | 1.49% | 87.45 %      |
| Tb 350       | 118783.4                 | 1768.57  | 1.49% | 89.65 %      |
| Ag 328.068*† | 149764.9                 | 158.69   | 0.11% | [0.75] mg/L  |
| Al 308.215*† | 484848.9                 | 2652.57  | 0.55% | [27.0] mg/L  |
| As 188.979†  | 17497.8                  | 25.21    | 0.14% | [7.50] mg/L  |
| As 193.696*† | 12071.3                  | 45.40    | 0.38% | [7.50] mg/L  |
| B 249.677*†  | 404078.6                 | 1434.93  | 0.36% | [7.50] mg/L  |
| Ba 233.527*† | 2403539.6                | 9865.89  | 0.41% | [15.0] mg/L  |
| Be 313.042*† | 4601823.8                | 6557.74  | 0.14% | [1.125] mg/L |
| Ca 317.933*† | 131233.9                 | 3632.03  | 2.77% | [60.0] mg/L  |
| Cd 226.502*† | 126272.6                 | 295.33   | 0.23% | [1.50] mg/L  |
| Cd 228.802†  | 62069.2                  | 71.83    | 0.12% | [1.50] mg/L  |
| Co 228.616*† | 112236.4                 | 10.27    | 0.01% | [3.75] mg/L  |
| Cr 267.716*† | 144813.4                 | 715.31   | 0.49% | [1.20] mg/L  |
| Cu 324.752*† | 494167.2                 | 605.56   | 0.12% | [1.875] mg/L |
| Fe 273.955*† | 187223.3                 | 193.64   | 0.10% | [7.50] mg/L  |
| K 766.490*†  | 173880.8                 | 4074.80  | 2.34% | [54.0] mg/L  |
| Mg 279.077*† | 311224.0                 | 890.09   | 0.29% | [15.0] mg/L  |
| Mn 257.610*† | 1033577.5                | 2913.66  | 0.28% | [1.50] mg/L  |
| Mo 202.031*† | 11648.3                  | 39.74    | 0.34% | [1.20] mg/L  |
| Na 589.592*† | 335556.7                 | 8368.81  | 2.49% | [72.0] mg/L  |
| Ni 231.604*† | 31720.4                  | 407.34   | 1.28% | [1.20] mg/L  |
| P 213.617*†  | 26475.4                  | 247.85   | 0.94% | [12.0] mg/L  |
| P 214.914†   | 16566.4                  | 18.69    | 0.11% | [12.0] mg/L  |
| Pb 220.353*† | 65005.8                  | 324.59   | 0.50% | [7.50] mg/L  |
| Sb 206.836†  | 18354.1                  | 102.18   | 0.56% | [9.0] mg/L   |
| Sb 217.582*† | 18244.4                  | 76.32    | 0.42% | [9.0] mg/L   |
| Se 196.026*† | 7245.6                   | 17.47    | 0.24% | [3.0] mg/L   |
| Si 251.611*† | 507080.3                 | 1921.09  | 0.38% | [12.0] mg/L  |
| Sn 189.927*† | 39695.4                  | 122.46   | 0.31% | [6.0] mg/L   |
| Sn 242.170†  | 11293.9                  | 99.32    | 0.88% | [6.0] mg/L   |
| Sr 407.771*† | 205542.3                 | 5502.00  | 2.68% | [0.60] mg/L  |
| Ti 334.940†  | 1053293.2                | 1598.17  | 0.15% | [1.20] mg/L  |
| Ti 336.121*† | 739330.1                 | 1972.93  | 0.27% | [1.20] mg/L  |
| Tl 190.801*† | 5867.0                   | 47.61    | 0.81% | [3.0] mg/L   |
| V 292.402*†  | 537361.0                 | 2115.10  | 0.39% | [3.75] mg/L  |
| Zn 206.200*† | 227052.8                 | 61.98    | 0.03% | [5.0] mg/L   |
| Zn 213.857*† | 381553.9                 | 1041.11  | 0.27% | [5.0] mg/L   |

Sequence No.: 3

Sample ID: ICV-M072816C

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 10

Date Collected: 3/27/2017 10:28:54 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

## Mean Data: ICV-M072816C

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 76783.0                  | 93.85 %     | 0.519           |                    |          | 0.55% |
| Tb 350                                                    | 126785.6                 | 95.69 %     | 0.136           |                    |          | 0.14% |
| Ag 328.068*†                                              | 99914.5                  | 0.5004 mg/L | 0.00157         | 0.5004 mg/L        | 0.00157  | 0.31% |
| QC value within limits for Ag 328.068* Recovery = 100.07% |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 74751.5                  | 4.163 mg/L  | 0.0088          | 4.163 mg/L         | 0.0088   | 0.21% |
| QC value within limits for Al 308.215* Recovery = 104.07% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 11259.4                  | 4.826 mg/L  | 0.0430          | 4.826 mg/L         | 0.0430   | 0.89% |
| QC value within limits for As 188.979 Recovery = 96.52%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 7781.5                   | 4.835 mg/L  | 0.0582          | 4.835 mg/L         | 0.0582   | 1.20% |
| QC value within limits for As 193.696* Recovery = 96.69%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 135971.2                 | 2.524 mg/L  | 0.0196          | 2.524 mg/L         | 0.0196   | 0.78% |
| QC value within limits for B 249.677* Recovery = 100.95%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 161181.6                 | 1.006 mg/L  | 0.0024          | 1.006 mg/L         | 0.0024   | 0.24% |
| QC value within limits for Ba 233.527* Recovery = 100.59% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2007745.3                | 0.4908 mg/L | 0.00326         | 0.4908 mg/L        | 0.00326  | 0.66% |
| QC value within limits for Be 313.042* Recovery = 98.17%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 41715.2                  | 19.07 mg/L  | 0.244           | 19.07 mg/L         | 0.244    | 1.28% |
| QC value within limits for Ca 317.933* Recovery = 95.36%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 125768.2                 | 1.494 mg/L  | 0.0036          | 1.494 mg/L         | 0.0036   | 0.24% |
| QC value within limits for Cd 226.502* Recovery = 99.60%  |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 61138.0                  | 1.477 mg/L  | 0.0022          | 1.477 mg/L         | 0.0022   | 0.15% |
| Co 228.616*†                                              | 30938.3                  | 1.034 mg/L  | 0.0028          | 1.034 mg/L         | 0.0028   | 0.27% |
| QC value within limits for Co 228.616* Recovery = 103.37% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 48247.4                  | 0.3998 mg/L | 0.00126         | 0.3998 mg/L        | 0.00126  | 0.32% |
| QC value within limits for Cr 267.716* Recovery = 99.95%  |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 264304.6                 | 1.003 mg/L  | 0.0008          | 1.003 mg/L         | 0.0008   | 0.08% |
| QC value within limits for Cu 324.752* Recovery = 100.28% |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 2540048.1                | 101.8 mg/L  | 0.20            | 101.8 mg/L         | 0.20     | 0.19% |
| QC value within limits for Fe 273.955* Recovery = 101.75% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 25623.0                  | 7.957 mg/L  | 0.1168          | 7.957 mg/L         | 0.1168   | 1.47% |
| QC value within limits for K 766.490* Recovery = 99.47%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 208280.1                 | 10.04 mg/L  | 0.005           | 10.04 mg/L         | 0.005    | 0.05% |
| QC value within limits for Mg 279.077* Recovery = 100.38% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 686099.2                 | 0.9957 mg/L | 0.00033         | 0.9957 mg/L        | 0.00033  | 0.03% |
| QC value within limits for Mn 257.610* Recovery = 99.57%  |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 23456.9                  | 2.417 mg/L  | 0.0201          | 2.417 mg/L         | 0.0201   | 0.83% |
| QC value within limits for Mo 202.031* Recovery = 96.66%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 248124.0                 | 53.24 mg/L  | 0.135           | 53.24 mg/L         | 0.135    | 0.25% |
| QC value within limits for Na 589.592* Recovery = 98.59%  |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 10587.8                  | 0.4005 mg/L | 0.00310         | 0.4005 mg/L        | 0.00310  | 0.77% |
| QC value within limits for Ni 231.604* Recovery = 100.14% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 10547.3                  | 4.781 mg/L  | 0.0452          | 4.781 mg/L         | 0.0452   | 0.94% |
| QC value within limits for P 213.617* Recovery = 95.61%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 6808.9                   | 4.932 mg/L  | 0.0453          | 4.932 mg/L         | 0.0453   | 0.92% |
| Pb 220.353*†                                              | 43566.5                  | 5.026 mg/L  | 0.0090          | 5.026 mg/L         | 0.0090   | 0.18% |
| QC value within limits for Pb 220.353* Recovery = 100.53% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 3888.8                   | 1.907 mg/L  | 0.0066          | 1.907 mg/L         | 0.0066   | 0.35% |
| QC value within limits for Sb 206.836 Recovery = 95.34%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 3874.2                   | 1.911 mg/L  | 0.0201          | 1.911 mg/L         | 0.0201   | 1.05% |
| QC value within limits for Sb 217.582* Recovery = 95.56%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 4675.7                   | 1.936 mg/L  | 0.0258          | 1.936 mg/L         | 0.0258   | 1.33% |
| QC value within limits for Se 196.026* Recovery = 96.80%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 404350.0                 | 9.569 mg/L  | 0.0483          | 9.569 mg/L         | 0.0483   | 0.51% |
| QC value within limits for Si 251.611* Recovery = 95.69%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 16319.9                  | 2.467 mg/L  | 0.0304          | 2.467 mg/L         | 0.0304   | 1.23% |
| QC value within limits for Sn 189.927* Recovery = 98.67%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5136.4                   | 2.729 mg/L  | 0.0007          | 2.729 mg/L         | 0.0007   | 0.02% |
| Sr 407.771*†                                              | 67450.0                  | 0.1969 mg/L | 0.00207         | 0.1969 mg/L        | 0.00207  | 1.05% |
| QC value within limits for Sr 407.771* Recovery = 98.45%  |                          |             |                 |                    |          |       |

|                                                           |           |             |         |             |         |       |
|-----------------------------------------------------------|-----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 4186048.0 | 4.769 mg/L  | 0.0080  | 4.769 mg/L  | 0.0080  | 0.17% |
| Ti 336.121*†                                              | 2964423.7 | 4.812 mg/L  | 0.0080  | 4.812 mg/L  | 0.0080  | 0.17% |
| QC value within limits for Ti 336.121* Recovery = 96.23%  |           |             |         |             |         |       |
| Tl 190.801*†                                              | 3842.1    | 1.965 mg/L  | 0.0126  | 1.965 mg/L  | 0.0126  | 0.64% |
| QC value within limits for Tl 190.801* Recovery = 98.23%  |           |             |         |             |         |       |
| V 292.402*†                                               | 142334.7  | 0.9916 mg/L | 0.00750 | 0.9916 mg/L | 0.00750 | 0.76% |
| QC value within limits for V 292.402* Recovery = 99.16%   |           |             |         |             |         |       |
| Zn 206.200*†                                              | 69017.1   | 1.520 mg/L  | 0.0082  | 1.520 mg/L  | 0.0082  | 0.54% |
| QC value within limits for Zn 206.200* Recovery = 101.32% |           |             |         |             |         |       |
| Zn 213.857*†                                              | 115634.5  | 1.507 mg/L  | 0.0047  | 1.507 mg/L  | 0.0047  | 0.31% |
| QC value within limits for Zn 213.857* Recovery = 100.46% |           |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 4

Sample ID: ICB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 1

Date Collected: 3/27/2017 10:29:52 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units  | Calib. | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|--------------|--------|----------|--------------------|----------|---------|
| Tb 384                                                           | 85719.5                  | 104.8 %      |        | 2.98     |                    |          | 2.85%   |
| Tb 350                                                           | 138269.7                 | 104.4 %      |        | 2.51     |                    |          | 2.41%   |
| Ag 328.068*†                                                     | -8.7                     | -0.0000 mg/L |        | 0.00057  | -0.0000 mg/L       | 0.00057  | >999.9% |
| Al 308.215*†                                                     | -56.0                    | -0.0031 mg/L |        | 0.00052  | -0.0031 mg/L       | 0.00052  | 16.66%  |
| As 188.979†                                                      | 12.8                     | 0.0055 mg/L  |        | 0.00200  | 0.0055 mg/L        | 0.00200  | 36.54%  |
| As 193.696*†                                                     | 8.0                      | 0.0050 mg/L  |        | 0.00297  | 0.0050 mg/L        | 0.00297  | 59.48%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| B 249.677*†                                                      | 2027.6                   | 0.0376 mg/L  |        | 0.00177  | 0.0376 mg/L        | 0.00177  | 4.71%   |
| QC value within limits for B 249.677* Recovery = Not calculated  |                          |              |        |          |                    |          |         |
| Ba 233.527*†                                                     | 64.0                     | 0.0004 mg/L  |        | 0.00007  | 0.0004 mg/L        | 0.00007  | 17.33%  |
| Be 313.042*†                                                     | 341.2                    | 0.0001 mg/L  |        | 0.00000  | 0.0001 mg/L        | 0.00000  | 2.85%   |
| Ca 317.933*†                                                     | 12.7                     | 0.0058 mg/L  |        | 0.00059  | 0.0058 mg/L        | 0.00059  | 10.21%  |
| Cd 226.502*†                                                     | 65.5                     | 0.0008 mg/L  |        | 0.00015  | 0.0008 mg/L        | 0.00015  | 18.72%  |
| Cd 228.802†                                                      | 33.2                     | 0.0008 mg/L  |        | 0.00003  | 0.0008 mg/L        | 0.00003  | 3.58%   |
| Co 228.616*†                                                     | 9.1                      | 0.0003 mg/L  |        | 0.00002  | 0.0003 mg/L        | 0.00002  | 5.77%   |
| Cr 267.716*†                                                     | -127.7                   | -0.0011 mg/L |        | 0.00143  | -0.0011 mg/L       | 0.00143  | 135.50% |
| Cu 324.752*†                                                     | 214.9                    | 0.0008 mg/L  |        | 0.00001  | 0.0008 mg/L        | 0.00001  | 0.87%   |
| Fe 273.955*†                                                     | 853.7                    | 0.0342 mg/L  |        | 0.00427  | 0.0342 mg/L        | 0.00427  | 12.49%  |
| K 766.490*†                                                      | -88.0                    | -0.0273 mg/L |        | 0.02079  | -0.0273 mg/L       | 0.02079  | 76.11%  |
| Mg 279.077*†                                                     | 241.7                    | 0.0116 mg/L  |        | 0.00670  | 0.0116 mg/L        | 0.00670  | 57.53%  |
| Mn 257.610*†                                                     | 191.7                    | 0.0003 mg/L  |        | 0.00002  | 0.0003 mg/L        | 0.00002  | 8.15%   |
| Mo 202.031*†                                                     | 24.4                     | 0.0025 mg/L  |        | 0.00109  | 0.0025 mg/L        | 0.00109  | 43.57%  |
| Na 589.592*†                                                     | 135.6                    | 0.0291 mg/L  |        | 0.00247  | 0.0291 mg/L        | 0.00247  | 8.48%   |
| Ni 231.604*†                                                     | 19.0                     | 0.0007 mg/L  |        | 0.00002  | 0.0007 mg/L        | 0.00002  | 2.66%   |
| P 213.617*†                                                      | 27.6                     | 0.0125 mg/L  |        | 0.01026  | 0.0125 mg/L        | 0.01026  | 82.03%  |
| P 214.914†                                                       | 4.0                      | 0.0029 mg/L  |        | 0.01077  | 0.0029 mg/L        | 0.01077  | 367.93% |
| Pb 220.353*†                                                     | 20.5                     | 0.0024 mg/L  |        | 0.00115  | 0.0024 mg/L        | 0.00115  | 48.50%  |
| QC value within limits for Pb 220.353* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Sb 206.836†                                                      | 0.3                      | 0.0001 mg/L  |        | 0.00064  | 0.0001 mg/L        | 0.00064  | 439.16% |
| Sb 217.582*†                                                     | -8.2                     | -0.0041 mg/L |        | 0.00154  | -0.0041 mg/L       | 0.00154  | 37.92%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Se 196.026*†                                                     | 5.3                      | 0.0022 mg/L  |        | 0.00130  | 0.0022 mg/L        | 0.00130  | 59.68%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Si 251.611*†                                                     | 288.1                    | 0.0068 mg/L  |        | 0.00274  | 0.0068 mg/L        | 0.00274  | 40.22%  |
| QC value within limits for Si 251.611* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Sn 189.927*†                                                     | 50.4                     | 0.0076 mg/L  |        | 0.00072  | 0.0076 mg/L        | 0.00072  | 9.50%   |
| Sn 242.170†                                                      | 28.6                     | 0.0152 mg/L  |        | 0.00319  | 0.0152 mg/L        | 0.00319  | 21.03%  |
| Sr 407.771*†                                                     | -23.1                    | -0.0001 mg/L |        | 0.00002  | -0.0001 mg/L       | 0.00002  | 29.35%  |
| Ti 334.940†                                                      | 2590.0                   | 0.0030 mg/L  |        | 0.00015  | 0.0030 mg/L        | 0.00015  | 5.04%   |
| Ti 336.121*†                                                     | 1752.5                   | 0.0028 mg/L  |        | 0.00048  | 0.0028 mg/L        | 0.00048  | 16.85%  |
| Tl 190.801*†                                                     | 15.8                     | 0.0081 mg/L  |        | 0.00139  | 0.0081 mg/L        | 0.00139  | 17.16%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| V 292.402*†                                                      | 45.5                     | 0.0003 mg/L  |        | 0.00122  | 0.0003 mg/L        | 0.00122  | 383.74% |
| Zn 206.200*†                                                     | 40.3                     | 0.0009 mg/L  |        | 0.00027  | 0.0009 mg/L        | 0.00027  | 29.97%  |
| Zn 213.857*†                                                     | 91.1                     | 0.0012 mg/L  |        | 0.00012  | 0.0012 mg/L        | 0.00012  | 9.83%   |

All analyte(s) passed QC.

Sequence No.: 5

Sample ID: ICS\_A - M110116B

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 8

Date Collected: 3/27/2017 10:30:53 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS\_A - M110116B

| Analyte      | Mean Corrected Intensity | Calib. Conc. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|--------------|--------------------------|--------------------|----------|--------------------|----------|---------|
| Tb 384       | 72361.8                  | 88.45 %            | 1.494    |                    |          | 1.69%   |
| Tb 350       | 120832.4                 | 91.20 %            | 1.751    |                    |          | 1.92%   |
| Ag 328.068*† | -63.6                    | -0.0003 mg/L       | 0.00032  | -0.0003 mg/L       | 0.00032  | 101.60% |
| Al 308.215*† | 449893.7                 | 25.05 mg/L         | 0.200    | 25.05 mg/L         | 0.200    | 0.80%   |
| As 188.979†  | 7.4                      | 0.0032 mg/L        | 0.00262  | 0.0032 mg/L        | 0.00262  | 82.48%  |
| As 193.696*† | 10.4                     | 0.0065 mg/L        | 0.00118  | 0.0065 mg/L        | 0.00118  | 18.20%  |
| B 249.677*†  | 950.9                    | 0.0176 mg/L        | 0.00109  | 0.0176 mg/L        | 0.00109  | 6.17%   |
| Ba 233.527*† | 406.2                    | 0.0025 mg/L        | 0.00002  | 0.0025 mg/L        | 0.00002  | 0.89%   |
| Be 313.042*† | -271.8                   | -0.0001 mg/L       | 0.00000  | -0.0001 mg/L       | 0.00000  | 6.80%   |
| Ca 317.933*† | 268255.7                 | 122.6 mg/L         | 3.52     | 122.6 mg/L         | 3.52     | 2.87%   |
| Cd 226.502*† | 138.2                    | 0.0016 mg/L        | 0.00007  | 0.0016 mg/L        | 0.00007  | 4.05%   |
| Cd 228.802†  | -1.8                     | -0.0000 mg/L       | 0.00033  | -0.0000 mg/L       | 0.00033  | 734.55% |
| Co 228.616*† | 6.1                      | 0.0002 mg/L        | 0.00008  | 0.0002 mg/L        | 0.00008  | 39.44%  |
| Cr 267.716*† | -173.0                   | -0.0014 mg/L       | 0.00054  | -0.0014 mg/L       | 0.00054  | 37.72%  |
| Cu 324.752*† | -260.7                   | -0.0010 mg/L       | 0.00056  | -0.0010 mg/L       | 0.00056  | 56.45%  |
| Fe 273.955*† | 2434532.5                | 97.53 mg/L         | 2.130    | 97.53 mg/L         | 2.130    | 2.18%   |
| K 766.490*†  | 447.2                    | 0.1389 mg/L        | 0.06435  | 0.1389 mg/L        | 0.06435  | 46.33%  |
| Mg 279.077*† | 1259738.1                | 60.72 mg/L         | 1.612    | 60.72 mg/L         | 1.612    | 2.66%   |
| Mn 257.610*† | -62.8                    | -0.0001 mg/L       | 0.00033  | -0.0001 mg/L       | 0.00033  | 359.64% |
| Mo 202.031*† | 7.6                      | 0.0008 mg/L        | 0.00034  | 0.0008 mg/L        | 0.00034  | 43.82%  |
| Na 589.592*† | 104875.8                 | 22.50 mg/L         | 0.547    | 22.50 mg/L         | 0.547    | 2.43%   |
| Ni 231.604*† | 24.8                     | 0.0009 mg/L        | 0.00111  | 0.0009 mg/L        | 0.00111  | 117.76% |
| P 213.617*†  | -291.6                   | -0.1322 mg/L       | 0.00554  | -0.1322 mg/L       | 0.00554  | 4.19%   |
| P 214.914†   | 50.7                     | 0.0367 mg/L        | 0.00083  | 0.0367 mg/L        | 0.00083  | 2.25%   |
| Pb 220.353*† | -57.3                    | -0.0066 mg/L       | 0.00036  | -0.0066 mg/L       | 0.00036  | 5.40%   |
| Sb 206.836†  | 24.5                     | 0.0120 mg/L        | 0.00443  | 0.0120 mg/L        | 0.00443  | 36.86%  |
| Sb 217.582*† | -13.4                    | -0.0066 mg/L       | 0.00297  | -0.0066 mg/L       | 0.00297  | 44.93%  |
| Se 196.026*† | -29.6                    | -0.0123 mg/L       | 0.00865  | -0.0123 mg/L       | 0.00865  | 70.53%  |
| Si 251.611*† | 204.5                    | 0.0048 mg/L        | 0.00254  | 0.0048 mg/L        | 0.00254  | 52.48%  |
| Sn 189.927*† | -3.0                     | -0.0005 mg/L       | 0.00339  | -0.0005 mg/L       | 0.00339  | 747.19% |
| Sn 242.170†  | 482.6                    | 0.2564 mg/L        | 0.00437  | 0.2564 mg/L        | 0.00437  | 1.70%   |
| Sr 407.771*† | 936.3                    | 0.0027 mg/L        | 0.00027  | 0.0027 mg/L        | 0.00027  | 9.76%   |
| Ti 334.940†  | -1679.2                  | -0.0019 mg/L       | 0.00063  | -0.0019 mg/L       | 0.00063  | 32.92%  |
| Ti 336.121*† | -688.9                   | -0.0011 mg/L       | 0.00039  | -0.0011 mg/L       | 0.00039  | 35.16%  |
| Tl 190.801*† | -22.2                    | -0.0113 mg/L       | 0.00085  | -0.0113 mg/L       | 0.00085  | 7.53%   |
| V 292.402*†  | 317.7                    | 0.0006 mg/L        | 0.00024  | 0.0006 mg/L        | 0.00024  | 38.88%  |
| Zn 206.200*† | 59.0                     | 0.0013 mg/L        | 0.00018  | 0.0013 mg/L        | 0.00018  | 13.84%  |
| Zn 213.857*† | 585.6                    | -0.0004 mg/L       | 0.00001  | -0.0004 mg/L       | 0.00001  | 3.29%   |

Sequence No.: 6

Sample ID: ICS\_AB - M110116A

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 9

Date Collected: 3/27/2017 10:31:44 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS\_AB - M110116A

| Analyte      | Mean Corrected Intensity | Conc. Units | Calib. | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD    |
|--------------|--------------------------|-------------|--------|----------|--------------------|----------|--------|
| Tb 384       | 72219.9                  | 88.27       | %      | 1.082    |                    |          | 1.23%  |
| Tb 350       | 120904.4                 | 91.26       | %      | 1.486    |                    |          | 1.63%  |
| Ag 328.068*† | 62684.9                  | 0.3139      | mg/L   | 0.00089  | 0.3139 mg/L        | 0.00089  | 0.28%  |
| Al 308.215*† | 448504.0                 | 24.98       | mg/L   | 0.039    | 24.98 mg/L         | 0.039    | 0.16%  |
| As 188.979†  | 2428.8                   | 1.041       | mg/L   | 0.0141   | 1.041 mg/L         | 0.0141   | 1.35%  |
| As 193.696*† | 1673.6                   | 1.040       | mg/L   | 0.0002   | 1.040 mg/L         | 0.0002   | 0.02%  |
| B 249.677*†  | 27298.2                  | 0.5067      | mg/L   | 0.01056  | 0.5067 mg/L        | 0.01056  | 2.08%  |
| Ba 233.527*† | 50040.9                  | 0.3123      | mg/L   | 0.00084  | 0.3123 mg/L        | 0.00084  | 0.27%  |
| Be 313.042*† | 428489.0                 | 0.1048      | mg/L   | 0.00039  | 0.1048 mg/L        | 0.00039  | 0.37%  |
| Ca 317.933*† | 254311.2                 | 116.3       | mg/L   | 7.41     | 116.3 mg/L         | 7.41     | 6.38%  |
| Cd 226.502*† | 25436.9                  | 0.3022      | mg/L   | 0.00210  | 0.3022 mg/L        | 0.00210  | 0.69%  |
| Cd 228.802†  | 12512.0                  | 0.3024      | mg/L   | 0.00258  | 0.3024 mg/L        | 0.00258  | 0.85%  |
| Co 228.616*† | 9260.0                   | 0.3094      | mg/L   | 0.00291  | 0.3094 mg/L        | 0.00291  | 0.94%  |
| Cr 267.716*† | 37105.1                  | 0.3075      | mg/L   | 0.00014  | 0.3075 mg/L        | 0.00014  | 0.05%  |
| Cu 324.752*† | 83315.5                  | 0.3161      | mg/L   | 0.00028  | 0.3161 mg/L        | 0.00028  | 0.09%  |
| Fe 273.955*† | 2426198.3                | 97.19       | mg/L   | 0.397    | 97.19 mg/L         | 0.397    | 0.41%  |
| K 766.490*†  | 69042.9                  | 21.44       | mg/L   | 1.089    | 21.44 mg/L         | 1.089    | 5.08%  |
| Mg 279.077*† | 1248264.2                | 60.16       | mg/L   | 0.420    | 60.16 mg/L         | 0.420    | 0.70%  |
| Mn 257.610*† | 140717.3                 | 0.2042      | mg/L   | 0.00075  | 0.2042 mg/L        | 0.00075  | 0.37%  |
| Mo 202.031*† | 2974.5                   | 0.3064      | mg/L   | 0.00194  | 0.3064 mg/L        | 0.00194  | 0.63%  |
| Na 589.592*† | 98835.5                  | 21.21       | mg/L   | 1.079    | 21.21 mg/L         | 1.079    | 5.09%  |
| Ni 231.604*† | 8219.0                   | 0.3109      | mg/L   | 0.00221  | 0.3109 mg/L        | 0.00221  | 0.71%  |
| P 213.617*†  | -217.3                   | -0.0985     | mg/L   | 0.00665  | -0.0985 mg/L       | 0.00665  | 6.75%  |
| P 214.914†   | 45.5                     | 0.0329      | mg/L   | 0.00685  | 0.0329 mg/L        | 0.00685  | 20.79% |
| Pb 220.353*† | 8677.3                   | 1.001       | mg/L   | 0.0069   | 1.001 mg/L         | 0.0069   | 0.69%  |
| Sb 206.836†  | 2061.4                   | 1.011       | mg/L   | 0.0088   | 1.011 mg/L         | 0.0088   | 0.87%  |
| Sb 217.582*† | 1974.8                   | 0.9742      | mg/L   | 0.01375  | 0.9742 mg/L        | 0.01375  | 1.41%  |
| Se 196.026*† | 1267.4                   | 0.5247      | mg/L   | 0.00488  | 0.5247 mg/L        | 0.00488  | 0.93%  |
| Si 251.611*† | 8745.3                   | 0.2070      | mg/L   | 0.00042  | 0.2070 mg/L        | 0.00042  | 0.20%  |
| Sn 189.927*† | -44.9                    | -0.0068     | mg/L   | 0.00168  | -0.0068 mg/L       | 0.00168  | 24.80% |
| Sn 242.170†  | 508.5                    | 0.2702      | mg/L   | 0.00850  | 0.2702 mg/L        | 0.00850  | 3.14%  |
| Sr 407.771*† | 709.8                    | 0.0021      | mg/L   | 0.00028  | 0.0021 mg/L        | 0.00028  | 13.70% |
| Ti 334.940†  | 881994.6                 | 1.005       | mg/L   | 0.0011   | 1.005 mg/L         | 0.0011   | 0.11%  |
| Ti 336.121*† | 622374.8                 | 1.010       | mg/L   | 0.0009   | 1.010 mg/L         | 0.0009   | 0.09%  |
| Tl 190.801*† | 2000.5                   | 1.023       | mg/L   | 0.0050   | 1.023 mg/L         | 0.0050   | 0.49%  |
| V 292.402*†  | 43615.1                  | 0.3028      | mg/L   | 0.00126  | 0.3028 mg/L        | 0.00126  | 0.42%  |
| Zn 206.200*† | 14070.6                  | 0.3099      | mg/L   | 0.00356  | 0.3099 mg/L        | 0.00356  | 1.15%  |
| Zn 213.857*† | 24062.2                  | 0.3072      | mg/L   | 0.00333  | 0.3072 mg/L        | 0.00333  | 1.08%  |

Sequence No.: 11

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 3

Date Collected: 3/27/2017 10:54:30 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                  | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                   | 74248.7                  | 90.75 %     | 0.491           |                    |          | 0.54% |
| Tb 350                                                   | 122614.9                 | 92.55 %     | 0.922           |                    |          | 1.00% |
| Ag 328.068*†                                             | 72024.2                  | 0.3607 mg/L | 0.00126         | 0.3607 mg/L        | 0.00126  | 0.35% |
| QC value within limits for Ag 328.068* Recovery = 96.18% |                          |             |                 |                    |          |       |
| Al 308.215*†                                             | 240519.7                 | 13.39 mg/L  | 0.036           | 13.39 mg/L         | 0.036    | 0.27% |
| QC value within limits for Al 308.215* Recovery = 99.21% |                          |             |                 |                    |          |       |
| As 188.979†                                              | 8088.9                   | 3.467 mg/L  | 0.0551          | 3.467 mg/L         | 0.0551   | 1.59% |
| QC value within limits for As 188.979 Recovery = 92.46%  |                          |             |                 |                    |          |       |
| As 193.696*†                                             | 5563.3                   | 3.456 mg/L  | 0.0726          | 3.456 mg/L         | 0.0726   | 2.10% |
| QC value within limits for As 193.696* Recovery = 92.17% |                          |             |                 |                    |          |       |
| B 249.677*†                                              | 191953.4                 | 3.563 mg/L  | 0.0495          | 3.563 mg/L         | 0.0495   | 1.39% |
| QC value within limits for B 249.677* Recovery = 95.01%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                             | 1180097.1                | 7.365 mg/L  | 0.0113          | 7.365 mg/L         | 0.0113   | 0.15% |
| QC value within limits for Ba 233.527* Recovery = 98.20% |                          |             |                 |                    |          |       |
| Be 313.042*†                                             | 2220637.3                | 0.5429 mg/L | 0.00086         | 0.5429 mg/L        | 0.00086  | 0.16% |
| QC value within limits for Be 313.042* Recovery = 96.51% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                             | 60099.3                  | 27.48 mg/L  | 0.602           | 27.48 mg/L         | 0.602    | 2.19% |
| QC value within limits for Ca 317.933* Recovery = 91.59% |                          |             |                 |                    |          |       |
| Cd 226.502*†                                             | 60289.7                  | 0.7162 mg/L | 0.00200         | 0.7162 mg/L        | 0.00200  | 0.28% |
| QC value within limits for Cd 226.502* Recovery = 95.49% |                          |             |                 |                    |          |       |
| Cd 228.802†                                              | 29994.8                  | 0.7249 mg/L | 0.00350         | 0.7249 mg/L        | 0.00350  | 0.48% |
| Co 228.616*†                                             | 54616.2                  | 1.825 mg/L  | 0.0009          | 1.825 mg/L         | 0.0009   | 0.05% |
| QC value within limits for Co 228.616* Recovery = 97.32% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                             | 69977.9                  | 0.5799 mg/L | 0.00165         | 0.5799 mg/L        | 0.00165  | 0.29% |
| QC value within limits for Cr 267.716* Recovery = 96.65% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                             | 240918.0                 | 0.9141 mg/L | 0.00074         | 0.9141 mg/L        | 0.00074  | 0.08% |
| QC value within limits for Cu 324.752* Recovery = 97.50% |                          |             |                 |                    |          |       |
| Fe 273.955*†                                             | 91052.5                  | 3.647 mg/L  | 0.0083          | 3.647 mg/L         | 0.0083   | 0.23% |
| QC value within limits for Fe 273.955* Recovery = 97.27% |                          |             |                 |                    |          |       |
| K 766.490*†                                              | 80565.8                  | 25.02 mg/L  | 0.499           | 25.02 mg/L         | 0.499    | 1.99% |
| QC value within limits for K 766.490* Recovery = 92.67%  |                          |             |                 |                    |          |       |
| Mg 279.077*†                                             | 150775.5                 | 7.267 mg/L  | 0.0156          | 7.267 mg/L         | 0.0156   | 0.21% |
| QC value within limits for Mg 279.077* Recovery = 96.89% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                             | 501772.4                 | 0.7282 mg/L | 0.00174         | 0.7282 mg/L        | 0.00174  | 0.24% |
| QC value within limits for Mn 257.610* Recovery = 97.09% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                             | 5616.0                   | 0.5786 mg/L | 0.00938         | 0.5786 mg/L        | 0.00938  | 1.62% |
| QC value within limits for Mo 202.031* Recovery = 96.43% |                          |             |                 |                    |          |       |
| Na 589.592*†                                             | 160952.4                 | 34.54 mg/L  | 0.621           | 34.54 mg/L         | 0.621    | 1.80% |
| QC value within limits for Na 589.592* Recovery = 95.93% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                             | 15026.7                  | 0.5685 mg/L | 0.00924         | 0.5685 mg/L        | 0.00924  | 1.63% |
| QC value within limits for Ni 231.604* Recovery = 94.74% |                          |             |                 |                    |          |       |
| P 213.617*†                                              | 12068.4                  | 5.470 mg/L  | 0.1103          | 5.470 mg/L         | 0.1103   | 2.02% |
| QC value within limits for P 213.617* Recovery = 91.17%  |                          |             |                 |                    |          |       |
| P 214.914†                                               | 7662.5                   | 5.550 mg/L  | 0.1332          | 5.550 mg/L         | 0.1332   | 2.40% |
| Pb 220.353*†                                             | 31025.0                  | 3.579 mg/L  | 0.0066          | 3.579 mg/L         | 0.0066   | 0.18% |
| QC value within limits for Pb 220.353* Recovery = 95.45% |                          |             |                 |                    |          |       |
| Sb 206.836†                                              | 8660.2                   | 4.247 mg/L  | 0.0930          | 4.247 mg/L         | 0.0930   | 2.19% |
| QC value within limits for Sb 206.836 Recovery = 94.37%  |                          |             |                 |                    |          |       |
| Sb 217.582*†                                             | 8553.0                   | 4.219 mg/L  | 0.0746          | 4.219 mg/L         | 0.0746   | 1.77% |
| QC value within limits for Sb 217.582* Recovery = 93.76% |                          |             |                 |                    |          |       |
| Se 196.026*†                                             | 3365.5                   | 1.393 mg/L  | 0.0350          | 1.393 mg/L         | 0.0350   | 2.51% |
| QC value within limits for Se 196.026* Recovery = 92.90% |                          |             |                 |                    |          |       |
| Si 251.611*†                                             | 241006.1                 | 5.703 mg/L  | 0.0499          | 5.703 mg/L         | 0.0499   | 0.88% |
| QC value within limits for Si 251.611* Recovery = 95.06% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                             | 18703.2                  | 2.827 mg/L  | 0.0512          | 2.827 mg/L         | 0.0512   | 1.81% |
| QC value within limits for Sn 189.927* Recovery = 94.23% |                          |             |                 |                    |          |       |
| Sn 242.170†                                              | 5365.5                   | 2.850 mg/L  | 0.0326          | 2.850 mg/L         | 0.0326   | 1.14% |
| Sr 407.771*†                                             | 97195.2                  | 0.2837 mg/L | 0.00585         | 0.2837 mg/L        | 0.00585  | 2.06% |
| QC value within limits for Sr 407.771* Recovery = 94.57% |                          |             |                 |                    |          |       |

|                                                          |          |             |         |             |         |       |
|----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                              | 512430.1 | 0.5838 mg/L | 0.00089 | 0.5838 mg/L | 0.00089 | 0.15% |
| Ti 336.121*†                                             | 361183.0 | 0.5862 mg/L | 0.00109 | 0.5862 mg/L | 0.00109 | 0.19% |
| QC value within limits for Ti 336.121* Recovery = 97.71% |          |             |         |             |         |       |
| Tl 190.801*†                                             | 2806.7   | 1.435 mg/L  | 0.0305  | 1.435 mg/L  | 0.0305  | 2.13% |
| QC value within limits for Tl 190.801* Recovery = 95.68% |          |             |         |             |         |       |
| V 292.402*†                                              | 260559.8 | 1.818 mg/L  | 0.0043  | 1.818 mg/L  | 0.0043  | 0.24% |
| QC value within limits for V 292.402* Recovery = 96.97%  |          |             |         |             |         |       |
| Zn 206.200*†                                             | 107303.6 | 2.363 mg/L  | 0.0088  | 2.363 mg/L  | 0.0088  | 0.37% |
| QC value within limits for Zn 206.200* Recovery = 94.52% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 12  
 Sample ID: CCB-R12091601  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 1  
 Date Collected: 3/27/2017 10:55:23 AM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

## Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|-------------|--------------|----------|--------------------|----------|---------|
| Tb 384                                                           | 82343.1                  | 100.6       | %            | 0.71     |                    |          | 0.70%   |
| Tb 350                                                           | 132623.8                 | 100.1       | %            | 0.72     |                    |          | 0.72%   |
| Ag 328.068*†                                                     | 69.2                     | 0.0003      | mg/L         | 0.00010  | 0.0003 mg/L        | 0.00010  | 27.68%  |
| Al 308.215*†                                                     | 50.8                     | 0.0028      | mg/L         | 0.00577  | 0.0028 mg/L        | 0.00577  | 204.19% |
| As 188.979†                                                      | 9.1                      | 0.0039      | mg/L         | 0.00088  | 0.0039 mg/L        | 0.00088  | 22.38%  |
| As 193.696*†                                                     | 3.4                      | 0.0021      | mg/L         | 0.00007  | 0.0021 mg/L        | 0.00007  | 3.07%   |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| B 249.677*†                                                      | 2089.1                   | 0.0388      | mg/L         | 0.00285  | 0.0388 mg/L        | 0.00285  | 7.34%   |
| Ba 233.527*†                                                     | 457.4                    | 0.0029      | mg/L         | 0.00006  | 0.0029 mg/L        | 0.00006  | 2.20%   |
| Be 313.042*†                                                     | 846.2                    | 0.0002      | mg/L         | 0.00004  | 0.0002 mg/L        | 0.00004  | 18.45%  |
| Ca 317.933*†                                                     | 13.3                     | 0.0061      | mg/L         | 0.00559  | 0.0061 mg/L        | 0.00559  | 91.64%  |
| Cd 226.502*†                                                     | 43.9                     | 0.0005      | mg/L         | 0.00007  | 0.0005 mg/L        | 0.00007  | 13.01%  |
| Cd 228.802†                                                      | 23.3                     | 0.0006      | mg/L         | 0.00008  | 0.0006 mg/L        | 0.00008  | 14.77%  |
| Co 228.616*†                                                     | 35.1                     | 0.0012      | mg/L         | 0.00018  | 0.0012 mg/L        | 0.00018  | 15.14%  |
| Cr 267.716*†                                                     | -51.6                    | -0.0004     | mg/L         | 0.00001  | -0.0004 mg/L       | 0.00001  | 1.75%   |
| Cu 324.752*†                                                     | 224.2                    | 0.0009      | mg/L         | 0.00034  | 0.0009 mg/L        | 0.00034  | 40.31%  |
| Fe 273.955*†                                                     | 47.0                     | 0.0019      | mg/L         | 0.00104  | 0.0019 mg/L        | 0.00104  | 55.53%  |
| K 766.490*†                                                      | 89.5                     | 0.0278      | mg/L         | 0.04087  | 0.0278 mg/L        | 0.04087  | 147.02% |
| Mg 279.077*†                                                     | 312.2                    | 0.0150      | mg/L         | 0.00862  | 0.0150 mg/L        | 0.00862  | 57.29%  |
| Mn 257.610*†                                                     | 219.9                    | 0.0003      | mg/L         | 0.00002  | 0.0003 mg/L        | 0.00002  | 5.93%   |
| Mo 202.031*†                                                     | 4.1                      | 0.0004      | mg/L         | 0.00017  | 0.0004 mg/L        | 0.00017  | 39.56%  |
| Na 589.592*†                                                     | 196.8                    | 0.0422      | mg/L         | 0.01329  | 0.0422 mg/L        | 0.01329  | 31.47%  |
| Ni 231.604*†                                                     | 22.8                     | 0.0009      | mg/L         | 0.00015  | 0.0009 mg/L        | 0.00015  | 17.09%  |
| P 213.617*†                                                      | 61.2                     | 0.0277      | mg/L         | 0.01208  | 0.0277 mg/L        | 0.01208  | 43.57%  |
| P 214.914†                                                       | 10.9                     | 0.0079      | mg/L         | 0.00870  | 0.0079 mg/L        | 0.00870  | 110.56% |
| Pb 220.353*†                                                     | 23.3                     | 0.0027      | mg/L         | 0.00046  | 0.0027 mg/L        | 0.00046  | 17.19%  |
| Sb 206.836†                                                      | 2.0                      | 0.0010      | mg/L         | 0.00064  | 0.0010 mg/L        | 0.00064  | 64.00%  |
| Sb 217.582*†                                                     | -6.2                     | -0.0031     | mg/L         | 0.00279  | -0.0031 mg/L       | 0.00279  | 90.39%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Se 196.026*†                                                     | 18.6                     | 0.0077      | mg/L         | 0.00421  | 0.0077 mg/L        | 0.00421  | 54.54%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Si 251.611*†                                                     | 262.7                    | 0.0062      | mg/L         | 0.00178  | 0.0062 mg/L        | 0.00178  | 28.61%  |
| Sn 189.927*†                                                     | 41.5                     | 0.0063      | mg/L         | 0.00008  | 0.0063 mg/L        | 0.00008  | 1.24%   |
| Sn 242.170†                                                      | 51.5                     | 0.0273      | mg/L         | 0.01194  | 0.0273 mg/L        | 0.01194  | 43.66%  |
| Sr 407.771*†                                                     | 9.5                      | 0.0000      | mg/L         | 0.00001  | 0.0000 mg/L        | 0.00001  | 41.69%  |
| Ti 334.940†                                                      | 565.1                    | 0.0006      | mg/L         | 0.00050  | 0.0006 mg/L        | 0.00050  | 77.28%  |
| Ti 336.121*†                                                     | 360.7                    | 0.0006      | mg/L         | 0.00002  | 0.0006 mg/L        | 0.00002  | 3.27%   |
| Tl 190.801*†                                                     | 13.8                     | 0.0070      | mg/L         | 0.00200  | 0.0070 mg/L        | 0.00200  | 28.42%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| V 292.402*†                                                      | 172.7                    | 0.0012      | mg/L         | 0.00034  | 0.0012 mg/L        | 0.00034  | 28.03%  |
| Zn 206.200*†                                                     | 92.0                     | 0.0020      | mg/L         | 0.00022  | 0.0020 mg/L        | 0.00022  | 10.96%  |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |             |              |          |                    |          |         |

All analyte(s) passed QC.

Sequence No.: 23

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 3

Date Collected: 3/27/2017 11:05:40 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                  | Mean Corrected Intensity | Conc. Units | Calib. | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|----------------------------------------------------------|--------------------------|-------------|--------|----------|--------------------|----------|-------|
| Tb 384                                                   | 71714.7                  | 87.66       | %      | 0.414    |                    |          | 0.47% |
| Tb 350                                                   | 119066.1                 | 89.87       | %      | 0.048    |                    |          | 0.05% |
| Ag 328.068*†                                             | 72237.2                  | 0.3618      | mg/L   | 0.00204  | 0.3618 mg/L        | 0.00204  | 0.56% |
| QC value within limits for Ag 328.068* Recovery = 96.47% |                          |             |        |          |                    |          |       |
| Al 308.215*†                                             | 242190.3                 | 13.49       | mg/L   | 0.009    | 13.49 mg/L         | 0.009    | 0.06% |
| QC value within limits for Al 308.215* Recovery = 99.90% |                          |             |        |          |                    |          |       |
| As 188.979†                                              | 8188.6                   | 3.510       | mg/L   | 0.0303   | 3.510 mg/L         | 0.0303   | 0.86% |
| QC value within limits for As 188.979 Recovery = 93.60%  |                          |             |        |          |                    |          |       |
| As 193.696*†                                             | 5657.2                   | 3.515       | mg/L   | 0.0463   | 3.515 mg/L         | 0.0463   | 1.32% |
| QC value within limits for As 193.696* Recovery = 93.73% |                          |             |        |          |                    |          |       |
| B 249.677*†                                              | 190186.8                 | 3.530       | mg/L   | 0.0374   | 3.530 mg/L         | 0.0374   | 1.06% |
| QC value within limits for B 249.677* Recovery = 94.13%  |                          |             |        |          |                    |          |       |
| Ba 233.527*†                                             | 1180680.2                | 7.368       | mg/L   | 0.0064   | 7.368 mg/L         | 0.0064   | 0.09% |
| QC value within limits for Ba 233.527* Recovery = 98.25% |                          |             |        |          |                    |          |       |
| Be 313.042*†                                             | 2196246.8                | 0.5369      | mg/L   | 0.00301  | 0.5369 mg/L        | 0.00301  | 0.56% |
| QC value within limits for Be 313.042* Recovery = 95.45% |                          |             |        |          |                    |          |       |
| Ca 317.933*†                                             | 61265.4                  | 28.01       | mg/L   | 0.063    | 28.01 mg/L         | 0.063    | 0.23% |
| QC value within limits for Ca 317.933* Recovery = 93.37% |                          |             |        |          |                    |          |       |
| Cd 226.502*†                                             | 60240.0                  | 0.7156      | mg/L   | 0.00287  | 0.7156 mg/L        | 0.00287  | 0.40% |
| QC value within limits for Cd 226.502* Recovery = 95.41% |                          |             |        |          |                    |          |       |
| Cd 228.802†                                              | 29888.1                  | 0.7223      | mg/L   | 0.00308  | 0.7223 mg/L        | 0.00308  | 0.43% |
| Co 228.616*†                                             | 54760.8                  | 1.830       | mg/L   | 0.0017   | 1.830 mg/L         | 0.0017   | 0.09% |
| QC value within limits for Co 228.616* Recovery = 97.58% |                          |             |        |          |                    |          |       |
| Cr 267.716*†                                             | 69990.8                  | 0.5800      | mg/L   | 0.00094  | 0.5800 mg/L        | 0.00094  | 0.16% |
| QC value within limits for Cr 267.716* Recovery = 96.66% |                          |             |        |          |                    |          |       |
| Cu 324.752*†                                             | 240388.8                 | 0.9121      | mg/L   | 0.00286  | 0.9121 mg/L        | 0.00286  | 0.31% |
| QC value within limits for Cu 324.752* Recovery = 97.29% |                          |             |        |          |                    |          |       |
| Fe 273.955*†                                             | 91029.3                  | 3.647       | mg/L   | 0.0033   | 3.647 mg/L         | 0.0033   | 0.09% |
| QC value within limits for Fe 273.955* Recovery = 97.24% |                          |             |        |          |                    |          |       |
| K 766.490*†                                              | 82683.2                  | 25.68       | mg/L   | 0.147    | 25.68 mg/L         | 0.147    | 0.57% |
| QC value within limits for K 766.490* Recovery = 95.10%  |                          |             |        |          |                    |          |       |
| Mg 279.077*†                                             | 149899.7                 | 7.225       | mg/L   | 0.0037   | 7.225 mg/L         | 0.0037   | 0.05% |
| QC value within limits for Mg 279.077* Recovery = 96.33% |                          |             |        |          |                    |          |       |
| Mn 257.610*†                                             | 501260.6                 | 0.7275      | mg/L   | 0.00146  | 0.7275 mg/L        | 0.00146  | 0.20% |
| QC value within limits for Mn 257.610* Recovery = 97.00% |                          |             |        |          |                    |          |       |
| Mo 202.031*†                                             | 5686.2                   | 0.5858      | mg/L   | 0.00397  | 0.5858 mg/L        | 0.00397  | 0.68% |
| QC value within limits for Mo 202.031* Recovery = 97.63% |                          |             |        |          |                    |          |       |
| Na 589.592*†                                             | 166645.9                 | 35.76       | mg/L   | 0.142    | 35.76 mg/L         | 0.142    | 0.40% |
| QC value within limits for Na 589.592* Recovery = 99.33% |                          |             |        |          |                    |          |       |
| Ni 231.604*†                                             | 15285.6                  | 0.5783      | mg/L   | 0.00296  | 0.5783 mg/L        | 0.00296  | 0.51% |
| QC value within limits for Ni 231.604* Recovery = 96.38% |                          |             |        |          |                    |          |       |
| P 213.617*†                                              | 12252.3                  | 5.553       | mg/L   | 0.0418   | 5.553 mg/L         | 0.0418   | 0.75% |
| QC value within limits for P 213.617* Recovery = 92.56%  |                          |             |        |          |                    |          |       |
| P 214.914†                                               | 7801.0                   | 5.651       | mg/L   | 0.0423   | 5.651 mg/L         | 0.0423   | 0.75% |
| Pb 220.353*†                                             | 30988.4                  | 3.575       | mg/L   | 0.0175   | 3.575 mg/L         | 0.0175   | 0.49% |
| QC value within limits for Pb 220.353* Recovery = 95.34% |                          |             |        |          |                    |          |       |
| Sb 206.836†                                              | 8789.4                   | 4.310       | mg/L   | 0.0359   | 4.310 mg/L         | 0.0359   | 0.83% |
| QC value within limits for Sb 206.836 Recovery = 95.78%  |                          |             |        |          |                    |          |       |
| Sb 217.582*†                                             | 8681.7                   | 4.283       | mg/L   | 0.0275   | 4.283 mg/L         | 0.0275   | 0.64% |
| QC value within limits for Sb 217.582* Recovery = 95.17% |                          |             |        |          |                    |          |       |
| Se 196.026*†                                             | 3445.0                   | 1.426       | mg/L   | 0.0199   | 1.426 mg/L         | 0.0199   | 1.39% |
| QC value within limits for Se 196.026* Recovery = 95.09% |                          |             |        |          |                    |          |       |
| Si 251.611*†                                             | 239788.2                 | 5.675       | mg/L   | 0.0180   | 5.675 mg/L         | 0.0180   | 0.32% |
| QC value within limits for Si 251.611* Recovery = 94.58% |                          |             |        |          |                    |          |       |
| Sn 189.927*†                                             | 19013.3                  | 2.874       | mg/L   | 0.0219   | 2.874 mg/L         | 0.0219   | 0.76% |
| QC value within limits for Sn 189.927* Recovery = 95.80% |                          |             |        |          |                    |          |       |
| Sn 242.170†                                              | 5373.6                   | 2.855       | mg/L   | 0.0313   | 2.855 mg/L         | 0.0313   | 1.10% |
| Sr 407.771*†                                             | 100734.3                 | 0.2941      | mg/L   | 0.00136  | 0.2941 mg/L        | 0.00136  | 0.46% |
| QC value within limits for Sr 407.771* Recovery = 98.02% |                          |             |        |          |                    |          |       |

|                                                          |          |             |         |             |         |       |
|----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                              | 513131.9 | 0.5846 mg/L | 0.00018 | 0.5846 mg/L | 0.00018 | 0.03% |
| Ti 336.121*†                                             | 362369.5 | 0.5882 mg/L | 0.00079 | 0.5882 mg/L | 0.00079 | 0.13% |
| QC value within limits for Ti 336.121* Recovery = 98.03% |          |             |         |             |         |       |
| Tl 190.801*†                                             | 2875.2   | 1.470 mg/L  | 0.0158  | 1.470 mg/L  | 0.0158  | 1.07% |
| QC value within limits for Tl 190.801* Recovery = 98.01% |          |             |         |             |         |       |
| V 292.402*†                                              | 260189.7 | 1.816 mg/L  | 0.0091  | 1.816 mg/L  | 0.0091  | 0.50% |
| QC value within limits for V 292.402* Recovery = 96.84%  |          |             |         |             |         |       |
| Zn 206.200*†                                             | 106512.2 | 2.346 mg/L  | 0.0082  | 2.346 mg/L  | 0.0082  | 0.35% |
| QC value within limits for Zn 206.200* Recovery = 93.82% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 24  
 Sample ID: CCB-R12091601  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 1  
 Date Collected: 3/27/2017 11:06:32 AM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

## Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|---------|
| Tb 384                                                           | 81299.1                     | 99.37       | %               | 1.618    |                       |          | 1.63%   |
| Tb 350                                                           | 129913.7                    | 98.05       | %               | 1.578    |                       |          | 1.61%   |
| Ag 328.068*†                                                     | 110.0                       | 0.0006      | mg/L            | 0.00049  | 0.0006 mg/L           | 0.00049  | 88.11%  |
| Al 308.215*†                                                     | -15.0                       | -0.0008     | mg/L            | 0.00251  | -0.0008 mg/L          | 0.00251  | 301.08% |
| As 188.979†                                                      | 5.6                         | 0.0024      | mg/L            | 0.00094  | 0.0024 mg/L           | 0.00094  | 39.08%  |
| As 193.696*†                                                     | -0.4                        | -0.0002     | mg/L            | 0.00186  | -0.0002 mg/L          | 0.00186  | 778.50% |
| QC value within limits for As 193.696* Recovery = Not calculated |                             |             |                 |          |                       |          |         |
| B 249.677*†                                                      | 2231.1                      | 0.0414      | mg/L            | 0.00290  | 0.0414 mg/L           | 0.00290  | 7.01%   |
| Ba 233.527*†                                                     | 415.2                       | 0.0026      | mg/L            | 0.00013  | 0.0026 mg/L           | 0.00013  | 5.21%   |
| Be 313.042*†                                                     | 832.6                       | 0.0002      | mg/L            | 0.00002  | 0.0002 mg/L           | 0.00002  | 8.37%   |
| Ca 317.933*†                                                     | 19.2                        | 0.0088      | mg/L            | 0.00273  | 0.0088 mg/L           | 0.00273  | 31.11%  |
| Cd 226.502*†                                                     | 56.1                        | 0.0007      | mg/L            | 0.00016  | 0.0007 mg/L           | 0.00016  | 24.44%  |
| Cd 228.802†                                                      | 18.5                        | 0.0004      | mg/L            | 0.00023  | 0.0004 mg/L           | 0.00023  | 51.08%  |
| Co 228.616*†                                                     | 16.1                        | 0.0005      | mg/L            | 0.00028  | 0.0005 mg/L           | 0.00028  | 52.84%  |
| Cr 267.716*†                                                     | -27.8                       | -0.0002     | mg/L            | 0.00068  | -0.0002 mg/L          | 0.00068  | 294.51% |
| Cu 324.752*†                                                     | 381.4                       | 0.0014      | mg/L            | 0.00009  | 0.0014 mg/L           | 0.00009  | 6.01%   |
| Fe 273.955*†                                                     | 184.6                       | 0.0074      | mg/L            | 0.00236  | 0.0074 mg/L           | 0.00236  | 31.86%  |
| K 766.490*†                                                      | -135.7                      | -0.0422     | mg/L            | 0.07252  | -0.0422 mg/L          | 0.07252  | 172.03% |
| Mg 279.077*†                                                     | 124.2                       | 0.0060      | mg/L            | 0.00317  | 0.0060 mg/L           | 0.00317  | 52.94%  |
| Mn 257.610*†                                                     | 270.0                       | 0.0004      | mg/L            | 0.00004  | 0.0004 mg/L           | 0.00004  | 11.48%  |
| Mo 202.031*†                                                     | 0.3                         | 0.0000      | mg/L            | 0.00066  | 0.0000 mg/L           | 0.00066  | >999.9% |
| Na 589.592*†                                                     | 139.3                       | 0.0299      | mg/L            | 0.01601  | 0.0299 mg/L           | 0.01601  | 53.56%  |
| Ni 231.604*†                                                     | 24.8                        | 0.0009      | mg/L            | 0.00094  | 0.0009 mg/L           | 0.00094  | 100.27% |
| P 213.617*†                                                      | 18.7                        | 0.0085      | mg/L            | 0.00021  | 0.0085 mg/L           | 0.00021  | 2.51%   |
| P 214.914†                                                       | 8.2                         | 0.0060      | mg/L            | 0.00165  | 0.0060 mg/L           | 0.00165  | 27.70%  |
| Pb 220.353*†                                                     | 20.1                        | 0.0023      | mg/L            | 0.00104  | 0.0023 mg/L           | 0.00104  | 45.00%  |
| Sb 206.836†                                                      | 15.8                        | 0.0078      | mg/L            | 0.00441  | 0.0078 mg/L           | 0.00441  | 56.88%  |
| Sb 217.582*†                                                     | 9.2                         | 0.0045      | mg/L            | 0.00177  | 0.0045 mg/L           | 0.00177  | 39.08%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                             |             |                 |          |                       |          |         |
| Se 196.026*†                                                     | 15.5                        | 0.0064      | mg/L            | 0.00265  | 0.0064 mg/L           | 0.00265  | 41.15%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                             |             |                 |          |                       |          |         |
| Si 251.611*†                                                     | 236.7                       | 0.0056      | mg/L            | 0.00146  | 0.0056 mg/L           | 0.00146  | 25.99%  |
| Sn 189.927*†                                                     | 48.4                        | 0.0073      | mg/L            | 0.00204  | 0.0073 mg/L           | 0.00204  | 27.95%  |
| Sn 242.170†                                                      | 46.2                        | 0.0245      | mg/L            | 0.02213  | 0.0245 mg/L           | 0.02213  | 90.18%  |
| Sr 407.771*†                                                     | 15.3                        | 0.0000      | mg/L            | 0.00001  | 0.0000 mg/L           | 0.00001  | 14.73%  |
| Ti 334.940†                                                      | 426.9                       | 0.0005      | mg/L            | 0.00010  | 0.0005 mg/L           | 0.00010  | 19.63%  |
| Ti 336.121*†                                                     | 498.7                       | 0.0008      | mg/L            | 0.00047  | 0.0008 mg/L           | 0.00047  | 58.51%  |
| Tl 190.801*†                                                     | 2.1                         | 0.0011      | mg/L            | 0.00174  | 0.0011 mg/L           | 0.00174  | 164.03% |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                             |             |                 |          |                       |          |         |
| V 292.402*†                                                      | 80.1                        | 0.0006      | mg/L            | 0.00091  | 0.0006 mg/L           | 0.00091  | 162.41% |
| Zn 206.200*†                                                     | 94.2                        | 0.0021      | mg/L            | 0.00006  | 0.0021 mg/L           | 0.00006  | 3.07%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                             |             |                 |          |                       |          |         |
| All analyte(s) passed QC.                                        |                             |             |                 |          |                       |          |         |

Sequence No.: 59  
 Sample ID: CCV= STD3x0.5  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 20

Autosampler Location: 3  
 Date Collected: 3/27/2017 12:43:04 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 72928.9                  | 89.14 %     | 2.066           |                    |          | 2.32% |
| Tb 350                                                    | 122179.5                 | 92.22 %     | 0.836           |                    |          | 0.91% |
| Ag 328.068*†                                              | 72201.8                  | 0.3616 mg/L | 0.00299         | 0.3616 mg/L        | 0.00299  | 0.83% |
| QC value within limits for Ag 328.068* Recovery = 96.42%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 244967.2                 | 13.64 mg/L  | 0.043           | 13.64 mg/L         | 0.043    | 0.32% |
| QC value within limits for Al 308.215* Recovery = 101.05% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 8352.6                   | 3.580 mg/L  | 0.0425          | 3.580 mg/L         | 0.0425   | 1.19% |
| QC value within limits for As 188.979 Recovery = 95.47%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5771.7                   | 3.586 mg/L  | 0.0348          | 3.586 mg/L         | 0.0348   | 0.97% |
| QC value within limits for As 193.696* Recovery = 95.63%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 194773.1                 | 3.615 mg/L  | 0.0123          | 3.615 mg/L         | 0.0123   | 0.34% |
| QC value within limits for B 249.677* Recovery = 96.40%   |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1190409.0                | 7.429 mg/L  | 0.0424          | 7.429 mg/L         | 0.0424   | 0.57% |
| QC value within limits for Ba 233.527* Recovery = 99.05%  |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2219120.4                | 0.5425 mg/L | 0.00886         | 0.5425 mg/L        | 0.00886  | 1.63% |
| QC value within limits for Be 313.042* Recovery = 96.45%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 62672.8                  | 28.65 mg/L  | 1.070           | 28.65 mg/L         | 1.070    | 3.73% |
| QC value within limits for Ca 317.933* Recovery = 95.51%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 61384.4                  | 0.7292 mg/L | 0.00717         | 0.7292 mg/L        | 0.00717  | 0.98% |
| QC value within limits for Cd 226.502* Recovery = 97.23%  |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 30471.7                  | 0.7364 mg/L | 0.00355         | 0.7364 mg/L        | 0.00355  | 0.48% |
| Co 228.616*†                                              | 55537.8                  | 1.856 mg/L  | 0.0119          | 1.856 mg/L         | 0.0119   | 0.64% |
| QC value within limits for Co 228.616* Recovery = 98.97%  |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 70455.0                  | 0.5838 mg/L | 0.00644         | 0.5838 mg/L        | 0.00644  | 1.10% |
| QC value within limits for Cr 267.716* Recovery = 97.30%  |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 241552.4                 | 0.9165 mg/L | 0.00599         | 0.9165 mg/L        | 0.00599  | 0.65% |
| QC value within limits for Cu 324.752* Recovery = 97.76%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 95428.6                  | 3.823 mg/L  | 0.0091          | 3.823 mg/L         | 0.0091   | 0.24% |
| QC value within limits for Fe 273.955* Recovery = 101.94% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 83193.1                  | 25.84 mg/L  | 0.863           | 25.84 mg/L         | 0.863    | 3.34% |
| QC value within limits for K 766.490* Recovery = 95.69%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 153638.9                 | 7.405 mg/L  | 0.0547          | 7.405 mg/L         | 0.0547   | 0.74% |
| QC value within limits for Mg 279.077* Recovery = 98.73%  |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 508006.7                 | 0.7373 mg/L | 0.00418         | 0.7373 mg/L        | 0.00418  | 0.57% |
| QC value within limits for Mn 257.610* Recovery = 98.30%  |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5738.4                   | 0.5912 mg/L | 0.00617         | 0.5912 mg/L        | 0.00617  | 1.04% |
| QC value within limits for Mo 202.031* Recovery = 98.53%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 165973.7                 | 35.61 mg/L  | 1.232           | 35.61 mg/L         | 1.232    | 3.46% |
| QC value within limits for Na 589.592* Recovery = 98.92%  |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 15385.8                  | 0.5821 mg/L | 0.00345         | 0.5821 mg/L        | 0.00345  | 0.59% |
| QC value within limits for Ni 231.604* Recovery = 97.01%  |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 12409.3                  | 5.625 mg/L  | 0.0485          | 5.625 mg/L         | 0.0485   | 0.86% |
| QC value within limits for P 213.617* Recovery = 93.74%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 7943.1                   | 5.754 mg/L  | 0.0554          | 5.754 mg/L         | 0.0554   | 0.96% |
| Pb 220.353*†                                              | 31779.7                  | 3.667 mg/L  | 0.0230          | 3.667 mg/L         | 0.0230   | 0.63% |
| QC value within limits for Pb 220.353* Recovery = 97.78%  |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 8906.6                   | 4.367 mg/L  | 0.0456          | 4.367 mg/L         | 0.0456   | 1.04% |
| QC value within limits for Sb 206.836 Recovery = 97.05%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 8753.6                   | 4.318 mg/L  | 0.0309          | 4.318 mg/L         | 0.0309   | 0.71% |
| QC value within limits for Sb 217.582* Recovery = 95.96%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3507.0                   | 1.452 mg/L  | 0.0074          | 1.452 mg/L         | 0.0074   | 0.51% |
| QC value within limits for Se 196.026* Recovery = 96.80%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 245065.6                 | 5.799 mg/L  | 0.0114          | 5.799 mg/L         | 0.0114   | 0.20% |
| QC value within limits for Si 251.611* Recovery = 96.66%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 19305.2                  | 2.918 mg/L  | 0.0306          | 2.918 mg/L         | 0.0306   | 1.05% |
| QC value within limits for Sn 189.927* Recovery = 97.27%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5520.5                   | 2.933 mg/L  | 0.0067          | 2.933 mg/L         | 0.0067   | 0.23% |
| Sr 407.771*†                                              | 100449.5                 | 0.2932 mg/L | 0.01109         | 0.2932 mg/L        | 0.01109  | 3.78% |
| QC value within limits for Sr 407.771* Recovery = 97.74%  |                          |             |                 |                    |          |       |

|                                                          |          |             |         |             |         |       |
|----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                              | 518958.1 | 0.5912 mg/L | 0.00174 | 0.5912 mg/L | 0.00174 | 0.29% |
| Ti 336.121*†                                             | 366301.8 | 0.5945 mg/L | 0.00242 | 0.5945 mg/L | 0.00242 | 0.41% |
| QC value within limits for Ti 336.121* Recovery = 99.09% |          |             |         |             |         |       |
| Tl 190.801*†                                             | 2907.3   | 1.487 mg/L  | 0.0077  | 1.487 mg/L  | 0.0077  | 0.52% |
| QC value within limits for Tl 190.801* Recovery = 99.11% |          |             |         |             |         |       |
| V 292.402*†                                              | 262401.0 | 1.831 mg/L  | 0.0209  | 1.831 mg/L  | 0.0209  | 1.14% |
| QC value within limits for V 292.402* Recovery = 97.66%  |          |             |         |             |         |       |
| Zn 206.200*†                                             | 109100.7 | 2.403 mg/L  | 0.0355  | 2.403 mg/L  | 0.0355  | 1.48% |
| QC value within limits for Zn 206.200* Recovery = 96.10% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 60  
 Sample ID: CCB-R12091601  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 1  
 Date Collected: 3/27/2017 12:44:02 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units  | Calib. | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|--------------|--------|----------|--------------------|----------|---------|
| Tb 384                                                           | 82088.4                  | 100.3 %      |        | 0.71     |                    |          | 0.71%   |
| Tb 350                                                           | 132435.4                 | 99.96 %      |        | 1.347    |                    |          | 1.35%   |
| Ag 328.068*†                                                     | -153.4                   | -0.0008 mg/L |        | 0.00032  | -0.0008 mg/L       | 0.00032  | 41.81%  |
| Al 308.215*†                                                     | -5.7                     | -0.0003 mg/L |        | 0.00429  | -0.0003 mg/L       | 0.00429  | >999.9% |
| As 188.979†                                                      | 2.8                      | 0.0012 mg/L  |        | 0.00034  | 0.0012 mg/L        | 0.00034  | 28.06%  |
| As 193.696*†                                                     | 4.3                      | 0.0027 mg/L  |        | 0.00158  | 0.0027 mg/L        | 0.00158  | 58.81%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| B 249.677*†                                                      | 2196.5                   | 0.0408 mg/L  |        | 0.00249  | 0.0408 mg/L        | 0.00249  | 6.10%   |
| Ba 233.527*†                                                     | 478.1                    | 0.0030 mg/L  |        | 0.00032  | 0.0030 mg/L        | 0.00032  | 10.75%  |
| Be 313.042*†                                                     | 924.2                    | 0.0002 mg/L  |        | 0.00000  | 0.0002 mg/L        | 0.00000  | 2.03%   |
| Ca 317.933*†                                                     | 29.0                     | 0.0133 mg/L  |        | 0.00224  | 0.0133 mg/L        | 0.00224  | 16.86%  |
| Cd 226.502*†                                                     | 43.5                     | 0.0005 mg/L  |        | 0.00003  | 0.0005 mg/L        | 0.00003  | 5.59%   |
| Cd 228.802†                                                      | 26.0                     | 0.0006 mg/L  |        | 0.00022  | 0.0006 mg/L        | 0.00022  | 35.25%  |
| Co 228.616*†                                                     | 17.2                     | 0.0006 mg/L  |        | 0.00005  | 0.0006 mg/L        | 0.00005  | 8.93%   |
| Cr 267.716*†                                                     | -65.8                    | -0.0005 mg/L |        | 0.00133  | -0.0005 mg/L       | 0.00133  | 243.68% |
| Cu 324.752*†                                                     | 221.5                    | 0.0008 mg/L  |        | 0.00012  | 0.0008 mg/L        | 0.00012  | 14.59%  |
| Fe 273.955*†                                                     | 176.7                    | 0.0071 mg/L  |        | 0.00144  | 0.0071 mg/L        | 0.00144  | 20.35%  |
| K 766.490*†                                                      | 257.6                    | 0.0800 mg/L  |        | 0.00279  | 0.0800 mg/L        | 0.00279  | 3.48%   |
| Mg 279.077*†                                                     | -107.4                   | -0.0052 mg/L |        | 0.00461  | -0.0052 mg/L       | 0.00461  | 89.07%  |
| Mn 257.610*†                                                     | 355.9                    | 0.0005 mg/L  |        | 0.00008  | 0.0005 mg/L        | 0.00008  | 15.47%  |
| Mo 202.031*†                                                     | 14.5                     | 0.0015 mg/L  |        | 0.00031  | 0.0015 mg/L        | 0.00031  | 20.67%  |
| Na 589.592*†                                                     | 96.6                     | 0.0207 mg/L  |        | 0.00739  | 0.0207 mg/L        | 0.00739  | 35.64%  |
| Ni 231.604*†                                                     | 17.2                     | 0.0006 mg/L  |        | 0.00006  | 0.0006 mg/L        | 0.00006  | 10.00%  |
| P 213.617*†                                                      | 43.8                     | 0.0199 mg/L  |        | 0.00273  | 0.0199 mg/L        | 0.00273  | 13.76%  |
| P 214.914†                                                       | 2.2                      | 0.0016 mg/L  |        | 0.00170  | 0.0016 mg/L        | 0.00170  | 105.85% |
| Pb 220.353*†                                                     | 17.7                     | 0.0020 mg/L  |        | 0.00123  | 0.0020 mg/L        | 0.00123  | 60.23%  |
| Sb 206.836†                                                      | 2.9                      | 0.0014 mg/L  |        | 0.00208  | 0.0014 mg/L        | 0.00208  | 147.33% |
| Sb 217.582*†                                                     | 10.2                     | 0.0050 mg/L  |        | 0.00553  | 0.0050 mg/L        | 0.00553  | 110.42% |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Se 196.026*†                                                     | 9.5                      | 0.0039 mg/L  |        | 0.00398  | 0.0039 mg/L        | 0.00398  | 100.97% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| Si 251.611*†                                                     | 691.9                    | 0.0164 mg/L  |        | 0.00144  | 0.0164 mg/L        | 0.00144  | 8.77%   |
| Sn 189.927*†                                                     | 48.2                     | 0.0073 mg/L  |        | 0.00004  | 0.0073 mg/L        | 0.00004  | 0.61%   |
| Sn 242.170†                                                      | 44.2                     | 0.0235 mg/L  |        | 0.00855  | 0.0235 mg/L        | 0.00855  | 36.42%  |
| Sr 407.771*†                                                     | 19.1                     | 0.0001 mg/L  |        | 0.00013  | 0.0001 mg/L        | 0.00013  | 224.69% |
| Ti 334.940†                                                      | 720.2                    | 0.0008 mg/L  |        | 0.00013  | 0.0008 mg/L        | 0.00013  | 15.37%  |
| Ti 336.121*†                                                     | 499.4                    | 0.0008 mg/L  |        | 0.00024  | 0.0008 mg/L        | 0.00024  | 30.21%  |
| Tl 190.801*†                                                     | -6.9                     | -0.0035 mg/L |        | 0.00147  | -0.0035 mg/L       | 0.00147  | 41.81%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| V 292.402*†                                                      | 78.1                     | 0.0005 mg/L  |        | 0.00060  | 0.0005 mg/L        | 0.00060  | 110.01% |
| Zn 206.200*†                                                     | 160.7                    | 0.0035 mg/L  |        | 0.00005  | 0.0035 mg/L        | 0.00005  | 1.40%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |              |        |          |                    |          |         |
| All analyte(s) passed QC.                                        |                          |              |        |          |                    |          |         |

Sequence No.: 11

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 3

Date Collected: 3/27/2017 12:55:50 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc.  | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|--------|-------|----------|--------------|-------|----------|-------|
| Tb 384                                                    | 74303.4                  | 90.82  | %     | 1.628    |              |       |          | 1.79% |
| Tb 350                                                    | 122791.2                 | 92.68  | %     | 1.008    |              |       |          | 1.09% |
| Ag 328.068*†                                              | 72483.3                  | 0.3630 | mg/L  | 0.00230  | 0.3630       | mg/L  | 0.00230  | 0.63% |
| QC value within limits for Ag 328.068* Recovery = 96.80%  |                          |        |       |          |              |       |          |       |
| Al 308.215*†                                              | 243615.2                 | 13.57  | mg/L  | 0.086    | 13.57        | mg/L  | 0.086    | 0.63% |
| QC value within limits for Al 308.215* Recovery = 100.49% |                          |        |       |          |              |       |          |       |
| As 188.979†                                               | 8386.3                   | 3.595  | mg/L  | 0.0176   | 3.595        | mg/L  | 0.0176   | 0.49% |
| QC value within limits for As 188.979 Recovery = 95.86%   |                          |        |       |          |              |       |          |       |
| As 193.696*†                                              | 5801.9                   | 3.605  | mg/L  | 0.0038   | 3.605        | mg/L  | 0.0038   | 0.11% |
| QC value within limits for As 193.696* Recovery = 96.13%  |                          |        |       |          |              |       |          |       |
| B 249.677*†                                               | 195319.0                 | 3.625  | mg/L  | 0.1018   | 3.625        | mg/L  | 0.1018   | 2.81% |
| QC value within limits for B 249.677* Recovery = 96.67%   |                          |        |       |          |              |       |          |       |
| Ba 233.527*†                                              | 1198464.7                | 7.479  | mg/L  | 0.0656   | 7.479        | mg/L  | 0.0656   | 0.88% |
| QC value within limits for Ba 233.527* Recovery = 99.72%  |                          |        |       |          |              |       |          |       |
| Be 313.042*†                                              | 2240709.3                | 0.5478 | mg/L  | 0.00895  | 0.5478       | mg/L  | 0.00895  | 1.63% |
| QC value within limits for Be 313.042* Recovery = 97.38%  |                          |        |       |          |              |       |          |       |
| Ca 317.933*†                                              | 61239.8                  | 28.00  | mg/L  | 0.581    | 28.00        | mg/L  | 0.581    | 2.08% |
| QC value within limits for Ca 317.933* Recovery = 93.33%  |                          |        |       |          |              |       |          |       |
| Cd 226.502*†                                              | 61760.8                  | 0.7337 | mg/L  | 0.00773  | 0.7337       | mg/L  | 0.00773  | 1.05% |
| QC value within limits for Cd 226.502* Recovery = 97.82%  |                          |        |       |          |              |       |          |       |
| Cd 228.802†                                               | 30233.5                  | 0.7306 | mg/L  | 0.00380  | 0.7306       | mg/L  | 0.00380  | 0.52% |
| Co 228.616*†                                              | 55320.1                  | 1.848  | mg/L  | 0.0140   | 1.848        | mg/L  | 0.0140   | 0.76% |
| QC value within limits for Co 228.616* Recovery = 98.58%  |                          |        |       |          |              |       |          |       |
| Cr 267.716*†                                              | 71539.8                  | 0.5928 | mg/L  | 0.00815  | 0.5928       | mg/L  | 0.00815  | 1.37% |
| QC value within limits for Cr 267.716* Recovery = 98.80%  |                          |        |       |          |              |       |          |       |
| Cu 324.752*†                                              | 242068.6                 | 0.9185 | mg/L  | 0.00780  | 0.9185       | mg/L  | 0.00780  | 0.85% |
| QC value within limits for Cu 324.752* Recovery = 97.97%  |                          |        |       |          |              |       |          |       |
| Fe 273.955*†                                              | 93288.4                  | 3.737  | mg/L  | 0.0345   | 3.737        | mg/L  | 0.0345   | 0.92% |
| QC value within limits for Fe 273.955* Recovery = 99.65%  |                          |        |       |          |              |       |          |       |
| K 766.490*†                                               | 82135.4                  | 25.51  | mg/L  | 0.426    | 25.51        | mg/L  | 0.426    | 1.67% |
| QC value within limits for K 766.490* Recovery = 94.47%   |                          |        |       |          |              |       |          |       |
| Mg 279.077*†                                              | 153455.4                 | 7.396  | mg/L  | 0.0671   | 7.396        | mg/L  | 0.0671   | 0.91% |
| QC value within limits for Mg 279.077* Recovery = 98.61%  |                          |        |       |          |              |       |          |       |
| Mn 257.610*†                                              | 508268.6                 | 0.7376 | mg/L  | 0.00704  | 0.7376       | mg/L  | 0.00704  | 0.95% |
| QC value within limits for Mn 257.610* Recovery = 98.35%  |                          |        |       |          |              |       |          |       |
| Mo 202.031*†                                              | 5774.1                   | 0.5948 | mg/L  | 0.00309  | 0.5948       | mg/L  | 0.00309  | 0.52% |
| QC value within limits for Mo 202.031* Recovery = 99.14%  |                          |        |       |          |              |       |          |       |
| Na 589.592*†                                              | 163690.3                 | 35.12  | mg/L  | 0.617    | 35.12        | mg/L  | 0.617    | 1.76% |
| QC value within limits for Na 589.592* Recovery = 97.56%  |                          |        |       |          |              |       |          |       |
| Ni 231.604*†                                              | 15611.0                  | 0.5906 | mg/L  | 0.00072  | 0.5906       | mg/L  | 0.00072  | 0.12% |
| QC value within limits for Ni 231.604* Recovery = 98.43%  |                          |        |       |          |              |       |          |       |
| P 213.617*†                                               | 12609.2                  | 5.715  | mg/L  | 0.0175   | 5.715        | mg/L  | 0.0175   | 0.31% |
| QC value within limits for P 213.617* Recovery = 95.25%   |                          |        |       |          |              |       |          |       |
| P 214.914†                                                | 7993.0                   | 5.790  | mg/L  | 0.0309   | 5.790        | mg/L  | 0.0309   | 0.53% |
| Pb 220.353*†                                              | 31765.6                  | 3.665  | mg/L  | 0.0331   | 3.665        | mg/L  | 0.0331   | 0.90% |
| QC value within limits for Pb 220.353* Recovery = 97.73%  |                          |        |       |          |              |       |          |       |
| Sb 206.836†                                               | 8909.4                   | 4.369  | mg/L  | 0.0068   | 4.369        | mg/L  | 0.0068   | 0.15% |
| QC value within limits for Sb 206.836 Recovery = 97.08%   |                          |        |       |          |              |       |          |       |
| Sb 217.582*†                                              | 8821.9                   | 4.352  | mg/L  | 0.0091   | 4.352        | mg/L  | 0.0091   | 0.21% |
| QC value within limits for Sb 217.582* Recovery = 96.71%  |                          |        |       |          |              |       |          |       |
| Se 196.026*†                                              | 3535.2                   | 1.464  | mg/L  | 0.0033   | 1.464        | mg/L  | 0.0033   | 0.22% |
| QC value within limits for Se 196.026* Recovery = 97.58%  |                          |        |       |          |              |       |          |       |
| Si 251.611*†                                              | 249359.6                 | 5.901  | mg/L  | 0.0984   | 5.901        | mg/L  | 0.0984   | 1.67% |
| QC value within limits for Si 251.611* Recovery = 98.35%  |                          |        |       |          |              |       |          |       |
| Sn 189.927*†                                              | 19432.0                  | 2.937  | mg/L  | 0.0035   | 2.937        | mg/L  | 0.0035   | 0.12% |
| QC value within limits for Sn 189.927* Recovery = 97.91%  |                          |        |       |          |              |       |          |       |
| Sn 242.170†                                               | 5503.9                   | 2.924  | mg/L  | 0.0183   | 2.924        | mg/L  | 0.0183   | 0.63% |
| Sr 407.771*†                                              | 98863.0                  | 0.2886 | mg/L  | 0.00396  | 0.2886       | mg/L  | 0.00396  | 1.37% |
| QC value within limits for Sr 407.771* Recovery = 96.20%  |                          |        |       |          |              |       |          |       |

|                                                          |          |             |         |             |         |       |
|----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                              | 517802.3 | 0.5899 mg/L | 0.00554 | 0.5899 mg/L | 0.00554 | 0.94% |
| Ti 336.121*†                                             | 365133.4 | 0.5926 mg/L | 0.00589 | 0.5926 mg/L | 0.00589 | 0.99% |
| QC value within limits for Ti 336.121* Recovery = 98.77% |          |             |         |             |         |       |
| Tl 190.801*†                                             | 2886.3   | 1.476 mg/L  | 0.0085  | 1.476 mg/L  | 0.0085  | 0.58% |
| QC value within limits for Tl 190.801* Recovery = 98.39% |          |             |         |             |         |       |
| V 292.402*†                                              | 263134.9 | 1.836 mg/L  | 0.0228  | 1.836 mg/L  | 0.0228  | 1.24% |
| QC value within limits for V 292.402* Recovery = 97.93%  |          |             |         |             |         |       |
| Zn 206.200*†                                             | 110049.7 | 2.423 mg/L  | 0.0416  | 2.423 mg/L  | 0.0416  | 1.72% |
| QC value within limits for Zn 206.200* Recovery = 96.94% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 12  
 Sample ID: CCB-R12091601  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 1  
 Date Collected: 3/27/2017 12:56:44 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

## Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units  | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|--------------|-----------------|--------------------|----------|---------|
| Tb 384                                                           | 82516.0                  | 100.9 %      | 0.55            |                    |          | 0.54%   |
| Tb 350                                                           | 134005.9                 | 101.1 %      | 0.80            |                    |          | 0.79%   |
| Ag 328.068*†                                                     | 281.8                    | 0.0014 mg/L  | 0.00009         | 0.0014 mg/L        | 0.00009  | 6.72%   |
| Al 308.215*†                                                     | 228.0                    | 0.0127 mg/L  | 0.00506         | 0.0127 mg/L        | 0.00506  | 39.82%  |
| As 188.979†                                                      | 17.6                     | 0.0075 mg/L  | 0.00005         | 0.0075 mg/L        | 0.00005  | 0.72%   |
| As 193.696*†                                                     | -1.3                     | -0.0008 mg/L | 0.00013         | -0.0008 mg/L       | 0.00013  | 16.41%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |              |                 |                    |          |         |
| B 249.677*†                                                      | 2163.0                   | 0.0401 mg/L  | 0.00310         | 0.0401 mg/L        | 0.00310  | 7.71%   |
| Ba 233.527*†                                                     | 853.2                    | 0.0053 mg/L  | 0.00043         | 0.0053 mg/L        | 0.00043  | 8.05%   |
| Be 313.042*†                                                     | 1281.8                   | 0.0003 mg/L  | 0.00003         | 0.0003 mg/L        | 0.00003  | 10.32%  |
| Ca 317.933*†                                                     | 38.9                     | 0.0178 mg/L  | 0.00049         | 0.0178 mg/L        | 0.00049  | 2.78%   |
| Cd 226.502*†                                                     | 87.4                     | 0.0010 mg/L  | 0.00025         | 0.0010 mg/L        | 0.00025  | 23.94%  |
| Cd 228.802†                                                      | 53.3                     | 0.0013 mg/L  | 0.00005         | 0.0013 mg/L        | 0.00005  | 3.88%   |
| Co 228.616*†                                                     | 35.8                     | 0.0012 mg/L  | 0.00019         | 0.0012 mg/L        | 0.00019  | 15.93%  |
| Cr 267.716*†                                                     | -1.6                     | -0.0000 mg/L | 0.00040         | -0.0000 mg/L       | 0.00040  | >999.9% |
| Cu 324.752*†                                                     | 174.4                    | 0.0007 mg/L  | 0.00031         | 0.0007 mg/L        | 0.00031  | 46.43%  |
| Fe 273.955*†                                                     | 589.5                    | 0.0236 mg/L  | 0.00251         | 0.0236 mg/L        | 0.00251  | 10.64%  |
| K 766.490*†                                                      | 159.8                    | 0.0496 mg/L  | 0.04209         | 0.0496 mg/L        | 0.04209  | 84.79%  |
| Mg 279.077*†                                                     | 303.6                    | 0.0146 mg/L  | 0.00797         | 0.0146 mg/L        | 0.00797  | 54.49%  |
| Mn 257.610*†                                                     | 611.9                    | 0.0009 mg/L  | 0.00012         | 0.0009 mg/L        | 0.00012  | 13.74%  |
| Mo 202.031*†                                                     | 9.4                      | 0.0010 mg/L  | 0.00111         | 0.0010 mg/L        | 0.00111  | 114.04% |
| Na 589.592*†                                                     | 50.9                     | 0.0109 mg/L  | 0.00080         | 0.0109 mg/L        | 0.00080  | 7.30%   |
| Ni 231.604*†                                                     | 5.6                      | 0.0002 mg/L  | 0.00092         | 0.0002 mg/L        | 0.00092  | 430.40% |
| P 213.617*†                                                      | 32.2                     | 0.0146 mg/L  | 0.01038         | 0.0146 mg/L        | 0.01038  | 71.15%  |
| P 214.914†                                                       | -1.2                     | -0.0008 mg/L | 0.01311         | -0.0008 mg/L       | 0.01311  | >999.9% |
| Pb 220.353*†                                                     | 14.1                     | 0.0016 mg/L  | 0.00111         | 0.0016 mg/L        | 0.00111  | 67.81%  |
| Sb 206.836†                                                      | 12.1                     | 0.0059 mg/L  | 0.00000         | 0.0059 mg/L        | 0.00000  | 0.07%   |
| Sb 217.582*†                                                     | 1.0                      | 0.0005 mg/L  | 0.00046         | 0.0005 mg/L        | 0.00046  | 91.76%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Se 196.026*†                                                     | 1.5                      | 0.0006 mg/L  | 0.00374         | 0.0006 mg/L        | 0.00374  | 619.85% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Si 251.611*†                                                     | 836.0                    | 0.0198 mg/L  | 0.00039         | 0.0198 mg/L        | 0.00039  | 2.00%   |
| Sn 189.927*†                                                     | 48.0                     | 0.0073 mg/L  | 0.00012         | 0.0073 mg/L        | 0.00012  | 1.61%   |
| Sn 242.170†                                                      | 39.7                     | 0.0211 mg/L  | 0.00669         | 0.0211 mg/L        | 0.00669  | 31.69%  |
| Sr 407.771*†                                                     | 64.1                     | 0.0002 mg/L  | 0.00005         | 0.0002 mg/L        | 0.00005  | 25.19%  |
| Ti 334.940†                                                      | 1134.1                   | 0.0013 mg/L  | 0.00007         | 0.0013 mg/L        | 0.00007  | 5.09%   |
| Ti 336.121*†                                                     | 942.5                    | 0.0015 mg/L  | 0.00037         | 0.0015 mg/L        | 0.00037  | 24.10%  |
| Tl 190.801*†                                                     | 7.9                      | 0.0041 mg/L  | 0.00247         | 0.0041 mg/L        | 0.00247  | 60.77%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |              |                 |                    |          |         |
| V 292.402*†                                                      | 145.1                    | 0.0010 mg/L  | 0.00000         | 0.0010 mg/L        | 0.00000  | 0.48%   |
| Zn 206.200*†                                                     | 276.6                    | 0.0061 mg/L  | 0.00048         | 0.0061 mg/L        | 0.00048  | 7.87%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |              |                 |                    |          |         |
| All analyte(s) passed QC.                                        |                          |              |                 |                    |          |         |

Sequence No.: 23  
 Sample ID: CCV= STD3x0.5  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 3  
 Date Collected: 3/27/2017 1:06:20 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 73753.7                  | 90.15 %     | 0.670           |                    |          | 0.74% |
| Tb 350                                                    | 122517.2                 | 92.47 %     | 0.198           |                    |          | 0.21% |
| Ag 328.068*†                                              | 72654.9                  | 0.3638 mg/L | 0.00139         | 0.3638 mg/L        | 0.00139  | 0.38% |
| QC value within limits for Ag 328.068* Recovery = 97.03%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 245400.6                 | 13.67 mg/L  | 0.074           | 13.67 mg/L         | 0.074    | 0.54% |
| QC value within limits for Al 308.215* Recovery = 101.23% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 8488.1                   | 3.638 mg/L  | 0.0572          | 3.638 mg/L         | 0.0572   | 1.57% |
| QC value within limits for As 188.979 Recovery = 97.02%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5852.5                   | 3.636 mg/L  | 0.0560          | 3.636 mg/L         | 0.0560   | 1.54% |
| QC value within limits for As 193.696* Recovery = 96.97%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 195807.1                 | 3.634 mg/L  | 0.0109          | 3.634 mg/L         | 0.0109   | 0.30% |
| QC value within limits for B 249.677* Recovery = 96.92%   |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1195959.1                | 7.464 mg/L  | 0.0415          | 7.464 mg/L         | 0.0415   | 0.56% |
| QC value within limits for Ba 233.527* Recovery = 99.52%  |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2233482.4                | 0.5460 mg/L | 0.00131         | 0.5460 mg/L        | 0.00131  | 0.24% |
| QC value within limits for Be 313.042* Recovery = 97.07%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 63688.5                  | 29.12 mg/L  | 0.434           | 29.12 mg/L         | 0.434    | 1.49% |
| QC value within limits for Ca 317.933* Recovery = 97.06%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 61487.6                  | 0.7304 mg/L | 0.00491         | 0.7304 mg/L        | 0.00491  | 0.67% |
| QC value within limits for Cd 226.502* Recovery = 97.39%  |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 30342.1                  | 0.7333 mg/L | 0.00176         | 0.7333 mg/L        | 0.00176  | 0.24% |
| Co 228.616*†                                              | 55620.0                  | 1.858 mg/L  | 0.0134          | 1.858 mg/L         | 0.0134   | 0.72% |
| QC value within limits for Co 228.616* Recovery = 99.11%  |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 71027.5                  | 0.5886 mg/L | 0.00177         | 0.5886 mg/L        | 0.00177  | 0.30% |
| QC value within limits for Cr 267.716* Recovery = 98.10%  |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 242846.1                 | 0.9214 mg/L | 0.00278         | 0.9214 mg/L        | 0.00278  | 0.30% |
| QC value within limits for Cu 324.752* Recovery = 98.28%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 94979.5                  | 3.805 mg/L  | 0.0157          | 3.805 mg/L         | 0.0157   | 0.41% |
| QC value within limits for Fe 273.955* Recovery = 101.46% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 84915.5                  | 26.37 mg/L  | 0.437           | 26.37 mg/L         | 0.437    | 1.66% |
| QC value within limits for K 766.490* Recovery = 97.67%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 153335.3                 | 7.390 mg/L  | 0.0474          | 7.390 mg/L         | 0.0474   | 0.64% |
| QC value within limits for Mg 279.077* Recovery = 98.54%  |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 510856.2                 | 0.7414 mg/L | 0.00365         | 0.7414 mg/L        | 0.00365  | 0.49% |
| QC value within limits for Mn 257.610* Recovery = 98.85%  |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5803.0                   | 0.5978 mg/L | 0.00819         | 0.5978 mg/L        | 0.00819  | 1.37% |
| QC value within limits for Mo 202.031* Recovery = 99.64%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 170087.7                 | 36.50 mg/L  | 0.394           | 36.50 mg/L         | 0.394    | 1.08% |
| QC value within limits for Na 589.592* Recovery = 101.38% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 15714.6                  | 0.5945 mg/L | 0.00703         | 0.5945 mg/L        | 0.00703  | 1.18% |
| QC value within limits for Ni 231.604* Recovery = 99.08%  |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 12697.7                  | 5.755 mg/L  | 0.0723          | 5.755 mg/L         | 0.0723   | 1.26% |
| QC value within limits for P 213.617* Recovery = 95.92%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 8101.3                   | 5.868 mg/L  | 0.0798          | 5.868 mg/L         | 0.0798   | 1.36% |
| Pb 220.353*†                                              | 31707.1                  | 3.658 mg/L  | 0.0309          | 3.658 mg/L         | 0.0309   | 0.85% |
| QC value within limits for Pb 220.353* Recovery = 97.55%  |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 8989.3                   | 4.408 mg/L  | 0.0559          | 4.408 mg/L         | 0.0559   | 1.27% |
| QC value within limits for Sb 206.836 Recovery = 97.95%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 8849.8                   | 4.366 mg/L  | 0.0419          | 4.366 mg/L         | 0.0419   | 0.96% |
| QC value within limits for Sb 217.582* Recovery = 97.01%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3550.2                   | 1.470 mg/L  | 0.0159          | 1.470 mg/L         | 0.0159   | 1.08% |
| QC value within limits for Se 196.026* Recovery = 98.00%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 252239.2                 | 5.969 mg/L  | 0.0091          | 5.969 mg/L         | 0.0091   | 0.15% |
| QC value within limits for Si 251.611* Recovery = 99.49%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 19731.8                  | 2.982 mg/L  | 0.0364          | 2.982 mg/L         | 0.0364   | 1.22% |
| QC value within limits for Sn 189.927* Recovery = 99.42%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5582.9                   | 2.966 mg/L  | 0.0243          | 2.966 mg/L         | 0.0243   | 0.82% |
| Sr 407.771*†                                              | 101929.5                 | 0.2975 mg/L | 0.00262         | 0.2975 mg/L        | 0.00262  | 0.88% |
| QC value within limits for Sr 407.771* Recovery = 99.18%  |                          |             |                 |                    |          |       |

|                                                          |          |             |         |             |         |       |
|----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                              | 520225.9 | 0.5927 mg/L | 0.00142 | 0.5927 mg/L | 0.00142 | 0.24% |
| Ti 336.121*†                                             | 366553.9 | 0.5950 mg/L | 0.00024 | 0.5950 mg/L | 0.00024 | 0.04% |
| QC value within limits for Ti 336.121* Recovery = 99.16% |          |             |         |             |         |       |
| Tl 190.801*†                                             | 2927.7   | 1.497 mg/L  | 0.0128  | 1.497 mg/L  | 0.0128  | 0.85% |
| QC value within limits for Tl 190.801* Recovery = 99.80% |          |             |         |             |         |       |
| V 292.402*†                                              | 263089.5 | 1.836 mg/L  | 0.0050  | 1.836 mg/L  | 0.0050  | 0.27% |
| QC value within limits for V 292.402* Recovery = 97.92%  |          |             |         |             |         |       |
| Zn 206.200*†                                             | 109824.0 | 2.418 mg/L  | 0.0136  | 2.418 mg/L  | 0.0136  | 0.56% |
| QC value within limits for Zn 206.200* Recovery = 96.74% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 24

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 1:07:13 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units  | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|--------------|-----------------|--------------------|----------|---------|
| Tb 384                                                           | 83353.8                  | 101.9 %      | 0.73            |                    |          | 0.72%   |
| Tb 350                                                           | 136302.0                 | 102.9 %      | 1.25            |                    |          | 1.21%   |
| Ag 328.068*†                                                     | 159.6                    | 0.0008 mg/L  | 0.00085         | 0.0008 mg/L        | 0.00085  | 106.94% |
| Al 308.215*†                                                     | 134.7                    | 0.0075 mg/L  | 0.00773         | 0.0075 mg/L        | 0.00773  | 103.07% |
| As 188.979†                                                      | 9.9                      | 0.0042 mg/L  | 0.00071         | 0.0042 mg/L        | 0.00071  | 16.69%  |
| As 193.696*†                                                     | 5.5                      | 0.0034 mg/L  | 0.00202         | 0.0034 mg/L        | 0.00202  | 58.91%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |              |                 |                    |          |         |
| B 249.677*†                                                      | 1912.1                   | 0.0355 mg/L  | 0.00203         | 0.0355 mg/L        | 0.00203  | 5.73%   |
| Ba 233.527*†                                                     | 840.1                    | 0.0052 mg/L  | 0.00139         | 0.0052 mg/L        | 0.00139  | 26.43%  |
| Be 313.042*†                                                     | 1184.0                   | 0.0003 mg/L  | 0.00002         | 0.0003 mg/L        | 0.00002  | 7.98%   |
| Ca 317.933*†                                                     | 36.5                     | 0.0167 mg/L  | 0.00352         | 0.0167 mg/L        | 0.00352  | 21.10%  |
| Cd 226.502*†                                                     | 67.5                     | 0.0008 mg/L  | 0.00007         | 0.0008 mg/L        | 0.00007  | 8.65%   |
| Cd 228.802†                                                      | 35.1                     | 0.0008 mg/L  | 0.00009         | 0.0008 mg/L        | 0.00009  | 11.02%  |
| Co 228.616*†                                                     | 49.0                     | 0.0016 mg/L  | 0.00044         | 0.0016 mg/L        | 0.00044  | 26.62%  |
| Cr 267.716*†                                                     | -133.3                   | -0.0011 mg/L | 0.00007         | -0.0011 mg/L       | 0.00007  | 6.72%   |
| Cu 324.752*†                                                     | 326.2                    | 0.0012 mg/L  | 0.00020         | 0.0012 mg/L        | 0.00020  | 16.13%  |
| Fe 273.955*†                                                     | 2987.2                   | 0.1197 mg/L  | 0.14858         | 0.1197 mg/L        | 0.14858  | 124.16% |
| Saturated within auto integration window (code 4)                |                          |              |                 |                    |          |         |
| K 766.490*†                                                      | 66.1                     | 0.0205 mg/L  | 0.03207         | 0.0205 mg/L        | 0.03207  | 156.14% |
| Mg 279.077*†                                                     | 91.1                     | 0.0044 mg/L  | 0.00850         | 0.0044 mg/L        | 0.00850  | 193.53% |
| Mn 257.610*†                                                     | 3071.2                   | 0.0045 mg/L  | 0.00507         | 0.0045 mg/L        | 0.00507  | 113.66% |
| Mo 202.031*†                                                     | 2.8                      | 0.0003 mg/L  | 0.00008         | 0.0003 mg/L        | 0.00008  | 28.54%  |
| Na 589.592*†                                                     | 62.1                     | 0.0133 mg/L  | 0.00949         | 0.0133 mg/L        | 0.00949  | 71.22%  |
| Ni 231.604*†                                                     | 43.5                     | 0.0016 mg/L  | 0.00141         | 0.0016 mg/L        | 0.00141  | 85.58%  |
| P 213.617*†                                                      | 94.1                     | 0.0427 mg/L  | 0.00405         | 0.0427 mg/L        | 0.00405  | 9.50%   |
| P 214.914†                                                       | 24.0                     | 0.0174 mg/L  | 0.01813         | 0.0174 mg/L        | 0.01813  | 104.43% |
| Pb 220.353*†                                                     | 28.7                     | 0.0033 mg/L  | 0.00162         | 0.0033 mg/L        | 0.00162  | 49.08%  |
| Sb 206.836†                                                      | 9.7                      | 0.0047 mg/L  | 0.00220         | 0.0047 mg/L        | 0.00220  | 46.42%  |
| Sb 217.582*†                                                     | 6.6                      | 0.0033 mg/L  | 0.00232         | 0.0033 mg/L        | 0.00232  | 70.97%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Se 196.026*†                                                     | 23.0                     | 0.0095 mg/L  | 0.00054         | 0.0095 mg/L        | 0.00054  | 5.67%   |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Si 251.611*†                                                     | 2243.7                   | 0.0531 mg/L  | 0.01284         | 0.0531 mg/L        | 0.01284  | 24.19%  |
| Sn 189.927*†                                                     | 45.1                     | 0.0068 mg/L  | 0.00195         | 0.0068 mg/L        | 0.00195  | 28.55%  |
| Sn 242.170†                                                      | 27.8                     | 0.0148 mg/L  | 0.00663         | 0.0148 mg/L        | 0.00663  | 44.94%  |
| Sr 407.771*†                                                     | 45.4                     | 0.0001 mg/L  | 0.00006         | 0.0001 mg/L        | 0.00006  | 45.91%  |
| Ti 334.940†                                                      | 1047.4                   | 0.0012 mg/L  | 0.00009         | 0.0012 mg/L        | 0.00009  | 7.42%   |
| Ti 336.121*†                                                     | 643.8                    | 0.0010 mg/L  | 0.00046         | 0.0010 mg/L        | 0.00046  | 43.60%  |
| Tl 190.801*†                                                     | -1.1                     | -0.0005 mg/L | 0.00182         | -0.0005 mg/L       | 0.00182  | 331.12% |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |              |                 |                    |          |         |
| V 292.402*†                                                      | 126.6                    | 0.0009 mg/L  | 0.00004         | 0.0009 mg/L        | 0.00004  | 4.57%   |
| Zn 206.200*†                                                     | 336.7                    | 0.0074 mg/L  | 0.00375         | 0.0074 mg/L        | 0.00375  | 50.54%  |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |              |                 |                    |          |         |
| All analyte(s) passed QC.                                        |                          |              |                 |                    |          |         |

Sequence No.: 35

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 3

Date Collected: 3/27/2017 1:16:19 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 74309.9                  | 90.83 %     | 0.973           |                    |          | 1.07% |
| Tb 350                                                    | 122655.8                 | 92.58 %     | 0.937           |                    |          | 1.01% |
| Ag 328.068*†                                              | 73452.8                  | 0.3678 mg/L | 0.00102         | 0.3678 mg/L        | 0.00102  | 0.28% |
| QC value within limits for Ag 328.068* Recovery = 98.09%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 246991.1                 | 13.75 mg/L  | 0.090           | 13.75 mg/L         | 0.090    | 0.66% |
| QC value within limits for Al 308.215* Recovery = 101.88% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 8426.0                   | 3.612 mg/L  | 0.0068          | 3.612 mg/L         | 0.0068   | 0.19% |
| QC value within limits for As 188.979 Recovery = 96.31%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5814.7                   | 3.613 mg/L  | 0.0155          | 3.613 mg/L         | 0.0155   | 0.43% |
| QC value within limits for As 193.696* Recovery = 96.34%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 198794.4                 | 3.690 mg/L  | 0.0114          | 3.690 mg/L         | 0.0114   | 0.31% |
| QC value within limits for B 249.677* Recovery = 98.39%   |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1204243.3                | 7.515 mg/L  | 0.0585          | 7.515 mg/L         | 0.0585   | 0.78% |
| QC value within limits for Ba 233.527* Recovery = 100.21% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2266229.7                | 0.5540 mg/L | 0.00469         | 0.5540 mg/L        | 0.00469  | 0.85% |
| QC value within limits for Be 313.042* Recovery = 98.49%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 63369.6                  | 28.97 mg/L  | 1.682           | 28.97 mg/L         | 1.682    | 5.81% |
| QC value within limits for Ca 317.933* Recovery = 96.58%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 62155.5                  | 0.7383 mg/L | 0.00745         | 0.7383 mg/L        | 0.00745  | 1.01% |
| QC value within limits for Cd 226.502* Recovery = 98.45%  |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 30557.9                  | 0.7385 mg/L | 0.00613         | 0.7385 mg/L        | 0.00613  | 0.83% |
| Co 228.616*†                                              | 56293.4                  | 1.881 mg/L  | 0.0155          | 1.881 mg/L         | 0.0155   | 0.82% |
| QC value within limits for Co 228.616* Recovery = 100.31% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 71978.2                  | 0.5964 mg/L | 0.00261         | 0.5964 mg/L        | 0.00261  | 0.44% |
| QC value within limits for Cr 267.716* Recovery = 99.41%  |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 244953.0                 | 0.9294 mg/L | 0.00143         | 0.9294 mg/L        | 0.00143  | 0.15% |
| QC value within limits for Cu 324.752* Recovery = 99.14%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 96491.1                  | 3.865 mg/L  | 0.0289          | 3.865 mg/L         | 0.0289   | 0.75% |
| QC value within limits for Fe 273.955* Recovery = 103.08% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 85031.3                  | 26.41 mg/L  | 1.225           | 26.41 mg/L         | 1.225    | 4.64% |
| QC value within limits for K 766.490* Recovery = 97.80%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 155587.1                 | 7.499 mg/L  | 0.0744          | 7.499 mg/L         | 0.0744   | 0.99% |
| QC value within limits for Mg 279.077* Recovery = 99.98%  |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 515149.4                 | 0.7476 mg/L | 0.00584         | 0.7476 mg/L        | 0.00584  | 0.78% |
| QC value within limits for Mn 257.610* Recovery = 99.68%  |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5779.2                   | 0.5954 mg/L | 0.00373         | 0.5954 mg/L        | 0.00373  | 0.63% |
| QC value within limits for Mo 202.031* Recovery = 99.23%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 169883.4                 | 36.45 mg/L  | 1.726           | 36.45 mg/L         | 1.726    | 4.73% |
| QC value within limits for Na 589.592* Recovery = 101.25% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 15541.7                  | 0.5880 mg/L | 0.00161         | 0.5880 mg/L        | 0.00161  | 0.27% |
| QC value within limits for Ni 231.604* Recovery = 97.99%  |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 12525.5                  | 5.677 mg/L  | 0.0009          | 5.677 mg/L         | 0.0009   | 0.02% |
| QC value within limits for P 213.617* Recovery = 94.62%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 8011.4                   | 5.803 mg/L  | 0.0511          | 5.803 mg/L         | 0.0511   | 0.88% |
| Pb 220.353*†                                              | 31821.4                  | 3.671 mg/L  | 0.0570          | 3.671 mg/L         | 0.0570   | 1.55% |
| QC value within limits for Pb 220.353* Recovery = 97.90%  |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 8969.3                   | 4.398 mg/L  | 0.0189          | 4.398 mg/L         | 0.0189   | 0.43% |
| QC value within limits for Sb 206.836 Recovery = 97.74%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 8826.1                   | 4.354 mg/L  | 0.0244          | 4.354 mg/L         | 0.0244   | 0.56% |
| QC value within limits for Sb 217.582* Recovery = 96.75%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3562.2                   | 1.475 mg/L  | 0.0080          | 1.475 mg/L         | 0.0080   | 0.54% |
| QC value within limits for Se 196.026* Recovery = 98.33%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 249877.1                 | 5.913 mg/L  | 0.0281          | 5.913 mg/L         | 0.0281   | 0.47% |
| QC value within limits for Si 251.611* Recovery = 98.56%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 19493.8                  | 2.947 mg/L  | 0.0116          | 2.947 mg/L         | 0.0116   | 0.39% |
| QC value within limits for Sn 189.927* Recovery = 98.22%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5562.2                   | 2.955 mg/L  | 0.0234          | 2.955 mg/L         | 0.0234   | 0.79% |
| Sr 407.771*†                                              | 101608.2                 | 0.2966 mg/L | 0.01334         | 0.2966 mg/L        | 0.01334  | 4.50% |
| QC value within limits for Sr 407.771* Recovery = 98.87%  |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 532597.5 | 0.6068 mg/L | 0.00221 | 0.6068 mg/L | 0.00221 | 0.36% |
| Ti 336.121*†                                              | 375718.5 | 0.6098 mg/L | 0.00241 | 0.6098 mg/L | 0.00241 | 0.39% |
| QC value within limits for Ti 336.121* Recovery = 101.64% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2925.0   | 1.496 mg/L  | 0.0001  | 1.496 mg/L  | 0.0001  | 0.00% |
| QC value within limits for Tl 190.801* Recovery = 99.71%  |          |             |         |             |         |       |
| V 292.402*†                                               | 266419.3 | 1.859 mg/L  | 0.0004  | 1.859 mg/L  | 0.0004  | 0.02% |
| QC value within limits for V 292.402* Recovery = 99.16%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 111334.8 | 2.452 mg/L  | 0.0368  | 2.452 mg/L  | 0.0368  | 1.50% |
| QC value within limits for Zn 206.200* Recovery = 98.07%  |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 36  
 Sample ID: CCB-R12091601  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 1  
 Date Collected: 3/27/2017 1:17:12 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units  | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|--------------|-----------------|--------------------|----------|---------|
| Tb 384                                                           | 83319.6                  | 101.8 %      | 1.56            |                    |          | 1.53%   |
| Tb 350                                                           | 134799.3                 | 101.7 %      | 1.34            |                    |          | 1.31%   |
| Ag 328.068*†                                                     | 275.7                    | 0.0014 mg/L  | 0.00123         | 0.0014 mg/L        | 0.00123  | 88.76%  |
| Al 308.215*†                                                     | 216.9                    | 0.0121 mg/L  | 0.00579         | 0.0121 mg/L        | 0.00579  | 47.95%  |
| As 188.979†                                                      | 7.0                      | 0.0030 mg/L  | 0.00244         | 0.0030 mg/L        | 0.00244  | 81.15%  |
| As 193.696*†                                                     | 3.6                      | 0.0023 mg/L  | 0.00795         | 0.0023 mg/L        | 0.00795  | 350.74% |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |              |                 |                    |          |         |
| B 249.677*†                                                      | 1906.5                   | 0.0354 mg/L  | 0.00127         | 0.0354 mg/L        | 0.00127  | 3.59%   |
| Ba 233.527*†                                                     | 745.5                    | 0.0047 mg/L  | 0.00072         | 0.0047 mg/L        | 0.00072  | 15.57%  |
| Be 313.042*†                                                     | 1216.3                   | 0.0003 mg/L  | 0.00001         | 0.0003 mg/L        | 0.00001  | 4.67%   |
| Ca 317.933*†                                                     | 44.8                     | 0.0205 mg/L  | 0.00375         | 0.0205 mg/L        | 0.00375  | 18.33%  |
| Cd 226.502*†                                                     | 54.3                     | 0.0006 mg/L  | 0.00004         | 0.0006 mg/L        | 0.00004  | 5.54%   |
| Cd 228.802†                                                      | 28.3                     | 0.0007 mg/L  | 0.00044         | 0.0007 mg/L        | 0.00044  | 64.84%  |
| Co 228.616*†                                                     | 40.6                     | 0.0014 mg/L  | 0.00068         | 0.0014 mg/L        | 0.00068  | 49.83%  |
| Cr 267.716*†                                                     | 21.4                     | 0.0002 mg/L  | 0.00005         | 0.0002 mg/L        | 0.00005  | 30.29%  |
| Cu 324.752*†                                                     | 315.5                    | 0.0012 mg/L  | 0.00017         | 0.0012 mg/L        | 0.00017  | 14.11%  |
| Fe 273.955*†                                                     | 458.4                    | 0.0184 mg/L  | 0.00259         | 0.0184 mg/L        | 0.00259  | 14.09%  |
| K 766.490*†                                                      | 314.2                    | 0.0976 mg/L  | 0.12377         | 0.0976 mg/L        | 0.12377  | 126.86% |
| Mg 279.077*†                                                     | 342.0                    | 0.0165 mg/L  | 0.01072         | 0.0165 mg/L        | 0.01072  | 65.04%  |
| Mn 257.610*†                                                     | 726.6                    | 0.0011 mg/L  | 0.00007         | 0.0011 mg/L        | 0.00007  | 6.21%   |
| Mo 202.031*†                                                     | 5.8                      | 0.0006 mg/L  | 0.00083         | 0.0006 mg/L        | 0.00083  | 138.58% |
| Na 589.592*†                                                     | 90.2                     | 0.0194 mg/L  | 0.01646         | 0.0194 mg/L        | 0.01646  | 84.98%  |
| Ni 231.604*†                                                     | 27.2                     | 0.0010 mg/L  | 0.00044         | 0.0010 mg/L        | 0.00044  | 42.65%  |
| P 213.617*†                                                      | 10.7                     | 0.0048 mg/L  | 0.00039         | 0.0048 mg/L        | 0.00039  | 8.01%   |
| P 214.914†                                                       | 3.1                      | 0.0023 mg/L  | 0.01173         | 0.0023 mg/L        | 0.01173  | 514.38% |
| Pb 220.353*†                                                     | 25.8                     | 0.0030 mg/L  | 0.00009         | 0.0030 mg/L        | 0.00009  | 3.07%   |
| Sb 206.836†                                                      | 10.3                     | 0.0051 mg/L  | 0.00114         | 0.0051 mg/L        | 0.00114  | 22.55%  |
| Sb 217.582*†                                                     | 2.0                      | 0.0010 mg/L  | 0.00087         | 0.0010 mg/L        | 0.00087  | 85.95%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Se 196.026*†                                                     | 8.6                      | 0.0035 mg/L  | 0.00536         | 0.0035 mg/L        | 0.00536  | 151.17% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |              |                 |                    |          |         |
| Si 251.611*†                                                     | 1568.6                   | 0.0371 mg/L  | 0.00269         | 0.0371 mg/L        | 0.00269  | 7.25%   |
| Sn 189.927*†                                                     | 43.2                     | 0.0065 mg/L  | 0.00160         | 0.0065 mg/L        | 0.00160  | 24.55%  |
| Sn 242.170†                                                      | 35.9                     | 0.0191 mg/L  | 0.00182         | 0.0191 mg/L        | 0.00182  | 9.56%   |
| Sr 407.771*†                                                     | 51.7                     | 0.0002 mg/L  | 0.00004         | 0.0002 mg/L        | 0.00004  | 24.26%  |
| Ti 334.940†                                                      | 1362.8                   | 0.0016 mg/L  | 0.00004         | 0.0016 mg/L        | 0.00004  | 2.26%   |
| Ti 336.121*†                                                     | 1045.0                   | 0.0017 mg/L  | 0.00003         | 0.0017 mg/L        | 0.00003  | 1.56%   |
| Tl 190.801*†                                                     | -2.3                     | -0.0012 mg/L | 0.00342         | -0.0012 mg/L       | 0.00342  | 293.09% |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |              |                 |                    |          |         |
| V 292.402*†                                                      | -6.8                     | -0.0000 mg/L | 0.00161         | -0.0000 mg/L       | 0.00161  | >999.9% |
| Zn 206.200*†                                                     | 365.3                    | 0.0080 mg/L  | 0.00043         | 0.0080 mg/L        | 0.00043  | 5.30%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |              |                 |                    |          |         |
| All analyte(s) passed QC.                                        |                          |              |                 |                    |          |         |

Sequence No.: 2

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/27/2017 3:36:17 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 69635.2                  | 85.12 %     | 0.111           |                    |          | 0.13% |
| Tb 350                                                    | 115272.9                 | 87.00 %     | 0.127           |                    |          | 0.15% |
| Ag 328.068*†                                              | 75630.4                  | 0.3787 mg/L | 0.00064         | 0.3787 mg/L        | 0.00064  | 0.17% |
| QC value within limits for Ag 328.068* Recovery = 101.00% |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 252166.1                 | 14.04 mg/L  | 0.014           | 14.04 mg/L         | 0.014    | 0.10% |
| QC value within limits for Al 308.215* Recovery = 104.02% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 8940.0                   | 3.832 mg/L  | 0.0247          | 3.832 mg/L         | 0.0247   | 0.64% |
| QC value within limits for As 188.979 Recovery = 102.18%  |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 6176.7                   | 3.838 mg/L  | 0.0299          | 3.838 mg/L         | 0.0299   | 0.78% |
| QC value within limits for As 193.696* Recovery = 102.34% |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 211026.6                 | 3.917 mg/L  | 0.0220          | 3.917 mg/L         | 0.0220   | 0.56% |
| QC value within limits for B 249.677* Recovery = 104.45%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1231600.8                | 7.686 mg/L  | 0.0046          | 7.686 mg/L         | 0.0046   | 0.06% |
| QC value within limits for Ba 233.527* Recovery = 102.48% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2329040.0                | 0.5694 mg/L | 0.00021         | 0.5694 mg/L        | 0.00021  | 0.04% |
| QC value within limits for Be 313.042* Recovery = 101.22% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 65116.3                  | 29.77 mg/L  | 0.079           | 29.77 mg/L         | 0.079    | 0.27% |
| QC value within limits for Ca 317.933* Recovery = 99.24%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 64818.4                  | 0.7700 mg/L | 0.00130         | 0.7700 mg/L        | 0.00130  | 0.17% |
| QC value within limits for Cd 226.502* Recovery = 102.66% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 31482.2                  | 0.7608 mg/L | 0.00043         | 0.7608 mg/L        | 0.00043  | 0.06% |
| Co 228.616*†                                              | 57517.0                  | 1.922 mg/L  | 0.0044          | 1.922 mg/L         | 0.0044   | 0.23% |
| QC value within limits for Co 228.616* Recovery = 102.49% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 73466.9                  | 0.6088 mg/L | 0.00003         | 0.6088 mg/L        | 0.00003  | 0.01% |
| QC value within limits for Cr 267.716* Recovery = 101.46% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 252312.8                 | 0.9573 mg/L | 0.00221         | 0.9573 mg/L        | 0.00221  | 0.23% |
| QC value within limits for Cu 324.752* Recovery = 102.12% |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 96569.0                  | 3.868 mg/L  | 0.0052          | 3.868 mg/L         | 0.0052   | 0.13% |
| QC value within limits for Fe 273.955* Recovery = 103.16% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 87755.5                  | 27.25 mg/L  | 0.037           | 27.25 mg/L         | 0.037    | 0.14% |
| QC value within limits for K 766.490* Recovery = 100.94%  |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 162833.4                 | 7.848 mg/L  | 0.0428          | 7.848 mg/L         | 0.0428   | 0.55% |
| QC value within limits for Mg 279.077* Recovery = 104.64% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 528531.3                 | 0.7670 mg/L | 0.00233         | 0.7670 mg/L        | 0.00233  | 0.30% |
| QC value within limits for Mn 257.610* Recovery = 102.27% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5936.8                   | 0.6116 mg/L | 0.00529         | 0.6116 mg/L        | 0.00529  | 0.86% |
| QC value within limits for Mo 202.031* Recovery = 101.93% |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 181014.1                 | 38.84 mg/L  | 0.038           | 38.84 mg/L         | 0.038    | 0.10% |
| QC value within limits for Na 589.592* Recovery = 107.89% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 16396.7                  | 0.6203 mg/L | 0.00377         | 0.6203 mg/L        | 0.00377  | 0.61% |
| QC value within limits for Ni 231.604* Recovery = 103.38% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 13558.0                  | 6.145 mg/L  | 0.0484          | 6.145 mg/L         | 0.0484   | 0.79% |
| QC value within limits for P 213.617* Recovery = 102.42%  |                          |             |                 |                    |          |       |
| P 214.914†                                                | 8521.2                   | 6.172 mg/L  | 0.0445          | 6.172 mg/L         | 0.0445   | 0.72% |
| Pb 220.353*†                                              | 33443.0                  | 3.858 mg/L  | 0.0401          | 3.858 mg/L         | 0.0401   | 1.04% |
| QC value within limits for Pb 220.353* Recovery = 102.89% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 9382.2                   | 4.601 mg/L  | 0.0274          | 4.601 mg/L         | 0.0274   | 0.60% |
| QC value within limits for Sb 206.836 Recovery = 102.24%  |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 9186.7                   | 4.532 mg/L  | 0.0427          | 4.532 mg/L         | 0.0427   | 0.94% |
| QC value within limits for Sb 217.582* Recovery = 100.71% |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3759.9                   | 1.557 mg/L  | 0.0074          | 1.557 mg/L         | 0.0074   | 0.47% |
| QC value within limits for Se 196.026* Recovery = 103.79% |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 256625.4                 | 6.073 mg/L  | 0.0232          | 6.073 mg/L         | 0.0232   | 0.38% |
| QC value within limits for Si 251.611* Recovery = 101.22% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 20697.9                  | 3.129 mg/L  | 0.0264          | 3.129 mg/L         | 0.0264   | 0.84% |
| QC value within limits for Sn 189.927* Recovery = 104.28% |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5733.8                   | 3.046 mg/L  | 0.0221          | 3.046 mg/L         | 0.0221   | 0.72% |
| Sr 407.771*†                                              | 101189.5                 | 0.2954 mg/L | 0.00056         | 0.2954 mg/L        | 0.00056  | 0.19% |
| QC value within limits for Sr 407.771* Recovery = 98.46%  |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 532030.8 | 0.6061 mg/L | 0.00079 | 0.6061 mg/L | 0.00079 | 0.13% |
| Ti 336.121*†                                              | 372831.5 | 0.6051 mg/L | 0.00077 | 0.6051 mg/L | 0.00077 | 0.13% |
| QC value within limits for Ti 336.121* Recovery = 100.86% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 3044.4   | 1.557 mg/L  | 0.0013  | 1.557 mg/L  | 0.0013  | 0.09% |
| QC value within limits for Tl 190.801* Recovery = 103.78% |          |             |         |             |         |       |
| V 292.402*†                                               | 269746.2 | 1.882 mg/L  | 0.0123  | 1.882 mg/L  | 0.0123  | 0.65% |
| QC value within limits for V 292.402* Recovery = 100.39%  |          |             |         |             |         |       |
| Zn 206.200*†                                              | 117984.6 | 2.598 mg/L  | 0.0178  | 2.598 mg/L  | 0.0178  | 0.69% |
| QC value within limits for Zn 206.200* Recovery = 103.93% |          |             |         |             |         |       |
| Zn 213.857*†                                              | 194402.3 | 2.547 mg/L  | 0.0106  | 2.547 mg/L  | 0.0106  | 0.42% |
| QC value within limits for Zn 213.857* Recovery = 101.89% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 3:37:11 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc.   | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|---------|--------------|----------|--------------------|----------|---------|
| Tb 384                                                           | 79546.0                  | 97.23   | %            | 0.780    |                    |          | 0.80%   |
| Tb 350                                                           | 128224.0                 | 96.78   | %            | 0.292    |                    |          | 0.30%   |
| Ag 328.068*†                                                     | -18.6                    | -0.0001 | mg/L         | 0.00043  | -0.0001 mg/L       | 0.00043  | 462.19% |
| QC value within limits for Ag 328.068* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Al 308.215*†                                                     | 134.2                    | 0.0075  | mg/L         | 0.00046  | 0.0075 mg/L        | 0.00046  | 6.18%   |
| As 188.979†                                                      | 2.9                      | 0.0012  | mg/L         | 0.00109  | 0.0012 mg/L        | 0.00109  | 87.45%  |
| As 193.696*†                                                     | 0.9                      | 0.0005  | mg/L         | 0.00012  | 0.0005 mg/L        | 0.00012  | 22.43%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| B 249.677*†                                                      | 2842.0                   | 0.0528  | mg/L         | 0.00206  | 0.0528 mg/L        | 0.00206  | 3.91%   |
| Ba 233.527*†                                                     | 570.9                    | 0.0036  | mg/L         | 0.00011  | 0.0036 mg/L        | 0.00011  | 3.22%   |
| Be 313.042*†                                                     | 1000.3                   | 0.0002  | mg/L         | 0.00000  | 0.0002 mg/L        | 0.00000  | 1.58%   |
| Ca 317.933*†                                                     | 126.5                    | 0.0578  | mg/L         | 0.00064  | 0.0578 mg/L        | 0.00064  | 1.11%   |
| Cd 226.502*†                                                     | 34.6                     | 0.0004  | mg/L         | 0.00004  | 0.0004 mg/L        | 0.00004  | 10.30%  |
| Cd 228.802†                                                      | 26.7                     | 0.0006  | mg/L         | 0.00000  | 0.0006 mg/L        | 0.00000  | 0.47%   |
| Co 228.616*†                                                     | 17.1                     | 0.0006  | mg/L         | 0.00005  | 0.0006 mg/L        | 0.00005  | 9.58%   |
| Cr 267.716*†                                                     | 12.7                     | 0.0001  | mg/L         | 0.00012  | 0.0001 mg/L        | 0.00012  | 110.76% |
| Cu 324.752*†                                                     | 409.7                    | 0.0016  | mg/L         | 0.00024  | 0.0016 mg/L        | 0.00024  | 15.13%  |
| Fe 273.955*†                                                     | 91.1                     | 0.0036  | mg/L         | 0.00065  | 0.0036 mg/L        | 0.00065  | 17.95%  |
| K 766.490*†                                                      | 1191.5                   | 0.3700  | mg/L         | 0.02803  | 0.3700 mg/L        | 0.02803  | 7.57%   |
| Mg 279.077*†                                                     | -373.0                   | -0.0180 | mg/L         | 0.00787  | -0.0180 mg/L       | 0.00787  | 43.75%  |
| Mn 257.610*†                                                     | 393.5                    | 0.0006  | mg/L         | 0.00007  | 0.0006 mg/L        | 0.00007  | 13.05%  |
| Mo 202.031*†                                                     | 2.6                      | 0.0003  | mg/L         | 0.00094  | 0.0003 mg/L        | 0.00094  | 348.44% |
| Na 589.592*†                                                     | 3664.3                   | 0.7863  | mg/L         | 0.02820  | 0.7863 mg/L        | 0.02820  | 3.59%   |
| Ni 231.604*†                                                     | 24.2                     | 0.0009  | mg/L         | 0.00023  | 0.0009 mg/L        | 0.00023  | 25.33%  |
| P 213.617*†                                                      | 29.4                     | 0.0133  | mg/L         | 0.01224  | 0.0133 mg/L        | 0.01224  | 91.74%  |
| P 214.914†                                                       | -4.6                     | -0.0033 | mg/L         | 0.01178  | -0.0033 mg/L       | 0.01178  | 353.66% |
| Pb 220.353*†                                                     | 8.4                      | 0.0010  | mg/L         | 0.00037  | 0.0010 mg/L        | 0.00037  | 38.50%  |
| Sb 206.836†                                                      | 11.8                     | 0.0058  | mg/L         | 0.00260  | 0.0058 mg/L        | 0.00260  | 44.91%  |
| Sb 217.582*†                                                     | 11.6                     | 0.0057  | mg/L         | 0.00217  | 0.0057 mg/L        | 0.00217  | 37.80%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Se 196.026*†                                                     | 9.3                      | 0.0039  | mg/L         | 0.00258  | 0.0039 mg/L        | 0.00258  | 66.77%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Si 251.611*†                                                     | 376.0                    | 0.0089  | mg/L         | 0.00000  | 0.0089 mg/L        | 0.00000  | 0.02%   |
| Sn 189.927*†                                                     | 31.3                     | 0.0047  | mg/L         | 0.00068  | 0.0047 mg/L        | 0.00068  | 14.32%  |
| Sn 242.170†                                                      | -19.3                    | -0.0102 | mg/L         | 0.02168  | -0.0102 mg/L       | 0.02168  | 211.91% |
| Sr 407.771*†                                                     | 96.3                     | 0.0003  | mg/L         | 0.00011  | 0.0003 mg/L        | 0.00011  | 37.85%  |
| Ti 334.940†                                                      | 691.4                    | 0.0008  | mg/L         | 0.00054  | 0.0008 mg/L        | 0.00054  | 69.08%  |
| Ti 336.121*†                                                     | 488.5                    | 0.0008  | mg/L         | 0.00037  | 0.0008 mg/L        | 0.00037  | 46.73%  |
| Tl 190.801*†                                                     | 0.4                      | 0.0002  | mg/L         | 0.00134  | 0.0002 mg/L        | 0.00134  | 656.38% |
| V 292.402*†                                                      | 177.8                    | 0.0012  | mg/L         | 0.00086  | 0.0012 mg/L        | 0.00086  | 69.11%  |
| Zn 206.200*†                                                     | 56.5                     | 0.0012  | mg/L         | 0.00015  | 0.0012 mg/L        | 0.00015  | 12.12%  |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Zn 213.857*†                                                     | 158.9                    | 0.0021  | mg/L         | 0.00024  | 0.0021 mg/L        | 0.00024  | 11.74%  |
| QC value within limits for Zn 213.857* Recovery = Not calculated |                          |         |              |          |                    |          |         |

All analyte(s) passed QC.

Sequence No.: 7  
 Sample ID: CCV= STD3x0.5  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 3  
 Date Collected: 3/27/2017 3:44:47 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|-------|
| Tb 384                                                    | 73217.5                  | 89.49 %     | 0.846           |                    |          | 0.94% |
| Tb 350                                                    | 121010.8                 | 91.34 %     | 0.507           |                    |          | 0.56% |
| Ag 328.068*†                                              | 73772.7                  | 0.3694 mg/L | 0.00323         | 0.3694 mg/L        | 0.00323  | 0.87% |
| QC value within limits for Ag 328.068* Recovery = 98.52%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 248734.0                 | 13.85 mg/L  | 0.044           | 13.85 mg/L         | 0.044    | 0.32% |
| QC value within limits for Al 308.215* Recovery = 102.60% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 8507.7                   | 3.647 mg/L  | 0.0022          | 3.647 mg/L         | 0.0022   | 0.06% |
| QC value within limits for As 188.979 Recovery = 97.24%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5876.8                   | 3.651 mg/L  | 0.0038          | 3.651 mg/L         | 0.0038   | 0.10% |
| QC value within limits for As 193.696* Recovery = 97.37%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 200810.2                 | 3.727 mg/L  | 0.0009          | 3.727 mg/L         | 0.0009   | 0.02% |
| QC value within limits for B 249.677* Recovery = 99.39%   |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1218941.3                | 7.607 mg/L  | 0.0328          | 7.607 mg/L         | 0.0328   | 0.43% |
| QC value within limits for Ba 233.527* Recovery = 101.43% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 2279977.3                | 0.5574 mg/L | 0.00438         | 0.5574 mg/L        | 0.00438  | 0.79% |
| QC value within limits for Be 313.042* Recovery = 99.09%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 63565.7                  | 29.06 mg/L  | 0.157           | 29.06 mg/L         | 0.157    | 0.54% |
| QC value within limits for Ca 317.933* Recovery = 96.87%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 62970.8                  | 0.7480 mg/L | 0.00653         | 0.7480 mg/L        | 0.00653  | 0.87% |
| QC value within limits for Cd 226.502* Recovery = 99.74%  |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 30784.0                  | 0.7439 mg/L | 0.00503         | 0.7439 mg/L        | 0.00503  | 0.68% |
| Co 228.616*†                                              | 56495.5                  | 1.888 mg/L  | 0.0078          | 1.888 mg/L         | 0.0078   | 0.41% |
| QC value within limits for Co 228.616* Recovery = 100.67% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 72591.8                  | 0.6015 mg/L | 0.00341         | 0.6015 mg/L        | 0.00341  | 0.57% |
| QC value within limits for Cr 267.716* Recovery = 100.26% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 246889.9                 | 0.9368 mg/L | 0.00683         | 0.9368 mg/L        | 0.00683  | 0.73% |
| QC value within limits for Cu 324.752* Recovery = 99.92%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 94875.3                  | 3.801 mg/L  | 0.0083          | 3.801 mg/L         | 0.0083   | 0.22% |
| QC value within limits for Fe 273.955* Recovery = 101.35% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 84967.7                  | 26.39 mg/L  | 0.044           | 26.39 mg/L         | 0.044    | 0.16% |
| QC value within limits for K 766.490* Recovery = 97.73%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 159045.9                 | 7.666 mg/L  | 0.0588          | 7.666 mg/L         | 0.0588   | 0.77% |
| QC value within limits for Mg 279.077* Recovery = 102.21% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 519401.2                 | 0.7538 mg/L | 0.00450         | 0.7538 mg/L        | 0.00450  | 0.60% |
| QC value within limits for Mn 257.610* Recovery = 100.51% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5817.0                   | 0.5993 mg/L | 0.00180         | 0.5993 mg/L        | 0.00180  | 0.30% |
| QC value within limits for Mo 202.031* Recovery = 99.88%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 175608.6                 | 37.68 mg/L  | 0.299           | 37.68 mg/L         | 0.299    | 0.79% |
| QC value within limits for Na 589.592* Recovery = 104.67% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 15755.7                  | 0.5960 mg/L | 0.00057         | 0.5960 mg/L        | 0.00057  | 0.10% |
| QC value within limits for Ni 231.604* Recovery = 99.34%  |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 12832.6                  | 5.816 mg/L  | 0.0102          | 5.816 mg/L         | 0.0102   | 0.18% |
| QC value within limits for P 213.617* Recovery = 96.94%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 8065.6                   | 5.842 mg/L  | 0.0022          | 5.842 mg/L         | 0.0022   | 0.04% |
| Pb 220.353*†                                              | 32225.7                  | 3.718 mg/L  | 0.0029          | 3.718 mg/L         | 0.0029   | 0.08% |
| QC value within limits for Pb 220.353* Recovery = 99.15%  |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 9022.6                   | 4.424 mg/L  | 0.0028          | 4.424 mg/L         | 0.0028   | 0.06% |
| QC value within limits for Sb 206.836 Recovery = 98.32%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 8907.8                   | 4.394 mg/L  | 0.0177          | 4.394 mg/L         | 0.0177   | 0.40% |
| QC value within limits for Sb 217.582* Recovery = 97.65%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3548.1                   | 1.469 mg/L  | 0.0005          | 1.469 mg/L         | 0.0005   | 0.03% |
| QC value within limits for Se 196.026* Recovery = 97.94%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 260351.1                 | 6.161 mg/L  | 0.0074          | 6.161 mg/L         | 0.0074   | 0.12% |
| QC value within limits for Si 251.611* Recovery = 102.69% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 19747.8                  | 2.985 mg/L  | 0.0027          | 2.985 mg/L         | 0.0027   | 0.09% |
| QC value within limits for Sn 189.927* Recovery = 99.50%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 5541.6                   | 2.944 mg/L  | 0.0061          | 2.944 mg/L         | 0.0061   | 0.21% |
| Sr 407.771*†                                              | 101571.8                 | 0.2965 mg/L | 0.00255         | 0.2965 mg/L        | 0.00255  | 0.86% |
| QC value within limits for Sr 407.771* Recovery = 98.83%  |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 528586.0 | 0.6022 mg/L | 0.00231 | 0.6022 mg/L | 0.00231 | 0.38% |
| Ti 336.121*†                                              | 372577.9 | 0.6047 mg/L | 0.00175 | 0.6047 mg/L | 0.00175 | 0.29% |
| QC value within limits for Ti 336.121* Recovery = 100.79% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2935.5   | 1.501 mg/L  | 0.0129  | 1.501 mg/L  | 0.0129  | 0.86% |
| QC value within limits for Tl 190.801* Recovery = 100.07% |          |             |         |             |         |       |
| V 292.402*†                                               | 267584.3 | 1.867 mg/L  | 0.0076  | 1.867 mg/L  | 0.0076  | 0.41% |
| QC value within limits for V 292.402* Recovery = 99.59%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 113032.8 | 2.489 mg/L  | 0.0239  | 2.489 mg/L  | 0.0239  | 0.96% |
| QC value within limits for Zn 206.200* Recovery = 99.57%  |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 3:45:40 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units | Calib. Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|-------------|-----------------|--------------------|----------|---------|
| Tb 384                                                           | 81197.1                  | 99.25 %     | 1.038           |                    |          | 1.05%   |
| Tb 350                                                           | 130963.1                 | 98.85 %     | 1.722           |                    |          | 1.74%   |
| Ag 328.068*†                                                     | 316.7                    | 0.0016 mg/L | 0.00007         | 0.0016 mg/L        | 0.00007  | 4.66%   |
| Al 308.215*†                                                     | 204.8                    | 0.0114 mg/L | 0.00312         | 0.0114 mg/L        | 0.00312  | 27.35%  |
| As 188.979†                                                      | 9.6                      | 0.0041 mg/L | 0.00142         | 0.0041 mg/L        | 0.00142  | 34.71%  |
| As 193.696*†                                                     | 1.6                      | 0.0010 mg/L | 0.00089         | 0.0010 mg/L        | 0.00089  | 89.38%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |                 |                    |          |         |
| B 249.677*†                                                      | 2566.1                   | 0.0476 mg/L | 0.00557         | 0.0476 mg/L        | 0.00557  | 11.70%  |
| Ba 233.527*†                                                     | 660.2                    | 0.0041 mg/L | 0.00020         | 0.0041 mg/L        | 0.00020  | 4.76%   |
| Be 313.042*†                                                     | 991.7                    | 0.0002 mg/L | 0.00003         | 0.0002 mg/L        | 0.00003  | 10.85%  |
| Ca 317.933*†                                                     | 131.3                    | 0.0600 mg/L | 0.00253         | 0.0600 mg/L        | 0.00253  | 4.21%   |
| Cd 226.502*†                                                     | 79.5                     | 0.0009 mg/L | 0.00010         | 0.0009 mg/L        | 0.00010  | 10.68%  |
| Cd 228.802†                                                      | 39.9                     | 0.0010 mg/L | 0.00021         | 0.0010 mg/L        | 0.00021  | 22.12%  |
| Co 228.616*†                                                     | 18.9                     | 0.0006 mg/L | 0.00001         | 0.0006 mg/L        | 0.00001  | 2.01%   |
| Cr 267.716*†                                                     | 64.5                     | 0.0005 mg/L | 0.00013         | 0.0005 mg/L        | 0.00013  | 24.26%  |
| Cu 324.752*†                                                     | 706.5                    | 0.0027 mg/L | 0.00057         | 0.0027 mg/L        | 0.00057  | 21.39%  |
| Fe 273.955*†                                                     | 445.6                    | 0.0179 mg/L | 0.00126         | 0.0179 mg/L        | 0.00126  | 7.08%   |
| K 766.490*†                                                      | 240.0                    | 0.0745 mg/L | 0.08133         | 0.0745 mg/L        | 0.08133  | 109.11% |
| Mg 279.077*†                                                     | 216.2                    | 0.0104 mg/L | 0.00887         | 0.0104 mg/L        | 0.00887  | 85.11%  |
| Mn 257.610*†                                                     | 673.7                    | 0.0010 mg/L | 0.00009         | 0.0010 mg/L        | 0.00009  | 9.16%   |
| Mo 202.031*†                                                     | 8.7                      | 0.0009 mg/L | 0.00019         | 0.0009 mg/L        | 0.00019  | 20.92%  |
| Na 589.592*†                                                     | 1134.8                   | 0.2435 mg/L | 0.04141         | 0.2435 mg/L        | 0.04141  | 17.01%  |
| Ni 231.604*†                                                     | 13.4                     | 0.0005 mg/L | 0.00071         | 0.0005 mg/L        | 0.00071  | 138.98% |
| P 213.617*†                                                      | 2.0                      | 0.0009 mg/L | 0.00060         | 0.0009 mg/L        | 0.00060  | 66.40%  |
| P 214.914†                                                       | 4.3                      | 0.0031 mg/L | 0.00586         | 0.0031 mg/L        | 0.00586  | 188.39% |
| Pb 220.353*†                                                     | 20.6                     | 0.0024 mg/L | 0.00166         | 0.0024 mg/L        | 0.00166  | 69.99%  |
| Sb 206.836†                                                      | 5.4                      | 0.0026 mg/L | 0.00136         | 0.0026 mg/L        | 0.00136  | 51.72%  |
| Sb 217.582*†                                                     | 3.0                      | 0.0015 mg/L | 0.00739         | 0.0015 mg/L        | 0.00739  | 502.93% |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |                 |                    |          |         |
| Se 196.026*†                                                     | 27.1                     | 0.0112 mg/L | 0.00565         | 0.0112 mg/L        | 0.00565  | 50.40%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |                 |                    |          |         |
| Si 251.611*†                                                     | 1107.2                   | 0.0262 mg/L | 0.00259         | 0.0262 mg/L        | 0.00259  | 9.89%   |
| Sn 189.927*†                                                     | 26.8                     | 0.0041 mg/L | 0.00323         | 0.0041 mg/L        | 0.00323  | 79.52%  |
| Sn 242.170†                                                      | 21.8                     | 0.0116 mg/L | 0.00128         | 0.0116 mg/L        | 0.00128  | 11.07%  |
| Sr 407.771*†                                                     | 110.2                    | 0.0003 mg/L | 0.00004         | 0.0003 mg/L        | 0.00004  | 12.23%  |
| Ti 334.940†                                                      | 667.8                    | 0.0008 mg/L | 0.00004         | 0.0008 mg/L        | 0.00004  | 5.41%   |
| Ti 336.121*†                                                     | 646.5                    | 0.0010 mg/L | 0.00033         | 0.0010 mg/L        | 0.00033  | 31.06%  |
| Tl 190.801*†                                                     | 6.8                      | 0.0035 mg/L | 0.00033         | 0.0035 mg/L        | 0.00033  | 9.54%   |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |                 |                    |          |         |
| V 292.402*†                                                      | 167.1                    | 0.0012 mg/L | 0.00057         | 0.0012 mg/L        | 0.00057  | 48.49%  |
| Zn 206.200*†                                                     | 221.0                    | 0.0049 mg/L | 0.00033         | 0.0049 mg/L        | 0.00033  | 6.73%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |             |                 |                    |          |         |
| All analyte(s) passed QC.                                        |                          |             |                 |                    |          |         |

Sequence No.: 2  
 Sample ID: CCV= STD3x0.5  
 Analyst: 935 icp 7300  
 Initial Sample Wt:  
 Dilution:  
 Wash Time: 15

Autosampler Location: 3  
 Date Collected: 3/27/2017 4:18:08 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:  
 Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc. Units | Calib. | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|-------------|--------|----------|--------------------|----------|-------|
| Tb 384                                                    | 71810.3                  | 87.77 %     |        | 1.689    |                    |          | 1.92% |
| Tb 350                                                    | 118779.5                 | 89.65 %     |        | 0.333    |                    |          | 0.37% |
| Ag 328.068*†                                              | 74247.6                  | 0.3718 mg/L |        | 0.00243  | 0.3718 mg/L        | 0.00243  | 0.65% |
| QC value within limits for Ag 328.068* Recovery = 99.15%  |                          |             |        |          |                    |          |       |
| Al 308.215*†                                              | 249494.6                 | 13.89 mg/L  |        | 0.004    | 13.89 mg/L         | 0.004    | 0.03% |
| QC value within limits for Al 308.215* Recovery = 102.92% |                          |             |        |          |                    |          |       |
| As 188.979†                                               | 8683.8                   | 3.722 mg/L  |        | 0.0223   | 3.722 mg/L         | 0.0223   | 0.60% |
| QC value within limits for As 188.979 Recovery = 99.26%   |                          |             |        |          |                    |          |       |
| As 193.696*†                                              | 5989.2                   | 3.721 mg/L  |        | 0.0088   | 3.721 mg/L         | 0.0088   | 0.24% |
| QC value within limits for As 193.696* Recovery = 99.23%  |                          |             |        |          |                    |          |       |
| B 249.677*†                                               | 198850.4                 | 3.691 mg/L  |        | 0.0684   | 3.691 mg/L         | 0.0684   | 1.85% |
| QC value within limits for B 249.677* Recovery = 98.42%   |                          |             |        |          |                    |          |       |
| Ba 233.527*†                                              | 1216585.8                | 7.592 mg/L  |        | 0.0112   | 7.592 mg/L         | 0.0112   | 0.15% |
| QC value within limits for Ba 233.527* Recovery = 101.23% |                          |             |        |          |                    |          |       |
| Be 313.042*†                                              | 2270501.3                | 0.5551 mg/L |        | 0.00612  | 0.5551 mg/L        | 0.00612  | 1.10% |
| QC value within limits for Be 313.042* Recovery = 98.68%  |                          |             |        |          |                    |          |       |
| Ca 317.933*†                                              | 62950.0                  | 28.78 mg/L  |        | 0.218    | 28.78 mg/L         | 0.218    | 0.76% |
| QC value within limits for Ca 317.933* Recovery = 95.94%  |                          |             |        |          |                    |          |       |
| Cd 226.502*†                                              | 62966.9                  | 0.7480 mg/L |        | 0.00086  | 0.7480 mg/L        | 0.00086  | 0.11% |
| QC value within limits for Cd 226.502* Recovery = 99.73%  |                          |             |        |          |                    |          |       |
| Cd 228.802†                                               | 30973.4                  | 0.7485 mg/L |        | 0.00605  | 0.7485 mg/L        | 0.00605  | 0.81% |
| Co 228.616*†                                              | 56367.0                  | 1.883 mg/L  |        | 0.0062   | 1.883 mg/L         | 0.0062   | 0.33% |
| QC value within limits for Co 228.616* Recovery = 100.44% |                          |             |        |          |                    |          |       |
| Cr 267.716*†                                              | 72598.5                  | 0.6016 mg/L |        | 0.00641  | 0.6016 mg/L        | 0.00641  | 1.06% |
| QC value within limits for Cr 267.716* Recovery = 100.26% |                          |             |        |          |                    |          |       |
| Cu 324.752*†                                              | 247389.6                 | 0.9387 mg/L |        | 0.00487  | 0.9387 mg/L        | 0.00487  | 0.52% |
| QC value within limits for Cu 324.752* Recovery = 100.12% |                          |             |        |          |                    |          |       |
| Fe 273.955*†                                              | 95138.4                  | 3.811 mg/L  |        | 0.0112   | 3.811 mg/L         | 0.0112   | 0.29% |
| QC value within limits for Fe 273.955* Recovery = 101.63% |                          |             |        |          |                    |          |       |
| K 766.490*†                                               | 85303.6                  | 26.49 mg/L  |        | 0.111    | 26.49 mg/L         | 0.111    | 0.42% |
| QC value within limits for K 766.490* Recovery = 98.12%   |                          |             |        |          |                    |          |       |
| Mg 279.077*†                                              | 158601.5                 | 7.644 mg/L  |        | 0.0190   | 7.644 mg/L         | 0.0190   | 0.25% |
| QC value within limits for Mg 279.077* Recovery = 101.92% |                          |             |        |          |                    |          |       |
| Mn 257.610*†                                              | 517059.7                 | 0.7504 mg/L |        | 0.00094  | 0.7504 mg/L        | 0.00094  | 0.12% |
| QC value within limits for Mn 257.610* Recovery = 100.05% |                          |             |        |          |                    |          |       |
| Mo 202.031*†                                              | 5931.3                   | 0.6110 mg/L |        | 0.00230  | 0.6110 mg/L        | 0.00230  | 0.38% |
| QC value within limits for Mo 202.031* Recovery = 101.84% |                          |             |        |          |                    |          |       |
| Na 589.592*†                                              | 176153.2                 | 37.80 mg/L  |        | 0.076    | 37.80 mg/L         | 0.076    | 0.20% |
| QC value within limits for Na 589.592* Recovery = 104.99% |                          |             |        |          |                    |          |       |
| Ni 231.604*†                                              | 16015.1                  | 0.6059 mg/L |        | 0.00175  | 0.6059 mg/L        | 0.00175  | 0.29% |
| QC value within limits for Ni 231.604* Recovery = 100.98% |                          |             |        |          |                    |          |       |
| P 213.617*†                                               | 12899.4                  | 5.847 mg/L  |        | 0.0301   | 5.847 mg/L         | 0.0301   | 0.51% |
| QC value within limits for P 213.617* Recovery = 97.44%   |                          |             |        |          |                    |          |       |
| P 214.914†                                                | 8259.0                   | 5.982 mg/L  |        | 0.0428   | 5.982 mg/L         | 0.0428   | 0.72% |
| Pb 220.353*†                                              | 32345.4                  | 3.732 mg/L  |        | 0.0058   | 3.732 mg/L         | 0.0058   | 0.16% |
| QC value within limits for Pb 220.353* Recovery = 99.52%  |                          |             |        |          |                    |          |       |
| Sb 206.836†                                               | 9219.8                   | 4.521 mg/L  |        | 0.0175   | 4.521 mg/L         | 0.0175   | 0.39% |
| QC value within limits for Sb 206.836 Recovery = 100.47%  |                          |             |        |          |                    |          |       |
| Sb 217.582*†                                              | 9059.9                   | 4.469 mg/L  |        | 0.0448   | 4.469 mg/L         | 0.0448   | 1.00% |
| QC value within limits for Sb 217.582* Recovery = 99.32%  |                          |             |        |          |                    |          |       |
| Se 196.026*†                                              | 3656.5                   | 1.514 mg/L  |        | 0.0134   | 1.514 mg/L         | 0.0134   | 0.88% |
| QC value within limits for Se 196.026* Recovery = 100.93% |                          |             |        |          |                    |          |       |
| Si 251.611*†                                              | 247194.0                 | 5.850 mg/L  |        | 0.0329   | 5.850 mg/L         | 0.0329   | 0.56% |
| QC value within limits for Si 251.611* Recovery = 97.50%  |                          |             |        |          |                    |          |       |
| Sn 189.927*†                                              | 20140.8                  | 3.044 mg/L  |        | 0.0224   | 3.044 mg/L         | 0.0224   | 0.74% |
| QC value within limits for Sn 189.927* Recovery = 101.48% |                          |             |        |          |                    |          |       |
| Sn 242.170†                                               | 5658.7                   | 3.006 mg/L  |        | 0.0005   | 3.006 mg/L         | 0.0005   | 0.02% |
| Sr 407.771*†                                              | 101102.2                 | 0.2951 mg/L |        | 0.00018  | 0.2951 mg/L        | 0.00018  | 0.06% |
| QC value within limits for Sr 407.771* Recovery = 98.38%  |                          |             |        |          |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 527222.6 | 0.6007 mg/L | 0.00197 | 0.6007 mg/L | 0.00197 | 0.33% |
| Ti 336.121*†                                              | 371350.5 | 0.6027 mg/L | 0.00108 | 0.6027 mg/L | 0.00108 | 0.18% |
| QC value within limits for Ti 336.121* Recovery = 100.46% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 3006.0   | 1.537 mg/L  | 0.0054  | 1.537 mg/L  | 0.0054  | 0.35% |
| QC value within limits for Tl 190.801* Recovery = 102.47% |          |             |         |             |         |       |
| V 292.402*†                                               | 269756.3 | 1.882 mg/L  | 0.0137  | 1.882 mg/L  | 0.0137  | 0.73% |
| QC value within limits for V 292.402* Recovery = 100.40%  |          |             |         |             |         |       |
| Zn 206.200*†                                              | 111671.4 | 2.459 mg/L  | 0.0112  | 2.459 mg/L  | 0.0112  | 0.45% |
| QC value within limits for Zn 206.200* Recovery = 98.37%  |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 4:19:02 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|-------------|--------------|----------|--------------------|----------|---------|
| Tb 384                                                           | 79369.7                  | 97.01       | %            | 0.928    |                    |          | 0.96%   |
| Tb 350                                                           | 128494.8                 | 96.98       | %            | 1.093    |                    |          | 1.13%   |
| Ag 328.068*†                                                     | 49.1                     | 0.0002      | mg/L         | 0.00013  | 0.0002 mg/L        | 0.00013  | 53.93%  |
| Al 308.215*†                                                     | 273.7                    | 0.0152      | mg/L         | 0.00019  | 0.0152 mg/L        | 0.00019  | 1.22%   |
| As 188.979†                                                      | 2.7                      | 0.0011      | mg/L         | 0.00200  | 0.0011 mg/L        | 0.00200  | 176.09% |
| As 193.696*†                                                     | 6.5                      | 0.0040      | mg/L         | 0.00308  | 0.0040 mg/L        | 0.00308  | 76.11%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| B 249.677*†                                                      | 2057.8                   | 0.0382      | mg/L         | 0.00353  | 0.0382 mg/L        | 0.00353  | 9.25%   |
| Ba 233.527*†                                                     | 1106.3                   | 0.0069      | mg/L         | 0.00030  | 0.0069 mg/L        | 0.00030  | 4.32%   |
| Be 313.042*†                                                     | 2064.7                   | 0.0005      | mg/L         | 0.00000  | 0.0005 mg/L        | 0.00000  | 0.72%   |
| Ca 317.933*†                                                     | 164.6                    | 0.0753      | mg/L         | 0.00524  | 0.0753 mg/L        | 0.00524  | 6.97%   |
| Cd 226.502*†                                                     | 63.0                     | 0.0007      | mg/L         | 0.00002  | 0.0007 mg/L        | 0.00002  | 2.16%   |
| Cd 228.802†                                                      | 38.3                     | 0.0009      | mg/L         | 0.00029  | 0.0009 mg/L        | 0.00029  | 31.67%  |
| Co 228.616*†                                                     | 44.9                     | 0.0015      | mg/L         | 0.00053  | 0.0015 mg/L        | 0.00053  | 35.41%  |
| Cr 267.716*†                                                     | 128.3                    | 0.0011      | mg/L         | 0.00019  | 0.0011 mg/L        | 0.00019  | 17.56%  |
| Cu 324.752*†                                                     | 540.7                    | 0.0021      | mg/L         | 0.00150  | 0.0021 mg/L        | 0.00150  | 73.27%  |
| Fe 273.955*†                                                     | 298.0                    | 0.0119      | mg/L         | 0.00048  | 0.0119 mg/L        | 0.00048  | 4.02%   |
| K 766.490*†                                                      | 183.0                    | 0.0568      | mg/L         | 0.01351  | 0.0568 mg/L        | 0.01351  | 23.78%  |
| Mg 279.077*†                                                     | -170.9                   | -0.0082     | mg/L         | 0.00366  | -0.0082 mg/L       | 0.00366  | 44.39%  |
| Mn 257.610*†                                                     | 736.0                    | 0.0011      | mg/L         | 0.00000  | 0.0011 mg/L        | 0.00000  | 0.17%   |
| Mo 202.031*†                                                     | 5.5                      | 0.0006      | mg/L         | 0.00021  | 0.0006 mg/L        | 0.00021  | 36.14%  |
| Na 589.592*†                                                     | 1168.7                   | 0.2508      | mg/L         | 0.00609  | 0.2508 mg/L        | 0.00609  | 2.43%   |
| Ni 231.604*†                                                     | 24.7                     | 0.0009      | mg/L         | 0.00054  | 0.0009 mg/L        | 0.00054  | 57.53%  |
| P 213.617*†                                                      | 27.3                     | 0.0124      | mg/L         | 0.01093  | 0.0124 mg/L        | 0.01093  | 88.39%  |
| P 214.914†                                                       | 9.0                      | 0.0065      | mg/L         | 0.00572  | 0.0065 mg/L        | 0.00572  | 87.95%  |
| Pb 220.353*†                                                     | 27.4                     | 0.0032      | mg/L         | 0.00128  | 0.0032 mg/L        | 0.00128  | 40.56%  |
| Sb 206.836†                                                      | 7.0                      | 0.0034      | mg/L         | 0.00109  | 0.0034 mg/L        | 0.00109  | 31.66%  |
| Sb 217.582*†                                                     | -0.6                     | -0.0003     | mg/L         | 0.00358  | -0.0003 mg/L       | 0.00358  | >999.9% |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Se 196.026*†                                                     | 10.4                     | 0.0043      | mg/L         | 0.00935  | 0.0043 mg/L        | 0.00935  | 218.22% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Si 251.611*†                                                     | 454.7                    | 0.0108      | mg/L         | 0.00083  | 0.0108 mg/L        | 0.00083  | 7.72%   |
| Sn 189.927*†                                                     | 47.5                     | 0.0072      | mg/L         | 0.00155  | 0.0072 mg/L        | 0.00155  | 21.63%  |
| Sn 242.170†                                                      | 26.1                     | 0.0139      | mg/L         | 0.00486  | 0.0139 mg/L        | 0.00486  | 35.07%  |
| Sr 407.771*†                                                     | 158.4                    | 0.0005      | mg/L         | 0.00000  | 0.0005 mg/L        | 0.00000  | 0.50%   |
| Ti 334.940†                                                      | 891.8                    | 0.0010      | mg/L         | 0.00005  | 0.0010 mg/L        | 0.00005  | 4.92%   |
| Ti 336.121*†                                                     | 694.6                    | 0.0011      | mg/L         | 0.00004  | 0.0011 mg/L        | 0.00004  | 3.93%   |
| Tl 190.801*†                                                     | 6.3                      | 0.0032      | mg/L         | 0.00136  | 0.0032 mg/L        | 0.00136  | 42.69%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| V 292.402*†                                                      | 259.5                    | 0.0018      | mg/L         | 0.00056  | 0.0018 mg/L        | 0.00056  | 30.78%  |
| Zn 206.200*†                                                     | 152.4                    | 0.0034      | mg/L         | 0.00015  | 0.0034 mg/L        | 0.00015  | 4.62%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |             |              |          |                    |          |         |

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/27/2017 5:07:05 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc.  | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|--------|-------|----------|--------------|-------|----------|-------|
| Tb 384                                                    | 72153.8                  | 88.19  | %     | 0.736    |              |       |          | 0.83% |
| Tb 350                                                    | 119235.7                 | 90.00  | %     | 0.479    |              |       |          | 0.53% |
| Ag 328.068*†                                              | 74831.2                  | 0.3747 | mg/L  | 0.00099  | 0.3747       | mg/L  | 0.00099  | 0.26% |
| QC value within limits for Ag 328.068* Recovery = 99.93%  |                          |        |       |          |              |       |          |       |
| Al 308.215*†                                              | 249870.4                 | 13.91  | mg/L  | 0.022    | 13.91        | mg/L  | 0.022    | 0.16% |
| QC value within limits for Al 308.215* Recovery = 103.07% |                          |        |       |          |              |       |          |       |
| As 188.979†                                               | 8561.8                   | 3.670  | mg/L  | 0.0354   | 3.670        | mg/L  | 0.0354   | 0.96% |
| QC value within limits for As 188.979 Recovery = 97.86%   |                          |        |       |          |              |       |          |       |
| As 193.696*†                                              | 5920.8                   | 3.679  | mg/L  | 0.0226   | 3.679        | mg/L  | 0.0226   | 0.61% |
| QC value within limits for As 193.696* Recovery = 98.10%  |                          |        |       |          |              |       |          |       |
| B 249.677*†                                               | 202762.5                 | 3.763  | mg/L  | 0.0076   | 3.763        | mg/L  | 0.0076   | 0.20% |
| QC value within limits for B 249.677* Recovery = 100.36%  |                          |        |       |          |              |       |          |       |
| Ba 233.527*†                                              | 1229592.3                | 7.674  | mg/L  | 0.0105   | 7.674        | mg/L  | 0.0105   | 0.14% |
| QC value within limits for Ba 233.527* Recovery = 102.32% |                          |        |       |          |              |       |          |       |
| Be 313.042*†                                              | 2288874.5                | 0.5596 | mg/L  | 0.00243  | 0.5596       | mg/L  | 0.00243  | 0.43% |
| QC value within limits for Be 313.042* Recovery = 99.48%  |                          |        |       |          |              |       |          |       |
| Ca 317.933*†                                              | 63353.5                  | 28.97  | mg/L  | 0.017    | 28.97        | mg/L  | 0.017    | 0.06% |
| QC value within limits for Ca 317.933* Recovery = 96.55%  |                          |        |       |          |              |       |          |       |
| Cd 226.502*†                                              | 63043.7                  | 0.7489 | mg/L  | 0.00297  | 0.7489       | mg/L  | 0.00297  | 0.40% |
| QC value within limits for Cd 226.502* Recovery = 99.85%  |                          |        |       |          |              |       |          |       |
| Cd 228.802†                                               | 30972.8                  | 0.7485 | mg/L  | 0.00335  | 0.7485       | mg/L  | 0.00335  | 0.45% |
| Co 228.616*†                                              | 57278.8                  | 1.914  | mg/L  | 0.0000   | 1.914        | mg/L  | 0.0000   | 0.00% |
| QC value within limits for Co 228.616* Recovery = 102.07% |                          |        |       |          |              |       |          |       |
| Cr 267.716*†                                              | 72872.8                  | 0.6039 | mg/L  | 0.00293  | 0.6039       | mg/L  | 0.00293  | 0.48% |
| QC value within limits for Cr 267.716* Recovery = 100.64% |                          |        |       |          |              |       |          |       |
| Cu 324.752*†                                              | 250056.7                 | 0.9488 | mg/L  | 0.00445  | 0.9488       | mg/L  | 0.00445  | 0.47% |
| QC value within limits for Cu 324.752* Recovery = 101.20% |                          |        |       |          |              |       |          |       |
| Fe 273.955*†                                              | 96456.1                  | 3.864  | mg/L  | 0.0107   | 3.864        | mg/L  | 0.0107   | 0.28% |
| QC value within limits for Fe 273.955* Recovery = 103.04% |                          |        |       |          |              |       |          |       |
| K 766.490*†                                               | 84895.5                  | 26.36  | mg/L  | 0.095    | 26.36        | mg/L  | 0.095    | 0.36% |
| QC value within limits for K 766.490* Recovery = 97.65%   |                          |        |       |          |              |       |          |       |
| Mg 279.077*†                                              | 158146.8                 | 7.622  | mg/L  | 0.0182   | 7.622        | mg/L  | 0.0182   | 0.24% |
| QC value within limits for Mg 279.077* Recovery = 101.63% |                          |        |       |          |              |       |          |       |
| Mn 257.610*†                                              | 518658.5                 | 0.7527 | mg/L  | 0.00058  | 0.7527       | mg/L  | 0.00058  | 0.08% |
| QC value within limits for Mn 257.610* Recovery = 100.36% |                          |        |       |          |              |       |          |       |
| Mo 202.031*†                                              | 5896.3                   | 0.6074 | mg/L  | 0.00070  | 0.6074       | mg/L  | 0.00070  | 0.11% |
| QC value within limits for Mo 202.031* Recovery = 101.24% |                          |        |       |          |              |       |          |       |
| Na 589.592*†                                              | 171177.5                 | 36.73  | mg/L  | 0.211    | 36.73        | mg/L  | 0.211    | 0.58% |
| QC value within limits for Na 589.592* Recovery = 102.03% |                          |        |       |          |              |       |          |       |
| Ni 231.604*†                                              | 15900.3                  | 0.6015 | mg/L  | 0.00202  | 0.6015       | mg/L  | 0.00202  | 0.34% |
| QC value within limits for Ni 231.604* Recovery = 100.25% |                          |        |       |          |              |       |          |       |
| P 213.617*†                                               | 13009.3                  | 5.896  | mg/L  | 0.0262   | 5.896        | mg/L  | 0.0262   | 0.44% |
| QC value within limits for P 213.617* Recovery = 98.27%   |                          |        |       |          |              |       |          |       |
| P 214.914†                                                | 8221.9                   | 5.956  | mg/L  | 0.0391   | 5.956        | mg/L  | 0.0391   | 0.66% |
| Pb 220.353*†                                              | 32630.2                  | 3.765  | mg/L  | 0.0238   | 3.765        | mg/L  | 0.0238   | 0.63% |
| QC value within limits for Pb 220.353* Recovery = 100.39% |                          |        |       |          |              |       |          |       |
| Sb 206.836†                                               | 9155.5                   | 4.489  | mg/L  | 0.0229   | 4.489        | mg/L  | 0.0229   | 0.51% |
| QC value within limits for Sb 206.836 Recovery = 99.76%   |                          |        |       |          |              |       |          |       |
| Sb 217.582*†                                              | 9000.4                   | 4.440  | mg/L  | 0.0156   | 4.440        | mg/L  | 0.0156   | 0.35% |
| QC value within limits for Sb 217.582* Recovery = 98.66%  |                          |        |       |          |              |       |          |       |
| Se 196.026*†                                              | 3582.1                   | 1.483  | mg/L  | 0.0211   | 1.483        | mg/L  | 0.0211   | 1.42% |
| QC value within limits for Se 196.026* Recovery = 98.88%  |                          |        |       |          |              |       |          |       |
| Si 251.611*†                                              | 256890.5                 | 6.079  | mg/L  | 0.0405   | 6.079        | mg/L  | 0.0405   | 0.67% |
| QC value within limits for Si 251.611* Recovery = 101.32% |                          |        |       |          |              |       |          |       |
| Sn 189.927*†                                              | 20083.5                  | 3.036  | mg/L  | 0.0142   | 3.036        | mg/L  | 0.0142   | 0.47% |
| QC value within limits for Sn 189.927* Recovery = 101.19% |                          |        |       |          |              |       |          |       |
| Sn 242.170†                                               | 5637.4                   | 2.995  | mg/L  | 0.0067   | 2.995        | mg/L  | 0.0067   | 0.22% |
| Sr 407.771*†                                              | 100186.5                 | 0.2925 | mg/L  | 0.00154  | 0.2925       | mg/L  | 0.00154  | 0.53% |
| QC value within limits for Sr 407.771* Recovery = 97.49%  |                          |        |       |          |              |       |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 531564.2 | 0.6056 mg/L | 0.00096 | 0.6056 mg/L | 0.00096 | 0.16% |
| Ti 336.121*†                                              | 373903.7 | 0.6069 mg/L | 0.00012 | 0.6069 mg/L | 0.00012 | 0.02% |
| QC value within limits for Ti 336.121* Recovery = 101.15% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2958.5   | 1.513 mg/L  | 0.0054  | 1.513 mg/L  | 0.0054  | 0.36% |
| QC value within limits for Tl 190.801* Recovery = 100.85% |          |             |         |             |         |       |
| V 292.402*†                                               | 271652.1 | 1.896 mg/L  | 0.0036  | 1.896 mg/L  | 0.0036  | 0.19% |
| QC value within limits for V 292.402* Recovery = 101.10%  |          |             |         |             |         |       |
| Zn 206.200*†                                              | 114243.1 | 2.516 mg/L  | 0.0020  | 2.516 mg/L  | 0.0020  | 0.08% |
| QC value within limits for Zn 206.200* Recovery = 100.63% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 5:07:57 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected Intensity | Conc. Units | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|--------------------------|-------------|--------------|----------|--------------------|----------|---------|
| Tb 384                                                           | 81718.9                  | 99.88       | %            | 0.111    |                    |          | 0.11%   |
| Tb 350                                                           | 132078.6                 | 99.69       | %            | 0.104    |                    |          | 0.10%   |
| Ag 328.068*†                                                     | 128.7                    | 0.0006      | mg/L         | 0.00060  | 0.0006 mg/L        | 0.00060  | 92.58%  |
| Al 308.215*†                                                     | 63.8                     | 0.0036      | mg/L         | 0.00319  | 0.0036 mg/L        | 0.00319  | 89.87%  |
| As 188.979†                                                      | 11.9                     | 0.0051      | mg/L         | 0.00284  | 0.0051 mg/L        | 0.00284  | 55.63%  |
| As 193.696*†                                                     | 1.3                      | 0.0008      | mg/L         | 0.00516  | 0.0008 mg/L        | 0.00516  | 659.96% |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| B 249.677*†                                                      | 1646.1                   | 0.0306      | mg/L         | 0.00177  | 0.0306 mg/L        | 0.00177  | 5.78%   |
| Ba 233.527*†                                                     | 533.6                    | 0.0033      | mg/L         | 0.00022  | 0.0033 mg/L        | 0.00022  | 6.71%   |
| Be 313.042*†                                                     | 987.3                    | 0.0002      | mg/L         | 0.00003  | 0.0002 mg/L        | 0.00003  | 14.08%  |
| Ca 317.933*†                                                     | 92.8                     | 0.0424      | mg/L         | 0.00685  | 0.0424 mg/L        | 0.00685  | 16.15%  |
| Cd 226.502*†                                                     | 30.2                     | 0.0004      | mg/L         | 0.00011  | 0.0004 mg/L        | 0.00011  | 31.22%  |
| Cd 228.802†                                                      | 12.1                     | 0.0003      | mg/L         | 0.00042  | 0.0003 mg/L        | 0.00042  | 144.32% |
| Co 228.616*†                                                     | 24.7                     | 0.0008      | mg/L         | 0.00017  | 0.0008 mg/L        | 0.00017  | 20.54%  |
| Cr 267.716*†                                                     | 23.3                     | 0.0002      | mg/L         | 0.00121  | 0.0002 mg/L        | 0.00121  | 624.95% |
| Cu 324.752*†                                                     | 326.2                    | 0.0012      | mg/L         | 0.00032  | 0.0012 mg/L        | 0.00032  | 26.14%  |
| Fe 273.955*†                                                     | 271.9                    | 0.0109      | mg/L         | 0.00005  | 0.0109 mg/L        | 0.00005  | 0.42%   |
| K 766.490*†                                                      | 61.2                     | 0.0190      | mg/L         | 0.06221  | 0.0190 mg/L        | 0.06221  | 327.28% |
| Mg 279.077*†                                                     | -11.8                    | -0.0006     | mg/L         | 0.00527  | -0.0006 mg/L       | 0.00527  | 923.99% |
| Mn 257.610*†                                                     | 500.9                    | 0.0007      | mg/L         | 0.00005  | 0.0007 mg/L        | 0.00005  | 7.14%   |
| Mo 202.031*†                                                     | 10.8                     | 0.0011      | mg/L         | 0.00179  | 0.0011 mg/L        | 0.00179  | 161.63% |
| Na 589.592*†                                                     | 785.0                    | 0.1684      | mg/L         | 0.00282  | 0.1684 mg/L        | 0.00282  | 1.67%   |
| Ni 231.604*†                                                     | 28.5                     | 0.0011      | mg/L         | 0.00022  | 0.0011 mg/L        | 0.00022  | 20.04%  |
| P 213.617*†                                                      | 49.5                     | 0.0225      | mg/L         | 0.00139  | 0.0225 mg/L        | 0.00139  | 6.17%   |
| P 214.914†                                                       | -5.5                     | -0.0040     | mg/L         | 0.00767  | -0.0040 mg/L       | 0.00767  | 193.63% |
| Pb 220.353*†                                                     | 20.2                     | 0.0023      | mg/L         | 0.00099  | 0.0023 mg/L        | 0.00099  | 42.57%  |
| Sb 206.836†                                                      | 12.6                     | 0.0062      | mg/L         | 0.00116  | 0.0062 mg/L        | 0.00116  | 18.77%  |
| Sb 217.582*†                                                     | 4.9                      | 0.0024      | mg/L         | 0.00262  | 0.0024 mg/L        | 0.00262  | 108.85% |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Se 196.026*†                                                     | 6.8                      | 0.0028      | mg/L         | 0.00235  | 0.0028 mg/L        | 0.00235  | 83.47%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Si 251.611*†                                                     | 1314.6                   | 0.0311      | mg/L         | 0.00113  | 0.0311 mg/L        | 0.00113  | 3.62%   |
| Sn 189.927*†                                                     | 56.9                     | 0.0086      | mg/L         | 0.00187  | 0.0086 mg/L        | 0.00187  | 21.78%  |
| Sn 242.170†                                                      | 28.0                     | 0.0149      | mg/L         | 0.00786  | 0.0149 mg/L        | 0.00786  | 52.89%  |
| Sr 407.771*†                                                     | 75.1                     | 0.0002      | mg/L         | 0.00016  | 0.0002 mg/L        | 0.00016  | 71.12%  |
| Ti 334.940†                                                      | 745.9                    | 0.0008      | mg/L         | 0.00002  | 0.0008 mg/L        | 0.00002  | 2.21%   |
| Ti 336.121*†                                                     | 571.0                    | 0.0009      | mg/L         | 0.00017  | 0.0009 mg/L        | 0.00017  | 18.67%  |
| Tl 190.801*†                                                     | 8.9                      | 0.0045      | mg/L         | 0.00490  | 0.0045 mg/L        | 0.00490  | 108.16% |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| V 292.402*†                                                      | 73.8                     | 0.0005      | mg/L         | 0.00047  | 0.0005 mg/L        | 0.00047  | 90.69%  |
| Zn 206.200*†                                                     | 189.1                    | 0.0042      | mg/L         | 0.00044  | 0.0042 mg/L        | 0.00044  | 10.61%  |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |             |              |          |                    |          |         |

All analyte(s) passed QC.

# EPA 6010B ICP Metals (Solid)

## Sample Data

# RAW DATA SHEET FOR METHOD: EPA 6010B

**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 13:12  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\17-03-1104-30 MIS.icp

**# 30** **CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

**LCS/MB BATCH:** 170324L11 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170324S11 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | -0.00867           | 0.976     | ND          | 0.732     |             |
| Arsenic         | 0.0427             | 0.976     | 2.08        | 0.732     |             |
| Barium          | 2.23               | 0.976     | 109         | 0.488     |             |
| Beryllium       | 0.00493            | 0.976     | ND          | 0.244     |             |
| Cadmium         | 0.00929            | 0.976     | ND          | 0.488     |             |
| Chromium        | 0.202              | 0.976     | 9.83        | 0.244     |             |
| Cobalt          | 0.168              | 0.976     | 8.18        | 0.244     |             |
| Copper          | 0.329              | 0.976     | 16.0        | 0.488     |             |
| Lead            | 0.203              | 0.976     | 9.88        | 0.488     |             |
| Molybdenum      | -0.00578           | 0.976     | ND          | 0.244     |             |
| Nickel          | 0.159              | 0.976     | 7.74        | 0.244     |             |
| Selenium        | 0.00679            | 0.976     | ND          | 0.732     |             |
| Silver          | 0.00191            | 0.976     | ND          | 0.244     |             |
| Thallium        | -0.0303            | 0.976     | ND          | 0.732     |             |
| Vanadium        | 0.530              | 0.976     | 25.9        | 0.244     |             |
| Zinc            | 24.4               | 0.976     | 1190        | 0.976     |             |

Sequence No.: 30  
 Sample ID: 17-03-1104-30 MIS  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.05 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 349  
 Date Collected: 3/27/2017 1:12:33 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

## Mean Data: 17-03-1104-30 MIS

| Analyte      | Mean Corrected Intensity | Calib. Conc. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|--------------|--------------------------|--------------------|----------|--------------------|----------|---------|
| Tb 384       | 59435.0                  | 72.65 %            | 0.221    |                    |          | 0.30%   |
| Tb 350       | 115273.1                 | 87.00 %            | 0.138    |                    |          | 0.16%   |
| Ag 328.068*† | 381.8                    | 0.0019 mg/L        | 0.00021  | 0.0933 mg/kg       | 0.01024  | 10.98%  |
| Al 308.215*† | 3539768.3                | 197.1 mg/L         | 1.40     | 9616 mg/kg         | 68.28    | 0.71%   |
| As 188.979†  | 111.0                    | 0.0476 mg/L        | 0.00291  | 2.322 mg/kg        | 0.1422   | 6.12%   |
| As 193.696*† | 68.8                     | 0.0427 mg/L        | 0.00866  | 2.084 mg/kg        | 0.4225   | 20.27%  |
| B 249.677*†  | 304.4                    | 0.0057 mg/L        | 0.00116  | 0.2756 mg/kg       | 0.05679  | 20.60%  |
| Ba 233.527*† | 357181.2                 | 2.229 mg/L         | 0.0150   | 108.7 mg/kg        | 0.73     | 0.67%   |
| Be 313.042*† | 20178.3                  | 0.0049 mg/L        | 0.00002  | 0.2406 mg/kg       | 0.00077  | 0.32%   |
| Ca 317.933*† | 236786.4                 | 108.3 mg/L         | 1.95     | 5281 mg/kg         | 94.95    | 1.80%   |
| Cd 226.502*† | 781.9                    | 0.0093 mg/L        | 0.00049  | 0.4531 mg/kg       | 0.02407  | 5.31%   |
| Cd 228.802†  | 114.7                    | 0.0028 mg/L        | 0.00008  | 0.1352 mg/kg       | 0.00368  | 2.72%   |
| Co 228.616*† | 5016.9                   | 0.1676 mg/L        | 0.00069  | 8.177 mg/kg        | 0.0337   | 0.41%   |
| Cr 267.716*† | 24323.9                  | 0.2016 mg/L        | 0.00369  | 9.832 mg/kg        | 0.1801   | 1.83%   |
| Cu 324.752*† | 86609.2                  | 0.3286 mg/L        | 0.00281  | 16.03 mg/kg        | 0.137    | 0.85%   |
| Fe 273.955*† | 6677903.8                | 267.5 mg/L         | 0.70     | 13050 mg/kg        | 34.04    | 0.26%   |
| K 766.490*†  | 217334.9                 | 67.49 mg/L         | 0.949    | 3292 mg/kg         | 46.30    | 1.41%   |
| Mg 279.077*† | 2080286.7                | 100.3 mg/L         | 0.82     | 4891 mg/kg         | 40.16    | 0.82%   |
| Mn 257.610*† | 17918579.8               | 26.00 mg/L         | 0.061    | 1269 mg/kg         | 2.98     | 0.23%   |
| Mo 202.031*† | -56.1                    | -0.0058 mg/L       | 0.00137  | -0.2819 mg/kg      | 0.06671  | 23.66%  |
| Na 589.592*† | 24661.6                  | 5.292 mg/L         | 0.0373   | 258.1 mg/kg        | 1.82     | 0.71%   |
| Ni 231.604*† | 4193.1                   | 0.1586 mg/L        | 0.00443  | 7.738 mg/kg        | 0.2161   | 2.79%   |
| P 213.617*†  | 36549.6                  | 16.57 mg/L         | 0.438    | 808.1 mg/kg        | 21.38    | 2.65%   |
| P 214.914†   | 23995.5                  | 17.38 mg/L         | 0.411    | 847.9 mg/kg        | 20.07    | 2.37%   |
| Pb 220.353*† | 1755.4                   | 0.2025 mg/L        | 0.00426  | 9.879 mg/kg        | 0.2079   | 2.10%   |
| Sb 206.836†  | -18.7                    | -0.0092 mg/L       | 0.00682  | -0.4475 mg/kg      | 0.33276  | 74.35%  |
| Sb 217.582*† | -17.6                    | -0.0087 mg/L       | 0.00384  | -0.4231 mg/kg      | 0.18724  | 44.25%  |
| Se 196.026*† | 16.4                     | 0.0068 mg/L        | 0.03250  | 0.3312 mg/kg       | 1.58523  | 478.60% |
| Si 251.611*† | 746290.5                 | 17.66 mg/L         | 0.185    | 861.5 mg/kg        | 9.03     | 1.05%   |
| Sn 189.927*† | -533.5                   | -0.0806 mg/L       | 0.00631  | -3.934 mg/kg       | 0.3076   | 7.82%   |
| Sn 242.170†  | 1381.0                   | 0.7337 mg/L        | 0.02029  | 35.79 mg/kg        | 0.990    | 2.77%   |
| Sr 407.771*† | 343572.1                 | 1.003 mg/L         | 0.0147   | 48.92 mg/kg        | 0.718    | 1.47%   |
| Ti 334.940†  | 17270987.7               | 19.68 mg/L         | 0.026    | 959.8 mg/kg        | 1.27     | 0.13%   |
| Ti 336.121*† | 12300882.9               | 19.97 mg/L         | 0.011    | 973.9 mg/kg        | 0.52     | 0.05%   |
| Tl 190.801*† | -59.2                    | -0.0303 mg/L       | 0.00684  | -1.477 mg/kg       | 0.3335   | 22.59%  |
| V 292.402*†  | 76623.8                  | 0.5303 mg/L        | 0.00066  | 25.87 mg/kg        | 0.032    | 0.12%   |
| Zn 206.200*† | 1109812.0                | 24.44 mg/L         | 0.182    | 1192 mg/kg         | 8.88     | 0.74%   |

# RAW DATA SHEET FOR METHOD: EPA 6010B

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 13:13  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\17-03-1104-31 MIS.icp

**# 31** **CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

**LCS/MB BATCH:** 170324L11 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170324S11 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | -0.0154            | 0.971     | ND          | 0.728     |             |
| Arsenic         | 0.0320             | 0.971     | 1.55        | 0.728     |             |
| Barium          | 2.32               | 0.971     | 113         | 0.485     |             |
| Beryllium       | 0.00526            | 0.971     | 0.255       | 0.243     |             |
| Cadmium         | 0.00963            | 0.971     | ND          | 0.485     |             |
| Chromium        | 0.209              | 0.971     | 10.1        | 0.243     |             |
| Cobalt          | 0.173              | 0.971     | 8.40        | 0.243     |             |
| Copper          | 0.331              | 0.971     | 16.1        | 0.485     |             |
| Lead            | 0.211              | 0.971     | 10.3        | 0.485     |             |
| Molybdenum      | 0.000755           | 0.971     | ND          | 0.243     |             |
| Nickel          | 0.167              | 0.971     | 8.11        | 0.243     |             |
| Selenium        | 0.00834            | 0.971     | ND          | 0.728     |             |
| Silver          | 0.00122            | 0.971     | ND          | 0.243     |             |
| Thallium        | -0.0156            | 0.971     | ND          | 0.728     |             |
| Vanadium        | 0.566              | 0.971     | 27.5        | 0.243     |             |
| Zinc            | 24.5               | 0.971     | 1190        | 0.971     |             |

Return to Contents

Sequence No.: 31  
 Sample ID: 17-03-1104-31 MIS  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.06 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 350  
 Date Collected: 3/27/2017 1:13:19 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

## Mean Data: 17-03-1104-31 MIS

| Analyte      | Mean Corrected<br>Intensity | Conc.   | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|---------|-----------------|----------|-----------------------|----------|---------|
| Tb 384       | 57726.1                     | 70.56   | %               | 0.604    |                       |          | 0.86%   |
| Tb 350       | 113995.0                    | 86.04   | %               | 1.159    |                       |          | 1.35%   |
| Ag 328.068*† | 244.3                       | 0.0012  | mg/L            | 0.00050  | 0.0594 mg/kg          | 0.02444  | 41.15%  |
| Al 308.215*† | 3768167.9                   | 209.8   | mg/L            | 0.37     | 10190 mg/kg           | 17.75    | 0.17%   |
| As 188.979†  | 98.2                        | 0.0421  | mg/L            | 0.01416  | 2.044 mg/kg           | 0.6873   | 33.62%  |
| As 193.696*† | 51.5                        | 0.0320  | mg/L            | 0.00041  | 1.553 mg/kg           | 0.0198   | 1.27%   |
| B 249.677*†  | 279.0                       | 0.0052  | mg/L            | 0.00060  | 0.2514 mg/kg          | 0.02919  | 11.61%  |
| Ba 233.527*† | 372541.7                    | 2.325   | mg/L            | 0.0067   | 112.9 mg/kg           | 0.33     | 0.29%   |
| Be 313.042*† | 21513.5                     | 0.0053  | mg/L            | 0.00005  | 0.2553 mg/kg          | 0.00231  | 0.90%   |
| Ca 317.933*† | 257013.7                    | 117.5   | mg/L            | 0.72     | 5704 mg/kg            | 34.74    | 0.61%   |
| Cd 226.502*† | 810.5                       | 0.0096  | mg/L            | 0.00021  | 0.4674 mg/kg          | 0.01021  | 2.18%   |
| Cd 228.802†  | 152.5                       | 0.0037  | mg/L            | 0.00029  | 0.1789 mg/kg          | 0.01396  | 7.80%   |
| Co 228.616*† | 5177.8                      | 0.1730  | mg/L            | 0.00146  | 8.398 mg/kg           | 0.0709   | 0.84%   |
| Cr 267.716*† | 25216.8                     | 0.2090  | mg/L            | 0.00061  | 10.14 mg/kg           | 0.030    | 0.29%   |
| Cu 324.752*† | 87178.8                     | 0.3308  | mg/L            | 0.00240  | 16.06 mg/kg           | 0.117    | 0.73%   |
| Fe 273.955*† | 7028568.4                   | 281.6   | mg/L            | 2.57     | 13670 mg/kg           | 124.72   | 0.91%   |
| K 766.490*†  | 228411.0                    | 70.93   | mg/L            | 0.673    | 3443 mg/kg            | 32.67    | 0.95%   |
| Mg 279.077*† | 2199753.8                   | 106.0   | mg/L            | 0.84     | 5147 mg/kg            | 40.68    | 0.79%   |
| Mn 257.610*† | 17477788.4                  | 25.36   | mg/L            | 0.212    | 1231 mg/kg            | 10.30    | 0.84%   |
| Mo 202.031*† | 7.3                         | 0.0008  | mg/L            | 0.00630  | 0.0366 mg/kg          | 0.30593  | 835.28% |
| Na 589.592*† | 27901.5                     | 5.987   | mg/L            | 0.0917   | 290.6 mg/kg           | 4.45     | 1.53%   |
| Ni 231.604*† | 4413.7                      | 0.1670  | mg/L            | 0.00087  | 8.105 mg/kg           | 0.0423   | 0.52%   |
| P 213.617*†  | 39948.1                     | 18.11   | mg/L            | 0.151    | 879.0 mg/kg           | 7.35     | 0.84%   |
| P 214.914†   | 26121.1                     | 18.92   | mg/L            | 0.147    | 918.5 mg/kg           | 7.13     | 0.78%   |
| Pb 220.353*† | 1830.4                      | 0.2112  | mg/L            | 0.00543  | 10.25 mg/kg           | 0.263    | 2.57%   |
| Sb 206.836†  | 2.1                         | 0.0010  | mg/L            | 0.01838  | 0.0492 mg/kg          | 0.89199  | >999.9% |
| Sb 217.582*† | -31.3                       | -0.0154 | mg/L            | 0.00928  | -0.7494 mg/kg         | 0.45038  | 60.10%  |
| Se 196.026*† | 20.1                        | 0.0083  | mg/L            | 0.01185  | 0.4050 mg/kg          | 0.57509  | 142.00% |
| Si 251.611*† | 823837.1                    | 19.50   | mg/L            | 0.103    | 946.4 mg/kg           | 5.01     | 0.53%   |
| Sn 189.927*† | -469.6                      | -0.0710 | mg/L            | 0.00377  | -3.446 mg/kg          | 0.1830   | 5.31%   |
| Sn 242.170†  | 1386.5                      | 0.7366  | mg/L            | 0.07373  | 35.76 mg/kg           | 3.579    | 10.01%  |
| Sr 407.771*† | 365380.3                    | 1.067   | mg/L            | 0.0077   | 51.78 mg/kg           | 0.376    | 0.73%   |
| Ti 334.940†  | 17966126.9                  | 20.47   | mg/L            | 0.123    | 993.6 mg/kg           | 5.99     | 0.60%   |
| Ti 336.121*† | 12812504.8                  | 20.80   | mg/L            | 0.150    | 1010 mg/kg            | 7.30     | 0.72%   |
| Tl 190.801*† | -30.5                       | -0.0156 | mg/L            | 0.02669  | -0.7564 mg/kg         | 1.29572  | 171.29% |
| V 292.402*†  | 81790.5                     | 0.5662  | mg/L            | 0.00045  | 27.48 mg/kg           | 0.022    | 0.08%   |
| Zn 206.200*† | 1113792.1                   | 24.53   | mg/L            | 0.227    | 1191 mg/kg            | 11.03    | 0.93%   |

# RAW DATA SHEET FOR METHOD: EPA 6010B

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 13:14  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\17-03-1104-32 MIS.icp

**# 32** **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

**LCS/MB BATCH:** 170324L11 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170324S11 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | -0.00513           | 0.971     | ND          | 0.728     |             |
| Arsenic         | 0.0411             | 0.971     | 2.00        | 0.728     |             |
| Barium          | 2.20               | 0.971     | 107         | 0.485     |             |
| Beryllium       | 0.00507            | 0.971     | 0.246       | 0.243     |             |
| Cadmium         | 0.00916            | 0.971     | ND          | 0.485     |             |
| Chromium        | 0.207              | 0.971     | 10.0        | 0.243     |             |
| Cobalt          | 0.172              | 0.971     | 8.37        | 0.243     |             |
| Copper          | 0.297              | 0.971     | 14.4        | 0.485     |             |
| Lead            | 0.189              | 0.971     | 9.18        | 0.485     |             |
| Molybdenum      | -0.00176           | 0.971     | ND          | 0.243     |             |
| Nickel          | 0.165              | 0.971     | 8.01        | 0.243     |             |
| Selenium        | 0.00302            | 0.971     | ND          | 0.728     |             |
| Silver          | 0.00157            | 0.971     | ND          | 0.243     |             |
| Thallium        | -0.0214            | 0.971     | ND          | 0.728     |             |
| Vanadium        | 0.547              | 0.971     | 26.5        | 0.243     |             |
| Zinc            | 20.5               | 0.971     | 996         | 0.971     |             |

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Sequence No.: 32  
 Sample ID: 17-03-1104-32 MIS  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.06 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 351  
 Date Collected: 3/27/2017 1:14:02 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

## Mean Data: 17-03-1104-32 MIS

| Analyte      | Mean Corrected Intensity | Conc. Units | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|--------------|--------------------------|-------------|--------------|----------|--------------------|----------|---------|
| Tb 384       | 58132.5                  | 71.06       | %            | 0.485    |                    |          | 0.68%   |
| Tb 350       | 113047.9                 | 85.33       | %            | 0.803    |                    |          | 0.94%   |
| Ag 328.068*† | 312.9                    | 0.0016      | mg/L         | 0.00055  | 0.0761 mg/kg       | 0.02687  | 35.32%  |
| Al 308.215*† | 3675967.8                | 204.7       | mg/L         | 0.83     | 9937 mg/kg         | 40.32    | 0.41%   |
| As 188.979†  | 115.1                    | 0.0494      | mg/L         | 0.01455  | 2.396 mg/kg        | 0.7063   | 29.48%  |
| As 193.696*† | 66.2                     | 0.0411      | mg/L         | 0.03344  | 1.996 mg/kg        | 1.6234   | 81.32%  |
| B 249.677*†  | 376.6                    | 0.0070      | mg/L         | 0.00217  | 0.3393 mg/kg       | 0.10543  | 31.07%  |
| Ba 233.527*† | 352127.6                 | 2.198       | mg/L         | 0.0139   | 106.7 mg/kg        | 0.68     | 0.63%   |
| Be 313.042*† | 20732.7                  | 0.0051      | mg/L         | 0.00000  | 0.2460 mg/kg       | 0.00020  | 0.08%   |
| Ca 317.933*† | 250499.4                 | 114.5       | mg/L         | 1.36     | 5560 mg/kg         | 65.90    | 1.19%   |
| Cd 226.502*† | 771.5                    | 0.0092      | mg/L         | 0.00107  | 0.4449 mg/kg       | 0.05172  | 11.62%  |
| Cd 228.802†  | 139.5                    | 0.0034      | mg/L         | 0.00064  | 0.1637 mg/kg       | 0.03116  | 19.04%  |
| Co 228.616*† | 5161.7                   | 0.1725      | mg/L         | 0.00729  | 8.372 mg/kg        | 0.3537   | 4.23%   |
| Cr 267.716*† | 24945.0                  | 0.2067      | mg/L         | 0.00822  | 10.03 mg/kg        | 0.399    | 3.98%   |
| Cu 324.752*† | 78341.2                  | 0.2972      | mg/L         | 0.00073  | 14.43 mg/kg        | 0.036    | 0.25%   |
| Fe 273.955*† | 6887321.7                | 275.9       | mg/L         | 6.54     | 13390 mg/kg        | 317.55   | 2.37%   |
| K 766.490*†  | 224735.6                 | 69.79       | mg/L         | 0.968    | 3388 mg/kg         | 47.01    | 1.39%   |
| Mg 279.077*† | 2138651.1                | 103.1       | mg/L         | 1.19     | 5004 mg/kg         | 57.84    | 1.16%   |
| Mn 257.610*† | 14934730.9               | 21.67       | mg/L         | 0.543    | 1052 mg/kg         | 26.35    | 2.50%   |
| Mo 202.031*† | -17.1                    | -0.0018     | mg/L         | 0.00056  | -0.0856 mg/kg      | 0.02738  | 31.98%  |
| Na 589.592*† | 25961.9                  | 5.571       | mg/L         | 0.0555   | 270.4 mg/kg        | 2.70     | 1.00%   |
| Ni 231.604*† | 4361.8                   | 0.1650      | mg/L         | 0.00650  | 8.010 mg/kg        | 0.3156   | 3.94%   |
| P 213.617*†  | 37857.6                  | 17.16       | mg/L         | 0.773    | 833.0 mg/kg        | 37.53    | 4.51%   |
| P 214.914†   | 24751.2                  | 17.93       | mg/L         | 0.916    | 870.3 mg/kg        | 44.45    | 5.11%   |
| Pb 220.353*† | 1638.8                   | 0.1891      | mg/L         | 0.01184  | 9.178 mg/kg        | 0.5747   | 6.26%   |
| Sb 206.836†  | 11.3                     | 0.0055      | mg/L         | 0.00846  | 0.2679 mg/kg       | 0.41048  | 153.22% |
| Sb 217.582*† | -10.4                    | -0.0051     | mg/L         | 0.00422  | -0.2488 mg/kg      | 0.20496  | 82.38%  |
| Se 196.026*† | 7.3                      | 0.0030      | mg/L         | 0.02784  | 0.1464 mg/kg       | 1.35130  | 923.02% |
| Si 251.611*† | 766424.8                 | 18.14       | mg/L         | 0.154    | 880.5 mg/kg        | 7.49     | 0.85%   |
| Sn 189.927*† | -623.3                   | -0.0942     | mg/L         | 0.00643  | -4.574 mg/kg       | 0.3121   | 6.82%   |
| Sn 242.170†  | 1373.9                   | 0.7299      | mg/L         | 0.01826  | 35.43 mg/kg        | 0.886    | 2.50%   |
| Sr 407.771*† | 347007.4                 | 1.013       | mg/L         | 0.0097   | 49.17 mg/kg        | 0.472    | 0.96%   |
| Ti 334.940†  | 17856681.3               | 20.34       | mg/L         | 0.482    | 987.6 mg/kg        | 23.40    | 2.37%   |
| Ti 336.121*† | 12714800.2               | 20.64       | mg/L         | 0.500    | 1002 mg/kg         | 24.26    | 2.42%   |
| Tl 190.801*† | -41.8                    | -0.0214     | mg/L         | 0.01311  | -1.037 mg/kg       | 0.6364   | 61.35%  |
| V 292.402*†  | 78963.3                  | 0.5465      | mg/L         | 0.00195  | 26.53 mg/kg        | 0.095    | 0.36%   |
| Zn 206.200*† | 932130.7                 | 20.53       | mg/L         | 0.290    | 996.4 mg/kg        | 14.10    | 1.42%   |

# RAW DATA SHEET FOR METHOD: EPA 6010B

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 13:14  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\17-03-1104-33 MIS.icp

**# 33** **CLIENT SAMPLE NUMBER:** B-DU3-ISM4-3

**LCS/MB BATCH:** 170324L12 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170324S12 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | -0.0150            | 0.971     | ND          | 0.728     |             |
| Arsenic         | 0.0420             | 0.971     | 2.04        | 0.728     |             |
| Barium          | 2.23               | 0.971     | 108         | 0.485     |             |
| Beryllium       | 0.00492            | 0.971     | ND          | 0.243     |             |
| Cadmium         | 0.00899            | 0.971     | ND          | 0.485     |             |
| Chromium        | 0.192              | 0.971     | 9.34        | 0.243     |             |
| Cobalt          | 0.158              | 0.971     | 7.69        | 0.243     |             |
| Copper          | 0.317              | 0.971     | 15.4        | 0.485     |             |
| Lead            | 0.229              | 0.971     | 11.1        | 0.485     |             |
| Molybdenum      | -0.00404           | 0.971     | ND          | 0.243     |             |
| Nickel          | 0.156              | 0.971     | 7.60        | 0.243     |             |
| Selenium        | 0.0114             | 0.971     | ND          | 0.728     |             |
| Silver          | 0.00125            | 0.971     | ND          | 0.243     |             |
| Thallium        | -0.000729          | 0.971     | ND          | 0.728     |             |
| Vanadium        | 0.523              | 0.971     | 25.4        | 0.243     |             |
| Zinc            | 28.8               | 0.971     | 1400        | 0.971     |             |

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Sequence No.: 33  
 Sample ID: 17-03-1104-33 MIS  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.06 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 352  
 Date Collected: 3/27/2017 1:14:45 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

## Mean Data: 17-03-1104-33 MIS

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|---------|
| Tb 384       | 59638.8                     | 72.90       | %               | 0.617    |                       |          | 0.85%   |
| Tb 350       | 114327.1                    | 86.29       | %               | 0.002    |                       |          | 0.00%   |
| Ag 328.068*† | 249.0                       | 0.0012      | mg/L            | 0.00013  | 0.0605                | 0.00613  | 10.13%  |
| Al 308.215*† | 3570730.7                   | 198.8       | mg/L            | 0.03     | 9653                  | 1.52     | 0.02%   |
| As 188.979†  | 72.3                        | 0.0310      | mg/L            | 0.01184  | 1.505                 | 0.5747   | 38.18%  |
| As 193.696*† | 67.6                        | 0.0420      | mg/L            | 0.02705  | 2.040                 | 1.3130   | 64.35%  |
| B 249.677*†  | 218.9                       | 0.0041      | mg/L            | 0.00940  | 0.1972                | 0.45631  | 231.41% |
| Ba 233.527*† | 356626.8                    | 2.226       | mg/L            | 0.0058   | 108.0                 | 0.28     | 0.26%   |
| Be 313.042*† | 20120.3                     | 0.0049      | mg/L            | 0.00008  | 0.2388                | 0.00372  | 1.56%   |
| Ca 317.933*† | 231917.5                    | 106.0       | mg/L            | 3.21     | 5147                  | 155.70   | 3.02%   |
| Cd 226.502*† | 756.7                       | 0.0090      | mg/L            | 0.00002  | 0.4364                | 0.00077  | 0.18%   |
| Cd 228.802†  | 115.7                       | 0.0028      | mg/L            | 0.00022  | 0.1358                | 0.01083  | 7.98%   |
| Co 228.616*† | 4742.3                      | 0.1584      | mg/L            | 0.00314  | 7.692                 | 0.1526   | 1.98%   |
| Cr 267.716*† | 23227.5                     | 0.1925      | mg/L            | 0.00000  | 9.343                 | 0.0001   | 0.00%   |
| Cu 324.752*† | 83637.5                     | 0.3173      | mg/L            | 0.00113  | 15.40                 | 0.055    | 0.36%   |
| Fe 273.955*† | 6533232.9                   | 261.7       | mg/L            | 3.46     | 12700                 | 167.73   | 1.32%   |
| K 766.490*†  | 207713.1                    | 64.51       | mg/L            | 1.582    | 3131                  | 76.82    | 2.45%   |
| Mg 279.077*† | 2055796.6                   | 99.08       | mg/L            | 0.043    | 4810                  | 2.09     | 0.04%   |
| Mn 257.610*† | 19513144.4                  | 28.32       | mg/L            | 0.351    | 1375                  | 17.04    | 1.24%   |
| Mo 202.031*† | -39.3                       | -0.0040     | mg/L            | 0.00181  | -0.1963               | 0.08772  | 44.68%  |
| Na 589.592*† | 25552.8                     | 5.483       | mg/L            | 0.1174   | 266.2                 | 5.70     | 2.14%   |
| Ni 231.604*† | 4136.7                      | 0.1565      | mg/L            | 0.00080  | 7.597                 | 0.0388   | 0.51%   |
| P 213.617*†  | 33041.2                     | 14.98       | mg/L            | 0.016    | 727.0                 | 0.79     | 0.11%   |
| P 214.914†   | 21803.1                     | 15.79       | mg/L            | 0.115    | 766.7                 | 5.60     | 0.73%   |
| Pb 220.353*† | 1982.2                      | 0.2287      | mg/L            | 0.00230  | 11.10                 | 0.112    | 1.01%   |
| Sb 206.836†  | -5.8                        | -0.0029     | mg/L            | 0.01747  | -0.1387               | 0.84798  | 611.51% |
| Sb 217.582*† | -30.4                       | -0.0150     | mg/L            | 0.00441  | -0.7280               | 0.21430  | 29.44%  |
| Se 196.026*† | 27.4                        | 0.0114      | mg/L            | 0.00361  | 0.5514                | 0.17531  | 31.79%  |
| Si 251.611*† | 716440.6                    | 16.95       | mg/L            | 0.004    | 823.0                 | 0.18     | 0.02%   |
| Sn 189.927*† | -523.7                      | -0.0792     | mg/L            | 0.00107  | -3.843                | 0.0520   | 1.35%   |
| Sn 242.170†  | 1315.2                      | 0.6987      | mg/L            | 0.02313  | 33.92                 | 1.123    | 3.31%   |
| Sr 407.771*† | 373258.7                    | 1.090       | mg/L            | 0.0262   | 52.89                 | 1.274    | 2.41%   |
| Ti 334.940†  | 17057762.6                  | 19.43       | mg/L            | 0.207    | 943.4                 | 10.05    | 1.06%   |
| Ti 336.121*† | 12130871.7                  | 19.69       | mg/L            | 0.220    | 955.8                 | 10.68    | 1.12%   |
| Tl 190.801*† | -1.4                        | -0.0007     | mg/L            | 0.01879  | -0.0354               | 0.91225  | >999.9% |
| V 292.402*†  | 75628.2                     | 0.5235      | mg/L            | 0.00269  | 25.41                 | 0.130    | 0.51%   |
| Zn 206.200*† | 1307207.6                   | 28.79       | mg/L            | 0.067    | 1397                  | 3.25     | 0.23%   |

# EPA 6010B ICP Metals (Solid)

## Quality Control

Method Blank  
LCS/LCSD  
MS/MSD  
PDS/PDSD

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 6010B

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**MB SAMPLE ID:** 097-01-002-24505  
**MB BATCH ID:** 170324L11  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:56  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-b-11\_\_24.icp

### CLIENT WORK ORDER: 17-03-1104

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                            |
|-----------|-----------------|-------------------------|---------------------|---------------------------------------------|
| 30        | B-DU3-ISM1-3    |                         | 2017-03-27 13:12    | W:\ICP-DATA\170327C 1\17-03-1104-30 MIS.icp |
| 31        | B-DU3-ISM2-3    |                         | 2017-03-27 13:13    | W:\ICP-DATA\170327C 1\17-03-1104-31 MIS.icp |
| 32        | B-DU3-ISM3-3    |                         | 2017-03-27 13:14    | W:\ICP-DATA\170327C 1\17-03-1104-32 MIS.icp |

  
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# RAW DATA SHEET FOR METHOD: EPA 6010B

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**WORK ORDER:** 097-01-002  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:56  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-b-11\_\_24.icp

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** 170324L11 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | 0.000999           | 0.966     | ND          | 0.725     |             |
| Arsenic         | -0.00371           | 0.966     | ND          | 0.725     |             |
| Barium          | 0.000157           | 0.966     | ND          | 0.483     |             |
| Beryllium       | 0.0000293          | 0.966     | ND          | 0.242     |             |
| Cadmium         | 0.0000990          | 0.966     | ND          | 0.483     |             |
| Chromium        | -0.000617          | 0.966     | ND          | 0.242     |             |
| Cobalt          | 0.0000434          | 0.966     | ND          | 0.242     |             |
| Copper          | 0.000575           | 0.966     | ND          | 0.483     |             |
| Lead            | 0.000628           | 0.966     | ND          | 0.483     |             |
| Molybdenum      | 0.000626           | 0.966     | ND          | 0.242     |             |
| Nickel          | 0.000939           | 0.966     | ND          | 0.242     |             |
| Selenium        | 0.00533            | 0.966     | ND          | 0.725     |             |
| Silver          | 0.000634           | 0.966     | ND          | 0.242     |             |
| Thallium        | -0.0104            | 0.966     | ND          | 0.725     |             |
| Vanadium        | -0.000103          | 0.966     | ND          | 0.242     |             |
| Zinc            | 0.000215           | 0.966     | ND          | 0.966     |             |

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# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

**LCS SAMPLE ID:** 097-01-002-24505  
**LCSMB BATCH ID:** 170324L11  
**INSTRUMENT:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:57  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-L11\_25.icp

| COMPOUND   | CONC  | CONC REC | %REC | %REC CL | ME CL  | STATUS | QUALIFIERS |
|------------|-------|----------|------|---------|--------|--------|------------|
| Antimony   | 25.00 | 22.20    | 89   | 80-120  | 73-127 | PASS   |            |
| Arsenic    | 25.00 | 22.10    | 88   | 80-120  | 73-127 | PASS   |            |
| Barium     | 25.00 | 25.13    | 101  | 80-120  | 73-127 | PASS   |            |
| Beryllium  | 25.00 | 22.44    | 90   | 80-120  | 73-127 | PASS   |            |
| Cadmium    | 25.00 | 23.24    | 93   | 80-120  | 73-127 | PASS   |            |
| Chromium   | 25.00 | 24.05    | 96   | 80-120  | 73-127 | PASS   |            |
| Cobalt     | 25.00 | 24.45    | 98   | 80-120  | 73-127 | PASS   |            |
| Copper     | 25.00 | 24.71    | 99   | 80-120  | 73-127 | PASS   |            |
| Lead       | 25.00 | 24.60    | 98   | 80-120  | 73-127 | PASS   |            |
| Molybdenum | 25.00 | 23.44    | 94   | 80-120  | 73-127 | PASS   |            |
| Nickel     | 25.00 | 24.02    | 96   | 80-120  | 73-127 | PASS   |            |
| Phosphorus | 25.00 | 24.07    | 96   | 80-120  | 73-127 | PASS   |            |
| Selenium   | 25.00 | 22.41    | 90   | 80-120  | 73-127 | PASS   |            |
| Silver     | 12.50 | 11.77    | 94   | 80-120  | 73-127 | PASS   |            |
| Thallium   | 25.00 | 24.05    | 96   | 80-120  | 73-127 | PASS   |            |
| Vanadium   | 25.00 | 23.03    | 92   | 80-120  | 73-127 | PASS   |            |
| Zinc       | 25.00 | 23.87    | 95   | 80-120  | 73-127 | PASS   |            |
| Aluminum   | 25.00 | 25.03    | 100  | 80-120  | 73-127 | PASS   |            |
| Calcium    | 25.00 | 22.81    | 91   | 80-120  | 73-127 | PASS   |            |
| Iron       | 25.00 | 25.02    | 100  | 80-120  | 73-127 | PASS   |            |
| Magnesium  | 25.00 | 24.04    | 96   | 80-120  | 73-127 | PASS   |            |
| Manganese  | 25.00 | 23.87    | 95   | 80-120  | 73-127 | PASS   |            |
| Potassium  | 250.0 | 223.0    | 89   | 80-120  | 73-127 | PASS   |            |
| Sodium     | 250.0 | 237.8    | 95   | 80-120  | 73-127 | PASS   |            |
| Strontium  | 25.00 | 23.84    | 95   | 80-120  | 73-127 | PASS   |            |
| Tin        | 25.00 | 23.72    | 95   | 80-120  | 73-127 | PASS   |            |
| Titanium   | 25.00 | 23.76    | 95   | 80-120  | 73-127 | PASS   |            |
| Boron      | 25.00 | 22.46    | 90   | 80-120  | 73-127 | PASS   |            |
| Silicon    | 25.00 | 23.56    | 94   | 80-120  | 73-127 | PASS   |            |

LCS QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-002-24505  
LCS/MB BATCH ID: 170324L11  
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED: 2017-03-27 10:57  
REVIEWED BY:  
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\170324-I-11\_\_25.icp

| <u>COMPOUND</u>                         | <u>CONC</u> | <u>CONC REC</u> | <u>%REC</u> | <u>%REC CL</u> | <u>ME CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------------------------------|-------------|-----------------|-------------|----------------|--------------|---------------|-------------------|
| Total number of LCS compounds: 29       |             |                 |             |                |              |               |                   |
| Total number of ME compounds: 0         |             |                 |             |                |              |               |                   |
| Total number of ME compounds allowed: 1 |             |                 |             |                |              |               |                   |
| LCS ME CL validation result: Pass       |             |                 |             |                |              |               |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1114-1  
MS/MSD BATCH: 170324S11  
INSTRUMENTS:  
SAMPLE: ICP 7300  
MS: ICP 7300  
MSD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:  
SAMPLE: 2017-03-24 00:00  
MS: 2017-03-24 00:00  
MSD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:  
SAMPLE: 2017-03-27 12:54  
MS: 2017-03-27 12:54  
MSD: 2017-03-27 12:57  
REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS REC | MSD CONC | % MSD REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Antimony      | 7.917  | 0.5000  | 25.00 | 24.44   | 66       | 18.33    | 42        | 50-115   | 29  | 0-20   | FAIL   | 34G        |
| Arsenic       | 2.654  | 0.5000  | 25.00 | 24.65   | 88       | 25.34    | 91        | 75-125   | 3   | 0-20   | PASS   |            |
| Barium        | 3852   | 0.5000  | 25.00 | 4335    | 4x       | 3503     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Beryllium     | ND     | 0.5000  | 25.00 | 23.56   | 94       | 24.01    | 96        | 75-125   | 2   | 0-20   | PASS   |            |
| Cadmium       | 101.2  | 0.5000  | 25.00 | 91.77   | 4x       | 89.10    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Chromium      | 506.0  | 0.5000  | 25.00 | 443.1   | 4x       | 463.7    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Cobalt        | ND     | 0.5000  | 25.00 | 23.59   | 94       | 24.83    | 99        | 75-125   | 5   | 0-20   | PASS   |            |
| Copper        | 119.8  | 0.5000  | 25.00 | 103.7   | 4x       | 96.08    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Lead          | 62.66  | 0.5000  | 25.00 | 58.96   | 0        | 60.29    | 0         | 75-125   | 2   | 0-20   | FAIL   | 3G         |
| Molybdenum    | 29.40  | 0.5000  | 25.00 | 45.12   | 63       | 39.29    | 40        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Nickel        | 8.949  | 0.5000  | 25.00 | 30.42   | 86       | 35.62    | 107       | 75-125   | 16  | 0-20   | PASS   |            |
| Phosphorus    | 33.52  | 0.5000  | 25.00 | 54.06   | 82       | 53.49    | 80        | 75-125   | 1   | 0-20   | PASS   |            |
| Selenium      | ND     | 0.5000  | 25.00 | 22.97   | 92       | 21.84    | 87        | 75-125   | 5   | 0-20   | PASS   |            |
| Silver        | 4.294  | 0.2500  | 12.50 | 15.76   | 92       | 15.74    | 92        | 75-125   | 0   | 0-20   | PASS   |            |
| Thallium      | ND     | 0.5000  | 25.00 | 5.256   | 21       | 25.38    | 102       | 75-125   | 131 | 0-20   | FAIL   | 3G4        |
| Vanadium      | ND     | 0.5000  | 25.00 | 20.70   | 83       | 21.11    | 84        | 75-125   | 2   | 0-20   | PASS   |            |
| Zinc          | 711.4  | 0.5000  | 25.00 | 587.5   | 4x       | 614.5    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Aluminum      | 1139   | 0.5000  | 25.00 | 1090    | 4x       | 1080     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Calcium       | 4033   | 0.5000  | 25.00 | 4625    | 4x       | 4640     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Iron          | 508.8  | 0.5000  | 25.00 | 533.7   | 4x       | 464.8    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Magnesium     | 684.6  | 0.5000  | 25.00 | 863.8   | 4x       | 933.7    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Manganese     | 64.42  | 0.5000  | 25.00 | 64.46   | 0        | 66.33    | 8         | 75-125   | 3   | 0-20   | FAIL   | 3G         |
| Potassium     | 53.22  | 5.000   | 250.0 | 292.3   | 96       | 291.5    | 95        | 75-125   | 0   | 0-20   | PASS   |            |
| Sodium        | 156.4  | 5.000   | 250.0 | 413.6   | 103      | 420.4    | 106       | 75-125   | 2   | 0-20   | PASS   |            |
| Strontium     | 159.4  | 0.5000  | 25.00 | 166.2   | 4x       | 165.8    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Tin           | ND     | 0.5000  | 25.00 | 23.12   | 92       | 22.72    | 91        | 75-125   | 2   | 0-20   | PASS   |            |
| Titanium      | 15.54  | 0.5000  | 25.00 | 37.31   | 87       | 37.16    | 86        | 75-125   | 0   | 0-20   | PASS   |            |
| Boron         | 5.995  | 0.5000  | 25.00 | 30.71   | 99       | 32.61    | 106       | 75-125   | 6   | 0-20   | PASS   |            |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1114-1  
MS/MSD BATCH: 170324S11  
INSTRUMENTS:  
SAMPLE: ICP 7300  
MS: ICP 7300  
MSD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:  
SAMPLE: 2017-03-24 00:00  
MS: 2017-03-24 00:00  
MSD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:  
SAMPLE: 2017-03-27 12:54  
MS: 2017-03-27 12:54  
MSD: 2017-03-27 12:57  
REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS REC | MSD CONC | % MSD REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Silicon       | 303.9  | 0.5000  | 25.00 | 385.2   | 4x       | 300.2    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |

Data Files:

| TYPE | DATA FILE            | DATA FILE PATH         |
|------|----------------------|------------------------|
| MS   | 17-03-1114-1 ms.icp  | W:\ICP-DATA\170327C 1\ |
| MSD  | 17-03-1114-1 msd.icp | W:\ICP-DATA\170327C 1\ |

POST DIGESTION SPIKE /POST DIGESTION SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

**SPIKED SAMPLE ID:** 17-03-1114-1  
**PDS/PDD BATCH:** 170324S11  
**INSTRUMENTS:**  
**SAMPLE:** ICP 7300  
**PDS:** ICP 7300  
**PDD:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:**  
**SAMPLE:** 2017-03-24 00:00  
**PDS:** 2017-03-24 00:00  
**PDD:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:**  
**SAMPLE:** 2017-03-27 12:54  
**PDS:** 2017-03-27 15:43  
**PDD:** 2017-03-27 15:43  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-27 17:25

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL ADDED | FINAL ADDED | PDS CONC | %PDS. REC | PDS CONC | %PDS. REC | CL     | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------------|-------------|----------|-----------|----------|-----------|--------|-----|--------|--------|------------|
| Antimony      | 7.917  | 0.5000        | 25.00       | 30.07    | 89        | 29.97    | 88        | 75-125 | 0   | 0-20   | PASS   |            |
| Arsenic       | 2.654  | 0.5000        | 25.00       | 25.35    | 91        | 25.27    | 90        | 75-125 | 0   | 0-20   | PASS   |            |
| Barium        | 3852   | 0.5000        | 25.00       | 3964     | 4x        | 4000     | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Beryllium     | ND     | 0.5000        | 25.00       | 23.18    | 93        | 23.23    | 93        | 75-125 | 0   | 0-20   | PASS   |            |
| Cadmium       | 101.2  | 0.5000        | 25.00       | 125.0    | 4x        | 125.1    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Chromium      | 506.0  | 0.5000        | 25.00       | 540.8    | 4x        | 541.2    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Cobalt        | ND     | 0.5000        | 25.00       | 23.55    | 94        | 23.44    | 94        | 75-125 | 0   | 0-20   | PASS   |            |
| Copper        | 119.8  | 0.5000        | 25.00       | 146.2    | 4x        | 146.1    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Lead          | 62.66  | 0.5000        | 25.00       | 87.31    | 99        | 87.26    | 98        | 75-125 | 0   | 0-20   | PASS   |            |
| Molybdenum    | 29.40  | 0.5000        | 25.00       | 53.68    | 97        | 53.60    | 97        | 75-125 | 0   | 0-20   | PASS   |            |
| Nickel        | 8.949  | 0.5000        | 25.00       | 32.45    | 94        | 32.41    | 94        | 75-125 | 0   | 0-20   | PASS   |            |
| Phosphorus    | 33.52  | 0.5000        | 25.00       | 62.28    | 115       | 59.26    | 103       | 75-125 | 5   | 0-20   | PASS   |            |
| Selenium      | ND     | 0.5000        | 25.00       | 22.62    | 90        | 22.44    | 90        | 75-125 | 1   | 0-20   | PASS   |            |
| Silver        | 4.294  | 0.2500        | 12.50       | 15.38    | 89        | 15.32    | 88        | 75-125 | 0   | 0-20   | PASS   |            |
| Thallium      | ND     | 0.5000        | 25.00       | 22.77    | 91        | 22.45    | 90        | 75-125 | 1   | 0-20   | PASS   |            |
| Vanadium      | ND     | 0.5000        | 25.00       | 19.60    | 78        | 19.61    | 78        | 75-125 | 0   | 0-20   | PASS   |            |
| Zinc          | 711.4  | 0.5000        | 25.00       | 742.4    | 4x        | 745.3    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Aluminum      | 1139   | 0.5000        | 25.00       | 1190     | 4x        | 1185     | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Calcium       | 4033   | 0.5000        | 25.00       | 4328     | 4x        | 4154     | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Iron          | 508.8  | 0.5000        | 25.00       | 554.7    | 4x        | 529.5    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Magnesium     | 684.6  | 0.5000        | 25.00       | 713.5    | 4x        | 711.3    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Manganese     | 64.42  | 0.5000        | 25.00       | 88.58    | 97        | 88.31    | 96        | 75-125 | 0   | 0-20   | PASS   |            |
| Potassium     | 53.22  | 5.000         | 250.0       | 308.2    | 102       | 296.5    | 97        | 75-125 | 4   | 0-20   | PASS   |            |
| Sodium        | 156.4  | 5.000         | 250.0       | 427.1    | 108       | 417.5    | 104       | 75-125 | 2   | 0-20   | PASS   |            |
| Strontium     | 159.4  | 0.5000        | 25.00       | 184.3    | 4x        | 184.9    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |
| Tin           | ND     | 0.5000        | 25.00       | 24.45    | 98        | 24.54    | 98        | 75-125 | 0   | 0-20   | PASS   |            |
| Titanium      | 15.54  | 0.5000        | 25.00       | 55.42    | 160       | 55.15    | 158       | 75-125 | 0   | 0-20   | FAIL   | 5F         |

POST DIGESTION SPIKE /POST DIGESTION SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1114-1  
PDS/PDD BATCH: 170324S11  
INSTRUMENTS:  
SAMPLE: ICP 7300  
PDS: ICP 7300  
PDD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:

SAMPLE: 2017-03-24 00:00  
PDS: 2017-03-24 00:00  
PDD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:  
SAMPLE: 2017-03-27 12:54  
PDS: 2017-03-27 15:43  
PDD: 2017-03-27 15:43  
REVIEWED BY: 309  
D/T REVIEWED: 2017-03-27 17:25

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL ADDED | FINAL ADDED | PDS CONC | %PDS. REC | PDS CONC | %PDS. REC | REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------------|-------------|----------|-----------|----------|-----------|--------|-----|--------|--------|------------|
| Boron         | 5.995  | 0.5000        | 25.00       | 31.01    | 100       | 30.63    | 99        | 75-125 | 1   | 0-20   | PASS   |            |
| Silicon       | 303.9  | 0.5000        | 25.00       | 356.4    | 4x        | 359.8    | 4x        | 75-125 | 4x  | 0-20   | PASS   | Q          |

Data Files:

| TYPE | DATA FILE             | DATA FILE PATH         |
|------|-----------------------|------------------------|
| PDS  | 17-03-1114-1 pds.icp  | W:\ICP-DATA\170327C 1\ |
| PDD  | 17-03-1114-1 pdsd.icp | W:\ICP-DATA\170327C 1\ |

Sequence No.: 13  
Sample ID: 170324-b-11  
Analyst: 935 icp 7300  
Initial Sample Wt: 2.07 g  
Dilution:  
Wash Time: 15

Autosampler Location: 117  
Date Collected: 3/27/2017 10:56:24 AM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

Mean Data: 170324-b-11

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|---------|
| Tb 384       | 79438.8                     | 97.10       | %               | 2.455    |                       |          | 2.53%   |
| Tb 350       | 128388.4                    | 96.90       | %               | 2.172    |                       |          | 2.24%   |
| Ag 328.068*† | 126.6                       | 0.0006      | mg/L            | 0.00051  | 0.0306 mg/kg          | 0.02455  | 80.17%  |
| Al 308.215*† | -372.9                      | -0.0208     | mg/L            | 0.00075  | -1.003 mg/kg          | 0.0363   | 3.61%   |
| As 188.979†  | 2.4                         | 0.0010      | mg/L            | 0.00256  | 0.0498 mg/kg          | 0.12355  | 247.98% |
| As 193.696*† | -6.0                        | -0.0037     | mg/L            | 0.00321  | -0.1790 mg/kg         | 0.15518  | 86.68%  |
| B 249.677*†  | 1039.8                      | 0.0193      | mg/L            | 0.00057  | 0.9324 mg/kg          | 0.02772  | 2.97%   |
| Ba 233.527*† | 25.1                        | 0.0002      | mg/L            | 0.00019  | 0.0076 mg/kg          | 0.00902  | 119.19% |
| Be 313.042*† | 119.7                       | 0.0000      | mg/L            | 0.00001  | 0.0014 mg/kg          | 0.00039  | 27.40%  |
| Ca 317.933*† | -34.5                       | -0.0158     | mg/L            | 0.00004  | -0.7628 mg/kg         | 0.00214  | 0.28%   |
| Cd 226.502*† | 8.3                         | 0.0001      | mg/L            | 0.00005  | 0.0048 mg/kg          | 0.00221  | 46.12%  |
| Cd 228.802†  | 1.1                         | 0.0000      | mg/L            | 0.00013  | 0.0013 mg/kg          | 0.00612  | 480.52% |
| Co 228.616*† | 1.3                         | 0.0000      | mg/L            | 0.00021  | 0.0021 mg/kg          | 0.00993  | 473.68% |
| Cr 267.716*† | -74.4                       | -0.0006     | mg/L            | 0.00003  | -0.0298 mg/kg         | 0.00168  | 5.64%   |
| Cu 324.752*† | 151.5                       | 0.0006      | mg/L            | 0.00023  | 0.0278 mg/kg          | 0.01133  | 40.79%  |
| Fe 273.955*† | -0.7                        | -0.0000     | mg/L            | 0.00085  | -0.0013 mg/kg         | 0.04102  | >999.9% |
| K 766.490*†  | -81.7                       | -0.0254     | mg/L            | 0.01961  | -1.226 mg/kg          | 0.9473   | 77.26%  |
| Mg 279.077*† | 99.4                        | 0.0048      | mg/L            | 0.00396  | 0.2315 mg/kg          | 0.19136  | 82.67%  |
| Mn 257.610*† | 4.3                         | 0.0000      | mg/L            | 0.00004  | 0.0003 mg/kg          | 0.00210  | 700.38% |
| Mo 202.031*† | 6.1                         | 0.0006      | mg/L            | 0.00006  | 0.0303 mg/kg          | 0.00283  | 9.37%   |
| Na 589.592*† | 16.7                        | 0.0036      | mg/L            | 0.01808  | 0.1728 mg/kg          | 0.87347  | 505.47% |
| Ni 231.604*† | 24.8                        | 0.0009      | mg/L            | 0.00042  | 0.0454 mg/kg          | 0.02008  | 44.25%  |
| P 213.617*†  | 32.1                        | 0.0146      | mg/L            | 0.00542  | 0.7033 mg/kg          | 0.26205  | 37.26%  |
| P 214.914†   | -6.1                        | -0.0044     | mg/L            | 0.00140  | -0.2128 mg/kg         | 0.06787  | 31.89%  |
| Pb 220.353*† | 5.4                         | 0.0006      | mg/L            | 0.00012  | 0.0303 mg/kg          | 0.00589  | 19.41%  |
| Sb 206.836†  | -0.6                        | -0.0003     | mg/L            | 0.00139  | -0.0133 mg/kg         | 0.06717  | 504.86% |
| Sb 217.582*† | 2.0                         | 0.0010      | mg/L            | 0.00041  | 0.0483 mg/kg          | 0.01957  | 40.54%  |
| Se 196.026*† | 12.9                        | 0.0053      | mg/L            | 0.00348  | 0.2577 mg/kg          | 0.16831  | 65.32%  |
| Si 251.611*† | -114.6                      | -0.0027     | mg/L            | 0.00146  | -0.1310 mg/kg         | 0.07032  | 53.67%  |
| Sn 189.927*† | 21.7                        | 0.0033      | mg/L            | 0.00380  | 0.1581 mg/kg          | 0.18351  | 116.04% |
| Sn 242.170†  | 23.3                        | 0.0124      | mg/L            | 0.00823  | 0.5988 mg/kg          | 0.39757  | 66.39%  |
| Sr 407.771*† | -111.3                      | -0.0003     | mg/L            | 0.00006  | -0.0157 mg/kg         | 0.00275  | 17.52%  |
| Ti 334.940†  | -233.3                      | -0.0003     | mg/L            | 0.00034  | -0.0128 mg/kg         | 0.01663  | 129.55% |
| Ti 336.121*† | 276.3                       | 0.0004      | mg/L            | 0.00018  | 0.0217 mg/kg          | 0.00865  | 39.91%  |
| Tl 190.801*† | -20.3                       | -0.0104     | mg/L            | 0.00016  | -0.5007 mg/kg         | 0.00769  | 1.54%   |
| V 292.402*†  | -14.8                       | -0.0001     | mg/L            | 0.00036  | -0.0050 mg/kg         | 0.01757  | 352.40% |
| Zn 206.200*† | 9.7                         | 0.0002      | mg/L            | 0.00087  | 0.0104 mg/kg          | 0.04212  | 406.48% |

Sequence No.: 14  
 Sample ID: 170324-1-11  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.08 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 118  
 Date Collected: 3/27/2017 10:57:25 AM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

Mean Data: 170324-1-11

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-------------|--------------------|-----------------------|----------|-------|
| Tb 384       | 78666.4                     | 96.15 %     | 2.203              |                       |          | 2.29% |
| Tb 350       | 129466.7                    | 97.72 %     | 1.429              |                       |          | 1.46% |
| Ag 328.068*† | 48890.0                     | 0.2448 mg/L | 0.00051            | 11.77 mg/kg           | 0.024    | 0.21% |
| Al 308.215*† | 9349.8                      | 0.5207 mg/L | 0.00522            | 25.03 mg/kg           | 0.251    | 1.00% |
| As 188.979†  | 1076.1                      | 0.4613 mg/L | 0.00358            | 22.18 mg/kg           | 0.172    | 0.78% |
| As 193.696*† | 739.7                       | 0.4596 mg/L | 0.00242            | 22.10 mg/kg           | 0.116    | 0.53% |
| B 249.677*†  | 25166.3                     | 0.4671 mg/L | 0.00192            | 22.46 mg/kg           | 0.092    | 0.41% |
| Ba 233.527*† | 83758.7                     | 0.5227 mg/L | 0.00070            | 25.13 mg/kg           | 0.034    | 0.13% |
| Be 313.042*† | 1909129.1                   | 0.4667 mg/L | 0.00350            | 22.44 mg/kg           | 0.168    | 0.75% |
| Ca 317.933*† | 1037.6                      | 0.4744 mg/L | 0.02935            | 22.81 mg/kg           | 1.411    | 6.19% |
| Cd 226.502*† | 40697.2                     | 0.4834 mg/L | 0.00102            | 23.24 mg/kg           | 0.049    | 0.21% |
| Cd 228.802†  | 19880.3                     | 0.4804 mg/L | 0.00381            | 23.10 mg/kg           | 0.183    | 0.79% |
| Co 228.616*† | 15223.5                     | 0.5086 mg/L | 0.00352            | 24.45 mg/kg           | 0.169    | 0.69% |
| Cr 267.716*† | 60365.5                     | 0.5002 mg/L | 0.00120            | 24.05 mg/kg           | 0.058    | 0.24% |
| Cu 324.752*† | 135456.7                    | 0.5140 mg/L | 0.00049            | 24.71 mg/kg           | 0.024    | 0.10% |
| Fe 273.955*† | 12992.9                     | 0.5205 mg/L | 0.00460            | 25.02 mg/kg           | 0.221    | 0.88% |
| K 766.490*†  | 14937.2                     | 4.639 mg/L  | 0.0562             | 223.0 mg/kg           | 2.70     | 1.21% |
| Mg 279.077*† | 10373.2                     | 0.5000 mg/L | 0.00364            | 24.04 mg/kg           | 0.175    | 0.73% |
| Mn 257.610*† | 342126.9                    | 0.4965 mg/L | 0.00031            | 23.87 mg/kg           | 0.015    | 0.06% |
| Mo 202.031*† | 4733.6                      | 0.4877 mg/L | 0.00464            | 23.45 mg/kg           | 0.223    | 0.95% |
| Na 589.592*† | 23048.6                     | 4.946 mg/L  | 0.0226             | 237.8 mg/kg           | 1.09     | 0.46% |
| Ni 231.604*† | 13206.4                     | 0.4996 mg/L | 0.00329            | 24.02 mg/kg           | 0.158    | 0.66% |
| P 213.617*†  | 1104.5                      | 0.5006 mg/L | 0.00343            | 24.07 mg/kg           | 0.165    | 0.68% |
| P 214.914†   | 632.7                       | 0.4583 mg/L | 0.00464            | 22.04 mg/kg           | 0.223    | 1.01% |
| Pb 220.353*† | 4435.2                      | 0.5117 mg/L | 0.00324            | 24.60 mg/kg           | 0.156    | 0.63% |
| Sb 206.836†  | 968.2                       | 0.4748 mg/L | 0.01036            | 22.83 mg/kg           | 0.498    | 2.18% |
| Sb 217.582*† | 936.1                       | 0.4618 mg/L | 0.00586            | 22.20 mg/kg           | 0.282    | 1.27% |
| Se 196.026*† | 1125.7                      | 0.4661 mg/L | 0.00571            | 22.41 mg/kg           | 0.275    | 1.23% |
| Si 251.611*† | 20711.9                     | 0.4901 mg/L | 0.00462            | 23.56 mg/kg           | 0.222    | 0.94% |
| Sn 189.927*† | 3263.7                      | 0.4933 mg/L | 0.00171            | 23.72 mg/kg           | 0.082    | 0.35% |
| Sn 242.170†  | 914.7                       | 0.4859 mg/L | 0.00186            | 23.36 mg/kg           | 0.089    | 0.38% |
| Sr 407.771*† | 169880.8                    | 0.4959 mg/L | 0.00515            | 23.84 mg/kg           | 0.247    | 1.04% |
| Ti 334.940†  | 429719.0                    | 0.4896 mg/L | 0.00020            | 23.54 mg/kg           | 0.010    | 0.04% |
| Ti 336.121*† | 304435.2                    | 0.4941 mg/L | 0.00016            | 23.76 mg/kg           | 0.008    | 0.03% |
| Tl 190.801*† | 978.3                       | 0.5002 mg/L | 0.00279            | 24.05 mg/kg           | 0.134    | 0.56% |
| V 292.402*†  | 68631.3                     | 0.4789 mg/L | 0.00349            | 23.03 mg/kg           | 0.168    | 0.73% |
| Zn 206.200*† | 22549.6                     | 0.4966 mg/L | 0.00195            | 23.87 mg/kg           | 0.094    | 0.39% |

Sequence No.: 10

Sample ID: 17-03-1114-1 ms

Analyst: 935 icp 7300

Initial Sample Wt: 2.09 g

Dilution:

Wash Time: 15

Autosampler Location: 208

Date Collected: 3/27/2017 12:54:58 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1114-1 ms

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD    |
|--------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|--------|
| Tb 384       | 52006.9                     | 63.57       | %               | 0.710    |                       |          | 1.12%  |
| Tb 350       | 124265.0                    | 93.79       | %               | 1.189    |                       |          | 1.27%  |
| Ag 328.068*† | 65767.8                     | 0.3294      | mg/L            | 0.00386  | 15.76 mg/kg           | 0.185    | 1.17%  |
| Al 308.215*† | 409210.3                    | 22.79       | mg/L            | 0.120    | 1090 mg/kg            | 5.74     | 0.53%  |
| As 188.979†  | 1100.7                      | 0.4718      | mg/L            | 0.00613  | 22.57 mg/kg           | 0.293    | 1.30%  |
| As 193.696*† | 829.2                       | 0.5152      | mg/L            | 0.01381  | 24.65 mg/kg           | 0.661    | 2.68%  |
| B 249.677*†  | 34578.4                     | 0.6418      | mg/L            | 0.00989  | 30.71 mg/kg           | 0.473    | 1.54%  |
| Ba 233.527*† | 14517203.1                  | 90.60       | mg/L            | 1.657    | 4335 mg/kg            | 79.28    | 1.83%  |
| Be 313.042*† | 2014562.3                   | 0.4925      | mg/L            | 0.00646  | 23.56 mg/kg           | 0.309    | 1.31%  |
| Ca 317.933*† | 211420.0                    | 96.66       | mg/L            | 4.465    | 4625 mg/kg            | 213.64   | 4.62%  |
| Cd 226.502*† | 161461.6                    | 1.918       | mg/L            | 0.0158   | 91.77 mg/kg           | 0.755    | 0.82%  |
| Cd 228.802†  | 79178.9                     | 1.913       | mg/L            | 0.0089   | 91.55 mg/kg           | 0.424    | 0.46%  |
| Co 228.616*† | 14756.0                     | 0.4930      | mg/L            | 0.00957  | 23.59 mg/kg           | 0.458    | 1.94%  |
| Cr 267.716*† | 1117578.5                   | 9.261       | mg/L            | 0.0622   | 443.1 mg/kg           | 2.98     | 0.67%  |
| Cu 324.752*† | 571411.3                    | 2.168       | mg/L            | 0.0098   | 103.7 mg/kg           | 0.47     | 0.45%  |
| Fe 273.955*† | 278431.1                    | 11.15       | mg/L            | 0.087    | 533.7 mg/kg           | 4.18     | 0.78%  |
| K 766.490*†  | 19669.0                     | 6.108       | mg/L            | 0.2014   | 292.3 mg/kg           | 9.64     | 3.30%  |
| Mg 279.077*† | 374557.8                    | 18.05       | mg/L            | 0.138    | 863.8 mg/kg           | 6.61     | 0.77%  |
| Mn 257.610*† | 928310.6                    | 1.347       | mg/L            | 0.0068   | 64.46 mg/kg           | 0.324    | 0.50%  |
| Mo 202.031*† | 9154.4                      | 0.9431      | mg/L            | 0.01203  | 45.12 mg/kg           | 0.576    | 1.28%  |
| Na 589.592*† | 40282.5                     | 8.643       | mg/L            | 0.3151   | 413.6 mg/kg           | 15.08    | 3.65%  |
| Ni 231.604*† | 16807.4                     | 0.6358      | mg/L            | 0.00608  | 30.42 mg/kg           | 0.291    | 0.96%  |
| P 213.617*†  | 2492.6                      | 1.130       | mg/L            | 0.0575   | 54.06 mg/kg           | 2.750    | 5.09%  |
| P 214.914†   | 1211.7                      | 0.8777      | mg/L            | 0.01729  | 42.00 mg/kg           | 0.827    | 1.97%  |
| Pb 220.353*† | 10680.4                     | 1.232       | mg/L            | 0.0241   | 58.96 mg/kg           | 1.153    | 1.95%  |
| Sb 206.836†  | 1225.0                      | 0.6007      | mg/L            | 0.01207  | 28.74 mg/kg           | 0.577    | 2.01%  |
| Sb 217.582*† | 1035.6                      | 0.5109      | mg/L            | 0.00272  | 24.44 mg/kg           | 0.130    | 0.53%  |
| Se 196.026*† | 1159.7                      | 0.4802      | mg/L            | 0.01175  | 22.97 mg/kg           | 0.562    | 2.45%  |
| Si 251.611*† | 340159.1                    | 8.050       | mg/L            | 0.0726   | 385.2 mg/kg           | 3.47     | 0.90%  |
| Sn 189.927*† | 3196.6                      | 0.4832      | mg/L            | 0.00712  | 23.12 mg/kg           | 0.341    | 1.47%  |
| Sn 242.170†  | 640.8                       | 0.3404      | mg/L            | 0.03687  | 16.29 mg/kg           | 1.764    | 10.83% |
| Sr 407.771*† | 1189915.8                   | 3.473       | mg/L            | 0.0295   | 166.2 mg/kg           | 1.41     | 0.85%  |
| Ti 334.940†  | 693670.1                    | 0.7903      | mg/L            | 0.00150  | 37.81 mg/kg           | 0.072    | 0.19%  |
| Ti 336.121*† | 480470.5                    | 0.7798      | mg/L            | 0.00120  | 37.31 mg/kg           | 0.057    | 0.15%  |
| Tl 190.801*† | 214.8                       | 0.1098      | mg/L            | 0.00330  | 5.255 mg/kg           | 0.1578   | 3.00%  |
| V 292.402*†  | 62016.0                     | 0.4326      | mg/L            | 0.00467  | 20.70 mg/kg           | 0.223    | 1.08%  |
| Zn 206.200*† | 557611.6                    | 12.28       | mg/L            | 0.099    | 587.5 mg/kg           | 4.75     | 0.81%  |

Sequence No.: 13

Sample ID: 17-03-1114-1 msd

Analyst: 935 icp 7300

Initial Sample Wt: 2 g

Dilution:

Wash Time: 15

Autosampler Location: 209

Date Collected: 3/27/2017 12:57:44 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1114-1 msd

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|-------|
| Tb 384       | 52838.0                     | 64.58       | %               | 0.027    |                       |          | 0.04% |
| Tb 350       | 126406.8                    | 95.41       | %               | 0.741    |                       |          | 0.78% |
| Ag 328.068*† | 62860.8                     | 0.3148      | mg/L            | 0.00068  | 15.74 mg/kg           | 0.034    | 0.22% |
| Al 308.215*† | 387844.2                    | 21.60       | mg/L            | 0.122    | 1080 mg/kg            | 6.11     | 0.57% |
| As 188.979†  | 1087.6                      | 0.4662      | mg/L            | 0.00253  | 23.31 mg/kg           | 0.126    | 0.54% |
| As 193.696*† | 815.8                       | 0.5069      | mg/L            | 0.00193  | 25.34 mg/kg           | 0.096    | 0.38% |
| B 249.677*†  | 35142.0                     | 0.6523      | mg/L            | 0.00757  | 32.61 mg/kg           | 0.378    | 1.16% |
| Ba 233.527*† | 11227012.9                  | 70.07       | mg/L            | 0.002    | 3503 mg/kg            | 0.08     | 0.00% |
| Be 313.042*† | 1964269.7                   | 0.4802      | mg/L            | 0.00382  | 24.01 mg/kg           | 0.191    | 0.80% |
| Ca 317.933*† | 202985.8                    | 92.80       | mg/L            | 1.034    | 4640 mg/kg            | 51.69    | 1.11% |
| Cd 226.502*† | 150017.4                    | 1.782       | mg/L            | 0.0174   | 89.10 mg/kg           | 0.871    | 0.98% |
| Cd 228.802†  | 73158.1                     | 1.768       | mg/L            | 0.0173   | 88.40 mg/kg           | 0.864    | 0.98% |
| Co 228.616*† | 14863.7                     | 0.4966      | mg/L            | 0.00389  | 24.83 mg/kg           | 0.195    | 0.78% |
| Cr 267.716*† | 1119213.7                   | 9.274       | mg/L            | 0.0336   | 463.7 mg/kg           | 1.68     | 0.36% |
| Cu 324.752*† | 506431.9                    | 1.922       | mg/L            | 0.0056   | 96.08 mg/kg           | 0.279    | 0.29% |
| Fe 273.955*† | 232061.8                    | 9.296       | mg/L            | 0.1043   | 464.8 mg/kg           | 5.21     | 1.12% |
| K 766.490*†  | 18773.8                     | 5.830       | mg/L            | 0.0035   | 291.5 mg/kg           | 0.18     | 0.06% |
| Mg 279.077*† | 387445.0                    | 18.67       | mg/L            | 0.202    | 933.7 mg/kg           | 10.12    | 1.08% |
| Mn 257.610*† | 914063.1                    | 1.327       | mg/L            | 0.0092   | 66.33 mg/kg           | 0.460    | 0.69% |
| Mo 202.031*† | 7627.2                      | 0.7857      | mg/L            | 0.00527  | 39.29 mg/kg           | 0.264    | 0.67% |
| Na 589.592*† | 39183.9                     | 8.408       | mg/L            | 0.1241   | 420.4 mg/kg           | 6.21     | 1.48% |
| Ni 231.604*† | 18831.9                     | 0.7124      | mg/L            | 0.01503  | 35.62 mg/kg           | 0.751    | 2.11% |
| P 213.617*†  | 2360.1                      | 1.070       | mg/L            | 0.0268   | 53.49 mg/kg           | 1.340    | 2.50% |
| P 214.914†   | 1198.1                      | 0.8679      | mg/L            | 0.00195  | 43.39 mg/kg           | 0.097    | 0.22% |
| Pb 220.353*† | 10450.9                     | 1.206       | mg/L            | 0.0074   | 60.29 mg/kg           | 0.372    | 0.62% |
| Sb 206.836†  | 935.7                       | 0.4588      | mg/L            | 0.00698  | 22.94 mg/kg           | 0.349    | 1.52% |
| Sb 217.582*† | 743.3                       | 0.3667      | mg/L            | 0.00148  | 18.33 mg/kg           | 0.074    | 0.40% |
| Se 196.026*† | 1054.9                      | 0.4368      | mg/L            | 0.00361  | 21.84 mg/kg           | 0.180    | 0.83% |
| Si 251.611*† | 253717.4                    | 6.004       | mg/L            | 0.0598   | 300.2 mg/kg           | 2.99     | 1.00% |
| Sn 189.927*† | 3006.2                      | 0.4544      | mg/L            | 0.00006  | 22.72 mg/kg           | 0.003    | 0.01% |
| Sn 242.170†  | 576.0                       | 0.3060      | mg/L            | 0.00590  | 15.30 mg/kg           | 0.295    | 1.93% |
| Sr 407.771*† | 1135998.4                   | 3.316       | mg/L            | 0.0464   | 165.8 mg/kg           | 2.32     | 1.40% |
| Ti 334.940†  | 661653.0                    | 0.7538      | mg/L            | 0.00370  | 37.69 mg/kg           | 0.185    | 0.49% |
| Ti 336.121*† | 457842.5                    | 0.7431      | mg/L            | 0.00237  | 37.16 mg/kg           | 0.118    | 0.32% |
| Tl 190.801*† | 992.7                       | 0.5076      | mg/L            | 0.00105  | 25.38 mg/kg           | 0.053    | 0.21% |
| V 292.402*†  | 60507.4                     | 0.4221      | mg/L            | 0.00023  | 21.11 mg/kg           | 0.011    | 0.05% |
| Zn 206.200*† | 558101.8                    | 12.29       | mg/L            | 0.149    | 614.5 mg/kg           | 7.44     | 1.21% |

Sequence No.: 5

Sample ID: 17-03-1114-1 pds

Analyst: 935 icp 7300

Initial Sample Wt: 2.09 g

Dilution:

Wash Time: 20

Autosampler Location: 451

Date Collected: 3/27/2017 3:43:03 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1114-1 pds

| Analyte      | Mean Corrected | Calib.      | Std.Dev. | Sample      | Std.Dev. | RSD   |
|--------------|----------------|-------------|----------|-------------|----------|-------|
|              | Intensity      | Conc. Units |          | Conc. Units |          |       |
| Tb 384       | 54698.8        | 66.86 %     | 0.874    |             |          | 1.31% |
| Tb 350       | 121708.5       | 91.86 %     | 0.597    |             |          | 0.65% |
| Ag 328.068*† | 64171.3        | 0.3214 mg/L | 0.00005  | 15.38 mg/kg | 0.002    | 0.01% |
| Al 308.215*† | 446645.7       | 24.87 mg/L  | 0.021    | 1190 mg/kg  | 0.98     | 0.08% |
| As 188.979†  | 1134.5         | 0.4863 mg/L | 0.00802  | 23.27 mg/kg | 0.384    | 1.65% |
| As 193.696*† | 852.9          | 0.5299 mg/L | 0.00182  | 25.35 mg/kg | 0.087    | 0.34% |
| B 249.677*†  | 34917.2        | 0.6481 mg/L | 0.00563  | 31.01 mg/kg | 0.269    | 0.87% |
| Ba 233.527*† | 13275383.6     | 82.85 mg/L  | 0.576    | 3964 mg/kg  | 27.56    | 0.70% |
| Be 313.042*† | 1981471.1      | 0.4844 mg/L | 0.00245  | 23.18 mg/kg | 0.117    | 0.51% |
| Ca 317.933*† | 197860.1       | 90.46 mg/L  | 1.103    | 4328 mg/kg  | 52.75    | 1.22% |
| Cd 226.502*† | 219923.5       | 2.612 mg/L  | 0.0011   | 125.0 mg/kg | 0.05     | 0.04% |
| Cd 228.802†  | 106754.6       | 2.580 mg/L  | 0.0097   | 123.4 mg/kg | 0.46     | 0.38% |
| Co 228.616*† | 14730.5        | 0.4922 mg/L | 0.00120  | 23.55 mg/kg | 0.057    | 0.24% |
| Cr 267.716*† | 1363937.2      | 11.30 mg/L  | 0.003    | 540.8 mg/kg | 0.14     | 0.03% |
| Cu 324.752*† | 805235.9       | 3.055 mg/L  | 0.0039   | 146.2 mg/kg | 0.19     | 0.13% |
| Fe 273.955*† | 289421.8       | 11.59 mg/L  | 0.088    | 554.7 mg/kg | 4.22     | 0.76% |
| K 766.490*†  | 20744.5        | 6.442 mg/L  | 0.0935   | 308.2 mg/kg | 4.47     | 1.45% |
| Mg 279.077*† | 309405.3       | 14.91 mg/L  | 0.010    | 713.5 mg/kg | 0.46     | 0.06% |
| Mn 257.610*† | 1275714.0      | 1.851 mg/L  | 0.0023   | 88.58 mg/kg | 0.108    | 0.12% |
| Mo 202.031*† | 10890.9        | 1.122 mg/L  | 0.0016   | 53.68 mg/kg | 0.078    | 0.15% |
| Na 589.592*† | 41598.7        | 8.926 mg/L  | 0.0746   | 427.1 mg/kg | 3.57     | 0.84% |
| Ni 231.604*† | 17927.5        | 0.6782 mg/L | 0.00596  | 32.45 mg/kg | 0.285    | 0.88% |
| P 213.617*†  | 2871.8         | 1.302 mg/L  | 0.0042   | 62.28 mg/kg | 0.201    | 0.32% |
| P 214.914†   | 1309.7         | 0.9487 mg/L | 0.00206  | 45.39 mg/kg | 0.099    | 0.22% |
| Pb 220.353*† | 15815.4        | 1.825 mg/L  | 0.0156   | 87.31 mg/kg | 0.746    | 0.85% |
| Sb 206.836†  | 1539.5         | 0.7549 mg/L | 0.00228  | 36.12 mg/kg | 0.109    | 0.30% |
| Sb 217.582*† | 1274.1         | 0.6285 mg/L | 0.00690  | 30.07 mg/kg | 0.330    | 1.10% |
| Se 196.026*† | 1141.7         | 0.4727 mg/L | 0.00502  | 22.62 mg/kg | 0.240    | 1.06% |
| Si 251.611*† | 314800.1       | 7.450 mg/L  | 0.1795   | 356.4 mg/kg | 8.59     | 2.41% |
| Sn 189.927*† | 3380.3         | 0.5109 mg/L | 0.00571  | 24.45 mg/kg | 0.273    | 1.12% |
| Sn 242.170†  | 765.2          | 0.4065 mg/L | 0.02360  | 19.45 mg/kg | 1.129    | 5.80% |
| Sr 407.771*† | 1319284.0      | 3.851 mg/L  | 0.0395   | 184.3 mg/kg | 1.89     | 1.03% |
| Ti 334.940†  | 1024733.0      | 1.167 mg/L  | 0.0128   | 55.86 mg/kg | 0.611    | 1.09% |
| Ti 336.121*† | 713598.9       | 1.158 mg/L  | 0.0090   | 55.42 mg/kg | 0.429    | 0.77% |
| Tl 190.801*† | 930.6          | 0.4758 mg/L | 0.01824  | 22.77 mg/kg | 0.873    | 3.83% |
| V 292.402*†  | 58738.6        | 0.4097 mg/L | 0.00247  | 19.60 mg/kg | 0.118    | 0.60% |
| Zn 206.200*† | 704640.5       | 15.52 mg/L  | 0.037    | 742.4 mg/kg | 1.75     | 0.24% |

Sequence No.: 6

Sample ID: 17-03-1114-1 pdsd

Analyst: 935 icp 7300

Initial Sample Wt: 2.09 g

Dilution:

Wash Time: 15

Autosampler Location: 452

Date Collected: 3/27/2017 3:43:55 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1114-1 pdsd

| Analyte                 | Mean Corrected   |                   | Calib.          |                    | Sample           |                  | RSD              |
|-------------------------|------------------|-------------------|-----------------|--------------------|------------------|------------------|------------------|
|                         | Intensity        | Conc.             | Units           | Std.Dev.           | Conc.            | Std.Dev.         |                  |
| Tb 384                  | 54336.1          | 66.41             | %               | 0.547              |                  |                  | 0.82%            |
| Tb 350                  | 121492.2         | 91.70             | %               | 0.737              |                  |                  | 0.80%            |
| Ag 328.068*†            | 63944.4          | 0.3202            | mg/L            | 0.00023            | 15.32            | 0.011            | 0.07%            |
| Al 308.215*†            | 444626.8         | 24.76             | mg/L            | 0.043              | 1185             | 2.06             | 0.17%            |
| As 188.979†             | 1129.2           | 0.4840            | mg/L            | 0.00646            | 23.16            | 0.309            | 1.33%            |
| <del>As 193.696*†</del> | <del>849.9</del> | <del>0.5280</del> | <del>mg/L</del> | <del>0.00486</del> | <del>25.27</del> | <del>0.233</del> | <del>0.92%</del> |
| B 249.677*†             | 34494.2          | 0.6402            | mg/L            | 0.01007            | 30.63            | 0.482            | 1.57%            |
| Ba 233.527*†            | 13397233.2       | 83.61             | mg/L            | 0.321              | 4000             | 15.37            | 0.38%            |
| Be 313.042*†            | 1986213.7        | 0.4856            | mg/L            | 0.00380            | 23.23            | 0.182            | 0.78%            |
| Ca 317.933*†            | 189872.3         | 86.81             | mg/L            | 0.900              | 4154             | 43.05            | 1.04%            |
| Cd 226.502*†            | 220111.6         | 2.615             | mg/L            | 0.0192             | 125.1            | 0.92             | 0.74%            |
| Cd 228.802†             | 106737.9         | 2.579             | mg/L            | 0.0134             | 123.4            | 0.64             | 0.52%            |
| Co 228.616*†            | 14664.0          | 0.4899            | mg/L            | 0.00637            | 23.44            | 0.305            | 1.30%            |
| Cr 267.716*†            | 1364932.8        | 11.31             | mg/L            | 0.060              | 541.2            | 2.89             | 0.53%            |
| Cu 324.752*†            | 804674.5         | 3.053             | mg/L            | 0.0118             | 146.1            | 0.56             | 0.39%            |
| Fe 273.955*†            | 276235.6         | 11.07             | mg/L            | 0.102              | 529.5            | 4.90             | 0.93%            |
| K 766.490*†             | 19953.0          | 6.197             | mg/L            | 0.0312             | 296.5            | 1.49             | 0.50%            |
| Mg 279.077*†            | 308447.8         | 14.87             | mg/L            | 0.107              | 711.3            | 5.12             | 0.72%            |
| Mn 257.610*†            | 1271731.4        | 1.846             | mg/L            | 0.0124             | 88.31            | 0.595            | 0.67%            |
| Mo 202.031*†            | 10873.5          | 1.120             | mg/L            | 0.0197             | 53.60            | 0.944            | 1.76%            |
| Na 589.592*†            | 40670.6          | 8.727             | mg/L            | 0.1096             | 417.5            | 5.25             | 1.26%            |
| Ni 231.604*†            | 17903.0          | 0.6773            | mg/L            | 0.00698            | 32.41            | 0.334            | 1.03%            |
| P 213.617*†             | 2732.6           | 1.239             | mg/L            | 0.0270             | 59.26            | 1.291            | 2.18%            |
| P 214.914†              | 1293.4           | 0.9369            | mg/L            | 0.02244            | 44.83            | 1.074            | 2.40%            |
| Pb 220.353*†            | 15807.4          | 1.824             | mg/L            | 0.0304             | 87.26            | 1.455            | 1.67%            |
| Sb 206.836†             | 1540.3           | 0.7553            | mg/L            | 0.00985            | 36.14            | 0.472            | 1.30%            |
| Sb 217.582*†            | 1269.6           | 0.6263            | mg/L            | 0.00055            | 29.97            | 0.026            | 0.09%            |
| Se 196.026*†            | 1132.5           | 0.4689            | mg/L            | 0.00789            | 22.44            | 0.378            | 1.68%            |
| Si 251.611*†            | 317777.5         | 7.520             | mg/L            | 0.2058             | 359.8            | 9.84             | 2.74%            |
| Sn 189.927*†            | 3393.5           | 0.5129            | mg/L            | 0.00432            | 24.54            | 0.207            | 0.84%            |
| Sn 242.170†             | 743.6            | 0.3951            | mg/L            | 0.00518            | 18.90            | 0.248            | 1.31%            |
| Sr 407.771*†            | 1323812.8        | 3.864             | mg/L            | 0.0195             | 184.9            | 0.94             | 0.51%            |
| Ti 334.940†             | 1019641.0        | 1.162             | mg/L            | 0.0048             | 55.58            | 0.231            | 0.42%            |
| Ti 336.121*†            | 710197.2         | 1.153             | mg/L            | 0.0039             | 55.15            | 0.186            | 0.34%            |
| Tl 190.801*†            | 917.5            | 0.4692            | mg/L            | 0.01086            | 22.45            | 0.520            | 2.32%            |
| V 292.402*†             | 58762.5          | 0.4099            | mg/L            | 0.00406            | 19.61            | 0.194            | 0.99%            |
| Zn 206.200*†            | 707388.7         | 15.58             | mg/L            | 0.155              | 745.3            | 7.40             | 0.99%            |

Sequence No.: 9  
Sample ID: 17-03-1114-1  
Analyst: 935 icp 7300  
Initial Sample Wt: 2.09 g  
Dilution:  
Wash Time: 20

Autosampler Location: 207  
Date Collected: 3/27/2017 12:54:06 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

## Mean Data: 17-03-1114-1

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD    |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|--------|
| Tb 384       | 57511.6                     | 70.30 %               | 0.590    |                       |          | 0.84%  |
| Tb 350       | 128359.5                    | 96.88 %               | 0.671    |                       |          | 0.69%  |
| Ag 328.068*† | 17919.5                     | 0.0897 mg/L           | 0.00080  | 4.294 mg/kg           | 0.0384   | 0.89%  |
| Al 308.215*† | 427355.9                    | 23.80 mg/L            | 0.143    | 1139 mg/kg            | 6.86     | 0.60%  |
| As 188.979†  | 29.5                        | 0.0127 mg/L           | 0.00265  | 0.6053 mg/kg          | 0.12690  | 20.96% |
| As 193.696*† | 89.3                        | 0.0555 mg/L           | 0.00037  | 2.654 mg/kg           | 0.0179   | 0.68%  |
| B 249.677*†  | 6750.4                      | 0.1253 mg/L           | 0.00078  | 5.995 mg/kg           | 0.0372   | 0.62%  |
| Ba 233.527*† | 12899117.3                  | 80.50 mg/L            | 0.631    | 3852 mg/kg            | 30.20    | 0.78%  |
| Be 313.042*† | -2746.5                     | -0.0007 mg/L          | 0.00001  | -0.0321 mg/kg         | 0.00028  | 0.86%  |
| Ca 317.933*† | 184341.4                    | 84.28 mg/L            | 5.168    | 4033 mg/kg            | 247.26   | 6.13%  |
| Cd 226.502*† | 177978.7                    | 2.114 mg/L            | 0.0108   | 101.2 mg/kg           | 0.51     | 0.51%  |
| Cd 228.802†  | 86853.8                     | 2.099 mg/L            | 0.0148   | 100.4 mg/kg           | 0.71     | 0.70%  |
| Co 228.616*† | 49.2                        | 0.0016 mg/L           | 0.00023  | 0.0786 mg/kg          | 0.01109  | 14.11% |
| Cr 267.716*† | 1276236.0                   | 10.58 mg/L            | 0.051    | 506.0 mg/kg           | 2.45     | 0.49%  |
| Cu 324.752*† | 660153.4                    | 2.505 mg/L            | 0.0149   | 119.8 mg/kg           | 0.71     | 0.59%  |
| Fe 273.955*† | 265472.3                    | 10.63 mg/L            | 0.018    | 508.8 mg/kg           | 0.85     | 0.17%  |
| K 766.490*†  | 3581.6                      | 1.112 mg/L            | 0.0436   | 53.22 mg/kg           | 2.086    | 3.92%  |
| Mg 279.077*† | 296859.8                    | 14.31 mg/L            | 0.052    | 684.6 mg/kg           | 2.48     | 0.36%  |
| Mn 257.610*† | 927780.8                    | 1.346 mg/L            | 0.0050   | 64.42 mg/kg           | 0.239    | 0.37%  |
| Mo 202.031*† | 5964.8                      | 0.6145 mg/L           | 0.00124  | 29.40 mg/kg           | 0.059    | 0.20%  |
| Na 589.592*† | 15235.2                     | 3.269 mg/L            | 0.1451   | 156.4 mg/kg           | 6.94     | 4.44%  |
| Ni 231.604*† | 4944.1                      | 0.1870 mg/L           | 0.00129  | 8.949 mg/kg           | 0.0619   | 0.69%  |
| P 213.617*†  | 1545.9                      | 0.7007 mg/L           | 0.03712  | 33.52 mg/kg           | 1.776    | 5.30%  |
| P 214.914†   | 615.4                       | 0.4457 mg/L           | 0.01703  | 21.33 mg/kg           | 0.815    | 3.82%  |
| Pb 220.353*† | 11351.0                     | 1.310 mg/L            | 0.0059   | 62.66 mg/kg           | 0.282    | 0.45%  |
| Sb 206.836†  | 569.7                       | 0.2794 mg/L           | 0.00797  | 13.37 mg/kg           | 0.381    | 2.85%  |
| Sb 217.582*† | 335.4                       | 0.1655 mg/L           | 0.00966  | 7.917 mg/kg           | 0.4621   | 5.84%  |
| Se 196.026*† | -25.4                       | -0.0105 mg/L          | 0.00143  | -0.5037 mg/kg         | 0.06861  | 13.62% |
| Si 251.611*† | 268389.8                    | 6.351 mg/L            | 0.0098   | 303.9 mg/kg           | 0.47     | 0.15%  |
| Sn 189.927*† | 161.0                       | 0.0243 mg/L           | 0.00485  | 1.164 mg/kg           | 0.2322   | 19.95% |
| Sn 242.170†  | -100.7                      | -0.0535 mg/L          | 0.02239  | -2.560 mg/kg          | 1.0714   | 41.86% |
| Sr 407.771*† | 1141204.1                   | 3.331 mg/L            | 0.0068   | 159.4 mg/kg           | 0.33     | 0.21%  |
| Ti 334.940†  | 295416.0                    | 0.3366 mg/L           | 0.00395  | 16.10 mg/kg           | 0.189    | 1.17%  |
| Ti 336.121*† | 200111.5                    | 0.3248 mg/L           | 0.00400  | 15.54 mg/kg           | 0.192    | 1.23%  |
| Tl 190.801*† | -26.1                       | -0.0133 mg/L          | 0.00298  | -0.6386 mg/kg         | 0.14244  | 22.30% |
| V 292.402*†  | -9827.8                     | -0.0688 mg/L          | 0.00115  | -3.290 mg/kg          | 0.0550   | 1.67%  |
| Zn 206.200*† | 675218.0                    | 14.87 mg/L            | 0.056    | 711.4 mg/kg           | 2.70     | 0.38%  |

**METHOD BLANK ASSOCIATION SUMMARY**  
**FOR METHOD: EPA 6010B**

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**MB SAMPLE ID:** 097-01-002-24504  
**MB BATCH ID:** 170324L12  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:58  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-b-12\_\_26.icp

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**CLIENT WORK ORDER: 17-03-1104**

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                            |
|-----------|-----------------|-------------------------|---------------------|---------------------------------------------|
| 33        | B-DU3-ISM4-3    |                         | 2017-03-27 13:14    | W:\ICP-DATA\170327C 1\17-03-1104-33 MIS.icp |

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# RAW DATA SHEET FOR METHOD: EPA 6010B

Page 235 of 486

**WORK ORDER:** 097-01-002  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:58  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-b-12\_\_26.icp

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** 170324L12 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | -0.00851           | 0.966     | ND          | 0.725     |             |
| Arsenic         | -0.00332           | 0.966     | ND          | 0.725     |             |
| Barium          | 0.000460           | 0.966     | ND          | 0.483     |             |
| Beryllium       | 0.000152           | 0.966     | ND          | 0.242     |             |
| Cadmium         | 0.000367           | 0.966     | ND          | 0.483     |             |
| Chromium        | 0.000235           | 0.966     | ND          | 0.242     |             |
| Cobalt          | 0.000293           | 0.966     | ND          | 0.242     |             |
| Copper          | -0.0000323         | 0.966     | ND          | 0.483     |             |
| Lead            | 0.00142            | 0.966     | ND          | 0.483     |             |
| Molybdenum      | -0.000135          | 0.966     | ND          | 0.242     |             |
| Nickel          | 0.00106            | 0.966     | ND          | 0.242     |             |
| Selenium        | 0.00544            | 0.966     | ND          | 0.725     |             |
| Silver          | 0.000677           | 0.966     | ND          | 0.242     |             |
| Thallium        | -0.00461           | 0.966     | ND          | 0.725     |             |
| Vanadium        | -0.000402          | 0.966     | ND          | 0.242     |             |
| Zinc            | 0.000614           | 0.966     | ND          | 0.966     |             |

Return to Contents

# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

**LCS SAMPLE ID:** 097-01-002-24504  
**LCS/MB BATCH ID:** 170324L12  
**INSTRUMENT:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-27 10:59  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170327C 1\170324-L12\_27.icp

| COMPOUND   | CONC  | CONC REC | %REC | %REC CL | ME CL  | STATUS | QUALIFIERS |
|------------|-------|----------|------|---------|--------|--------|------------|
| Antimony   | 25.00 | 23.01    | 92   | 80-120  | 73-127 | PASS   |            |
| Arsenic    | 25.00 | 22.69    | 91   | 80-120  | 73-127 | PASS   |            |
| Barium     | 25.00 | 25.19    | 101  | 80-120  | 73-127 | PASS   |            |
| Beryllium  | 25.00 | 22.96    | 92   | 80-120  | 73-127 | PASS   |            |
| Cadmium    | 25.00 | 23.36    | 93   | 80-120  | 73-127 | PASS   |            |
| Chromium   | 25.00 | 24.02    | 96   | 80-120  | 73-127 | PASS   |            |
| Cobalt     | 25.00 | 24.33    | 97   | 80-120  | 73-127 | PASS   |            |
| Copper     | 25.00 | 24.63    | 99   | 80-120  | 73-127 | PASS   |            |
| Lead       | 25.00 | 24.49    | 98   | 80-120  | 73-127 | PASS   |            |
| Molybdenum | 25.00 | 23.86    | 95   | 80-120  | 73-127 | PASS   |            |
| Nickel     | 25.00 | 24.08    | 96   | 80-120  | 73-127 | PASS   |            |
| Phosphorus | 25.00 | 23.95    | 96   | 80-120  | 73-127 | PASS   |            |
| Selenium   | 25.00 | 22.84    | 91   | 80-120  | 73-127 | PASS   |            |
| Silver     | 12.50 | 11.85    | 95   | 80-120  | 73-127 | PASS   |            |
| Thallium   | 25.00 | 24.59    | 98   | 80-120  | 73-127 | PASS   |            |
| Vanadium   | 25.00 | 23.00    | 92   | 80-120  | 73-127 | PASS   |            |
| Zinc       | 25.00 | 23.89    | 96   | 80-120  | 73-127 | PASS   |            |
| Aluminum   | 25.00 | 25.42    | 102  | 80-120  | 73-127 | PASS   |            |
| Calcium    | 25.00 | 24.28    | 97   | 80-120  | 73-127 | PASS   |            |
| Iron       | 25.00 | 26.39    | 106  | 80-120  | 73-127 | PASS   |            |
| Magnesium  | 25.00 | 23.34    | 93   | 80-120  | 73-127 | PASS   |            |
| Manganese  | 25.00 | 24.01    | 96   | 80-120  | 73-127 | PASS   |            |
| Potassium  | 250.0 | 230.1    | 92   | 80-120  | 73-127 | PASS   |            |
| Sodium     | 250.0 | 246.9    | 99   | 80-120  | 73-127 | PASS   |            |
| Strontium  | 25.00 | 24.60    | 98   | 80-120  | 73-127 | PASS   |            |
| Tin        | 25.00 | 24.23    | 97   | 80-120  | 73-127 | PASS   |            |
| Titanium   | 25.00 | 23.66    | 95   | 80-120  | 73-127 | PASS   |            |
| Boron      | 25.00 | 22.29    | 89   | 80-120  | 73-127 | PASS   |            |
| Silicon    | 25.00 | 23.66    | 95   | 80-120  | 73-127 | PASS   |            |

LCS QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-002-24504  
LCS/MB BATCH ID: 170324L12  
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED: 2017-03-27 10:59  
REVIEWED BY:  
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\170324-1-12\_27.icp

| <u>COMPOUND</u> | <u>CONC</u> | <u>CONC REC</u> | <u>%REC</u> | <u>%REC CL</u> | <u>ME CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|-------------|-----------------|-------------|----------------|--------------|---------------|-------------------|
|-----------------|-------------|-----------------|-------------|----------------|--------------|---------------|-------------------|

Total number of LCS compounds: 29  
Total number of ME compounds: 0  
Total number of ME compounds allowed: 1  
LCS ME CL validation result: Pass

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1115-1  
MS/MSD BATCH: 170324S12  
INSTRUMENTS: ICP 7300  
SAMPLE: ICP 7300  
MS: ICP 7300  
MSD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:

ANALYZED BY: 935

D/T ANALYZED:

SAMPLE: 2017-03-24 00:00  
MS: 2017-03-24 00:00  
MSD: 2017-03-24 00:00

2017-03-27 12:58  
2017-03-27 12:59  
2017-03-27 13:00

REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Antimony      | 2.812  | 0.5000  | 25.00 | 15.39   | 50       | 17.30    | 58        | 50-115   | 12  | 0-20   | PASS   |            |
| Arsenic       | ND     | 0.5000  | 25.00 | 15.52   | 62       | 17.83    | 71        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Barium        | 1.861  | 0.5000  | 25.00 | 14.98   | 52       | 17.38    | 62        | 75-125   | 15  | 0-20   | FAIL   | 3G         |
| Beryllium     | ND     | 0.5000  | 25.00 | 13.51   | 54       | 15.39    | 62        | 75-125   | 13  | 0-20   | FAIL   | 3G         |
| Cadmium       | ND     | 0.5000  | 25.00 | 17.44   | 70       | 20.36    | 81        | 75-125   | 15  | 0-20   | FAIL   | 3G         |
| Chromium      | 0.3483 | 0.5000  | 25.00 | 13.38   | 52       | 15.70    | 61        | 75-125   | 16  | 0-20   | FAIL   | 3G         |
| Cobalt        | ND     | 0.5000  | 25.00 | 13.57   | 54       | 15.74    | 63        | 75-125   | 15  | 0-20   | FAIL   | 3G         |
| Copper        | ND     | 0.5000  | 25.00 | 14.73   | 59       | 17.13    | 69        | 75-125   | 15  | 0-20   | FAIL   | 3G         |
| Lead          | ND     | 0.5000  | 25.00 | 17.07   | 68       | 19.59    | 78        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Molybdenum    | ND     | 0.5000  | 25.00 | 14.05   | 56       | 16.20    | 65        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Nickel        | ND     | 0.5000  | 25.00 | 13.35   | 53       | 15.41    | 62        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Phosphorus    | 2287   | 0.5000  | 25.00 | 2623    | 4x       | 2841     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Selenium      | ND     | 0.5000  | 25.00 | 15.67   | 63       | 18.12    | 72        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Silver        | ND     | 0.2500  | 12.50 | 9.394   | 75       | 10.36    | 83        | 75-125   | 10  | 0-20   | PASS   |            |
| Thallium      | ND     | 0.5000  | 25.00 | 10.56   | 42       | 15.04    | 60        | 75-125   | 35  | 0-20   | FAIL   | 3G4        |
| Vanadium      | ND     | 0.5000  | 25.00 | 12.68   | 51       | 14.93    | 60        | 75-125   | 16  | 0-20   | FAIL   | 3G         |
| Zinc          | 7.305  | 0.5000  | 25.00 | 30.61   | 93       | 34.14    | 107       | 75-125   | 11  | 0-20   | PASS   |            |
| Aluminum      | 11140  | 0.5000  | 25.00 | 14260   | 4x       | 15260    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Calcium       | 131.2  | 0.5000  | 25.00 | 278.9   | 4x       | 395.1    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Iron          | 10.80  | 0.5000  | 25.00 | 27.06   | 65       | 35.61    | 99        | 75-125   | 27  | 0-20   | FAIL   | 3G4        |
| Magnesium     | 12.53  | 0.5000  | 25.00 | 37.25   | 99       | 53.85    | 165       | 75-125   | 36  | 0-20   | FAIL   | 34F        |
| Manganese     | 0.6003 | 0.5000  | 25.00 | 13.75   | 53       | 16.47    | 63        | 75-125   | 18  | 0-20   | FAIL   | 3G         |
| Potassium     | ND     | 5.000   | 250.0 | 166.2   | 66       | 184.3    | 74        | 75-125   | 10  | 0-20   | FAIL   | 3G         |
| Sodium        | 87.71  | 5.000   | 250.0 | 266.7   | 72       | 289.2    | 81        | 75-125   | 8   | 0-20   | FAIL   | 3G         |
| Strontium     | ND     | 0.5000  | 25.00 | 14.26   | 57       | 16.25    | 65        | 75-125   | 13  | 0-20   | FAIL   | 3G         |
| Tin           | 7.423  | 0.5000  | 25.00 | 23.44   | 64       | 26.85    | 78        | 75-125   | 14  | 0-20   | FAIL   | 3G         |
| Titanium      | 2.117  | 0.5000  | 25.00 | 15.23   | 52       | 17.66    | 62        | 75-125   | 15  | 0-20   | FAIL   | 3G         |
| Boron         | 2.589  | 0.5000  | 25.00 | 18.24   | 63       | 20.72    | 73        | 75-125   | 13  | 0-20   | FAIL   | 3G         |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1115-1  
MS/MSD BATCH: 170324S12  
INSTRUMENTS:  
SAMPLE: ICP 7300  
MS: ICP 7300  
MSD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:  
SAMPLE: 2017-03-24 00:00  
MS: 2017-03-24 00:00  
MSD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:  
SAMPLE: 2017-03-27 12:58  
MS: 2017-03-27 12:59  
MSD: 2017-03-27 13:00  
REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Silicon       | 139.1  | 0.5000  | 25.00 | 160.9   | 4x       | 166.1    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |

Data Files:

| TYPE | DATA FILE            | DATA FILE PATH         |
|------|----------------------|------------------------|
| MS   | 17-03-1115-1 ms.icp  | W:\ICP-DATA\170327C 1\ |
| MSD  | 17-03-1115-1 msd.icp | W:\ICP-DATA\170327C 1\ |

POST DIGESTION SPIKE /POST DIGESTION SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1115-1  
PDS/PDD BATCH: 170324S12

INSTRUMENTS:

SAMPLE: ICP 7300  
PDS: ICP 7300  
PDD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:

SAMPLE: 2017-03-24 00:00  
PDS: 2017-03-24 00:00  
PDD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:

SAMPLE: 2017-03-27 12:58  
PDS: 2017-03-27 16:58  
PDD: 2017-03-27 16:59

REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL ADDED | FINAL ADDED | PDS CONC | %PDS.REC | PCDSD CONC | %PCDSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------------|-------------|----------|----------|------------|------------|----------|-----|--------|--------|------------|
| Antimony      | 2.812  | 0.5000        | 25.00       | 33.90    | 124      | 33.58      | 123        | 75-125   | 1   | 0-20   | PASS   |            |
| Arsenic       | ND     | 0.5000        | 25.00       | 29.04    | 116      | 28.76      | 115        | 75-125   | 1   | 0-20   | PASS   |            |
| Barium        | 1.861  | 0.5000        | 25.00       | 29.57    | 111      | 29.31      | 110        | 75-125   | 1   | 0-20   | PASS   |            |
| Beryllium     | ND     | 0.5000        | 25.00       | 28.10    | 112      | 27.98      | 112        | 75-125   | 0   | 0-20   | PASS   |            |
| Cadmium       | ND     | 0.5000        | 25.00       | 27.90    | 112      | 27.57      | 110        | 75-125   | 1   | 0-20   | PASS   |            |
| Chromium      | 0.3483 | 0.5000        | 25.00       | 28.13    | 111      | 27.96      | 110        | 75-125   | 1   | 0-20   | PASS   |            |
| Cobalt        | ND     | 0.5000        | 25.00       | 28.16    | 113      | 27.92      | 112        | 75-125   | 1   | 0-20   | PASS   |            |
| Copper        | ND     | 0.5000        | 25.00       | 29.11    | 116      | 28.98      | 116        | 75-125   | 0   | 0-20   | PASS   |            |
| Lead          | ND     | 0.5000        | 25.00       | 27.71    | 111      | 27.39      | 110        | 75-125   | 1   | 0-20   | PASS   |            |
| Molybdenum    | ND     | 0.5000        | 25.00       | 26.68    | 107      | 26.44      | 106        | 75-125   | 1   | 0-20   | PASS   |            |
| Nickel        | ND     | 0.5000        | 25.00       | 27.57    | 110      | 27.41      | 110        | 75-125   | 1   | 0-20   | PASS   |            |
| Phosphorus    | 2287   | 0.5000        | 25.00       | 6238     | 4x       | 6182       | 4x         | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Selenium      | ND     | 0.5000        | 25.00       | 28.64    | 115      | 28.64      | 115        | 75-125   | 0   | 0-20   | PASS   |            |
| Silver        | ND     | 0.2500        | 12.50       | 12.70    | 102      | 12.67      | 101        | 75-125   | 0   | 0-20   | PASS   |            |
| Thallium      | ND     | 0.5000        | 25.00       | 26.37    | 105      | 26.10      | 104        | 75-125   | 1   | 0-20   | PASS   |            |
| Vanadium      | ND     | 0.5000        | 25.00       | 26.68    | 107      | 26.49      | 106        | 75-125   | 1   | 0-20   | PASS   |            |
| Zinc          | 7.305  | 0.5000        | 25.00       | 38.48    | 125      | 38.21      | 124        | 75-125   | 1   | 0-20   | PASS   |            |
| Aluminum      | 11140  | 0.5000        | 25.00       | 33690    | 4x       | 33730      | 4x         | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Calcium       | 131.2  | 0.5000        | 25.00       | 406.3    | 4x       | 410.3      | 4x         | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Iron          | 10.80  | 0.5000        | 25.00       | 53.54    | 171      | 53.12      | 169        | 75-125   | 1   | 0-20   | FAIL   | 5F         |
| Magnesium     | 12.53  | 0.5000        | 25.00       | 60.70    | 193      | 60.92      | 194        | 75-125   | 0   | 0-20   | FAIL   | 5F         |
| Manganese     | 0.6003 | 0.5000        | 25.00       | 28.70    | 112      | 28.51      | 112        | 75-125   | 1   | 0-20   | PASS   |            |
| Potassium     | ND     | 5.000         | 250.0       | 339.7    | 136      | 341.7      | 137        | 75-125   | 1   | 0-20   | FAIL   | 5F         |
| Sodium        | 87.71  | 5.000         | 250.0       | 536.1    | 179      | 545.3      | 183        | 75-125   | 2   | 0-20   | FAIL   | 5F         |
| Strontium     | ND     | 0.5000        | 25.00       | 26.45    | 106      | 26.91      | 108        | 75-125   | 2   | 0-20   | PASS   |            |
| Tin           | 7.423  | 0.5000        | 25.00       | 46.61    | 157      | 46.39      | 156        | 75-125   | 0   | 0-20   | FAIL   | 5F         |
| Titanium      | 2.117  | 0.5000        | 25.00       | 33.26    | 125      | 33.04      | 124        | 75-125   | 1   | 0-20   | PASS   |            |

POST DIGESTION SPIKE /POST DIGESTION SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1115-1  
PDS/PDD BATCH: 170324S12  
INSTRUMENTS:  
SAMPLE: ICP 7300  
PDS: ICP 7300  
PDD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:

SAMPLE: 2017-03-24 00:00  
PDS: 2017-03-24 00:00  
PDD: 2017-03-24 00:00

ANALYZED BY: 935  
D/T ANALYZED:  
SAMPLE: 2017-03-27 12:58  
PDS: 2017-03-27 16:58  
PDD: 2017-03-27 16:59  
REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL ADDED | FINAL ADDED | PDS CONC | %PDS. REC | PCSDS CONC | %PCSDS. REC | REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------------|-------------|----------|-----------|------------|-------------|--------|-----|--------|--------|------------|
| Boron         | 2.589  | 0.5000        | 25.00       | 30.61    | 112       | 30.83      | 113         | 75-125 | 1   | 0-20   | PASS   |            |
| Silicon       | 139.1  | 0.5000        | 25.00       | 383.5    | 4x        | 386.9      | 4x          | 75-125 | 4x  | 0-20   | PASS   | Q          |

Data Files:

| TYPE | DATA FILE             | DATA FILE PATH         |
|------|-----------------------|------------------------|
| PDS  | 17-03-1115-1 pds.icp  | W:\ICP-DATA\170327C 1\ |
| PDD  | 17-03-1115-1 pdsd.icp | W:\ICP-DATA\170327C 1\ |

Sequence No.: 15  
 Sample ID: 170324-b-12  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.07 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 119  
 Date Collected: 3/27/2017 10:58:17 AM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

## Mean Data: 170324-b-12

| Analyte      | Mean Corrected<br>Intensity | Conc. Units  | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|--------------|-----------------|----------|-----------------------|----------|---------|
| Tb 384       | 81186.0                     | 99.23 %      | %               | 2.040    |                       |          | 2.06%   |
| Tb 350       | 130219.2                    | 98.29 %      | %               | 2.773    |                       |          | 2.82%   |
| Ag 328.068*† | 135.1                       | 0.0007 mg/L  | mg/L            | 0.00027  | 0.0327 mg/kg          | 0.01317  | 40.29%  |
| Al 308.215*† | -150.4                      | -0.0084 mg/L | mg/L            | 0.00329  | -0.4047 mg/kg         | 0.15897  | 39.29%  |
| As 188.979†  | -0.3                        | -0.0001 mg/L | mg/L            | 0.00179  | -0.0067 mg/kg         | 0.08656  | >999.9% |
| As 193.696*† | -5.4                        | -0.0033 mg/L | mg/L            | 0.00375  | -0.1606 mg/kg         | 0.18123  | 112.86% |
| B 249.677*†  | 836.9                       | 0.0155 mg/L  | mg/L            | 0.00065  | 0.7504 mg/kg          | 0.03149  | 4.20%   |
| Ba 233.527*† | 73.7                        | 0.0005 mg/L  | mg/L            | 0.00010  | 0.0222 mg/kg          | 0.00492  | 22.12%  |
| Be 313.042*† | 622.6                       | 0.0002 mg/L  | mg/L            | 0.00002  | 0.0074 mg/kg          | 0.00119  | 16.19%  |
| Ca 317.933*† | -35.9                       | -0.0164 mg/L | mg/L            | 0.00017  | -0.7930 mg/kg         | 0.00832  | 1.05%   |
| Cd 226.502*† | 30.9                        | 0.0004 mg/L  | mg/L            | 0.00029  | 0.0177 mg/kg          | 0.01393  | 78.50%  |
| Cd 228.802†  | 12.8                        | 0.0003 mg/L  | mg/L            | 0.00009  | 0.0149 mg/kg          | 0.00414  | 27.69%  |
| Co 228.616*† | 8.8                         | 0.0003 mg/L  | mg/L            | 0.00063  | 0.0142 mg/kg          | 0.03047  | 215.25% |
| Cr 267.716*† | 28.4                        | 0.0002 mg/L  | mg/L            | 0.00076  | 0.0114 mg/kg          | 0.03649  | 320.95% |
| Cu 324.752*† | -8.5                        | -0.0000 mg/L | mg/L            | 0.00041  | -0.0016 mg/kg         | 0.01970  | >999.9% |
| Fe 273.955*† | 338.2                       | 0.0135 mg/L  | mg/L            | 0.00175  | 0.6544 mg/kg          | 0.08449  | 12.91%  |
| K 766.490*†  | -360.1                      | -0.1118 mg/L | mg/L            | 0.04043  | -5.402 mg/kg          | 1.9529   | 36.15%  |
| Mg 279.077*† | 58.0                        | 0.0028 mg/L  | mg/L            | 0.00492  | 0.1350 mg/kg          | 0.23787  | 176.17% |
| Mn 257.610*† | 255.3                       | 0.0004 mg/L  | mg/L            | 0.00008  | 0.0179 mg/kg          | 0.00399  | 22.28%  |
| Mo 202.031*† | -1.3                        | -0.0001 mg/L | mg/L            | 0.00146  | -0.0065 mg/kg         | 0.07058  | >999.9% |
| Na 589.592*† | 75.1                        | 0.0161 mg/L  | mg/L            | 0.00753  | 0.7782 mg/kg          | 0.36391  | 46.76%  |
| Ni 231.604*† | 28.0                        | 0.0011 mg/L  | mg/L            | 0.00026  | 0.0512 mg/kg          | 0.01243  | 24.27%  |
| P 213.617*†  | 33.0                        | 0.0150 mg/L  | mg/L            | 0.00069  | 0.7222 mg/kg          | 0.03318  | 4.59%   |
| P 214.914†   | 13.0                        | 0.0094 mg/L  | mg/L            | 0.01254  | 0.4555 mg/kg          | 0.60603  | 133.05% |
| Pb 220.353*† | 12.4                        | 0.0014 mg/L  | mg/L            | 0.00194  | 0.0688 mg/kg          | 0.09386  | 136.35% |
| Sb 206.836†  | 3.5                         | 0.0017 mg/L  | mg/L            | 0.00026  | 0.0837 mg/kg          | 0.01248  | 14.92%  |
| Sb 217.582*† | -17.3                       | -0.0085 mg/L | mg/L            | 0.00096  | -0.4112 mg/kg         | 0.04637  | 11.28%  |
| Se 196.026*† | 13.1                        | 0.0054 mg/L  | mg/L            | 0.00332  | 0.2627 mg/kg          | 0.16063  | 61.15%  |
| Si 251.611*† | -168.5                      | -0.0040 mg/L | mg/L            | 0.00060  | -0.1926 mg/kg         | 0.02881  | 14.96%  |
| Sn 189.927*† | 37.1                        | 0.0056 mg/L  | mg/L            | 0.00024  | 0.2712 mg/kg          | 0.01155  | 4.26%   |
| Sn 242.170†  | 37.6                        | 0.0200 mg/L  | mg/L            | 0.01600  | 0.9659 mg/kg          | 0.77317  | 80.05%  |
| Sr 407.771*† | -52.9                       | -0.0002 mg/L | mg/L            | 0.00007  | -0.0075 mg/kg         | 0.00334  | 44.80%  |
| Ti 334.940†  | 413.0                       | 0.0005 mg/L  | mg/L            | 0.00007  | 0.0227 mg/kg          | 0.00322  | 14.18%  |
| Ti 336.121*† | 619.9                       | 0.0010 mg/L  | mg/L            | 0.00005  | 0.0486 mg/kg          | 0.00230  | 4.73%   |
| Tl 190.801*† | -9.0                        | -0.0046 mg/L | mg/L            | 0.00224  | -0.2226 mg/kg         | 0.10828  | 48.63%  |
| V 292.402*†  | -57.6                       | -0.0004 mg/L | mg/L            | 0.00083  | -0.0194 mg/kg         | 0.03997  | 205.86% |
| Zn 206.200*† | 27.9                        | 0.0006 mg/L  | mg/L            | 0.00017  | 0.0296 mg/kg          | 0.00810  | 27.34%  |

Sequence No.: 16  
Sample ID: 170324-1-12  
Analyst: 935 icp 7300  
Initial Sample Wt: 2.05 g  
Dilution:  
Wash Time: 15

Autosampler Location: 120  
Date Collected: 3/27/2017 10:59:16 AM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

## Mean Data: 170324-1-12

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 76412.5                     | 93.40 %               | 0.371    |                       |          | 0.40% |
| Tb 350       | 125667.6                    | 94.85 %               | 0.244    |                       |          | 0.26% |
| Ag 328.068*† | 48497.8                     | 0.2429 mg/L           | 0.00163  | 11.85 mg/kg           | 0.080    | 0.67% |
| Al 308.215*† | 9359.3                      | 0.5212 mg/L           | 0.00325  | 25.42 mg/kg           | 0.159    | 0.62% |
| As 188.979†  | 1093.8                      | 0.4688 mg/L           | 0.00386  | 22.87 mg/kg           | 0.188    | 0.82% |
| As 193.696*† | 748.6                       | 0.4651 mg/L           | 0.00529  | 22.69 mg/kg           | 0.258    | 1.14% |
| B 249.677*†  | 24616.1                     | 0.4569 mg/L           | 0.00364  | 22.29 mg/kg           | 0.177    | 0.80% |
| Ba 233.527*† | 82759.0                     | 0.5165 mg/L           | 0.00432  | 25.19 mg/kg           | 0.211    | 0.84% |
| Be 313.042*† | 1925069.8                   | 0.4706 mg/L           | 0.00074  | 22.96 mg/kg           | 0.036    | 0.16% |
| Ca 317.933*† | 1088.9                      | 0.4978 mg/L           | 0.00260  | 24.28 mg/kg           | 0.127    | 0.52% |
| Cd 226.502*† | 40316.7                     | 0.4789 mg/L           | 0.00604  | 23.36 mg/kg           | 0.295    | 1.26% |
| Cd 228.802†  | 19728.6                     | 0.4768 mg/L           | 0.00211  | 23.26 mg/kg           | 0.103    | 0.44% |
| Co 228.616*† | 14928.7                     | 0.4988 mg/L           | 0.00579  | 24.33 mg/kg           | 0.282    | 1.16% |
| Cr 267.716*† | 59419.4                     | 0.4924 mg/L           | 0.00066  | 24.02 mg/kg           | 0.032    | 0.13% |
| Cu 324.752*† | 133081.8                    | 0.5049 mg/L           | 0.00195  | 24.63 mg/kg           | 0.095    | 0.39% |
| Fe 273.955*† | 13503.6                     | 0.5409 mg/L           | 0.00300  | 26.39 mg/kg           | 0.146    | 0.55% |
| K 766.490*†  | 15186.9                     | 4.716 mg/L            | 0.0296   | 230.1 mg/kg           | 1.44     | 0.63% |
| Mg 279.077*† | 9927.6                      | 0.4785 mg/L           | 0.00069  | 23.34 mg/kg           | 0.034    | 0.14% |
| Mn 257.610*† | 339146.7                    | 0.4922 mg/L           | 0.00246  | 24.01 mg/kg           | 0.120    | 0.50% |
| Mo 202.031*† | 4748.7                      | 0.4892 mg/L           | 0.00134  | 23.86 mg/kg           | 0.066    | 0.27% |
| Na 589.592*† | 23585.2                     | 5.061 mg/L            | 0.0648   | 246.9 mg/kg           | 3.16     | 1.28% |
| Ni 231.604*† | 13049.2                     | 0.4937 mg/L           | 0.00608  | 24.08 mg/kg           | 0.297    | 1.23% |
| P 213.617*†  | 1083.4                      | 0.4911 mg/L           | 0.00838  | 23.95 mg/kg           | 0.409    | 1.71% |
| P 214.914†   | 652.6                       | 0.4727 mg/L           | 0.00485  | 23.06 mg/kg           | 0.237    | 1.03% |
| Pb 220.353*† | 4351.7                      | 0.5021 mg/L           | 0.00298  | 24.49 mg/kg           | 0.145    | 0.59% |
| Sb 206.836†  | 979.9                       | 0.4805 mg/L           | 0.00081  | 23.44 mg/kg           | 0.039    | 0.17% |
| Sb 217.582*† | 956.3                       | 0.4718 mg/L           | 0.00614  | 23.01 mg/kg           | 0.299    | 1.30% |
| Se 196.026*† | 1131.1                      | 0.4683 mg/L           | 0.01054  | 22.84 mg/kg           | 0.514    | 2.25% |
| Si 251.611*† | 20492.6                     | 0.4850 mg/L           | 0.00462  | 23.66 mg/kg           | 0.226    | 0.95% |
| Sn 189.927*† | 3285.8                      | 0.4967 mg/L           | 0.00115  | 24.23 mg/kg           | 0.056    | 0.23% |
| Sn 242.170†  | 892.2                       | 0.4740 mg/L           | 0.01515  | 23.12 mg/kg           | 0.739    | 3.20% |
| Sr 407.771*† | 172780.6                    | 0.5044 mg/L           | 0.00470  | 24.60 mg/kg           | 0.229    | 0.93% |
| Ti 334.940†  | 428643.8                    | 0.4883 mg/L           | 0.00146  | 23.82 mg/kg           | 0.071    | 0.30% |
| Ti 336.121*† | 298810.7                    | 0.4850 mg/L           | 0.00104  | 23.66 mg/kg           | 0.051    | 0.22% |
| Tl 190.801*† | 985.9                       | 0.5041 mg/L           | 0.00092  | 24.59 mg/kg           | 0.045    | 0.18% |
| V 292.402*†  | 67551.9                     | 0.4714 mg/L           | 0.00233  | 23.00 mg/kg           | 0.114    | 0.49% |
| Zn 206.200*† | 22239.5                     | 0.4897 mg/L           | 0.00478  | 23.89 mg/kg           | 0.233    | 0.98% |

Sequence No.: 15  
 Sample ID: 17-03-1115-1 ms  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 1.99 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 211  
 Date Collected: 3/27/2017 12:59:30 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

Mean Data: 17-03-1115-1 ms

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 72023.1                     | 88.03 %               | 0.215    |                       |          | 0.24% |
| Tb 350       | 120430.7                    | 90.90 %               | 0.705    |                       |          | 0.78% |
| Ag 328.068*† | 37329.1                     | 0.1869 mg/L           | 0.00105  | 9.394 mg/kg           | 0.0527   | 0.56% |
| Al 308.215*† | 5097344.1                   | 283.9 mg/L            | 0.78     | 14260 mg/kg           | 39.41    | 0.28% |
| As 188.979†  | 689.0                       | 0.2953 mg/L           | 0.00008  | 14.84 mg/kg           | 0.004    | 0.03% |
| As 193.696*† | 497.1                       | 0.3088 mg/L           | 0.01166  | 15.52 mg/kg           | 0.586    | 3.78% |
| B 249.677*†  | 19555.6                     | 0.3630 mg/L           | 0.00077  | 18.24 mg/kg           | 0.039    | 0.21% |
| Ba 233.527*† | 47761.6                     | 0.2981 mg/L           | 0.00006  | 14.98 mg/kg           | 0.003    | 0.02% |
| Be 313.042*† | 1099373.0                   | 0.2688 mg/L           | 0.00074  | 13.51 mg/kg           | 0.037    | 0.28% |
| Ca 317.933*† | 12140.4                     | 5.551 mg/L            | 0.2410   | 278.9 mg/kg           | 12.11    | 4.34% |
| Cd 226.502*† | 29212.3                     | 0.3470 mg/L           | 0.00095  | 17.44 mg/kg           | 0.048    | 0.27% |
| Cd 228.802†  | 14224.5                     | 0.3438 mg/L           | 0.00271  | 17.27 mg/kg           | 0.136    | 0.79% |
| Co 228.616*† | 8079.8                      | 0.2700 mg/L           | 0.00336  | 13.57 mg/kg           | 0.169    | 1.25% |
| Cr 267.716*† | 32135.1                     | 0.2663 mg/L           | 0.00014  | 13.38 mg/kg           | 0.007    | 0.05% |
| Cu 324.752*† | 77252.7                     | 0.2931 mg/L           | 0.00185  | 14.73 mg/kg           | 0.093    | 0.63% |
| Fe 273.955*† | 13442.2                     | 0.5385 mg/L           | 0.00766  | 27.06 mg/kg           | 0.385    | 1.42% |
| K 766.490*†  | 10651.8                     | 3.308 mg/L            | 0.1440   | 166.2 mg/kg           | 7.24     | 4.35% |
| Mg 279.077*† | 15381.8                     | 0.7414 mg/L           | 0.00304  | 37.25 mg/kg           | 0.153    | 0.41% |
| Mn 257.610*† | 188485.7                    | 0.2735 mg/L           | 0.00021  | 13.75 mg/kg           | 0.010    | 0.08% |
| Mo 202.031*† | 2713.1                      | 0.2795 mg/L           | 0.00359  | 14.05 mg/kg           | 0.180    | 1.28% |
| Na 589.592*† | 24732.1                     | 5.307 mg/L            | 0.1871   | 266.7 mg/kg           | 9.40     | 3.53% |
| Ni 231.604*† | 7021.2                      | 0.2656 mg/L           | 0.00171  | 13.35 mg/kg           | 0.086    | 0.64% |
| P 213.617*†  | 115146.3                    | 52.19 mg/L            | 0.011    | 2623 mg/kg            | 0.54     | 0.02% |
| P 214.914†   | 72831.0                     | 52.76 mg/L            | 0.038    | 2651 mg/kg            | 1.92     | 0.07% |
| Pb 220.353*† | 2944.5                      | 0.3397 mg/L           | 0.00050  | 17.07 mg/kg           | 0.025    | 0.15% |
| Sb 206.836†  | 643.6                       | 0.3156 mg/L           | 0.00369  | 15.86 mg/kg           | 0.186    | 1.17% |
| Sb 217.582*† | 620.8                       | 0.3062 mg/L           | 0.00484  | 15.39 mg/kg           | 0.243    | 1.58% |
| Se 196.026*† | 753.0                       | 0.3118 mg/L           | 0.00452  | 15.67 mg/kg           | 0.227    | 1.45% |
| Si 251.611*† | 135311.6                    | 3.202 mg/L            | 0.0264   | 160.9 mg/kg           | 1.33     | 0.83% |
| Sn 189.927*† | 3085.4                      | 0.4664 mg/L           | 0.00280  | 23.44 mg/kg           | 0.141    | 0.60% |
| Sn 242.170†  | 829.7                       | 0.4408 mg/L           | 0.00755  | 22.15 mg/kg           | 0.379    | 1.71% |
| Sr 407.771*† | 97226.5                     | 0.2838 mg/L           | 0.00724  | 14.26 mg/kg           | 0.364    | 2.55% |
| Ti 334.940†  | 264550.2                    | 0.3014 mg/L           | 0.00103  | 15.15 mg/kg           | 0.052    | 0.34% |
| Ti 336.121*† | 186699.2                    | 0.3030 mg/L           | 0.00086  | 15.23 mg/kg           | 0.043    | 0.29% |
| Tl 190.801*† | 410.9                       | 0.2101 mg/L           | 0.00519  | 10.56 mg/kg           | 0.261    | 2.47% |
| V 292.402*†  | 36145.5                     | 0.2522 mg/L           | 0.00051  | 12.68 mg/kg           | 0.026    | 0.20% |
| Zn 206.200*† | 27659.5                     | 0.6091 mg/L           | 0.00493  | 30.61 mg/kg           | 0.248    | 0.81% |

Sequence No.: 16

Sample ID: 17-03-1115-1 msd

Analyst: 935 icp 7300

Initial Sample Wt: 1.92 g

Dilution:

Wash Time: 15

Autosampler Location: 212

Date Collected: 3/27/2017 1:00:21 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1115-1 msd

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 72144.5                     | 88.18 %               | 0.284    |                       |          | 0.32% |
| Tb 350       | 121398.1                    | 91.63 %               | 0.323    |                       |          | 0.35% |
| Ag 328.068*† | 39722.3                     | 0.1989 mg/L           | 0.00054  | 10.36 mg/kg           | 0.028    | 0.27% |
| Al 308.215*† | 5260409.8                   | 292.9 mg/L            | 0.80     | 15260 mg/kg           | 41.92    | 0.27% |
| As 188.979†  | 771.9                       | 0.3309 mg/L           | 0.00189  | 17.23 mg/kg           | 0.099    | 0.57% |
| As 193.696*† | 551.0                       | 0.3423 mg/L           | 0.00442  | 17.83 mg/kg           | 0.230    | 1.29% |
| B 249.677*†  | 21433.8                     | 0.3978 mg/L           | 0.00140  | 20.72 mg/kg           | 0.073    | 0.35% |
| Ba 233.527*† | 53477.8                     | 0.3337 mg/L           | 0.00135  | 17.38 mg/kg           | 0.070    | 0.40% |
| Be 313.042*† | 1208994.7                   | 0.2956 mg/L           | 0.00247  | 15.39 mg/kg           | 0.129    | 0.84% |
| Ca 317.933*† | 16593.7                     | 7.587 mg/L            | 0.2102   | 395.1 mg/kg           | 10.95    | 2.77% |
| Cd 226.502*† | 32913.3                     | 0.3910 mg/L           | 0.00258  | 20.36 mg/kg           | 0.134    | 0.66% |
| Cd 228.802†  | 15949.1                     | 0.3854 mg/L           | 0.00293  | 20.07 mg/kg           | 0.153    | 0.76% |
| Co 228.616*† | 9046.0                      | 0.3022 mg/L           | 0.00138  | 15.74 mg/kg           | 0.072    | 0.46% |
| Cr 267.716*† | 36370.7                     | 0.3014 mg/L           | 0.00154  | 15.70 mg/kg           | 0.080    | 0.51% |
| Cu 324.752*† | 86674.2                     | 0.3289 mg/L           | 0.00062  | 17.13 mg/kg           | 0.032    | 0.19% |
| Fe 273.955*† | 17067.1                     | 0.6837 mg/L           | 0.01036  | 35.61 mg/kg           | 0.540    | 1.52% |
| K 766.490*†  | 11396.6                     | 3.539 mg/L            | 0.2018   | 184.3 mg/kg           | 10.51    | 5.70% |
| Mg 279.077*† | 21451.3                     | 1.034 mg/L            | 0.0060   | 53.85 mg/kg           | 0.310    | 0.58% |
| Mn 257.610*† | 217919.6                    | 0.3163 mg/L           | 0.00272  | 16.47 mg/kg           | 0.142    | 0.86% |
| Mo 202.031*† | 3018.6                      | 0.3110 mg/L           | 0.00128  | 16.20 mg/kg           | 0.067    | 0.41% |
| Na 589.592*† | 25882.2                     | 5.554 mg/L            | 0.1062   | 289.2 mg/kg           | 5.53     | 1.91% |
| Ni 231.604*† | 7821.5                      | 0.2959 mg/L           | 0.00058  | 15.41 mg/kg           | 0.030    | 0.20% |
| P 213.617*†  | 120366.0                    | 54.56 mg/L            | 1.204    | 2841 mg/kg            | 62.70    | 2.21% |
| P 214.914†   | 77285.4                     | 55.98 mg/L            | 0.494    | 2916 mg/kg            | 25.74    | 0.88% |
| Pb 220.353*† | 3260.0                      | 0.3761 mg/L           | 0.00218  | 19.59 mg/kg           | 0.114    | 0.58% |
| Sb 206.836†  | 683.7                       | 0.3352 mg/L           | 0.00439  | 17.46 mg/kg           | 0.229    | 1.31% |
| Sb 217.582*† | 673.4                       | 0.3322 mg/L           | 0.00203  | 17.30 mg/kg           | 0.106    | 0.61% |
| Se 196.026*† | 840.1                       | 0.3478 mg/L           | 0.00183  | 18.12 mg/kg           | 0.095    | 0.53% |
| Si 251.611*† | 134792.4                    | 3.190 mg/L            | 0.0212   | 166.1 mg/kg           | 1.10     | 0.66% |
| Sn 189.927*† | 3410.3                      | 0.5155 mg/L           | 0.00326  | 26.85 mg/kg           | 0.170    | 0.63% |
| Sn 242.170†  | 941.4                       | 0.5001 mg/L           | 0.00854  | 26.05 mg/kg           | 0.445    | 1.71% |
| Sr 407.771*† | 106884.5                    | 0.3120 mg/L           | 0.00392  | 16.25 mg/kg           | 0.204    | 1.26% |
| Ti 334.940†  | 295829.5                    | 0.3370 mg/L           | 0.00181  | 17.55 mg/kg           | 0.094    | 0.54% |
| Ti 336.121*† | 208901.5                    | 0.3391 mg/L           | 0.00006  | 17.66 mg/kg           | 0.003    | 0.02% |
| Tl 190.801*† | 564.6                       | 0.2887 mg/L           | 0.00242  | 15.04 mg/kg           | 0.126    | 0.84% |
| V 292.402*†  | 41078.3                     | 0.2867 mg/L           | 0.00146  | 14.93 mg/kg           | 0.076    | 0.51% |
| Zn 206.200*† | 29764.9                     | 0.6555 mg/L           | 0.00350  | 34.14 mg/kg           | 0.182    | 0.53% |

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Analysis Begun

Start Time: 3/27/2017 4:58:13 PM  
Logged In Analyst: Oscar Gomez 935  
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/27/2017 3:34:39 PM  
Technique: ICP Continuous  
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\  
17032702.sif

Batch ID:  
Results Data Set: 170327C 1  
Results Library: W:\pe\7300\Results\results.mdb

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|                             |                                      |
|-----------------------------|--------------------------------------|
| Sequence No.: 1             | Autosampler Location: 103            |
| Sample ID: 17-03-1115-1 pds | Date Collected: 3/27/2017 4:58:26 PM |
| Analyst: 935 icp 7300       | Data Type: Original                  |
| Initial Sample Wt: 2.04 g   | Initial Sample Vol:                  |
| Dilution:                   | Sample Prep Vol: 100 mL              |
| Wash Time:                  |                                      |

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## Mean Data: 17-03-1115-1 pds

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 64835.3                     | 79.25 %               | 0.956    |                       |          | 1.21% |
| Tb 350       | 109755.9                    | 82.84 %               | 1.667    |                       |          | 2.01% |
| Ag 328.068*† | 51745.1                     | 0.2591 mg/L           | 0.00161  | 12.70 mg/kg           | 0.079    | 0.62% |
| Al 308.215*† | 12342041.7                  | 687.3 mg/L            | 6.31     | 33690 mg/kg           | 309.30   | 0.92% |
| As 188.979†  | 1364.1                      | 0.5847 mg/L           | 0.00471  | 28.66 mg/kg           | 0.231    | 0.81% |
| As 193.696*† | 953.3                       | 0.5923 mg/L           | 0.00341  | 29.04 mg/kg           | 0.167    | 0.58% |
| B 249.677*†  | 33648.3                     | 0.6245 mg/L           | 0.00795  | 30.61 mg/kg           | 0.390    | 1.27% |
| Ba 233.527*† | 96671.1                     | 0.6033 mg/L           | 0.00050  | 29.57 mg/kg           | 0.024    | 0.08% |
| Be 313.042*† | 2344804.7                   | 0.5732 mg/L           | 0.00164  | 28.10 mg/kg           | 0.081    | 0.29% |
| Ca 317.933*† | 18129.2                     | 8.289 mg/L            | 0.1221   | 406.3 mg/kg           | 5.99     | 1.47% |
| Cd 226.502*† | 47921.1                     | 0.5693 mg/L           | 0.00373  | 27.90 mg/kg           | 0.183    | 0.65% |
| Cd 228.802†  | 23005.0                     | 0.5560 mg/L           | 0.01257  | 27.25 mg/kg           | 0.616    | 2.26% |
| Co 228.616*† | 17191.1                     | 0.5744 mg/L           | 0.01074  | 28.16 mg/kg           | 0.527    | 1.87% |
| Cr 267.716*† | 69260.9                     | 0.5739 mg/L           | 0.00271  | 28.13 mg/kg           | 0.133    | 0.47% |
| Cu 324.752*† | 156484.2                    | 0.5937 mg/L           | 0.00019  | 29.11 mg/kg           | 0.009    | 0.03% |
| Fe 273.955*† | 27265.6                     | 1.092 mg/L            | 0.0094   | 53.54 mg/kg           | 0.462    | 0.86% |
| K 766.490*†  | 22311.9                     | 6.929 mg/L            | 0.0170   | 339.7 mg/kg           | 0.83     | 0.25% |
| Mg 279.077*† | 25692.0                     | 1.238 mg/L            | 0.0113   | 60.70 mg/kg           | 0.556    | 0.92% |
| Mn 257.610*† | 403410.8                    | 0.5855 mg/L           | 0.00002  | 28.70 mg/kg           | 0.001    | 0.00% |
| Mo 202.031*† | 5282.3                      | 0.5442 mg/L           | 0.00997  | 26.68 mg/kg           | 0.489    | 1.83% |
| Na 589.592*† | 50965.7                     | 10.94 mg/L            | 0.116    | 536.1 mg/kg           | 5.67     | 1.06% |
| Ni 231.604*† | 14867.4                     | 0.5624 mg/L           | 0.01221  | 27.57 mg/kg           | 0.599    | 2.17% |
| P 213.617*†  | 280767.8                    | 127.3 mg/L            | 0.24     | 6238 mg/kg            | 11.99    | 0.19% |
| P 214.914†   | 178690.9                    | 129.4 mg/L            | 1.34     | 6345 mg/kg            | 65.57    | 1.03% |
| Pb 220.353*† | 4899.7                      | 0.5653 mg/L           | 0.00980  | 27.71 mg/kg           | 0.480    | 1.73% |
| Sb 206.836†  | 1408.6                      | 0.6907 mg/L           | 0.02041  | 33.86 mg/kg           | 1.001    | 2.96% |
| Sb 217.582*† | 1401.9                      | 0.6915 mg/L           | 0.01169  | 33.90 mg/kg           | 0.573    | 1.69% |
| Se 196.026*† | 1411.1                      | 0.5843 mg/L           | 0.02066  | 28.64 mg/kg           | 1.013    | 3.54% |
| Si 251.611*† | 330615.0                    | 7.824 mg/L            | 0.1483   | 383.5 mg/kg           | 7.27     | 1.89% |
| Sn 189.927*† | 6291.3                      | 0.9509 mg/L           | 0.02095  | 46.61 mg/kg           | 1.027    | 2.20% |
| Sn 242.170†  | 1695.8                      | 0.9009 mg/L           | 0.01466  | 44.16 mg/kg           | 0.719    | 1.63% |
| Sr 407.771*† | 184823.6                    | 0.5395 mg/L           | 0.01360  | 26.45 mg/kg           | 0.667    | 2.52% |
| Ti 334.940†  | 593599.7                    | 0.6763 mg/L           | 0.00035  | 33.15 mg/kg           | 0.017    | 0.05% |
| Ti 336.121*† | 418061.3                    | 0.6786 mg/L           | 0.00019  | 33.26 mg/kg           | 0.009    | 0.03% |
| Tl 190.801*† | 1052.0                      | 0.5379 mg/L           | 0.01413  | 26.37 mg/kg           | 0.693    | 2.63% |
| V 292.402*†  | 77996.4                     | 0.5443 mg/L           | 0.00126  | 26.68 mg/kg           | 0.062    | 0.23% |
| Zn 206.200*† | 35643.7                     | 0.7849 mg/L           | 0.01370  | 38.48 mg/kg           | 0.672    | 1.75% |

Sequence No.: 2

Sample ID: 17-03-1115-1 pdsd

Analyst: 935 icp 7300

Initial Sample Wt: 2.04 g

Dilution:

Wash Time: 15

Autosampler Location: 104

Date Collected: 3/27/2017 4:59:25 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1115-1 pdsd

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 65359.8                     | 79.89 %               | 0.766    |                       |          | 0.96% |
| Tb 350       | 111052.6                    | 83.82 %               | 0.663    |                       |          | 0.79% |
| Ag 328.068*† | 51602.5                     | 0.2584 mg/L           | 0.00167  | 12.67 mg/kg           | 0.082    | 0.65% |
| Al 308.215*† | 12356755.6                  | 688.1 mg/L            | 5.38     | 33730 mg/kg           | 263.54   | 0.78% |
| As 188.979†  | 1364.9                      | 0.5850 mg/L           | 0.00904  | 28.68 mg/kg           | 0.443    | 1.55% |
| As 193.696*† | 944.3                       | 0.5867 mg/L           | 0.01637  | 28.76 mg/kg           | 0.802    | 2.79% |
| B 249.677*†  | 33885.3                     | 0.6289 mg/L           | 0.00561  | 30.83 mg/kg           | 0.275    | 0.89% |
| Ba 233.527*† | 95798.5                     | 0.5979 mg/L           | 0.00145  | 29.31 mg/kg           | 0.071    | 0.24% |
| Be 313.042*† | 2334819.4                   | 0.5708 mg/L           | 0.00576  | 27.98 mg/kg           | 0.282    | 1.01% |
| Ca 317.933*† | 18308.5                     | 8.371 mg/L            | 0.1175   | 410.3 mg/kg           | 5.76     | 1.40% |
| Cd 226.502*† | 47339.4                     | 0.5623 mg/L           | 0.00189  | 27.57 mg/kg           | 0.093    | 0.34% |
| Cd 228.802†  | 22874.2                     | 0.5528 mg/L           | 0.00024  | 27.10 mg/kg           | 0.012    | 0.04% |
| Co 228.616*† | 17047.8                     | 0.5696 mg/L           | 0.00115  | 27.92 mg/kg           | 0.056    | 0.20% |
| Cr 267.716*† | 68828.7                     | 0.5704 mg/L           | 0.00275  | 27.96 mg/kg           | 0.135    | 0.48% |
| Cu 324.752*† | 155804.0                    | 0.5912 mg/L           | 0.00102  | 28.98 mg/kg           | 0.050    | 0.17% |
| Fe 273.955*† | 27049.3                     | 1.084 mg/L            | 0.0007   | 53.12 mg/kg           | 0.037    | 0.07% |
| K 766.490*†  | 22445.8                     | 6.971 mg/L            | 0.0981   | 341.7 mg/kg           | 4.81     | 1.41% |
| Mg 279.077*† | 25784.9                     | 1.243 mg/L            | 0.0023   | 60.92 mg/kg           | 0.113    | 0.19% |
| Mn 257.610*† | 400809.6                    | 0.5817 mg/L           | 0.00184  | 28.51 mg/kg           | 0.090    | 0.32% |
| Mo 202.031*† | 5235.1                      | 0.5393 mg/L           | 0.00042  | 26.44 mg/kg           | 0.021    | 0.08% |
| Na 589.592*† | 51847.0                     | 11.12 mg/L            | 0.073    | 545.3 mg/kg           | 3.56     | 0.65% |
| Ni 231.604*† | 14778.7                     | 0.5591 mg/L           | 0.00081  | 27.41 mg/kg           | 0.040    | 0.14% |
| P 213.617*†  | 278225.0                    | 126.1 mg/L            | 1.21     | 6182 mg/kg            | 59.41    | 0.96% |
| P 214.914†   | 177417.4                    | 128.5 mg/L            | 0.80     | 6300 mg/kg            | 39.05    | 0.62% |
| Pb 220.353*† | 4843.0                      | 0.5588 mg/L           | 0.00194  | 27.39 mg/kg           | 0.095    | 0.35% |
| Sb 206.836†  | 1409.1                      | 0.6910 mg/L           | 0.00669  | 33.87 mg/kg           | 0.328    | 0.97% |
| Sb 217.582*† | 1388.5                      | 0.6850 mg/L           | 0.01110  | 33.58 mg/kg           | 0.544    | 1.62% |
| Se 196.026*† | 1410.9                      | 0.5842 mg/L           | 0.00370  | 28.64 mg/kg           | 0.181    | 0.63% |
| Si 251.611*† | 333507.5                    | 7.892 mg/L            | 0.0579   | 386.9 mg/kg           | 2.84     | 0.73% |
| Sn 189.927*† | 6260.9                      | 0.9463 mg/L           | 0.00339  | 46.39 mg/kg           | 0.166    | 0.36% |
| Sn 242.170†  | 1677.3                      | 0.8911 mg/L           | 0.01216  | 43.68 mg/kg           | 0.596    | 1.36% |
| Sr 407.771*† | 188063.9                    | 0.5490 mg/L           | 0.02237  | 26.91 mg/kg           | 1.097    | 4.08% |
| Ti 334.940†  | 589995.7                    | 0.6722 mg/L           | 0.00120  | 32.95 mg/kg           | 0.059    | 0.18% |
| Ti 336.121*† | 415219.4                    | 0.6739 mg/L           | 0.00074  | 33.04 mg/kg           | 0.036    | 0.11% |
| Tl 190.801*† | 1041.4                      | 0.5325 mg/L           | 0.00180  | 26.10 mg/kg           | 0.088    | 0.34% |
| V 292.402*†  | 77444.2                     | 0.5404 mg/L           | 0.00381  | 26.49 mg/kg           | 0.187    | 0.71% |
| Zn 206.200*† | 35396.5                     | 0.7795 mg/L           | 0.00021  | 38.21 mg/kg           | 0.011    | 0.03% |

Sequence No.: 14  
 Sample ID: 17-03-1115-1  
 Analyst: 935 icp 7300  
 Initial Sample Wt: 2.04 g  
 Dilution:  
 Wash Time: 15

Autosampler Location: 210  
 Date Collected: 3/27/2017 12:58:40 PM  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol: 100 mL  
 Auto Dilution Factor: 1

Mean Data: 17-03-1115-1

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 74851.4                     | 91.49 %               | 0.254    |                       |          | 0.28%   |
| Tb 350       | 125896.4                    | 95.02 %               | 0.004    |                       |          | 0.00%   |
| Ag 328.068*† | 73.8                        | 0.0004 mg/L           | 0.00030  | 0.0181 mg/kg          | 0.01492  | 82.33%  |
| Al 308.215*† | 4081271.7                   | 227.3 mg/L            | 0.37     | 11140 mg/kg           | 18.02    | 0.16%   |
| As 188.979†  | 14.4                        | 0.0062 mg/L           | 0.00185  | 0.3032 mg/kg          | 0.09086  | 29.96%  |
| As 193.696*† | 4.9                         | 0.0031 mg/L           | 0.00878  | 0.1499 mg/kg          | 0.43049  | 287.13% |
| B 249.677*†  | 2845.1                      | 0.0528 mg/L           | 0.00130  | 2.589 mg/kg           | 0.0638   | 2.47%   |
| Ba 233.527*† | 6082.4                      | 0.0380 mg/L           | 0.00254  | 1.861 mg/kg           | 0.1245   | 6.69%   |
| Be 313.042*† | 6458.4                      | 0.0016 mg/L           | 0.00006  | 0.0774 mg/kg          | 0.00282  | 3.64%   |
| Ca 317.933*† | 5852.6                      | 2.676 mg/L            | 0.0504   | 131.2 mg/kg           | 2.47     | 1.88%   |
| Cd 226.502*† | 169.7                       | 0.0020 mg/L           | 0.00011  | 0.0988 mg/kg          | 0.00555  | 5.62%   |
| Cd 228.802†  | 65.7                        | 0.0016 mg/L           | 0.00008  | 0.0778 mg/kg          | 0.00405  | 5.20%   |
| Co 228.616*† | 52.7                        | 0.0018 mg/L           | 0.00034  | 0.0863 mg/kg          | 0.01672  | 19.37%  |
| Cr 267.716*† | 857.5                       | 0.0071 mg/L           | 0.00035  | 0.3483 mg/kg          | 0.01712  | 4.92%   |
| Cu 324.752*† | 979.7                       | 0.0037 mg/L           | 0.00022  | 0.1822 mg/kg          | 0.01099  | 6.03%   |
| Fe 273.955*† | 5502.1                      | 0.2204 mg/L           | 0.00318  | 10.80 mg/kg           | 0.156    | 1.44%   |
| K 766.490*†  | 492.4                       | 0.1529 mg/L           | 0.05006  | 7.496 mg/kg           | 2.4541   | 32.74%  |
| Mg 279.077*† | 5304.8                      | 0.2557 mg/L           | 0.00036  | 12.53 mg/kg           | 0.018    | 0.14%   |
| Mn 257.610*† | 8438.9                      | 0.0122 mg/L           | 0.00005  | 0.6003 mg/kg          | 0.00263  | 0.44%   |
| Mo 202.031*† | -24.7                       | -0.0025 mg/L          | 0.00068  | -0.1248 mg/kg         | 0.03349  | 26.83%  |
| Na 589.592*† | 8338.7                      | 1.789 mg/L            | 0.0146   | 87.71 mg/kg           | 0.713    | 0.81%   |
| Ni 231.604*† | 41.7                        | 0.0016 mg/L           | 0.00011  | 0.0773 mg/kg          | 0.00540  | 6.99%   |
| P 213.617*†  | 102914.2                    | 46.65 mg/L            | 1.591    | 2287 mg/kg            | 78.00    | 3.41%   |
| P 214.914†   | 65589.3                     | 47.51 mg/L            | 1.187    | 2329 mg/kg            | 58.19    | 2.50%   |
| Pb 220.353*† | 18.1                        | 0.0021 mg/L           | 0.00010  | 0.1024 mg/kg          | 0.00494  | 4.83%   |
| Sb 206.836†  | 112.2                       | 0.0550 mg/L           | 0.00397  | 2.697 mg/kg           | 0.1945   | 7.21%   |
| Sb 217.582*† | 116.3                       | 0.0574 mg/L           | 0.00257  | 2.812 mg/kg           | 0.1260   | 4.48%   |
| Se 196.026*† | 8.2                         | 0.0034 mg/L           | 0.00279  | 0.1663 mg/kg          | 0.13667  | 82.17%  |
| Si 251.611*† | 119895.5                    | 2.837 mg/L            | 0.1054   | 139.1 mg/kg           | 5.17     | 3.71%   |
| Sn 189.927*† | 1001.9                      | 0.1514 mg/L           | 0.00288  | 7.423 mg/kg           | 0.1411   | 1.90%   |
| Sn 242.170†  | 300.6                       | 0.1597 mg/L           | 0.00466  | 7.829 mg/kg           | 0.2284   | 2.92%   |
| Sr 407.771*† | 1471.6                      | 0.0043 mg/L           | 0.00009  | 0.2106 mg/kg          | 0.00456  | 2.17%   |
| Ti 334.940†  | 38155.6                     | 0.0435 mg/L           | 0.00081  | 2.131 mg/kg           | 0.0397   | 1.86%   |
| Ti 336.121*† | 26606.4                     | 0.0432 mg/L           | 0.00078  | 2.117 mg/kg           | 0.0382   | 1.81%   |
| Tl 190.801*† | -18.2                       | -0.0093 mg/L          | 0.00423  | -0.4564 mg/kg         | 0.20738  | 45.43%  |
| V 292.402*†  | 68.5                        | 0.0005 mg/L           | 0.00006  | 0.0233 mg/kg          | 0.00286  | 12.31%  |
| Zn 206.200*† | 6767.3                      | 0.1490 mg/L           | 0.00051  | 7.305 mg/kg           | 0.0250   | 0.34%   |

# EPA 6010B ICP Metals (Solid)

## Run Logs

# 170327C 1

M006-032-05 0.050 ml

10 ml

PDS/PDSD

INT STD M120716A

M006-032-06 0.050 ml

R.B. R12091602

Carrier/wash sol R12091604/R12091603

| No. | File Name                 | Date      | Time        | Analyst Name | A/S | Location |
|-----|---------------------------|-----------|-------------|--------------|-----|----------|
| 1   | Cal blankR12091601_935    | 3/27/2017 | 10:17:52 AM | 935 icp 7300 | 1   | 1        |
| 2   | Cal blankR12091601_935    | 3/27/2017 | 10:19:28 AM | 935 icp 7300 | 1   | 1        |
| 3   | Cal blankR12091601_935    | 3/27/2017 | 10:25:50 AM | 935 icp 7300 | 1   | 1        |
| 4   | Cal blankR12091601_935    | 3/27/2017 | 10:27:02 AM | 935 icp 7300 | 1   | 1        |
| 5   | STD3-M111116A_935_ICP7300 | 3/27/2017 | 10:28:08 AM | 935 icp 7300 | 2   | 2        |
| 6   | ICV-M072816C              | 3/27/2017 | 10:28:54 AM | 935 icp 7300 | 10  | 10       |
| 7   | ICB-R12091601             | 3/27/2017 | 10:29:52 AM | 935 icp 7300 | 1   | 1        |
| 8   | ICS_A - M110116B          | 3/27/2017 | 10:30:53 AM | 935 icp 7300 | 8   | 8        |
| 9   | ICS_AB - M110116A         | 3/27/2017 | 10:31:44 AM | 935 icp 7300 | 9   | 9        |
| 10  | CCV= STD3x0.5             | 3/27/2017 | 10:32:35 AM | 935 icp 7300 | 3   | 3        |
| 11  | CCB-R12091601             | 3/27/2017 | 10:33:27 AM | 935 icp 7300 | 1   | 1        |
| 12  | LLCV-M082616A             | 3/27/2017 | 10:45:04 AM | 935 icp 7300 | 101 | 101      |
| 13  | LLCV--M082616A            | 3/27/2017 | 10:46:10 AM | 935 icp 7300 | 102 | 102      |
| 14  | 170324-b-07               | 3/27/2017 | 10:47:09 AM | 935 icp 7300 | 109 | 109      |
| 15  | 170324-l-07               | 3/27/2017 | 10:48:10 AM | 935 icp 7300 | 110 | 110      |
| 16  | 170324-b-08               | 3/27/2017 | 10:49:01 AM | 935 icp 7300 | 111 | 111      |
| 17  | 170324-l-08               | 3/27/2017 | 10:50:00 AM | 935 icp 7300 | 112 | 112      |
| 18  | 170324-b-09               | 3/27/2017 | 10:50:51 AM | 935 icp 7300 | 113 | 113      |
| 19  | 170324-l-09               | 3/27/2017 | 10:51:50 AM | 935 icp 7300 | 114 | 114      |
| 20  | 170324-b-10               | 3/27/2017 | 10:52:40 AM | 935 icp 7300 | 115 | 115      |
| 21  | 170324-l-10               | 3/27/2017 | 10:53:39 AM | 935 icp 7300 | 116 | 116      |
| 22  | CCV= STD3x0.5             | 3/27/2017 | 10:54:30 AM | 935 icp 7300 | 3   | 3        |
| 23  | CCB-R12091601             | 3/27/2017 | 10:55:23 AM | 935 icp 7300 | 1   | 1        |
| 24  | 170324-b-11               | 3/27/2017 | 10:56:24 AM | 935 icp 7300 | 117 | 117      |

T/ out

| No. | File Name         | Date      | Time        | Analyst Name | A/S Location |
|-----|-------------------|-----------|-------------|--------------|--------------|
| 25  | 170324-l-11       | 3/27/2017 | 10:57:25 AM | 935 icp 7300 | 118          |
| 26  | 170324-b-12       | 3/27/2017 | 10:58:17 AM | 935 icp 7300 | 119          |
| 27  | 170324-l-12       | 3/27/2017 | 10:59:16 AM | 935 icp 7300 | 120          |
| 28  | 170324-b-15       | 3/27/2017 | 11:00:07 AM | 935 icp 7300 | 121          |
| 29  | 170324-l-15       | 3/27/2017 | 11:01:06 AM | 935 icp 7300 | 122          |
| 30  | 170324-b-16       | 3/27/2017 | 11:01:58 AM | 935 icp 7300 | 123          |
| 31  | 170324-l-16       | 3/27/2017 | 11:02:57 AM | 935 icp 7300 | 124          |
| 32  | 170325-b-01       | 3/27/2017 | 11:03:49 AM | 935 icp 7300 | 125          |
| 33  | 170325-l-01       | 3/27/2017 | 11:04:48 AM | 935 icp 7300 | 126          |
| 34  | CCV= STD3x0.5     | 3/27/2017 | 11:05:40 AM | 935 icp 7300 | 3            |
| 35  | CCB-R12091601     | 3/27/2017 | 11:06:32 AM | 935 icp 7300 | 1            |
| 36  | 17-03-1799-1      | 3/27/2017 | 11:07:32 AM | 935 icp 7300 | 127          |
| 37  | 17-03-1799-1 ms   | 3/27/2017 | 11:08:25 AM | 935 icp 7300 | 128          |
| 38  | 17-03-1799-1 msd  | 3/27/2017 | 11:09:16 AM | 935 icp 7300 | 129          |
| 39  | 17-03-1799-2      | 3/27/2017 | 11:10:07 AM | 935 icp 7300 | 130          |
| 40  | 17-03-1799-3      | 3/27/2017 | 11:10:58 AM | 935 icp 7300 | 131          |
| 41  | 17-03-1801-1      | 3/27/2017 | 11:11:49 AM | 935 icp 7300 | 132          |
| 42  | 17-03-1804-1      | 3/27/2017 | 11:12:40 AM | 935 icp 7300 | 133          |
| 43  | 17-03-1804-2      | 3/27/2017 | 11:13:31 AM | 935 icp 7300 | 134          |
| 44  | 17-03-1807-1      | 3/27/2017 | 11:14:22 AM | 935 icp 7300 | 135          |
| 45  | 17-03-1808-1 ms   | 3/27/2017 | 11:15:13 AM | 935 icp 7300 | 136          |
| 46  | CCV= STD3x0.5     | 3/27/2017 | 11:16:04 AM | 935 icp 7300 | 3            |
| 47  | CCB-R12091601     | 3/27/2017 | 11:16:56 AM | 935 icp 7300 | 1            |
| 48  | 17-03-1808-1 msd  | 3/27/2017 | 11:17:57 AM | 935 icp 7300 | 137          |
| 49  | 17-03-1808-21 ms  | 3/27/2017 | 11:18:50 AM | 935 icp 7300 | 138          |
| 50  | 17-03-1808-21 msd | 3/27/2017 | 11:19:41 AM | 935 icp 7300 | 139          |
| 51  | 17-03-1808-1      | 3/27/2017 | 11:20:32 AM | 935 icp 7300 | 140          |
| 52  | 17-03-1808-2      | 3/27/2017 | 11:21:23 AM | 935 icp 7300 | 141          |
| 53  | 17-03-1808-3      | 3/27/2017 | 11:22:14 AM | 935 icp 7300 | 142          |
| 54  | 17-03-1808-4      | 3/27/2017 | 11:23:05 AM | 935 icp 7300 | 143          |
| 55  | 17-03-1808-5      | 3/27/2017 | 11:23:56 AM | 935 icp 7300 | 144          |
| 56  | 17-03-1808-6      | 3/27/2017 | 11:24:47 AM | 935 icp 7300 | 145          |

Reviewed/Assign to Logbook Date: 3/28/17  
 Analysis: 20.7/6012 Chemist ID: 1012  
 Logbook Page: 42 Instrument ID: 1087

| No. | File Name        | Date      | Time        | Analyst | A/S  | Location |
|-----|------------------|-----------|-------------|---------|------|----------|
| 121 | 17-03-1380-1     | 3/27/2017 | 12:30:03 PM | 935 icp | 7300 | 338      |
| 122 | 17-03-1380-2     | 3/27/2017 | 12:30:54 PM | 935 icp | 7300 | 339      |
| 123 | 17-03-1380-3     | 3/27/2017 | 12:31:45 PM | 935 icp | 7300 | 340      |
| 124 | CCV= STD3x0.5    | 3/27/2017 | 12:32:36 PM | 935 icp | 7300 | 3        |
| 125 | CCB-R12091601    | 3/27/2017 | 12:33:29 PM | 935 icp | 7300 | 1        |
| 126 | 17-03-1380-4     | 3/27/2017 | 12:34:29 PM | 935 icp | 7300 | 341      |
| 127 | 17-03-1380-5     | 3/27/2017 | 12:35:22 PM | 935 icp | 7300 | 342      |
| 128 | 17-03-1380-6     | 3/27/2017 | 12:36:13 PM | 935 icp | 7300 | 343      |
| 129 | 17-03-1383-1     | 3/27/2017 | 12:37:04 PM | 935 icp | 7300 | 344      |
| 130 | 17-03-1383-1 ms  | 3/27/2017 | 12:37:55 PM | 935 icp | 7300 | 345      |
| 131 | 17-03-1383-1 msd | 3/27/2017 | 12:38:46 PM | 935 icp | 7300 | 346      |
| 132 | 17-03-1383-2     | 3/27/2017 | 12:39:37 PM | 935 icp | 7300 | 347      |
| 133 | 17-03-1383-3     | 3/27/2017 | 12:40:28 PM | 935 icp | 7300 | 348      |
| 134 | 17-03-1084-1     | 3/27/2017 | 12:41:19 PM | 935 icp | 7300 | 357      |
| 135 | 17-03-1084-1 ms  | 3/27/2017 | 12:42:18 PM | 935 icp | 7300 | 358      |
| 136 | CCV= STD3x0.5    | 3/27/2017 | 12:43:04 PM | 935 icp | 7300 | 3        |
| 137 | CCB-R12091601    | 3/27/2017 | 12:44:02 PM | 935 icp | 7300 | 1        |
| 138 | 17-03-1084-1 msd | 3/27/2017 | 12:46:42 PM | 935 icp | 7300 | 359      |
| 139 | 17-03-1084-2     | 3/27/2017 | 12:47:35 PM | 935 icp | 7300 | 360      |
| 140 | 17-03-1084-3     | 3/27/2017 | 12:48:31 PM | 935 icp | 7300 | 201      |
| 141 | 17-03-1084-4     | 3/27/2017 | 12:49:29 PM | 935 icp | 7300 | 202      |
| 142 | 17-03-1084-6     | 3/27/2017 | 12:50:26 PM | 935 icp | 7300 | 203      |
| 143 | 17-03-1084-7     | 3/27/2017 | 12:51:13 PM | 935 icp | 7300 | 204      |
| 144 | 17-03-1084-8     | 3/27/2017 | 12:52:11 PM | 935 icp | 7300 | 205      |
| 145 | 17-03-1084-9     | 3/27/2017 | 12:53:09 PM | 935 icp | 7300 | 206      |
| 146 | 17-03-1114-1     | 3/27/2017 | 12:54:06 PM | 935 icp | 7300 | 207      |
| 147 | 17-03-1114-1 ms  | 3/27/2017 | 12:54:58 PM | 935 icp | 7300 | 208      |
| 148 | CCV= STD3x0.5    | 3/27/2017 | 12:55:50 PM | 935 icp | 7300 | 3        |
| 149 | CCB-R12091601    | 3/27/2017 | 12:56:44 PM | 935 icp | 7300 | 1        |
| 150 | 17-03-1114-1 msd | 3/27/2017 | 12:57:44 PM | 935 icp | 7300 | 209      |
| 151 | 17-03-1115-1     | 3/27/2017 | 12:58:40 PM | 935 icp | 7300 | 210      |
| 152 | 17-03-1115-1 ms  | 3/27/2017 | 12:59:30 PM | 935 icp | 7300 | 211      |

|                            |                     |
|----------------------------|---------------------|
| Reviewed/Assign to Logbook | Date: 3/28/17       |
| Analysis: 200-7/6010       | Chemist ID: 1012    |
| Logbook Page: 45           | Instrument ID: 1087 |

| No. | File Name         | Date      | Time       | Analyst Name | A/S Location |
|-----|-------------------|-----------|------------|--------------|--------------|
| 153 | 17-03-1115-1 msd  | 3/27/2017 | 1:00:21 PM | 935 icp 7300 | 212          |
| 154 | 17-03-1523-1      | 3/27/2017 | 1:01:12 PM | 935 icp 7300 | 213          |
| 155 | 17-03-1523-1 ms   | 3/27/2017 | 1:02:03 PM | 935 icp 7300 | 214          |
| 156 | 17-03-1523-1 msd  | 3/27/2017 | 1:02:55 PM | 935 icp 7300 | 215          |
| 157 | 17-03-1487-1      | 3/27/2017 | 1:03:46 PM | 935 icp 7300 | 216          |
| 158 | 17-03-1490-1      | 3/27/2017 | 1:04:38 PM | 935 icp 7300 | 217          |
| 159 | 17-03-1490-2      | 3/27/2017 | 1:05:29 PM | 935 icp 7300 | 218          |
| 160 | CCV= STD3x0.5     | 3/27/2017 | 1:06:20 PM | 935 icp 7300 | 3            |
| 161 | CCB-R12091601     | 3/27/2017 | 1:07:13 PM | 935 icp 7300 | 1            |
| 162 | 17-03-1490-3      | 3/27/2017 | 1:08:14 PM | 935 icp 7300 | 219          |
| 163 | 17-03-1490-4      | 3/27/2017 | 1:09:08 PM | 935 icp 7300 | 220          |
| 164 | 17-03-1490-5      | 3/27/2017 | 1:09:59 PM | 935 icp 7300 | 221          |
| 165 | 17-03-1482-5      | 3/27/2017 | 1:10:50 PM | 935 icp 7300 | 222          |
| 166 | 17-03-1515-2      | 3/27/2017 | 1:11:42 PM | 935 icp 7300 | 223          |
| 167 | 17-03-1104-30 MIS | 3/27/2017 | 1:12:33 PM | 935 icp 7300 | 349          |
| 168 | 17-03-1104-31 MIS | 3/27/2017 | 1:13:19 PM | 935 icp 7300 | 350          |
| 169 | 17-03-1104-32 MIS | 3/27/2017 | 1:14:02 PM | 935 icp 7300 | 351          |
| 170 | 17-03-1104-33 MIS | 3/27/2017 | 1:14:45 PM | 935 icp 7300 | 352          |
| 171 | 17-03-1105-30 MIS | 3/27/2017 | 1:15:28 PM | 935 icp 7300 | 353          |
| 172 | CCV= STD3x0.5     | 3/27/2017 | 1:16:19 PM | 935 icp 7300 | 3            |
| 173 | CCB-R12091601     | 3/27/2017 | 1:17:12 PM | 935 icp 7300 | 1            |
| 174 | 17-03-1105-31 MIS | 3/27/2017 | 1:18:13 PM | 935 icp 7300 | 354          |
| 175 | 17-03-1105-32 MIS | 3/27/2017 | 1:19:06 PM | 935 icp 7300 | 355          |
| 176 | 17-03-1105-33 MIS | 3/27/2017 | 1:19:57 PM | 935 icp 7300 | 356          |
| 177 | CCV= STD3x0.5     | 3/27/2017 | 1:20:48 PM | 935 icp 7300 | 3 } for      |
| 178 | CCB-R12091601     | 3/27/2017 | 1:21:41 PM | 935 icp 7300 | 1            |
| 179 | CCV= STD3x0.5     | 3/27/2017 | 1:22:32 PM | 935 icp 7300 | 3 } water    |
| 180 | CCB-R12091601     | 3/27/2017 | 1:23:30 PM | 935 icp 7300 | 1            |
| 181 | 170325-ba-1       | 3/27/2017 | 1:24:21 PM | 935 icp 7300 | 226          |
| 182 | 170325-la-1       | 3/27/2017 | 1:25:34 PM | 935 icp 7300 | 227          |
| 183 | 17-03-1747-st-1   | 3/27/2017 | 1:26:32 PM | 935 icp 7300 | 228          |
| 184 | 17-03-1747-st-1   | 3/27/2017 | 1:27:29 PM | 935 icp 7300 | 229          |

Reviewed/Assign to Logbook Date: 3/28/17  
 Analysis: 200.7/600 Chemist ID: 1012  
 Logbook Page: 46 Instrument ID: 1017

| No. | File Name         | Date      | Time       | Analyst Name | A/S Location |
|-----|-------------------|-----------|------------|--------------|--------------|
| 281 | 17-03-1911-2 eb   | 3/27/2017 | 3:23:00 PM | 935 icp 7300 | 438          |
| 282 | 17-03-1005-16 eb  | 3/27/2017 | 3:24:00 PM | 935 icp 7300 | 439          |
| 283 | 170321-la-7       | 3/27/2017 | 3:25:00 PM | 935 icp 7300 | 440          |
| 284 | 170327-ba-1       | 3/27/2017 | 3:25:52 PM | 935 icp 7300 | 441          |
| 285 | 170327-la-1       | 3/27/2017 | 3:26:52 PM | 935 icp 7300 | 442          |
| 286 | 17-03-1826-5      | 3/27/2017 | 3:27:44 PM | 935 icp 7300 | 443          |
| 287 | 17-03-1826-5 ms   | 3/27/2017 | 3:28:40 PM | 935 icp 7300 | 444          |
| 288 | CCV= STD3x0.5     | 3/27/2017 | 3:29:37 PM | 935 icp 7300 | 3            |
| 289 | CCB-R12091601     | 3/27/2017 | 3:30:30 PM | 935 icp 7300 | 1            |
| 290 | 17-03-1826-5 msd  | 3/27/2017 | 3:31:31 PM | 935 icp 7300 | 445          |
| 291 | 17-03-1826x10-9   | 3/27/2017 | 3:35:15 PM | 935 icp 7300 | 446          |
| 292 | CCV= STD3x0.5     | 3/27/2017 | 3:36:17 PM | 935 icp 7300 | 3            |
| 293 | CCB-R12091601     | 3/27/2017 | 3:37:11 PM | 935 icp 7300 | 1            |
| 294 | 170324-l-01       | 3/27/2017 | 3:39:25 PM | 935 icp 7300 | 447          |
| 295 | 17-03-1236-1      | 3/27/2017 | 3:40:31 PM | 935 icp 7300 | 448          |
| 296 | 17-03-1236-1 ms   | 3/27/2017 | 3:41:23 PM | 935 icp 7300 | 449          |
| 297 | 17-03-1236-1 msd  | 3/27/2017 | 3:42:13 PM | 935 icp 7300 | 450          |
| 298 | 17-03-1114-1 pds  | 3/27/2017 | 3:43:03 PM | 935 icp 7300 | 451          |
| 299 | 17-03-1114-1 pdsd | 3/27/2017 | 3:43:55 PM | 935 icp 7300 | 452          |
| 300 | CCV= STD3x0.5 }   | 3/27/2017 | 3:44:47 PM | 935 icp 7300 | 3            |
| 301 | CCB-R12091601 }   | 3/27/2017 | 3:45:40 PM | 935 icp 7300 | 1            |
| 302 | CCV= STD3x0.5 }   | 3/27/2017 | 3:48:47 PM | 935 icp 7300 | 3            |
| 303 | CCB-R12091601 }   | 3/27/2017 | 3:49:44 PM | 935 icp 7300 | 1            |
| 304 | 17-03-1717x10-4   | 3/27/2017 | 3:50:36 PM | 935 icp 7300 | 430          |
| 305 | 17-03-1717x10-5   | 3/27/2017 | 3:51:39 PM | 935 icp 7300 | 431          |
| 306 | 17-03-1717x10-6   | 3/27/2017 | 3:52:35 PM | 935 icp 7300 | 432          |
| 307 | 17-03-1717x10-7   | 3/27/2017 | 3:53:29 PM | 935 icp 7300 | 433          |
| 308 | 17-03-1717x10-8   | 3/27/2017 | 3:54:23 PM | 935 icp 7300 | 434          |
| 309 | CCV= STD3x0.5     | 3/27/2017 | 3:55:17 PM | 935 icp 7300 | 3            |
| 310 | CCB-R12091601     | 3/27/2017 | 3:56:11 PM | 935 icp 7300 | 1            |
| 311 | 10324-b-01        | 3/27/2017 | 3:57:49 PM | 935 icp 7300 | 453          |
| 312 | CCV= STD3x0.5     | 3/27/2017 | 3:58:56 PM | 935 icp 7300 | 3            |

*No solution*

*3 } \* T22 + minerals (60/100 Soil)*

*3 } \* T22 + minerals (60/100 Water)*

|                            |                    |
|----------------------------|--------------------|
| Reviewed/Assign to Logbook | Date: 5/28/17      |
| Analysis: 200.7/1090       | Chemist ID: 1012   |
| Logbook Page: 20           | Instrument ID: 147 |

| No. | File Name             | Date      | Time       | Analyst Name | A/S Location |
|-----|-----------------------|-----------|------------|--------------|--------------|
| 313 | CCB-R12091601         | 3/27/2017 | 3:59:49 PM | 935 icp 7300 | 1            |
| 314 | 170324-I-01           | 3/27/2017 | 4:17:09 PM | 935 icp 7300 | 447          |
| 315 | CCV= STD3x0.5         | 3/27/2017 | 4:18:08 PM | 935 icp 7300 | 3            |
| 316 | CCB-R12091601         | 3/27/2017 | 4:19:02 PM | 935 icp 7300 | 1            |
| 317 | 17-03-1115-1 pds      | 3/27/2017 | 4:58:26 PM | 935 icp 7300 | 103          |
| 318 | 17-03-1115-1 pdsd     | 3/27/2017 | 4:59:25 PM | 935 icp 7300 | 104          |
| 319 | 17-03-1084x10-6       | 3/27/2017 | 5:00:17 PM | 935 icp 7300 | 105          |
| 320 | 17-03-1084x10-7       | 3/27/2017 | 5:01:07 PM | 935 icp 7300 | 106          |
| 321 | 17-03-1005x10-1       | 3/27/2017 | 5:01:57 PM | 935 icp 7300 | 107          |
| 322 | 17-03-1005x10-2       | 3/27/2017 | 5:02:48 PM | 935 icp 7300 | 108          |
| 323 | 17-03-1005x10-6       | 3/27/2017 | 5:03:38 PM | 935 icp 7300 | 109          |
| 324 | 17-03-1005x10-10      | 3/27/2017 | 5:04:28 PM | 935 icp 7300 | 110          |
| 325 | 17-03-1005x10-11      | 3/27/2017 | 5:05:19 PM | 935 icp 7300 | 111          |
| 326 | 17-03-1005x10-15      | 3/27/2017 | 5:06:09 PM | 935 icp 7300 | 112          |
| 327 | CCV= STD3x0.5         | 3/27/2017 | 5:07:05 PM | 935 icp 7300 | 3            |
| 328 | CCB-R12091601         | 3/27/2017 | 5:07:57 PM | 935 icp 7300 | 1            |
| 329 | CCV= STD3x0.5         | 3/27/2017 | 5:08:49 PM | 935 icp 7300 | 3            |
| 330 | CCB-R12091601         | 3/27/2017 | 5:09:47 PM | 935 icp 7300 | 1            |
| 331 | 170327-ba-2           | 3/27/2017 | 5:10:38 PM | 935 icp 7300 | 113          |
| 332 | 170327-la-2           | 3/27/2017 | 5:11:45 PM | 935 icp 7300 | 114          |
| 333 | 170327-la-2-d         | 3/27/2017 | 5:12:36 PM | 935 icp 7300 | 115          |
| 334 | 17-03-1569-dist-1     | 3/27/2017 | 5:13:27 PM | 935 icp 7300 | 116          |
| 335 | 17-03-1569-dist-1 ms  | 3/27/2017 | 5:14:26 PM | 935 icp 7300 | 117          |
| 336 | 17-03-1569-dist-1 msd | 3/27/2017 | 5:15:18 PM | 935 icp 7300 | 118          |
| 337 | 17-03-1569-dist-2     | 3/27/2017 | 5:16:10 PM | 935 icp 7300 | 119          |
| 338 | 17-03-1569-dist-3     | 3/27/2017 | 5:17:09 PM | 935 icp 7300 | 120          |
| 339 | 17-03-1569-dist-4     | 3/27/2017 | 5:17:59 PM | 935 icp 7300 | 121          |
| 340 | 17-03-1569-dist-5     | 3/27/2017 | 5:18:48 PM | 935 icp 7300 | 122          |
| 341 | CCV= STD3x0.5         | 3/27/2017 | 5:20:17 PM | 935 icp 7300 | 3            |
| 342 | CCB-R12091601         | 3/27/2017 | 5:21:15 PM | 935 icp 7300 | 1            |
| 343 | 17-03-1569-dist-6     | 3/27/2017 | 5:22:07 PM | 935 icp 7300 | 123          |
| 344 | 170327-ba-3           | 3/27/2017 | 5:23:03 PM | 935 icp 7300 | 124          |

Reviewed/Assign to Logbook Date: 3/28/17  
 Analysis: 200.7/6010 Chemist ID: 1012  
 Logbook Page: 51 Instrument ID: 1017

# EPA 6010B ICP Metals (Solid)

## Preparation Logs

## Metals Sample Preparation Logbook (Solid / Other)

| METHOD                                        |                                           | MATRIX                  |                | EQUIPMENT ID #       |                        | REAGENT ID #                  |             | STANDARD ID #               |                  |             |                |        |        |        |
|-----------------------------------------------|-------------------------------------------|-------------------------|----------------|----------------------|------------------------|-------------------------------|-------------|-----------------------------|------------------|-------------|----------------|--------|--------|--------|
| <input checked="" type="checkbox"/> EPA 3050B | <input checked="" type="checkbox"/> Solid |                         |                | Thermometer          | 1711142945 (CF 0.0 °C) | HNO <sub>3</sub>              | R01311701   | 20 mL                       | Spike 1 M022617A |             |                |        |        |        |
| <input type="checkbox"/> EPA 200.7            | <input type="checkbox"/> Other (Specify)  |                         |                | Block Digester       | 5                      | HCl                           | R12301602   | 15 mL                       | Spike 2 M020617C |             |                |        |        |        |
| <input type="checkbox"/> EPA 200.8            |                                           |                         |                | Pipettor / Dispenser | P-072/P-027/D-028      | H <sub>2</sub> O <sub>2</sub> | M006-040-13 | 3.0 mL                      | Spike 3          |             |                |        |        |        |
| BATCH NUMBER                                  |                                           | SUPPLY LOT #            |                | BALANCE ID #         |                        | QUALITY SYSTEM MATRIX ID #    |             | SAMPLE HANDLING             |                  |             |                |        |        |        |
| MS/MSD 170324-511                             |                                           | Tube / Container 170104 |                | 65                   |                        | Teflon Chip M006-035-15       |             | 1 = Composite 2 = Subsample |                  |             |                |        |        |        |
| (Specify)                                     |                                           | Filter                  |                |                      |                        | (Specify)                     |             | 3 = Homogenize 4 = None     |                  |             |                |        |        |        |
| DIGESTION                                     |                                           |                         |                |                      |                        |                               |             |                             |                  |             |                |        |        |        |
| DATE                                          | TIME                                      | START                   |                | END                  |                        | SAMPLE HANDLING               | ECI ID #    | ANALYTE(S)                  | SAMPLE           |             | SPIKE STANDARD |        |        |        |
|                                               |                                           | TEMP W/O CF (°C)        | PREP TECH ID # | TIME                 | TEMP W/O CF (°C)       |                               |             |                             | PREP TECH ID #   | INITIAL (g) | FINAL (mL)     | 1 (µL) | 2 (µL) | 3 (µL) |
| 3/24/17                                       | 16:00                                     | 95                      | 1080           | 17:30                | 95                     | 1080                          | 4           | MS 17-03-1114-1A            | metals           | 2.09        | 100            | 500    | 500    |        |
|                                               |                                           |                         |                |                      |                        |                               |             | MSD                         |                  | 2.00        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | LCS 17-0324-L11             |                  | 2.08        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | LCS/D / MB 1 - B11          |                  | 2.07        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | 17-03-1114-1A               |                  | 2.09        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | 17-03-1104-30A              |                  | 2.00        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -30B                        |                  | 2.01        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -30C                        |                  | 2.09        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -30D                        |                  | 2.07        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -30E                        |                  | 2.07        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -31A                        |                  | 2.03        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -31B                        |                  | 2.02        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -31C                        |                  | 2.09        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -31D                        |                  | 2.09        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -31E                        |                  | 2.09        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -32A                        |                  | 2.10        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -32B                        |                  | 2.06        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -32C                        |                  | 2.03        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -32D                        |                  | 2.06        |                |        |        |        |
|                                               |                                           |                         |                |                      |                        |                               |             | -32E                        |                  | 2.07        |                |        |        |        |

COMMENTS:

# Metals Sample Preparation Logbook (Solid / Other)

| METHOD                                        |                                           | MATRIX                  |                   | EQUIPMENT ID #                |                  | REAGENT ID #               |                 | STANDARD ID #               |            |             |            |                |        |        |
|-----------------------------------------------|-------------------------------------------|-------------------------|-------------------|-------------------------------|------------------|----------------------------|-----------------|-----------------------------|------------|-------------|------------|----------------|--------|--------|
| <input checked="" type="checkbox"/> EPA 3050B | <input checked="" type="checkbox"/> Solid | Thermometer             | 6104 (CE-2.0 °C)  | HNO <sub>3</sub>              | R01311701        | 20 mL                      | Spike 1         | M022017A                    |            |             |            |                |        |        |
| <input type="checkbox"/> EPA 200.7            | <input type="checkbox"/> Other (Specify)  | Block Digester          | 3                 | HCl                           | R12301602        | 15 mL                      | Spike 2         | M020617C                    |            |             |            |                |        |        |
| <input type="checkbox"/> EPA 200.8            |                                           | Pipetter / Dispenser    | P-022/D-027/D-028 | H <sub>2</sub> O <sub>2</sub> | M006-040-13      | 3.0 mL                     | Spike 3         |                             |            |             |            |                |        |        |
| BATCH NUMBER                                  |                                           | SUPPLY LOT #            |                   | BALANCE ID #                  |                  | QUALITY SYSTEM MATRIX ID # |                 | SAMPLE HANDLING             |            |             |            |                |        |        |
| MS/MSD 176224-512                             |                                           | Tube / Container 170104 |                   | 65                            |                  | Teflon Chip M006-035-15    |                 | 1 = Composite 2 = Subsample |            |             |            |                |        |        |
| (Specify)                                     |                                           | Filter                  |                   |                               |                  | (Specify)                  |                 | 3 = Homogenize 4 = None     |            |             |            |                |        |        |
| DIGESTION                                     |                                           |                         |                   |                               |                  |                            |                 |                             |            |             |            |                |        |        |
| START                                         |                                           |                         |                   | END                           |                  |                            | SAMPLE HANDLING | ECI ID #                    | ANALYTE(S) | SAMPLE      |            | SPIKE STANDARD |        |        |
| DATE                                          | TIME                                      | TEMP W/O CF (°C)        | PREP TECH ID #    | TIME                          | TEMP W/O CF (°C) | PREP TECH ID #             |                 |                             |            | INITIAL (g) | FINAL (mL) | 1 (µL)         | 2 (µL) | 3 (µL) |
| 3/24/17                                       | 16:10                                     | 95                      | 1080              | 17:40                         | 95               | 1080                       | 4               | MS 17-03-1115-1A            | metals     | 1.99        | 100        | 500            | 500    |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | MSD                         |            | 1.92        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | LCS 17-0324-L12             |            | 2.05        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | LCS/D / MB -B12             |            | 2.07        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | 17-03-1115-1A               |            | 2.04        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | 17-03-1104-33A              |            | 2.07        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -33B                        |            | 2.00        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -33C                        |            | 2.10        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -33D                        |            | 2.10        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -33E                        |            | 2.02        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | 17-03-1105-30A              |            | 2.00        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -30B                        |            | 2.10        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -30C                        |            | 2.01        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -30D                        |            | 2.00        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -30E                        |            | 2.07        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -31A                        |            | 2.09        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -31B                        |            | 2.04        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -31C                        |            | 2.01        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -31D                        |            | 2.06        |            |                |        |        |
|                                               |                                           |                         |                   |                               |                  |                            |                 | -31E                        |            | 2.10        |            |                |        |        |

COMMENTS:

# EPA 7471A Mercury (Solid)

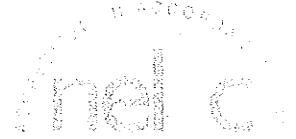
## RAW DATA

# EPA 7471A Mercury (Solid)

Initial Calibration  
ICV/ICB  
CCV/CCB

Sample Data

Quality Control  
Method Blank  
LCS/LCSD  
MS/MSD  
PDS/PDSD

**EPA Method 7471A**  
**Initial Calibration Verification**

Work Order No.: 17-03-1104

Instrument ID: HG 7 (G)

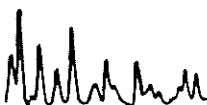
Concentration Unit: µg/L

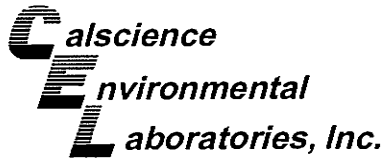
Test Method: EPA 7471A

| Analyte | Initial Calibration Verification |          |    |               |
|---------|----------------------------------|----------|----|---------------|
|         | True                             | ICV-1    |    | Control Limit |
|         |                                  | Observed | %D |               |
| Mercury | 5.000000                         | 5.123877 | 2  | 0 – 10        |

03/25/2017 13:32

ICV-1 File: ICV M030617B 03/24/2017 01:07:47 PM





**EPA Method 7471A  
Continuing Calibration Verification**



Work Order No.: 17-03-1104

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7471A

| Analyte | Continuing Calibration Verification |          |    |          |    |          |    |          |    |               |
|---------|-------------------------------------|----------|----|----------|----|----------|----|----------|----|---------------|
|         | True                                | CCV-1    |    | CCV-2    |    | CCV-3    |    | CCV-4    |    | Control Limit |
|         |                                     | Observed | %D | Observed | %D | Observed | %D | Observed | %D |               |
| Mercury | 2.000000                            | 1.973749 | 1  | 1.780108 | 11 | 1.749431 | 13 | 1.678755 | 16 | 0 - 20        |

03/25/2017 13:36

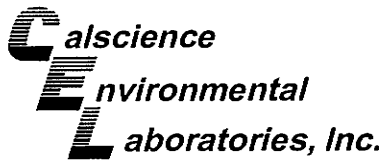
CCV-1 File: CCV 0.2x10ppb 03/24/2017 02:42:55 PM

CCV-2 File: CCV 0.2x10ppb 03/24/2017 05:09:37 PM

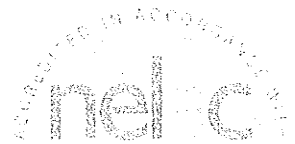
CCV-3 File: CCV 0.2x10ppb 03/24/2017 05:44:09 PM

CCV-4 File: CCV 0.2x10ppb 03/24/2017 06:11:51 PM





**EPA Method 7471A  
Initial and Continuing Calibration Blanks**



Work Order No.: 17-03-1104

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7471A

| Analyte | Initial and Continuing Calibration Blanks |           |           |           |           | RL (No PF) |
|---------|-------------------------------------------|-----------|-----------|-----------|-----------|------------|
|         | ICB-1                                     | CCB-1     | CCB-2     | CCB-3     | CCB-4     |            |
| Mercury | -0.021539                                 | -0.023010 | -0.020506 | -0.027017 | -0.026057 | 0.500000   |

03/25/2017 13:36

ICB-1 File: ICB 03/24/2017 01:10:04 PM

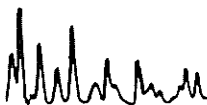
CCB-1 File: CCB 03/24/2017 02:45:12 PM

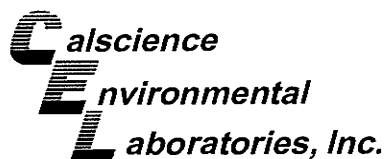
CCB-2 File: CCB 03/24/2017 05:11:55 PM

CCB-3 File: CCB 03/24/2017 05:46:26 PM

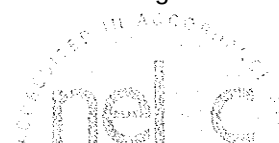
CCB-4 File: CCB 03/24/2017 06:14:08 PM

Note: Preparation factor (PF) = 167 L/kg





**EPA Method 7471A  
Continuing Calibration Verification**



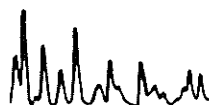
Work Order No.: 17-03-1104  
 Instrument ID: HG 7 (G)  
 Concentration Unit: µg/L Test Method: EPA 7471A

| Analyte | Continuing Calibration Verification |          |    |               |
|---------|-------------------------------------|----------|----|---------------|
|         | True                                | CCV-1    |    | Control Limit |
|         |                                     | Observed | %D |               |
| Mercury | 2.000000                            | 1.890879 | 5  | 0 – 20        |

03/25/2017 13:38

CCV-1 File: CCV 0.2x10ppb 03/24/2017 06:18:43 PM

↑  
Return to Contents



**EPA Method 7471A**  
**Initial and Continuing Calibration Blanks**

Work Order No.: 17-03-1104

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7471A

| Analyte | Initial and Continuing Calibration Blanks |           |            |
|---------|-------------------------------------------|-----------|------------|
|         | ICB-1                                     | CCB-1     | RL (No PF) |
| Mercury | -0.021539                                 | -0.024800 | 0.500000   |

03/25/2017 13:38

ICB-1 File: ICB 03/24/2017 01:10:04 PM

CCB-1 File: CCB 03/24/2017 06:21:00 PM

Note: Preparation factor (PF) = 167 L/kg

**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 18:04  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:29

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\17-03-1104-26.icp

**# 26**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170324L02 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.57 g |
| <b>MS/MSD BATCH:</b> 170324S02 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 ml                |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 1.05                             |

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000103           | 1.00      | ND          | 0.0877    |             |

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# RAW DATA SHEET FOR METHOD: EPA 7471A

**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 18:07  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:29

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\17-03-1104-27.icp

**# 27** **CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

**LCS/MB BATCH:** 170324L02 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 0.60 g / ACTUAL: 0.61 g  
**MS/MSD BATCH:** 170324S02 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 0.98

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000106           | 1.00      | ND          | 0.0820    |             |

**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 18:09  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:29

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\17-03-1104-28.icp

**# 28**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170324L02 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.62 g |
| <b>MS/MSD BATCH:</b> 170324S02 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 ml                |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 0.97                             |

**COMMENT:**

| <b>COMPOUND</b> | <b>ON COL CONC</b> | <b>DF</b> | <b>CONC</b> | <b>RL</b> | <b>QUAL</b> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000128           | 1.00      | ND          | 0.0806    |             |

**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 18:16  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:29

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\17-03-1104-29.icp

**# 29**      **CLIENT SAMPLE NUMBER: B-DU3-ISM4-3**

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170324L02 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.61 g |
| <b>MS/MSD BATCH:</b> 170324S02 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 ml                |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 0.98                             |

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000137           | 1.00      | ND          | 0.0820    |             |

# METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 7471A

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**MB SAMPLE ID:** 099-16-272-2902  
**MB BATCH ID:** 170324L02  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 15:47  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:23  
**MATRIX:** Soil

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\170324-B-02.icp

## CLIENT WORK ORDER: 17-03-1104

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                 |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------------|
| 26        | B-DU3-ISM1-3    |                         | 2017-03-24 18:04    | W:\MERCURY_DATA\FINAL\170324G1\17-03-1104-26.icp |
| 27        | B-DU3-ISM2-3    |                         | 2017-03-24 18:07    | W:\MERCURY_DATA\FINAL\170324G1\17-03-1104-27.icp |
| 28        | B-DU3-ISM3-3    |                         | 2017-03-24 18:09    | W:\MERCURY_DATA\FINAL\170324G1\17-03-1104-28.icp |
| 29        | B-DU3-ISM4-3    |                         | 2017-03-24 18:16    | W:\MERCURY_DATA\FINAL\170324G1\17-03-1104-29.icp |

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**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 099-16-272  
**INSTRUMENT:** Mercury 07  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-24 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-24 15:47  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-25 13:23

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170324G1\170324-B-02.icp

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** 170324L02 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 0.60 g / ACTUAL: 0.60 g  
**MS/MSD BATCH:** **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | -0.0000249         | 1.00      | ND          | 0.0833    |             |

LCS QUALITY CONTROL SHEET  
FOR METHOD: EPA 7471A

LCS SAMPLE ID: 099-16-272- 2902  
LCS/MB BATCH ID: 170324L02  
INSTRUMENT: Mercury 07

EXTRACTION: EPA 7471A Total  
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 868  
D/T ANALYZED: 2017-03-24 15:49  
REVIEWED BY: 309  
D/T REVIEWED: 2017-03-25 13:23

DATA FILE: W:\MERCURY\_DATA\FINAL\170324G1\170324-L-02.icp

| <u>COMPOUND NAME</u> | <u>CONC ADDED</u> | <u>CONC REC</u> | <u>%RECOVERY</u> | <u>%REC CONTROL LIMIT</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|----------------------|-------------------|-----------------|------------------|---------------------------|---------------|-------------------|
| Mercury              | 0.8350            | 0.8521          | 102              | 85-121                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 7471A

SPIKED SAMPLE ID: 17-03-0879-1  
MS/MSD BATCH: 170324S02  
INSTRUMENTS:  
SAMPLE: Mercury 07  
MS: Mercury 07  
MSD: Mercury 07

EXTRACTION: EPA 7471A Total  
D/T EXTRACTED:  
SAMPLE: 2017-03-24 00:00  
MS: 2017-03-24 00:00  
MSD: 2017-03-24 00:00

ANALYZED BY: 868  
D/T ANALYZED:  
SAMPLE: 2017-03-24 15:52  
MS: 2017-03-24 15:54  
MSD: 2017-03-24 15:56  
REVIEWED BY: 309  
D/T REVIEWED: 2017-03-25 13:26

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL  | FINAL  | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|----------|--------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Mercury       | 1.257  | 0.005000 | 0.8350 | 1.601   | 41       | 1.663    | 49        | 71-137   | 4   | 0-14   | FAIL   | 3G         |

Data Files:

| TYPE | DATA FILE            | DATA FILE PATH                  |
|------|----------------------|---------------------------------|
| MS   | 17-03-0879-1 MS.icp  | W:\MERCURY_DATA\FINAL\170324G1\ |
| MSD  | 17-03-0879-1 MSD.icp | W:\MERCURY_DATA\FINAL\170324G1\ |

=====  
Analysis BegunLogged In Analyst: US26\_SVC INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifxBatch ID:  
Results Data Set: 170324G1  
Results Library: U:\MERCURY\_7\Data\Results\results.mdb=====  
Sequence No.: 1  
Sample ID: Calib blank\_868  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 1  
Date Collected: 3/24/2017 12:46:14 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: Calib blank\_868  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/L | StdConc ug/L | BlkCorr | Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|--------------|---------|--------|-----------|-------------|-------------|-------------|
| 1      |                 | [0.00]       | 0.0000  |        | -0.0015   | 0.0000      | 12:47:19 PM | Yes         |
| 2      |                 | [0.00]       | 0.0001  |        | -0.0006   | 0.0001      | 12:48:04 PM | Yes         |
| Mean:  |                 | [0.00]       | 0.0000  |        |           |             |             |             |
| SD:    |                 | 0.0000       | 0.0000  |        |           |             |             |             |
| %RSD:  |                 | 0.00%        | 0.00%   |        |           |             |             |             |

Auto-zero performed.=====  
Sequence No.: 2  
Sample ID: 0.025ppb 0.005x5ppb  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 2  
Date Collected: 3/24/2017 12:48:30 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: 0.025ppb 0.005x5ppb  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/L | StdConc ug/L | BlkCorr | Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|--------------|---------|--------|-----------|-------------|-------------|-------------|
| 1      |                 | [0.025]      | 0.0003  |        | 0.0012    | 0.0003      | 12:49:34 PM | Yes         |
| 2      |                 | [0.025]      | 0.0002  |        | -0.0000   | 0.0002      | 12:50:20 PM | Yes         |
| Mean:  |                 | [0.025]      | 0.0002  |        |           |             |             |             |
| SD:    |                 | 0.00000      | 0.0000  |        |           |             |             |             |
| %RSD:  |                 | 0.00%        | 0.00%   |        |           |             |             |             |

Standard number 1 applied. [0.025]  
Correlation Coef.: 1.000000 Slope: 0.00961 Intercept: 0.00000=====  
Sequence No.: 3  
Sample ID: 0.10ppb M030617AX0.0001  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 3  
Date Collected: 3/24/2017 12:50:46 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: 0.10ppb M030617AX0.0001  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/L | StdConc ug/L | BlkCorr | Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|--------------|---------|--------|-----------|-------------|-------------|-------------|
| 1      |                 | [0.100]      | 0.0010  |        | 0.0036    | 0.0010      | 12:51:50 PM | Yes         |
| 2      |                 | [0.100]      | 0.0009  |        | 0.0021    | 0.0010      | 12:52:36 PM | Yes         |
| Mean:  |                 | [0.100]      | 0.0010  |        |           |             |             |             |
| SD:    |                 | 0.00000      | 0.0000  |        |           |             |             |             |
| %RSD:  |                 | 0.00%        | 0.00%   |        |           |             |             |             |

Standard number 2 applied. [0.100]  
Correlation Coef.: 1.000000 Slope: 0.00962 Intercept: -0.00000

Sequence No.: 4  
Sample ID: 1.00ppb M030617AX0.0001  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 4  
Date Collected: 3/24/2017 12:53:02 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1

Replicate Data: 1.00ppb M030617AX0.0001  
Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|-------------|-------------|
| 1      |                 | [1.000]        | 0.0089          | 0.0314    | 0.0090      | 12:54:08 PM | Yes         |
| 2      |                 | [1.000]        | 0.0089          | 0.0308    | 0.0090      | 12:54:54 PM | Yes         |
| Mean:  |                 | [1.000]        | 0.0089          |           |             |             |             |
| SD:    |                 | 0.00000        | 0.0000          |           |             |             |             |
| %RSD:  |                 | 0.00%          | 0.03            |           |             |             |             |

Standard number 3 applied. [1.000]  
Correlation Coef.: 0.999975 Slope: 0.00891 Intercept: 0.00003

Sequence No.: 5  
Sample ID: 2.00ppb M030617AX0.002  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 5  
Date Collected: 3/24/2017 12:55:21 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1

Replicate Data: 2.00ppb M030617AX0.002  
Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|-------------|-------------|
| 1      |                 | [2.000]        | 0.0182          | 0.0597    | 0.0183      | 12:56:26 PM | Yes         |
| 2      |                 | [2.000]        | 0.0176          | 0.0610    | 0.0176      | 12:57:12 PM | Yes         |
| Mean:  |                 | [2.000]        | 0.0179          |           |             |             |             |
| SD:    |                 | 0.00000        | 0.0005          |           |             |             |             |
| %RSD:  |                 | 0.00%          | 2.65            |           |             |             |             |

Standard number 4 applied. [2.000]  
Correlation Coef.: 0.999993 Slope: 0.00894 Intercept: 0.00002

Sequence No.: 6  
Sample ID: 5.00ppb M030617AX0.005  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 6  
Date Collected: 3/24/2017 12:57:39 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1

Replicate Data: 5.00ppb M030617AX0.005  
Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|-------------|-------------|
| 1      |                 | [5.000]        | 0.0444          | 0.1540    | 0.0445      | 12:58:43 PM | Yes         |
| 2      |                 | [5.000]        | 0.0443          | 0.1536    | 0.0444      | 12:59:29 PM | Yes         |
| Mean:  |                 | [5.000]        | 0.0444          |           |             |             |             |
| SD:    |                 | 0.00000        | 0.0001          |           |             |             |             |
| %RSD:  |                 | 0.00%          | 0.17            |           |             |             |             |

Standard number 5 applied. [5.000]  
Correlation Coef.: 0.999994 Slope: 0.00887 Intercept: 0.00005

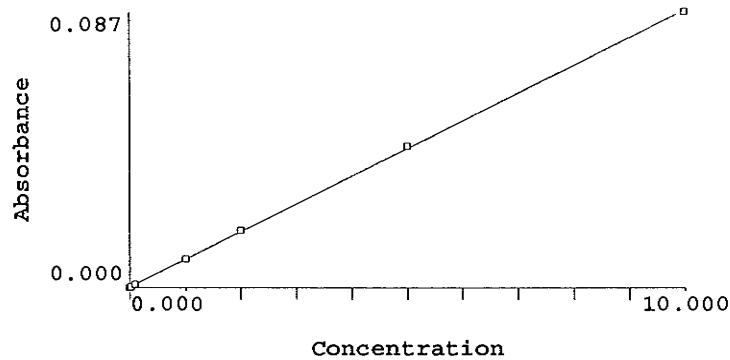
Sequence No.: 7  
Sample ID: 10.0ppb M030617AX0.01  
Analyst: 868  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 7  
Date Collected: 3/24/2017 12:59:55 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1

Replicate Data: 10.0ppb M030617AX0.01  
Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------|-------------|
|--------|-----------------|----------------|-----------------|-----------|-------------|------|-------------|

1 [10.00] 0.0866 0.3005 0.0867 1:00:59 PM Yes  
 2 [10.00] 0.0870 0.3005 0.0870 1:01:45 PM Yes  
 Mean: [10.00] 0.0868  
 SD: 0.0000 0.0002  
 %RSD: 0.00% 0.27  
 Standard number 6 applied. [10.00]  
 Correlation Coef.: 0.999936 Slope: 0.00870 Intercept: 0.00023



## Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

| ID                                                            | Mean Signal<br>(Abs) | Entered<br>Conc.<br>ug/L | Calculated<br>Conc.<br>ug/L | Standard<br>Deviation | %RSD  |
|---------------------------------------------------------------|----------------------|--------------------------|-----------------------------|-----------------------|-------|
| Calib blank_868                                               | 0.0000               | 0                        | -0.026500                   | 0.00                  | 92.04 |
| 0.025ppb 0.005x5ppb                                           | 0.0002               | 0.025                    | 0.001117                    | 0.00                  | 19.49 |
| 0.10ppb M030617AX0.0001                                       | 0.0010               | 0.100                    | 0.084147                    | 0.00                  | 4.05  |
| 1.00ppb M030617AX0.0001                                       | 0.0089               | 1.000                    | 1.000798                    | 0.00                  | 0.03  |
| 2.00ppb M030617AX0.002                                        | 0.0179               | 2.000                    | 2.033192                    | 0.00                  | 2.65  |
| 5.00ppb M030617AX0.005                                        | 0.0444               | 5.000                    | 5.077491                    | 0.00                  | 0.17  |
| 10.0ppb M030617AX0.01                                         | 0.0868               | 10.00                    | 9.954754                    | 0.00                  | 0.27  |
| Correlation Coef.: 0.999936 Slope: 0.00870 Intercept: 0.00023 |                      |                          |                             |                       |       |

=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifxBatch ID:  
Results Data Set: 170324G1  
Results Library: U:\MERCURY\_7\Data\Results\results.mdb=====  
Sequence No.: 1  
Sample ID: ICV M030617B  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 8  
Date Collected: 3/24/2017 1:05:56 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1.0000-----  
Replicate Data: ICV M030617B  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.00513    | 5.13    | 0.0448  | 0.1553 | 0.0449 | 1:07:01 PM | Yes    |
| 2     | 0.00512    | 5.12    | 0.0447  | 0.1557 | 0.0448 | 1:07:47 PM | Yes    |
| Mean: | 0.00512    | 5.12    | 0.0448  |        |        |            |        |
| SD:   | 0.000009   | 0.009   | 0.0001  |        |        |            |        |
| %RSD: | 0.17%      | 0.17%   | 0.17    |        |        |            |        |

QC value within limits for Hg 253.7 Recovery = 102.48%  
All analyte(s) passed QC.

=====  
Sequence No.: 2  
Sample ID: ICB  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 1  
Date Collected: 3/24/2017 1:08:14 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1.0000-----  
Replicate Data: ICB  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | BlkCorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.000019  | -0.0186 | 0.0001  | 0.0000  | 0.0001 | 1:09:18 PM | Yes    |
| 2     | -0.000025  | -0.0245 | 0.0000  | -0.0006 | 0.0001 | 1:10:04 PM | Yes    |
| Mean: | -0.000022  | -0.0215 | 0.0000  |         |        |            |        |
| SD:   | 0.0000042  | 0.00422 | 0.0000  |         |        |            |        |
| %RSD: | 19.58%     | 19.58%  | 85.02   |         |        |            |        |

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

=====  
Sequence No.: 3  
Sample ID: CRQL 0.25  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution: 2X  
Wash Time (before sample): 0  
Autosampler Location: 9  
Date Collected: 3/24/2017 1:10:29 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: CRQL 0.25  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.000461   | 0.231   | 0.0022  | 0.0067 | 0.0023 | 1:11:34 PM | Yes    |
| 2     | 0.000453   | 0.226   | 0.0022  | 0.0060 | 0.0022 | 1:12:21 PM | Yes    |
| Mean: | 0.000457   | 0.228   | 0.0022  |        |        |            |        |
| SD:   | 0.0000059  | 0.0029  | 0.0000  |        |        |            |        |
| %RSD: | 1.28%      | 1.28%   | 1.15    |        |        |            |        |

  
=====

Sequence No.: 4

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/24/2017 1:12:47 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

-----  
Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

| Repl  | SampleConc | StndConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | 0.00197    | 1.97     | 0.0174  | 0.0602 | 0.0174 | 1:13:53 PM | Yes    |
| 2     | 0.00198    | 1.98     | 0.0174  | 0.0599 | 0.0174 | 1:14:39 PM | Yes    |
| Mean: | 0.00197    | 1.97     | 0.0174  |        |        |            |        |
| SD:   | 0.000005   | 0.005    | 0.0000  |        |        |            |        |
| %RSD: | 0.23%      | 0.23%    | 0.23    |        |        |            |        |

QC value within limits for Hg 253.7 Recovery = 98.62%

All analyte(s) passed QC.

=====

Sequence No.: 5

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/24/2017 1:15:06 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

-----  
Replicate Data: CCB

Analyte: Hg 253.7

| Repl  | SampleConc | StndConc | Blncorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|----------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L     | Signal  | Area    | Height |            | Stored |
| 1     | -0.000023  | -0.0235  | 0.0000  | -0.0006 | 0.0001 | 1:16:10 PM | Yes    |
| 2     | -0.000027  | -0.0267  | -0.0000 | -0.0017 | 0.0000 | 1:16:55 PM | Yes    |
| Mean: | -0.000025  | -0.0251  | 0.0000  |         |        |            |        |
| SD:   | 0.0000023  | 0.00225  | 0.0000  |         |        |            |        |
| %RSD: | 8.98%      | 8.98%    | 158.95  |         |        |            |        |

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifx

Batch ID:

Results Data Set: 170324G1

Results Library: U:\MERCURY\_7\Data\Results\results.mdb

=====  
Sequence No.: 1  
Sample ID: 17-03-1340-F-1  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution: 2X  
Wash Time (before sample): 0  
Autosampler Location: 90  
Date Collected: 3/24/2017 2:29:29 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: 17-03-1340-F-1

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | -0.000021  | -0.0105 | 0.0001  | 0.0014 | 0.0002 | 2:30:35 PM | Yes    |
| 2     | -0.000027  | -0.0133 | 0.0001  | 0.0007 | 0.0002 | 2:31:21 PM | Yes    |
| Mean: | -0.000024  | -0.0119 | 0.0001  |        |        |            |        |
| SD:   | 0.0000039  | 0.00197 | 0.0000  |        |        |            |        |
| %RSD: | 16.54%     | 16.54%  | 13.53   |        |        |            |        |

=====  
Sequence No.: 2  
Sample ID: 17-03-1340-F-2  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution: 2X  
Wash Time (before sample): 0  
Autosampler Location: 91  
Date Collected: 3/24/2017 2:31:48 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: 17-03-1340-F-2

| Repl  | SampleConc | StdConc  | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | -0.000021  | -0.0107  | 0.0001  | 0.0009 | 0.0002 | 2:32:54 PM | Yes    |
| 2     | -0.000019  | -0.00957 | 0.0001  | 0.0011 | 0.0002 | 2:33:40 PM | Yes    |
| Mean: | -0.000020  | -0.0101  | 0.0001  |        |        |            |        |
| SD:   | 0.0000016  | 0.00080  | 0.0000  |        |        |            |        |
| %RSD: | 7.87%      | 7.87%    | 4.87    |        |        |            |        |

=====  
Sequence No.: 3  
Sample ID: 17-03-1450-1  
Analyst: 868 HG-7  
Initial Sample Wt:  
Dilution: 2X  
Wash Time (before sample): 0  
Autosampler Location: 92  
Date Collected: 3/24/2017 2:34:07 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: 17-03-1450-1

| Repl  | SampleConc | StdConc  | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | -0.000027  | -0.0135  | 0.0001  | 0.0004 | 0.0002 | 2:35:13 PM | Yes    |
| 2     | -0.000017  | -0.00856 | 0.0002  | 0.0008 | 0.0002 | 2:35:59 PM | Yes    |
| Mean: | -0.000022  | -0.0110  | 0.0001  |        |        |            |        |
| SD:   | 0.0000070  | 0.00349  | 0.0000  |        |        |            |        |
| %RSD: | 31.63%     | 31.63%   | 22.55   |        |        |            |        |

=====  
Sequence No.: 4  
Sample ID: 17-03-1450-2  
Analyst: 868 HG-7  
Initial Sample Wt:  
Autosampler Location: 93  
Date Collected: 3/24/2017 2:36:25 PM  
Data Type: Original  
Initial Sample Vol:

Dilution: 2X

Wash Time (before sample): 0

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 17-03-1450-2

Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | -0.000022       | -0.0108        | 0.0001          | 0.0006    | 0.0002      | 2:37:32 PM | Yes         |
| 2      | -0.000021       | -0.0106        | 0.0001          | 0.0008    | 0.0002      | 2:38:17 PM | Yes         |
| Mean:  | -0.000021       | -0.0107        | 0.0001          |           |             |            |             |
| SD:    | 0.0000003       | 0.00013        | 0.0000          |           |             |            |             |
| %RSD:  | 1.22%           | 1.22%          | 0.83            |           |             |            |             |

Sequence No.: 5

Sample ID: 17-03-1450-3

Analyst: 868 HG-7

Initial Sample Wt:

Dilution: 2X

Wash Time (before sample): 0

Autosampler Location: 94

Date Collected: 3/24/2017 2:38:44 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Replicate Data: 17-03-1450-3

Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | -0.000018       | -0.00918       | 0.0002          | 0.0005    | 0.0002      | 2:39:50 PM | Yes         |
| 2      | -0.000010       | -0.00485       | 0.0002          | 0.0012    | 0.0002      | 2:40:36 PM | Yes         |
| Mean:  | -0.000014       | -0.00701       | 0.0002          |           |             |            |             |
| SD:    | 0.0000061       | 0.003063       | 0.0000          |           |             |            |             |
| %RSD:  | 43.68%          | 43.68%         | 15.71           |           |             |            |             |

Sequence No.: 6

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/24/2017 2:41:03 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | 0.00198         | 1.98           | 0.0175          | 0.0625    | 0.0175      | 2:42:09 PM | Yes         |
| 2      | 0.00197         | 1.97           | 0.0173          | 0.0623    | 0.0174      | 2:42:55 PM | Yes         |
| Mean:  | 0.00197         | 1.97           | 0.0174          |           |             |            |             |
| SD:    | 0.000011        | 0.011          | 0.0001          |           |             |            |             |
| %RSD:  | 0.55%           | 0.55%          | 0.54            |           |             |            |             |

QC value within limits for Hg 253.7 Recovery = 98.69%

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/24/2017 2:43:22 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

| Repl # | SampleConc mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | -0.000023       | -0.0230        | 0.0000          | -0.0005   | 0.0001      | 2:44:27 PM | Yes         |
| 2      | -0.000023       | -0.0230        | 0.0000          | -0.0005   | 0.0001      | 2:45:12 PM | Yes         |
| Mean:  | -0.000023       | -0.0230        | 0.0000          |           |             |            |             |
| SD:    | 0.0000000       | 0.00001        | 0.0000          |           |             |            |             |
| %RSD:  | 0.02%           | 0.02%          | 0.16            |           |             |            |             |

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifxBatch ID:  
Results Data Set: 170324G1  
Results Library: U:\MERCURY\_7\Data\Results\results.mdb=====  
Sequence No.: 1  
Sample ID: 170324-B-02  
Analyst: 868 HG-7  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 95  
Date Collected: 3/24/2017 3:45:40 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 170324-B-02  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | Blncorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.00385   | -0.0231 | 0.0000  | 0.0006  | 0.0001 | 3:46:45 PM | Yes    |
| 2     | -0.00444   | -0.0266 | -0.0000 | -0.0001 | 0.0000 | 3:47:31 PM | Yes    |
| Mean: | -0.00414   | -0.0249 | 0.0000  |         |        |            |        |
| SD:   | 0.000420   | 0.00252 | 0.0000  |         |        |            |        |
| %RSD: | 10.14%     | 10.14%  | 154.09  |         |        |            |        |

=====  
Sequence No.: 2  
Sample ID: 170324-L-02  
Analyst: 868 HG-7  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 96  
Date Collected: 3/24/2017 3:47:58 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 170324-L-02  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.854      | 5.12    | 0.0448  | 0.1605 | 0.0448 | 3:49:04 PM | Yes    |
| 2     | 0.850      | 5.10    | 0.0446  | 0.1606 | 0.0446 | 3:49:49 PM | Yes    |
| Mean: | 0.852      | 5.11    | 0.0447  |        |        |            |        |
| SD:   | 0.0024     | 0.015   | 0.0001  |        |        |            |        |
| %RSD: | 0.28%      | 0.28%   | 0.28    |        |        |            |        |

=====  
Sequence No.: 3  
Sample ID: 17-03-0879-1  
Analyst: 868 HG-7  
Initial Sample Wt: 0.63 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 97  
Date Collected: 3/24/2017 3:50:16 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 17-03-0879-1  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 1.26       | 7.93    | 0.0692  | 0.2569 | 0.0692 | 3:51:22 PM | Yes    |
| 2     | 1.26       | 7.91    | 0.0691  | 0.2561 | 0.0691 | 3:52:08 PM | Yes    |
| Mean: | 1.26       | 7.92    | 0.0691  |        |        |            |        |
| SD:   | 0.001      | 0.009   | 0.0001  |        |        |            |        |
| %RSD: | 0.11%      | 0.11%   | 0.11    |        |        |            |        |

=====  
Sequence No.: 4  
Sample ID: 17-03-0879-1 MS  
Analyst: 868 HG-7  
Initial Sample Wt: 0.63 g  
Autosampler Location: 98  
Date Collected: 3/24/2017 3:52:35 PM  
Data Type: Original  
Initial Sample Vol:

Dilution:

Sample Prep Vol: 100 mL

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 17-03-0879-1 MS

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | 1.60             | 10.1           | 0.0877          | 0.3320    | 0.0877      | 3:53:41 PM | Yes         |
| 2      | 1.61             | 10.1           | 0.0883          | 0.3317    | 0.0883      | 3:54:27 PM | Yes         |
| Mean:  | 1.60             | 10.1           | 0.0880          |           |             |            |             |
| SD:    | 0.008            | 0.05           | 0.0004          |           |             |            |             |
| %RSD:  | 0.49%            | 0.49%          | 0.49            |           |             |            |             |

Sequence No.: 5

Autosampler Location: 99

Sample ID: 17-03-0879-1 MSD

Date Collected: 3/24/2017 3:54:54 PM

Analyst: 868 HG-7

Data Type: Original

Initial Sample Wt: 0.62 g

Initial Sample Vol:

Dilution:

Sample Prep Vol: 100 mL

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 17-03-0879-1 MSD

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | 1.66             | 10.3           | 0.0899          | 0.3374    | 0.0900      | 3:56:00 PM | Yes         |
| 2      | 1.66             | 10.3           | 0.0898          | 0.3338    | 0.0899      | 3:56:46 PM | Yes         |
| Mean:  | 1.66             | 10.3           | 0.0899          |           |             |            |             |
| SD:    | 0.002            | 0.01           | 0.0001          |           |             |            |             |
| %RSD:  | 0.10%            | 0.10%          | 0.10            |           |             |            |             |

Sequence No.: 6

Autosampler Location: 100

Sample ID: 17-03-0879-2

Date Collected: 3/24/2017 3:57:13 PM

Analyst: 868 HG-7

Data Type: Original

Initial Sample Wt: 0.57 g

Initial Sample Vol:

Dilution:

Sample Prep Vol: 100 mL

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 17-03-0879-2

Analyte: Hg 253.7

| Repl #                                                             | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------------------------------------------------------------------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1                                                                  | 3.26             | 18.6           | 0.1616          | 0.6338    | 0.1617      | 3:58:19 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| 2                                                                  | 3.33             | 19.0           | 0.1653          | 0.6362    | 0.1653      | 3:59:05 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| Mean:                                                              | 3.29             | 18.8           | 0.1635          |           |             |            |             |
| SD:                                                                | 0.052            | 0.30           | 0.0026          |           |             |            |             |
| %RSD:                                                              | 1.59%            | 1.59%          | 1.59            |           |             |            |             |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |

Sequence No.: 7

Autosampler Location: 101

Sample ID: 17-03-0879-3

Date Collected: 3/24/2017 3:59:32 PM

Analyst: 868 HG-7

Data Type: Original

Initial Sample Wt: 0.63 g

Initial Sample Vol:

Dilution:

Sample Prep Vol: 100 mL

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 17-03-0879-3

Analyte: Hg 253.7

| Repl #                                                             | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------------------------------------------------------------------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1                                                                  | 6.76             | 42.6           | 0.3704          | 1.4753    | 0.3704      | 4:00:38 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| 2                                                                  | 6.85             | 43.2           | 0.3756          | 1.4669    | 0.3756      | 4:01:23 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| Mean:                                                              | 6.80             | 42.9           | 0.3730          |           |             |            |             |
| SD:                                                                | 0.067            | 0.42           | 0.0037          |           |             |            |             |
| %RSD:                                                              | 0.99%            | 0.99%          | 0.99            |           |             |            |             |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |

=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifx

Batch ID:

Results Data Set: 170324G1

Results Library: U:\MERCURY\_7\Data\Results\results.mdb

=====  
Sequence No.: 1

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/24/2017 5:07:45 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

-----  
Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.00178    | 1.78    | 0.0157  | 0.0629 | 0.0157 | 5:08:52 PM | Yes    |
| 2     | 0.00178    | 1.78    | 0.0157  | 0.0615 | 0.0158 | 5:09:37 PM | Yes    |
| Mean: | 0.00178    | 1.78    | 0.0157  |        |        |            |        |
| SD:   | 0.000006   | 0.006   | 0.0000  |        |        |            |        |
| %RSD: | 0.32%      | 0.32%   | 0.31    |        |        |            |        |

QC value within limits for Hg 253.7 Recovery = 89.01%  
All analyte(s) passed QC.=====  
Sequence No.: 2

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/24/2017 5:10:05 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

-----  
Replicate Data: CCB

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.000014  | -0.0136 | 0.0001  | 0.0017  | 0.0002 | 5:11:09 PM | Yes    |
| 2     | -0.000027  | -0.0274 | -0.0000 | -0.0008 | 0.0000 | 5:11:55 PM | Yes    |
| Mean: | -0.000021  | -0.0205 | 0.0001  |         |        |            |        |
| SD:   | 0.0000098  | 0.00982 | 0.0001  |         |        |            |        |
| %RSD: | 47.88%     | 47.88%  | 163.78  |         |        |            |        |

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.=====  
Sequence No.: 3

Sample ID: 17-03-0879-4

Analyst: 868 HG-7

Initial Sample Wt: 0.62 g

Dilution:

Wash Time (before sample): 0

Autosampler Location: 102

Date Collected: 3/24/2017 5:12:20 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

-----  
Replicate Data: 17-03-0879-4

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.105      | 0.651   | 0.0059  | 0.0234 | 0.0059 | 5:13:26 PM | Yes    |
| 2     | 0.106      | 0.659   | 0.0060  | 0.0238 | 0.0060 | 5:14:12 PM | Yes    |
| Mean: | 0.106      | 0.655   | 0.0059  |        |        |            |        |
| SD:   | 0.0009     | 0.0058  | 0.0001  |        |        |            |        |
| %RSD: | 0.88%      | 0.88%   | 0.85    |        |        |            |        |

Sequence No.: 4  
Sample ID: 17-03-0879-5  
Analyst: 868 HG-7  
Initial Sample Wt: 0.63 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 103  
Date Collected: 3/24/2017 5:14:39 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

-----  
Replicate Data: 17-03-0879-5

| Repl  | SampleConc | StndConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | 0.207      | 1.30     | 0.0116  | 0.0449 | 0.0116 | 5:15:46 PM | Yes    |
| 2     | 0.208      | 1.31     | 0.0116  | 0.0453 | 0.0117 | 5:16:31 PM | Yes    |
| Mean: | 0.207      | 1.31     | 0.0116  |        |        |            |        |
| SD:   | 0.0006     | 0.004    | 0.0000  |        |        |            |        |
| %RSD: | 0.30%      | 0.30%    | 0.29    |        |        |            |        |

Sequence No.: 5  
Sample ID: 17-03-0879-6  
Analyst: 868 HG-7  
Initial Sample Wt: 0.59 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 104  
Date Collected: 3/24/2017 5:16:59 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

-----  
Replicate Data: 17-03-0879-6

| Repl  | SampleConc | StndConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | 0.141      | 0.829    | 0.0074  | 0.0296 | 0.0075 | 5:18:04 PM | Yes    |
| 2     | 0.142      | 0.836    | 0.0075  | 0.0293 | 0.0075 | 5:18:50 PM | Yes    |
| Mean: | 0.141      | 0.833    | 0.0075  |        |        |            |        |
| SD:   | 0.0008     | 0.0048   | 0.0000  |        |        |            |        |
| %RSD: | 0.57%      | 0.57%    | 0.56    |        |        |            |        |

Sequence No.: 6  
Sample ID: 17-03-0879-7  
Analyst: 868 HG-7  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 105  
Date Collected: 3/24/2017 5:19:17 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

-----  
Replicate Data: 17-03-0879-7

| Repl  | SampleConc | StndConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | 0.126      | 0.755    | 0.0068  | 0.0266 | 0.0068 | 5:20:24 PM | Yes    |
| 2     | 0.125      | 0.751    | 0.0068  | 0.0256 | 0.0068 | 5:21:10 PM | Yes    |
| Mean: | 0.126      | 0.753    | 0.0068  |        |        |            |        |
| SD:   | 0.0005     | 0.0031   | 0.0000  |        |        |            |        |
| %RSD: | 0.41%      | 0.41%    | 0.39    |        |        |            |        |

Sequence No.: 7  
Sample ID: 17-03-0879-8  
Analyst: 868 HG-7  
Initial Sample Wt: 0.63 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 106  
Date Collected: 3/24/2017 5:21:37 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

-----  
Replicate Data: 17-03-0879-8

| Repl  | SampleConc | StndConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|----------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L     | Signal  | Area   | Height |            | Stored |
| 1     | 0.115      | 0.725    | 0.0065  | 0.0256 | 0.0066 | 5:22:43 PM | Yes    |
| 2     | 0.118      | 0.744    | 0.0067  | 0.0259 | 0.0067 | 5:23:29 PM | Yes    |
| Mean: | 0.117      | 0.735    | 0.0066  |        |        |            |        |
| SD:   | 0.0022     | 0.0139   | 0.0001  |        |        |            |        |
| %RSD: | 1.89%      | 1.89%    | 1.83    |        |        |            |        |

=====  
Analysis Begun

Logged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS  
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170324G1.sifx

Batch ID:

Results Data Set: 170324G1

Results Library: U:\MERCURY\_7\Data\Results\results.mdb

=====

|                              |                                      |
|------------------------------|--------------------------------------|
| Sequence No.: 1              | Autosampler Location: 5              |
| Sample ID: CCV 0.2x10ppb     | Date Collected: 3/24/2017 5:42:17 PM |
| Analyst: 868 HG-7            | Data Type: Original                  |
| Initial Sample Wt:           | Initial Sample Vol:                  |
| Dilution:                    | Sample Prep Vol:                     |
| Wash Time (before sample): 0 | Auto Dilution Factor: 1.0000         |

=====

Replicate Data: CCV 0.2x10ppb      Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.00175    | 1.75    | 0.0154  | 0.0614 | 0.0154 | 5:43:23 PM | Yes    |
| 2     | 0.00175    | 1.75    | 0.0155  | 0.0621 | 0.0155 | 5:44:09 PM | Yes    |
| Mean: | 0.00175    | 1.75    | 0.0154  |        |        |            |        |
| SD:   | 0.000006   | 0.006   | 0.0000  |        |        |            |        |
| %RSD: | 0.32%      | 0.32%   | 0.32    |        |        |            |        |

QC value within limits for Hg 253.7    Recovery = 87.47%  
All analyte(s) passed QC.

=====

|                              |                                      |
|------------------------------|--------------------------------------|
| Sequence No.: 2              | Autosampler Location: 1              |
| Sample ID: CCB               | Date Collected: 3/24/2017 5:44:36 PM |
| Analyst: 868 HG-7            | Data Type: Original                  |
| Initial Sample Wt:           | Initial Sample Vol:                  |
| Dilution:                    | Sample Prep Vol:                     |
| Wash Time (before sample): 0 | Auto Dilution Factor: 1.0000         |

=====

Replicate Data: CCB      Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | Blncorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.000027  | -0.0267 | -0.0000 | -0.0006 | 0.0000 | 5:45:40 PM | Yes    |
| 2     | -0.000027  | -0.0273 | -0.0000 | -0.0005 | 0.0000 | 5:46:26 PM | Yes    |
| Mean: | -0.000027  | -0.0270 | -0.0000 |         |        |            |        |
| SD:   | 0.0000004  | 0.00042 | 0.0000  |         |        |            |        |
| %RSD: | 1.56%      | 1.56%   | 81.23   |         |        |            |        |

QC value within limits for Hg 253.7    Recovery = Not calculated  
All analyte(s) passed QC.

=====

|                              |                                      |
|------------------------------|--------------------------------------|
| Sequence No.: 3              | Autosampler Location: 108            |
| Sample ID: 17-03-0879-10     | Date Collected: 3/24/2017 5:46:51 PM |
| Analyst: 868 HG-7            | Data Type: Original                  |
| Initial Sample Wt: 0.59 g    | Initial Sample Vol:                  |
| Dilution:                    | Sample Prep Vol: 100 mL              |
| Wash Time (before sample): 0 | Auto Dilution Factor: 1              |

=====

Replicate Data: 17-03-0879-10      Analyte: Hg 253.7

| Repl                                                               | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time       | Peak   |
|--------------------------------------------------------------------|------------|---------|---------|--------|--------|------------|--------|
| #                                                                  | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1                                                                  | 8.05       | 47.5    | 0.4134  | 1.7490 | 0.4134 | 5:47:57 PM | Yes    |
| Sample concentration is greater than that of the highest standard. |            |         |         |        |        |            |        |
| 2                                                                  | 8.03       | 47.4    | 0.4120  | 1.7264 | 0.4121 | 5:48:43 PM | Yes    |
| Sample concentration is greater than that of the highest standard. |            |         |         |        |        |            |        |
| Mean:                                                              | 8.04       | 47.4    | 0.4127  |        |        |            |        |
| SD:                                                                | 0.019      | 0.11    | 0.0010  |        |        |            |        |
| %RSD:                                                              | 0.23%      | 0.23%   | 0.23    |        |        |            |        |

Sample concentration is greater than that of the highest standard.

```

=====
Sequence No.: 4
Sample ID: 17-03-0879-11
Analyst: 868 HG-7
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 109
Date Collected: 3/24/2017 5:49:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-0879-11
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal  Area  Height
1      2.39       14.6      0.1272   0.5090 0.1272  5:50:15 PM  Yes
Sample concentration is greater than that of the highest standard.
2      2.38       14.5      0.1266   0.5013 0.1267  5:51:01 PM  Yes
Sample concentration is greater than that of the highest standard.
Mean:  2.39       14.6      0.1269
SD:    0.007      0.04      0.0004
%RSD:  0.31%     0.31%     0.31
Sample concentration is greater than that of the highest standard.
=====

```

```

=====
Sequence No.: 5
Sample ID: 17-03-0879-12
Analyst: 868 HG-7
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 110
Date Collected: 3/24/2017 5:51:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-0879-12
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal  Area  Height
1      0.375      2.21     0.0195   0.0752 0.0195  5:52:34 PM  Yes
2      0.0224     0.132    0.0014   0.0038 0.0014  5:53:20 PM  Yes
Mean:  0.199     1.17     0.0104
SD:    0.2493     1.471    0.0128
%RSD:  125.47%   125.47%  122.70
=====

```

```

=====
Sequence No.: 6
Sample ID: 17-03-1105-26
Analyst: 868 HG-7
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 111
Date Collected: 3/24/2017 5:53:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1105-26
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal  Area  Height
1      0.0176     0.107    0.0012   0.0046 0.0012  5:54:52 PM  Yes
2      0.0127     0.0772   0.0009   0.0033 0.0009  5:55:38 PM  Yes
Mean:  0.0151     0.0921   0.0010
SD:    0.00346     0.02112  0.0002
%RSD:  22.92%     22.92%   17.80
=====

```

```

=====
Sequence No.: 7
Sample ID: 17-03-1105-27
Analyst: 868 HG-7
Initial Sample Wt: 0.57 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 112
Date Collected: 3/24/2017 5:56:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1105-27
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal  Area  Height
1      0.0110     0.0630   0.0008   0.0030 0.0008  5:57:11 PM  Yes
=====

```

Method: EPA 7470A+7471A-Hg-6

Page 3

Date: 3/24/2017 6:06:32 PM

|       |         |         |        |        |        |            |     |
|-------|---------|---------|--------|--------|--------|------------|-----|
| 2     | 0.0100  | 0.0570  | 0.0007 | 0.0020 | 0.0008 | 5:57:57 PM | Yes |
| Mean: | 0.0105  | 0.0600  | 0.0008 |        |        |            |     |
| SD:   | 0.00074 | 0.00421 | 0.0000 |        |        |            |     |
| %RSD: | 7.01%   | 7.01%   | 4.87   |        |        |            |     |

```

=====
Sequence No.: 8                               Autosampler Location: 113
Sample ID: 17-03-1105-28                     Date Collected: 3/24/2017 5:58:25 PM
Analyst: 868 HG-7                             Data Type: Original
Initial Sample Wt: 0.58 g                     Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1105-28                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/kg      ug/L      Signal   Area    Height
1      0.00353    0.0205    0.0004    0.0014  0.0004   5:59:31 PM  Yes
2      0.00338    0.0196    0.0004    0.0013  0.0004   6:00:16 PM  Yes
Mean:  0.00345    0.0200    0.0004
SD:     0.000110   0.00064   0.0000
%RSD:   3.20%     3.20%     1.38
=====

```

```

=====
Sequence No.: 9                               Autosampler Location: 114
Sample ID: 17-03-1105-29                     Date Collected: 3/24/2017 6:00:44 PM
Analyst: 868 HG-7                             Data Type: Original
Initial Sample Wt: 0.6 g                     Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1105-29                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/kg      ug/L      Signal   Area    Height
1      0.0279     0.167     0.0017    0.0072  0.0017   6:01:50 PM  Yes
2      0.0408     0.245     0.0024    0.0100  0.0024   6:02:36 PM  Yes
Mean:  0.0344     0.206     0.0020
SD:     0.00915    0.0549    0.0005
%RSD:  26.63%     26.63%    23.60
=====

```

```

=====
Sequence No.: 10                              Autosampler Location: 115
Sample ID: 17-03-1104-26                     Date Collected: 3/24/2017 6:03:03 PM
Analyst: 868 HG-7                             Data Type: Original
Initial Sample Wt: 0.57 g                     Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1104-26                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/kg      ug/L      Signal   Area    Height
1      0.0186     0.106     0.0012    0.0038  0.0012   6:04:10 PM  Yes
2      0.0175     0.0998    0.0011    0.0044  0.0011   6:04:55 PM  Yes
Mean:  0.0181     0.103     0.0011
SD:     0.00081    0.0046    0.0000
%RSD:   4.46%     4.46%     3.55
=====

```

```

=====
Sequence No.: 11                              Autosampler Location: 116
Sample ID: 17-03-1104-27                     Date Collected: 3/24/2017 6:05:23 PM
Analyst: 868 HG-7                             Data Type: Original
Initial Sample Wt: 0.61 g                     Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1104-27                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/kg      ug/L      Signal   Area    Height
1      0.0168     0.102     0.0011    0.0040  0.0012   6:06:29 PM  Yes
=====

```

2 0.0178 0.109 0.0012 0.0037 0.0012 6:07:15 PM Yes  
 Mean: 0.0173 0.106 0.0011  
 SD: 0.00077 0.0047 0.0000  
 %RSD: 4.45% 4.45% 3.55

Sequence No.: 12

Sample ID: 17-03-1104-28

Analyst: 868 HG-7

Initial Sample Wt: 0.62 g

Dilution:

Wash Time (before sample): 0

Autosampler Location: 117

Date Collected: 3/24/2017 6:07:42 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Replicate Data: 17-03-1104-28

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.0209     | 0.129   | 0.0014  | 0.0052 | 0.0014 | 6:08:47 PM | Yes    |
| 2     | 0.0203     | 0.126   | 0.0013  | 0.0051 | 0.0014 | 6:09:33 PM | Yes    |
| Mean: | 0.0206     | 0.128   | 0.0013  |        |        |            |        |
| SD:   | 0.00037    | 0.0023  | 0.0000  |        |        |            |        |
| %RSD: | 1.81%      | 1.81%   | 1.50    |        |        |            |        |

Sequence No.: 13

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/24/2017 6:10:00 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.00172    | 1.72    | 0.0152  | 0.0608 | 0.0152 | 6:11:06 PM | Yes    |
| 2     | 0.00164    | 1.64    | 0.0145  | 0.0599 | 0.0145 | 6:11:51 PM | Yes    |
| Mean: | 0.00168    | 1.68    | 0.0148  |        |        |            |        |
| SD:   | 0.000057   | 0.057   | 0.0005  |        |        |            |        |
| %RSD: | 3.42%      | 3.42%   | 3.37    |        |        |            |        |

QC value within limits for Hg 253.7 Recovery = 83.94%

All analyte(s) passed QC.

Sequence No.: 14

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/24/2017 6:12:18 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.000025  | -0.0250 | 0.0000  | -0.0004 | 0.0001 | 6:13:22 PM | Yes    |
| 2     | -0.000027  | -0.0271 | -0.0000 | -0.0007 | 0.0000 | 6:14:08 PM | Yes    |
| Mean: | -0.000026  | -0.0261 | 0.0000  |         |        |            |        |
| SD:   | 0.0000015  | 0.00147 | 0.0000  |         |        |            |        |
| %RSD: | 5.65%      | 5.65%   | 332.07  |         |        |            |        |

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 15

Sample ID: 17-03-1104-29

Analyst: 868 HG-7

Initial Sample Wt: 0.61 g

Dilution:

Wash Time (before sample): 0

Autosampler Location: 118

Date Collected: 3/24/2017 6:14:33 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Replicate Data: 17-03-1104-29

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.0222     | 0.135   | 0.0014  | 0.0055 | 0.0014 | 6:15:39 PM | Yes    |
| 2     | 0.0229     | 0.140   | 0.0014  | 0.0053 | 0.0015 | 6:16:24 PM | Yes    |
| Mean: | 0.0225     | 0.137   | 0.0014  |        |        |            |        |
| SD:   | 0.00051    | 0.0031  | 0.0000  |        |        |            |        |
| %RSD: | 2.27%      | 2.27%   | 1.90    |        |        |            |        |

Sequence No.: 16

Sample ID: CCV 0.2x10ppb

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 5

Date Collected: 3/24/2017 6:16:51 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time       | Peak   |
|-------|------------|---------|---------|--------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |            | Stored |
| 1     | 0.00189    | 1.89    | 0.0167  | 0.0631 | 0.0167 | 6:17:57 PM | Yes    |
| 2     | 0.00189    | 1.89    | 0.0167  | 0.0619 | 0.0167 | 6:18:43 PM | Yes    |
| Mean: | 0.00189    | 1.89    | 0.0167  |        |        |            |        |
| SD:   | 0.000002   | 0.002   | 0.0000  |        |        |            |        |
| %RSD: | 0.13%      | 0.13%   | 0.13    |        |        |            |        |

QC value within limits for Hg 253.7 Recovery = 94.54%

All analyte(s) passed QC.

Sequence No.: 17

Sample ID: CCB

Analyst: 868 HG-7

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/24/2017 6:19:10 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak    | Peak   | Time       | Peak   |
|-------|------------|---------|---------|---------|--------|------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area    | Height |            | Stored |
| 1     | -0.000025  | -0.0248 | 0.0000  | -0.0006 | 0.0001 | 6:20:15 PM | Yes    |
| 2     | -0.000025  | -0.0248 | 0.0000  | -0.0004 | 0.0001 | 6:21:00 PM | Yes    |
| Mean: | -0.000025  | -0.0248 | 0.0000  |         |        |            |        |
| SD:   | 0.0000000  | 0.00001 | 0.0000  |         |        |            |        |
| %RSD: | 0.03%      | 0.03%   | 0.47    |         |        |            |        |

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

# EPA 7471A Mercury (Solid)

## Run Logs

**170324G1**

Carrier solution R07141602

Reducing Agent R07141603

| Sample ID               | Analyst Name | Sample Wt | Analyte Name | Date      | Time        | Conc          |         | Units     |        | Corr Coef |
|-------------------------|--------------|-----------|--------------|-----------|-------------|---------------|---------|-----------|--------|-----------|
|                         |              |           |              |           |             | (Calib)       | (Calib) | (Samp)    | (Samp) |           |
| Calib blank_868         | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:48:04 PM | ug/L          |         |           | mg/L   |           |
| 0.025ppb 0.005x5ppb     | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:50:20 PM | ug/L          |         |           | mg/L   |           |
| 0.10ppb M030617AX0.0001 | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:52:36 PM | ug/L          |         |           | mg/L   |           |
| 1.00ppb M030617AX0.0001 | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:54:54 PM | ug/L          |         |           | mg/L   |           |
| 2.00ppb M030617AX0.002  | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:57:12 PM | ug/L          |         |           | mg/L   |           |
| 5.00ppb M030617AX0.005  | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 12:59:29 PM | ug/L          |         |           | mg/L   |           |
| 10.0ppb M030617AX0.01   | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:01:45 PM  | ug/L          |         |           | mg/L   |           |
| ICV M030617B            | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:07:47 PM  | 5.123877 ug/L |         | 0.005124  | mg/L   | 0.999936  |
| ICB                     | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:10:04 PM  | -0.02154 ug/L |         | -2.15E-05 | mg/L   | 0.999936  |
| CRQL 0.25               | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:12:21 PM  | 0.228452 ug/L |         | 0.000457  | mg/L   | 0.999936  |
| CCV 0.2x10ppb           | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:14:39 PM  | 1.972382 ug/L |         | 0.001972  | mg/L   | 0.999936  |
| CCB                     | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 1:16:55 PM  | -0.02508 ug/L |         | -2.51E-05 | mg/L   | 0.999936  |
| 17-03-1340-F-1          | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:31:21 PM  | -0.01193 ug/L |         | -2.39E-05 | mg/L   | 0.999936  |
| 17-03-1340-F-2          | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:33:40 PM  | -0.01013 ug/L |         | -2.03E-05 | mg/L   | 0.999936  |
| 17-03-1450-1            | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:35:59 PM  | -0.01103 ug/L |         | -2.21E-05 | mg/L   | 0.999936  |
| 17-03-1450-2            | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:38:17 PM  | -0.01072 ug/L |         | -2.14E-05 | mg/L   | 0.999936  |
| 17-03-1450-3            | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:40:36 PM  | -0.00701 ug/L |         | -1.40E-05 | mg/L   | 0.999936  |
| CCV 0.2x10ppb           | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:42:55 PM  | 1.973749 ug/L |         | 0.001974  | mg/L   | 0.999936  |
| CCB                     | 868 HG-7     |           | Hg 253.7     | 3/24/2017 | 2:45:12 PM  | -0.02301 ug/L |         | -2.30E-05 | mg/L   | 0.999936  |
| 170324-B-02             | 868 HG-7     | 0.6       | Hg 253.7     | 3/24/2017 | 3:47:31 PM  | -0.02486 ug/L |         | -0.00414  | mg/kg  | 0.999936  |
| 170324-L-02             | 868 HG-7     | 0.6       | Hg 253.7     | 3/24/2017 | 3:49:49 PM  | 5.112568 ug/L |         | 0.852095  | mg/kg  | 0.999936  |
| 17-03-0879-1            | 868 HG-7     | 0.63      | Hg 253.7     | 3/24/2017 | 3:52:08 PM  | 7.921139 ug/L |         | 1.257324  | mg/kg  | 0.999936  |
| 17-03-0879-1 MS         | 868 HG-7     | 0.63      | Hg 253.7     | 3/24/2017 | 3:54:27 PM  | 10.08839 ug/L |         | 1.601332  | mg/kg  | 0.999936  |
| 17-03-0879-1 MSD        | 868 HG-7     | 0.62      | Hg 253.7     | 3/24/2017 | 3:56:46 PM  | 10.30965 ug/L |         | 1.662847  | mg/kg  | 0.999936  |
| 17-03-0879-2            | 868 HG-7     | 0.57      | Hg 253.7     | 3/24/2017 | 3:59:05 PM  | 18.77142 ug/L |         | 3.293231  | mg/kg  | 0.999936  |

Reviewed/Assign to Logbook Date: 03-25-17Analysis Hg Chemist ID: 309Logbook Page: 8 Instrument ID: Hg-7

| Initial       |              |        |      |              |           |            |          |         |       |  |             |              |           |
|---------------|--------------|--------|------|--------------|-----------|------------|----------|---------|-------|--|-------------|--------------|-----------|
| Sample ID     | Analyst Name | Sample | Wt   | Analyte Name | Date      | Time       | Conc     |         | Units |  | Conc (Samp) | Units (Samp) | Corr Coef |
|               |              |        |      |              |           |            | (Calib)  | (Calib) |       |  |             |              |           |
| 17-03-0879-3  | 868 HG-7     |        | 0.63 | Hg 253.7     | 3/24/2017 | 4:01:23 PM | 42.86761 | ug/L    |       |  | 6.804382    | mg/kg        | 0.999936  |
| 17-03-0879-4  | 868 HG-7     |        | 0.62 | Hg 253.7     | 3/24/2017 | 4:03:43 PM | 0.343521 | ug/L    |       |  | 0.055407    | mg/kg        | 0.999936  |
| 17-03-0879-5  | 868 HG-7     |        | 0.63 | Hg 253.7     | 3/24/2017 | 4:06:02 PM | -0.0261  | ug/L    |       |  | -0.00414    | mg/kg        | 0.999936  |
| 17-03-0879-6  | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 4:08:21 PM | -0.02827 | ug/L    |       |  | -0.00479    | mg/kg        | 0.999936  |
| CCV 0.2x10ppb | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 4:10:40 PM | -0.02919 | ug/L    |       |  | -2.92E-05   | mg/L         | 0.999936  |
| CCV 0.2x10ppb | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 5:09:37 PM | 1.780108 | ug/L    |       |  | 0.00178     | mg/L         | 0.999936  |
| CCB           | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 5:11:55 PM | -0.02051 | ug/L    |       |  | -2.05E-05   | mg/L         | 0.999936  |
| 17-03-0879-4  | 868 HG-7     |        | 0.62 | Hg 253.7     | 3/24/2017 | 5:14:12 PM | 0.655303 | ug/L    |       |  | 0.105694    | mg/kg        | 0.999936  |
| 17-03-0879-5  | 868 HG-7     |        | 0.63 | Hg 253.7     | 3/24/2017 | 5:16:31 PM | 1.306507 | ug/L    |       |  | 0.207382    | mg/kg        | 0.999936  |
| 17-03-0879-6  | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 5:18:50 PM | 0.832844 | ug/L    |       |  | 0.14116     | mg/kg        | 0.999936  |
| 17-03-0879-7  | 868 HG-7     |        | 0.6  | Hg 253.7     | 3/24/2017 | 5:21:10 PM | 0.753168 | ug/L    |       |  | 0.125528    | mg/kg        | 0.999936  |
| 17-03-0879-8  | 868 HG-7     |        | 0.63 | Hg 253.7     | 3/24/2017 | 5:23:29 PM | 0.734595 | ug/L    |       |  | 0.116602    | mg/kg        | 0.999936  |
| 17-03-0879-9  | 868 HG-7     |        | 0.6  | Hg 253.7     | 3/24/2017 | 5:25:48 PM | 0.626783 | ug/L    |       |  | 0.104464    | mg/kg        | 0.999936  |
| 17-03-0879-10 | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 5:28:08 PM | -0.03035 | ug/L    |       |  | -0.00514    | mg/kg        | 0.999936  |
| 17-03-0879-11 | 868 HG-7     |        | 0.61 | Hg 253.7     | 3/24/2017 | 5:30:27 PM | -0.02889 | ug/L    |       |  | -0.00474    | mg/kg        | 0.999936  |
| 17-03-0879-12 | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 5:32:46 PM | -0.02927 | ug/L    |       |  | -0.00496    | mg/kg        | 0.999936  |
| 17-03-1105-26 | 868 HG-7     |        | 0.61 | Hg 253.7     | 3/24/2017 | 5:35:06 PM | -0.03069 | ug/L    |       |  | -0.00503    | mg/kg        | 0.999936  |
| CCV 0.2x10ppb | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 5:37:24 PM | -0.03145 | ug/L    |       |  | -3.14E-05   | mg/L         | 0.999936  |
| CCV 0.2x10ppb | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 5:44:09 PM | 1.749431 | ug/L    |       |  | 0.001749    | mg/L         | 0.999936  |
| CCB           | 868 HG-7     |        |      | Hg 253.7     | 3/24/2017 | 5:46:26 PM | -0.02702 | ug/L    |       |  | -2.70E-05   | mg/L         | 0.999936  |
| 17-03-0879-10 | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 5:48:43 PM | 47.43604 | ug/L    |       |  | 8.040007    | mg/kg        | 0.999936  |
| 17-03-0879-11 | 868 HG-7     |        | 0.61 | Hg 253.7     | 3/24/2017 | 5:51:01 PM | 14.56708 | ug/L    |       |  | 2.388045    | mg/kg        | 0.999936  |
| 17-03-0879-12 | 868 HG-7     |        | 0.59 | Hg 253.7     | 3/24/2017 | 5:53:20 PM | 1.172282 | ug/L    |       |  | 0.198692    | mg/kg        | 0.999936  |
| 17-03-1105-26 | 868 HG-7     |        | 0.61 | Hg 253.7     | 3/24/2017 | 5:55:38 PM | 0.092136 | ug/L    |       |  | 0.015104    | mg/kg        | 0.999936  |
| 17-03-1105-27 | 868 HG-7     |        | 0.57 | Hg 253.7     | 3/24/2017 | 5:57:57 PM | 0.060004 | ug/L    |       |  | 0.010527    | mg/kg        | 0.999936  |
| 17-03-1105-28 | 868 HG-7     |        | 0.58 | Hg 253.7     | 3/24/2017 | 6:00:16 PM | 0.020029 | ug/L    |       |  | 0.003453    | mg/kg        | 0.999936  |
| 17-03-1105-29 | 868 HG-7     |        | 0.6  | Hg 253.7     | 3/24/2017 | 6:02:36 PM | 0.206211 | ug/L    |       |  | 0.034368    | mg/kg        | 0.999936  |
| 17-03-1104-26 | 868 HG-7     |        | 0.57 | Hg 253.7     | 3/24/2017 | 6:04:55 PM | 0.103002 | ug/L    |       |  | 0.01807     | mg/kg        | 0.999936  |
| 17-03-1104-27 | 868 HG-7     |        | 0.61 | Hg 253.7     | 3/24/2017 | 6:07:15 PM | 0.105543 | ug/L    |       |  | 0.017302    | mg/kg        | 0.999936  |

Reviewed/Assign to Logbook Date: 03-25-17  
 Analysis Hg Chemist ID: 309  
 Logbook Page: 9 Instrument ID: Hg-7

\* did not take sample, return

| Sample ID           | Analyst Name | Initial Sample Wt | Analyte Name | Date      | Time       | Conc          |                | Units   |                | Corr Coef |
|---------------------|--------------|-------------------|--------------|-----------|------------|---------------|----------------|---------|----------------|-----------|
|                     |              |                   |              |           |            | (Calib)       | (Samp)         | (Calib) | (Samp)         |           |
| 17-03-1104-28       | 868 HG-7     | 0.62              | Hg 253.7     | 3/24/2017 | 6:09:33 PM | 0.1278 ug/L   | 0.020613 mg/kg |         | 0.020613 mg/kg | 0.999936  |
| CCV 0.2x10ppb       | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 6:11:51 PM | 1.678755 ug/L | 0.001679 mg/L  |         | 0.001679 mg/L  | 0.999936  |
| CCB                 | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 6:14:08 PM | -0.02606 ug/L | -2.61E-05 mg/L |         | -2.61E-05 mg/L | 0.999936  |
| 17-03-1104-29       | 868 HG-7     | 0.61              | Hg 253.7     | 3/24/2017 | 6:16:24 PM | 0.137362 ug/L | 0.022518 mg/kg |         | 0.022518 mg/kg | 0.999936  |
| CCV 0.2x10ppb       | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 6:18:43 PM | 1.890879 ug/L | 0.001891 mg/L  |         | 0.001891 mg/L  | 0.999936  |
| CCB                 | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 6:21:00 PM | -0.0248 ug/L  | -2.48E-05 mg/L |         | -2.48E-05 mg/L | 0.999936  |
| 170324-B-A2         | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:25:40 PM | 0.010506 ug/L | 0.000105 mg/L  |         | 0.000105 mg/L  | 0.999936  |
| 170324-L-A2         | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:27:58 PM | 4.750539 ug/L | 0.047505 mg/L  |         | 0.047505 mg/L  | 0.999936  |
| 17-03-1742-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:30:17 PM | -0.03094 ug/L | -0.00031 mg/L  |         | -0.00031 mg/L  | 0.999936  |
| 17-03-1742-TC-1 MS  | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:32:34 PM | 4.58294 ug/L  | 0.045829 mg/L  |         | 0.045829 mg/L  | 0.999936  |
| 17-03-1742-TC-1 MSD | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:34:53 PM | 4.583527 ug/L | 0.045835 mg/L  |         | 0.045835 mg/L  | 0.999936  |
| 17-03-1741-TC-2     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:37:11 PM | -0.01406 ug/L | -0.00014 mg/L  |         | -0.00014 mg/L  | 0.999936  |
| 17-03-1743-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:39:30 PM | -0.01414 ug/L | -0.00014 mg/L  |         | -0.00014 mg/L  | 0.999936  |
| 17-03-1761-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:41:49 PM | -0.01817 ug/L | -0.00018 mg/L  |         | -0.00018 mg/L  | 0.999936  |
| 17-03-1217-TC-4     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:44:09 PM | 1.378227 ug/L | 0.013782 mg/L  |         | 0.013782 mg/L  | 0.999936  |
| 17-03-1437-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:46:29 PM | -0.01996 ug/L | -0.0002 mg/L   |         | -0.0002 mg/L   | 0.999936  |
| CCV 0.2x10ppb       | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:51:20 PM | 1.936705 ug/L | 0.001937 mg/L  |         | 0.001937 mg/L  | 0.999936  |
| CCB                 | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:53:38 PM | -0.02625 ug/L | -2.62E-05 mg/L |         | -2.62E-05 mg/L | 0.999936  |
| 17-03-0838-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:55:55 PM | -0.01825 ug/L | -0.00018 mg/L  |         | -0.00018 mg/L  | 0.999936  |
| 17-03-0884-TC-1     | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 7:58:14 PM | 0.00469 ug/L  | 4.69E-05 mg/L  |         | 4.69E-05 mg/L  | 0.999936  |
| 17-03-0879-2 10X    | 868 HG-7     | 0.57              | Hg 253.7     | 3/24/2017 | 8:00:34 PM | 2.038476 ug/L | 3.576274 mg/kg |         | 3.576274 mg/kg | 0.999936  |
| 17-03-0879-3 10X    | 868 HG-7     | 0.63              | Hg 253.7     | 3/24/2017 | 8:02:52 PM | 4.912241 ug/L | 7.797207 mg/kg |         | 7.797207 mg/kg | 0.999936  |
| 17-03-0879-10 10X   | 868 HG-7     | 0.59              | Hg 253.7     | 3/24/2017 | 8:05:10 PM | 6.637472 ug/L | 11.24995 mg/kg |         | 11.24995 mg/kg | 0.999936  |
| 17-03-0879-11 10X   | 868 HG-7     | 0.61              | Hg 253.7     | 3/24/2017 | 8:07:28 PM | 1.600903 ug/L | 2.624431 mg/kg |         | 2.624431 mg/kg | 0.999936  |
| 17-03-0879-12       | 868 HG-7     | 0.59              | Hg 253.7     | 3/24/2017 | 8:09:46 PM | 2.776333 ug/L | 0.470565 mg/kg |         | 0.470565 mg/kg | 0.999936  |
| CCV 0.2x10ppb       | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 8:12:04 PM | 1.924674 ug/L | 0.001925 mg/L  |         | 0.001925 mg/L  | 0.999936  |
| CCB                 | 868 HG-7     |                   | Hg 253.7     | 3/24/2017 | 8:14:21 PM | -0.02153 ug/L | -2.15E-05 mg/L |         | -2.15E-05 mg/L | 0.999936  |

Reviewed/Assign to Logbook Date: 03-25-17  
 Analysis Hg Chemist ID: 309  
 Logbook Page: 10 Instrument ID: Hg-7

# EPA 7471A Mercury (Solid)

## Preparation Logs

1. 10/1/2014 - 10/1/2014

2. 10/1/2014 - 10/1/2014

## Mercury Sample Preparation Logbook (Solid / Other)

| METHOD                                        |                                           | MATRIX                  |                | EQUIPMENT ID #       |                  | REAGENT ID #               |                 | STANDARD ID #               |             |            |                             |                        |
|-----------------------------------------------|-------------------------------------------|-------------------------|----------------|----------------------|------------------|----------------------------|-----------------|-----------------------------|-------------|------------|-----------------------------|------------------------|
| <input checked="" type="checkbox"/> EPA 7471A | <input checked="" type="checkbox"/> Solid |                         |                | Thermometer          | GT-4 (C2.0 °C)   | Aqua Regia                 | R0929160/10 mL  | Spike                       | M030617 A   |            |                             |                        |
| <input type="checkbox"/> EPA 7471B            | <input type="checkbox"/> Other (Specify)  |                         |                | Block Digester       | 3                | 5% KMnO <sub>4</sub>       | R10061601       | IC                          | A           |            |                             |                        |
|                                               |                                           |                         |                | Pipetter / Dispenser | P071/*           | NaCl-H <sub>3</sub> NO-HCl | R1026160/6 mL   | ICV                         | B           |            |                             |                        |
| BATCH NUMBER                                  |                                           | SUPPLY LOT #            |                | BALANCE ID #         |                  | QUALITY SYSTEM MATRIX ID # |                 | SAMPLE HANDLING             |             |            |                             |                        |
| MS/MSD 170324-SK2                             |                                           | Tube / Container 160975 |                | 3 L                  |                  | Teflon Chip M006-35-13     |                 | 1 = Composite 2 = Subsample |             |            |                             |                        |
| (Specify)                                     |                                           | Filter                  |                |                      |                  | (Specify)                  |                 | 3 = Homogenize 4 = None     |             |            |                             |                        |
| DIGESTION                                     |                                           |                         |                |                      |                  |                            | SAMPLE HANDLING | ECI ID #                    | SAMPLE      |            | 5% KMNO <sub>4</sub> V (mL) | SPIKE OR IC/ICV V (µL) |
| DATE                                          | TIME                                      | START TEMP W/O CF (°C)  | PREP TECH ID # | END TIME             | TEMP W/O CF (°C) | PREP TECH ID #             |                 |                             | INITIAL (g) | FINAL (mL) |                             |                        |
| 3/24/17                                       | 12:00                                     | 95                      | 808            | 12:45                | 95               | 808                        | 43              | MS 17-03-0879-1AA           | 0.63        | 106        | 15                          | 506                    |
|                                               |                                           |                         |                |                      |                  |                            | 43              | MSD 808 24/17               | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            | 4               | 170323-162                  | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            | 4               | LCSD / MB 170324-BV2        | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            | 3               | 17-03-0879-1AA              | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 2                           | 0.57        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 3                           | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 4                           | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 5                           | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 6                           | 0.59        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 7                           | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 8                           | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 9                           | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 10                          | 0.59        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 11                          | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 12                          | 0.59        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            | 4               | 17-03-1105-26A              | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 27                          | 0.57        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 28                          | 0.58        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 29                          | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 17-03-1104-26               | 0.57        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 27                          | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 28                          | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | 29                          | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | IC                          |             |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | ICV                         |             |            |                             |                        |
|                                               |                                           |                         |                |                      |                  |                            |                 | CB                          |             |            |                             |                        |

COMMENTS: \* D003 / MD043 / D058

# EPA METHOD 8082

## PCB Aroclors

### RAW DATA

# EPA METHOD 8082

## PCB Aroclors

### Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY  
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9423-5154  
ICAL BATCH ID: 170314I001  
INSTRUMENT: GC 58

ANALYZED BY: 944  
ICAL D/T ANALYZED: 2017-03-14 12:57  
REVIEWED BY:  
D/T REVIEWED:

| COMPOUND     | COMP. TYPE | CALIB. MODEL | 1          | 2          | 3          | 4          | 5         | 6 | 7 | 8 | 9 | Avg. RF    | Min. RF | %RSD CL | %RSD CL | R or R <sup>2</sup> CL | R or R <sup>2</sup> CL | STATUS |
|--------------|------------|--------------|------------|------------|------------|------------|-----------|---|---|---|---|------------|---------|---------|---------|------------------------|------------------------|--------|
| Atoclor-1016 | C          | Avg RF       | 11,449,553 | 11,760,075 | 10,570,907 | 10,300,873 | 9,187,568 |   |   |   |   | 10,653,795 | 0.00    | 10      | 0-20    |                        |                        | PASS   |
| Atoclor-1260 | C          | Avg RF       | 11,459,770 | 12,044,166 | 11,073,860 | 10,785,482 | 9,891,414 |   |   |   |   | 11,050,938 | 0.00    | 7       | 0-20    |                        |                        | PASS   |

Data Files:

| Level # | D/T Analyzed     | Data File                                  |
|---------|------------------|--------------------------------------------|
| 1       | 2017-03-14 12:57 | /chem1/SVOA/GC_58/170314/b1703140517031405 |
| 2       | 2017-03-14 12:39 | /chem1/SVOA/GC_58/170314/b1703140417031404 |
| 3       | 2017-03-14 12:21 | /chem1/SVOA/GC_58/170314/b1703140317031403 |
| 4       | 2017-03-14 12:03 | /chem1/SVOA/GC_58/170314/b1703140217031402 |
| 5       | 2017-03-14 11:45 | /chem1/SVOA/GC_58/170314/b1703140117031401 |

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

ICV WORK ORDER: 099-12-532-9423-5154  
INITIAL BATCH: 1703141001  
INSTRUMENT: GC 58

ANALYZED BY: 944  
D/T ANALYZED: 2017-03-14 12:57  
INITIAL: 2017-03-14 13:55  
ICV:  
REVIEWED BY:  
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC\_58/170314/b1703149917031499

| COMPOUND NAME | COMP CALIB |          | MIN RF | AVG RF       | ICV RF       | AMOUNT | ICV CONC | ICV %D | ICV %D CL | STATUS |
|---------------|------------|----------|--------|--------------|--------------|--------|----------|--------|-----------|--------|
|               | TYPE       | MODEL    |        |              |              |        |          |        |           |        |
| Aroclor-1016  | C          | Avg Resp | 0.00   | 10653795.233 | 11061713.756 |        |          | -4     | 0-15      | PASS   |
| Aroclor-1260  | C          | Avg Resp | 0.00   | 11050938.420 | 11760153.866 |        |          | -6     | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Report Date : 14-Mar-2017 15:37

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49  
 End Cal Date : 14-MAR-2017 15:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Cal Date : 14-Mar-2017 15:37 src3  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem1/SVOA/GC\_58.i/170314.b/b17031405.d  
 Level 2: /chem1/SVOA/GC\_58.i/170314.b/b17031404.d  
 Level 3: /chem1/SVOA/GC\_58.i/170314.b/b17031410.d  
 Level 4: /chem1/SVOA/GC\_58.i/170314.b/b17031402.d  
 Level 5: /chem1/SVOA/GC\_58.i/170314.b/b17031401.d

|          |                     | 100.000  | 250.000  | 500.000  | 750.000  | 2000.000 |          |       |
|----------|---------------------|----------|----------|----------|----------|----------|----------|-------|
| Compound |                     | Level 1  | Level 2  | Level 3  | Level 4  | Level 5  | RRF      | % RSD |
| =====    |                     | =====    | =====    | =====    | =====    | =====    | =====    | ===== |
| M        | 2 Aroclor-1016      | 11449553 | 11760075 | 10570907 | 10300873 | 9187568  | 10653795 | 10    |
|          | 3 Aroclor 1016 (1)  | 1355444  | 1310538  | 1158079  | 1111432  | 968265   | 1180752  | 13    |
|          | 4 Aroclor 1016 (2)  | 2414986  | 2465117  | 2198023  | 2082373  | 1879922  | 2208084  | 11    |
|          | 5 Aroclor 1016 (3)  | 4472194  | 4650465  | 4208355  | 4131164  | 3697787  | 4231993  | 9     |
|          | 6 Aroclor 1016 (4)  | 2049700  | 2128810  | 1922361  | 1897777  | 1682308  | 1936191  | 9     |
|          | 7 Aroclor 1016 (5)  | 1157229  | 1205145  | 1084088  | 1078127  | 959287   | 1096775  | 9     |
| M        | 8 Aroclor-1260      | 11459770 | 12044166 | 11073860 | 10785482 | 9891414  | 11050938 | 7     |
|          | 9 Aroclor 1260 (1)  | 3169993  | 3340925  | 3048830  | 3033116  | 2694320  | 3057437  | 8     |
|          | 10 Aroclor 1260 (2) | 2933112  | 3022600  | 2755227  | 2624225  | 2409631  | 2748959  | 9     |
|          | 11 Aroclor 1260 (3) | 2736669  | 2923001  | 2706357  | 2645092  | 2434952  | 2689214  | 7     |
|          | 12 Aroclor 1260 (4) | 1026649  | 1014887  | 936877   | 874668   | 839733   | 938563   | 9     |
|          | 13 Aroclor 1260 (5) | 1593347  | 1742753  | 1626569  | 1608381  | 1512779  | 1616766  | 5     |
| M        | 14 Aroclor-1221     | +++++    | +++++    | 4144462  | +++++    | +++++    | 4144462  | 0     |
|          | 15 Aroclor 1221 (1) | +++++    | +++++    | 646501   | +++++    | +++++    | 646501   | 0     |
|          | 16 Aroclor 1221 (2) | +++++    | +++++    | 835069   | +++++    | +++++    | 835069   | 0     |
|          | 17 Aroclor 1221 (3) | +++++    | +++++    | 474671   | +++++    | +++++    | 474671   | 0     |
|          | 18 Aroclor 1221 (4) | +++++    | +++++    | 1901652  | +++++    | +++++    | 1901652  | 0     |
|          | 19 Aroclor 1221 (5) | +++++    | +++++    | 286569   | +++++    | +++++    | 286569   | 0     |
| M        | 20 Aroclor-1232     | +++++    | +++++    | 5985255  | +++++    | +++++    | 5985255  | 0     |
|          | 21 Aroclor 1232 (1) | +++++    | +++++    | 1306588  | +++++    | +++++    | 1306588  | 0     |
|          | 22 Aroclor 1232 (2) | +++++    | +++++    | 1056500  | +++++    | +++++    | 1056500  | 0     |
|          | 23 Aroclor 1232 (3) | +++++    | +++++    | 2104579  | +++++    | +++++    | 2104579  | 0     |

Report Date : 14-Mar-2017 15:37

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49  
 End Cal Date : 14-MAR-2017 15:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Cal Date : 14-Mar-2017 15:37 src3  
 Curve Type : Average

| Compound            | 100.000<br>Level 1 | 250.000<br>Level 2 | 500.000<br>Level 3 | 750.000<br>Level 4 | 2000.000<br>Level 5 | RRF      | % RSD |
|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------|-------|
| 24 Aroclor 1232 (4) | ++++               | ++++               | 956052             | ++++               | ++++                | 956052   | 0     |
| 25 Aroclor 1232 (5) | ++++               | ++++               | 561535             | ++++               | ++++                | 561535   | 0     |
| M 26 Aroclor-1242   | ++++               | ++++               | 8593933            | ++++               | ++++                | 8593933  | 0     |
| 27 Aroclor 1242 (1) | ++++               | ++++               | 911015             | ++++               | ++++                | 911015   | 0     |
| 28 Aroclor 1242 (2) | ++++               | ++++               | 1799515            | ++++               | ++++                | 1799515  | 0     |
| 29 Aroclor 1242 (3) | ++++               | ++++               | 3414006            | ++++               | ++++                | 3414006  | 0     |
| 30 Aroclor 1242 (4) | ++++               | ++++               | 1578291            | ++++               | ++++                | 1578291  | 0     |
| 31 Aroclor 1242 (5) | ++++               | ++++               | 891105             | ++++               | ++++                | 891105   | 0     |
| M 32 Aroclor-1248   | ++++               | ++++               | 8826314            | ++++               | ++++                | 8826314  | 0     |
| 33 Aroclor 1248 (1) | ++++               | ++++               | 2342606            | ++++               | ++++                | 2342606  | 0     |
| 34 Aroclor 1248 (2) | ++++               | ++++               | 1352014            | ++++               | ++++                | 1352014  | 0     |
| 35 Aroclor 1248 (3) | ++++               | ++++               | 1286920            | ++++               | ++++                | 1286920  | 0     |
| 36 Aroclor 1248 (4) | ++++               | ++++               | 1765619            | ++++               | ++++                | 1765619  | 0     |
| 37 Aroclor 1248 (5) | ++++               | ++++               | 2079155            | ++++               | ++++                | 2079155  | 0     |
| M 38 Aroclor-1254   | ++++               | ++++               | 14412736           | ++++               | ++++                | 14412736 | 0     |
| 39 Aroclor 1254 (1) | ++++               | ++++               | 2533066            | ++++               | ++++                | 2533066  | 0     |
| 40 Aroclor 1254 (2) | ++++               | ++++               | 1352533            | ++++               | ++++                | 1352533  | 0     |
| 41 Aroclor 1254 (3) | ++++               | ++++               | 4267115            | ++++               | ++++                | 4267115  | 0     |
| 42 Aroclor 1254 (4) | ++++               | ++++               | 2865294            | ++++               | ++++                | 2865294  | 0     |
| 43 Aroclor 1254 (5) | ++++               | ++++               | 3394728            | ++++               | ++++                | 3394728  | 0     |
| M 44 Aroclor-1262   | ++++               | ++++               | 14378163           | ++++               | ++++                | 14378163 | 0     |
| 45 Aroclor 1262 (1) | ++++               | ++++               | 2548278            | ++++               | ++++                | 2548278  | 0     |
| 46 Aroclor 1262 (2) | ++++               | ++++               | 4059209            | ++++               | ++++                | 4059209  | 0     |
| 47 Aroclor 1262 (3) | ++++               | ++++               | 3587838            | ++++               | ++++                | 3587838  | 0     |
| 48 Aroclor 1262 (4) | ++++               | ++++               | 1323438            | ++++               | ++++                | 1323438  | 0     |
| 49 Aroclor 1262 (5) | ++++               | ++++               | 2859400            | ++++               | ++++                | 2859400  | 0     |
| M 50 Aroclor-1268   | ++++               | ++++               | 56766933           | ++++               | ++++                | 56766933 | 0     |
| 51 Aroclor 1268 (1) | ++++               | ++++               | 10469915           | ++++               | ++++                | 10469915 | 0     |
| 52 Aroclor 1268 (2) | ++++               | ++++               | 9123612            | ++++               | ++++                | 9123612  | 0     |

Report Date : 14-Mar-2017 15:37

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 04-OCT-2016 21:49  
 End Cal Date : 14-MAR-2017 15:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Cal Date : 14-Mar-2017 15:37 src3  
 Curve Type : Average

|                                  | 100.000  | 250.000  | 500.000  | 750.000  | 2000.000 |          |       |
|----------------------------------|----------|----------|----------|----------|----------|----------|-------|
| Compound                         | Level 1  | Level 2  | Level 3  | Level 4  | Level 5  | RRF      | % RSD |
| =====                            | =====    | =====    | =====    | =====    | =====    | =====    | ===== |
| 53 Aroclor 1268 (3)              | +++++    | +++++    | 8937013  | +++++    | +++++    | 8937013  | 0     |
| 54 Aroclor 1268 (4)              | +++++    | +++++    | 3069269  | +++++    | +++++    | 3069269  | 0     |
| 55 Aroclor 1268 (5)              | +++++    | +++++    | 25167124 | +++++    | +++++    | 25167124 | 0     |
| =====                            | =====    | =====    | =====    | =====    | =====    | =====    | ===== |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 76690806 | 83152685 | 77586623 | 78571211 | 72848292 | 77769923 | 5     |
| T 56 Decachlorobiphenyl          | 67399829 | 75653939 | 71544401 | 73012897 | 68348145 | 71191842 | 5     |
| =====                            | =====    | =====    | =====    | =====    | =====    | =====    | ===== |

Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031499.d  
 Report Date: 03/14/2017 15:37

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_58.i Injection Date and Time: 14-MAR-2017 13:55  
 Sample Name: PCB ICV 500 PPB P021517H Initial Calibration Date(s): 04-OCT-2016 14-MAR-2017  
 Sublist used: p1016\_1260.sub Initial Calibration Time(s): 21:49 15:07  
 Method used: /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
|------------------------------|--------------------|--------------|----------|-------------|---------------|------------|
| =====                        |                    |              |          |             |               |            |
| Aroclor-1016                 | 10653795.233       | 11061713.755 | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1016 (1)             | 1180751.717        | 1196604.872  | 0.01     | -1          | 15            | Averaged   |
| Aroclor 1016 (2)             | 2208084.188        | 2293673.224  | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1016 (3)             | 4231992.885        | 4405074.149  | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1016 (4)             | 1936191.176        | 2022756.938  | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1016 (5)             | 1096775.268        | 1143604.572  | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1260 (4)             | 938562.907         | 1029487.032  | 0.01     | -10         | 15            | Averaged   |
| Aroclor-1260                 | 11050938.420       | 11760153.866 | 0.01     | -6          | 15            | Averaged   |
| Aroclor 1260 (5)             | 1616765.700        | 1741648.276  | 0.01     | -8          | 15            | Averaged   |
| Aroclor 1260 (1)             | 3057436.633        | 3281227.744  | 0.01     | -7          | 15            | Averaged   |
| Aroclor 1260 (2)             | 2748959.018        | 2822201.772  | 0.01     | -3          | 15            | Averaged   |
| Aroclor 1260 (3)             | 2689214.162        | 2885589.042  | 0.01     | -7          | 15            | Averaged   |
| =====                        |                    |              |          |             |               |            |
| Surrogate Standards          | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
| =====                        |                    |              |          |             |               |            |
| 2,4,5,6-Tetrachloro-m-xylene | 77769923.209       | 74097731.345 | 0.01     | 5           | 15            | Averaged   |
| Decachlorobiphenyl           | 71191842.305       | 71983953.902 | 0.01     | -1          | 15            | Averaged   |

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Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031401.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031401.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 11:45  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB ICAL-5 2000 PPB P021517B  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 11:45 Cal File: b17031401.d  
 Als bottle: 1 Calibration Sample, Level: 5  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1016\_1260.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |             | AMOUNTS |        |
|----------------------------------|--------|--------|--------|-------------|---------|--------|
|                                  |        |        |        |             | CAL-AMT | ON-COL |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE    | ( ppb)  | ( ppb) |
| =====                            | ==     | =====  | =====  | =====       | =====   | =====  |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.648  | 4.647  | 0.001  | 29139316741 | 400.000 | 375    |
| M 2 Aroclor-1016                 |        |        |        | 18375136867 | 2000.00 | 1720   |
| 3 Aroclor 1016 (1)               | 5.349  | 5.349  | 0.000  | 1936530627  | 2000.00 | 1640   |
| 4 Aroclor 1016 (2)               | 5.889  | 5.888  | 0.001  | 3759843807  | 2000.00 | 1700   |
| 5 Aroclor 1016 (3)               | 6.465  | 6.464  | 0.001  | 7395573160  | 2000.00 | 1750   |
| 6 Aroclor 1016 (4)               | 6.633  | 6.632  | 0.001  | 3364615261  | 2000.00 | 1740   |
| 7 Aroclor 1016 (5)               | 6.759  | 6.758  | 0.001  | 1918574012  | 2000.00 | 1750   |
| M 8 Aroclor-1260                 |        |        |        | 19782828081 | 2000.00 | 1790   |
| 9 Aroclor 1260 (1)               | 8.918  | 8.917  | 0.001  | 5388639542  | 2000.00 | 1760   |
| 10 Aroclor 1260 (2)              | 9.428  | 9.427  | 0.001  | 4819261376  | 2000.00 | 1750   |
| 11 Aroclor 1260 (3)              | 9.762  | 9.762  | 0.000  | 4869904026  | 2000.00 | 1810   |
| 12 Aroclor 1260 (4)              | 10.924 | 10.923 | 0.001  | 1679465579  | 2000.00 | 1790   |
| 13 Aroclor 1260 (5)              | 11.104 | 11.104 | 0.000  | 3025557556  | 2000.00 | 1870   |
| T 56 Decachlorobiphenyl          | 11.764 | 11.763 | 0.001  | 27339257855 | 400.000 | 384    |

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Data File: /chem1/SV0A/GC\_58.i/170314.b/b17031401.d

Date : 14-MAR-2017 11:45

Client ID:

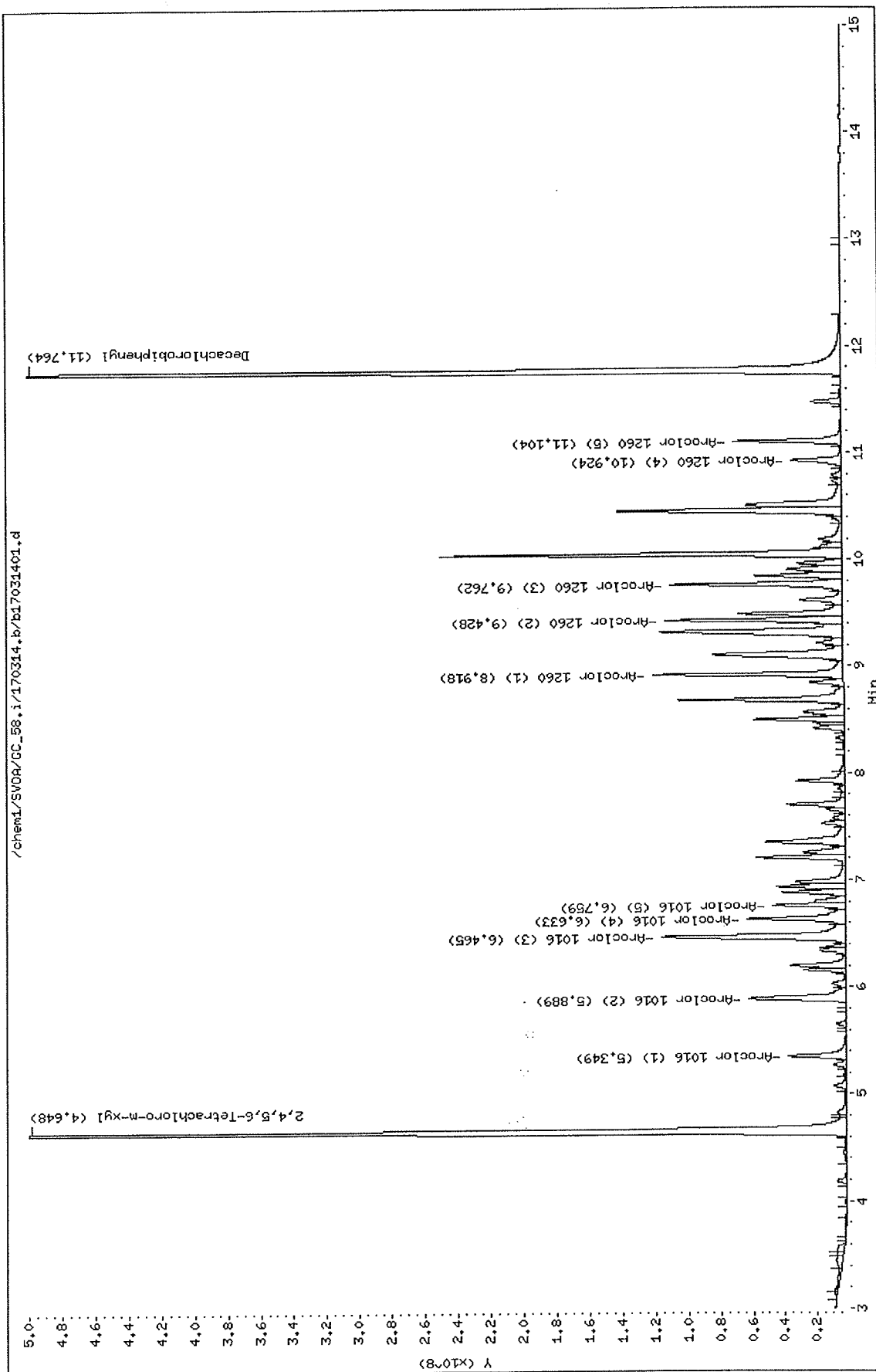
Sample Info: PCB ICAL-5 2000 PPB P024517B

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031402.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031402.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 12:03  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB ICAL-4 750 PPB P021517C  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 12:03 Cal File: b17031402.d  
 Als bottle: 2 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1016\_1260.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |             | AMOUNTS |        |
|----------------------------------|--------|--------|--------|-------------|---------|--------|
|                                  |        |        |        |             | CAL-AMT | ON-COL |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE    | ( ppb)  | ( ppb) |
| =====                            | ==     | =====  | =====  | =====       | =====   | =====  |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.648  | 4.647  | 0.001  | 11785681577 | 150.000 | 152    |
| M 2 Aroclor-1016                 |        |        |        | 7725654433  | 750.000 | 725    |
| 3 Aroclor 1016 (1)               | 5.349  | 5.349  | 0.000  | 833574012   | 750.000 | 706    |
| 4 Aroclor 1016 (2)               | 5.888  | 5.888  | 0.000  | 1561779515  | 750.000 | 707    |
| 5 Aroclor 1016 (3)               | 6.464  | 6.464  | 0.000  | 3098372759  | 750.000 | 732    |
| 6 Aroclor 1016 (4)               | 6.632  | 6.632  | 0.000  | 1423333002  | 750.000 | 735    |
| 7 Aroclor 1016 (5)               | 6.757  | 6.758  | -0.001 | 808595145   | 750.000 | 737    |
| M 8 Aroclor-1260                 |        |        |        | 8089111654  | 750.000 | 732    |
| 9 Aroclor 1260 (1)               | 8.917  | 8.917  | 0.000  | 2274837202  | 750.000 | 744    |
| 10 Aroclor 1260 (2)              | 9.427  | 9.427  | 0.000  | 1968168409  | 750.000 | 716    |
| 11 Aroclor 1260 (3)              | 9.762  | 9.762  | 0.000  | 1983819332  | 750.000 | 738    |
| 12 Aroclor 1260 (4)              | 10.924 | 10.923 | 0.001  | 656001064   | 750.000 | 699    |
| 13 Aroclor 1260 (5)              | 11.105 | 11.104 | 0.001  | 1206285647  | 750.000 | 746    |
| T 56 Decachlorobiphenyl          | 11.763 | 11.763 | 0.000  | 10951934619 | 150.000 | 154    |

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Data File: /chem1/SVDA/GC\_58.i/170314.b/b17031402.d

Date : 14-MAR-2017 12:03

Client ID:

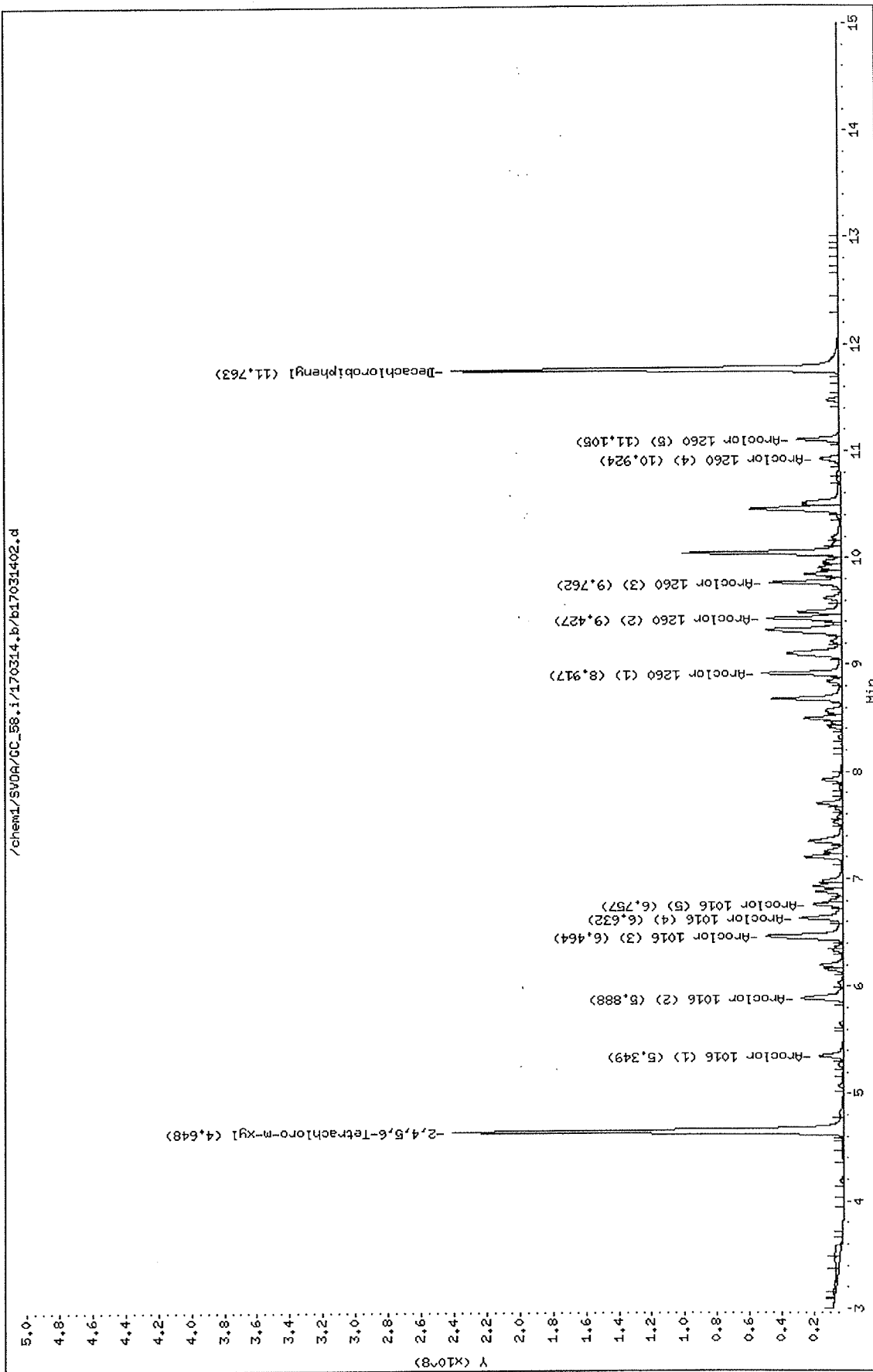
Sample Info: PCB ICAL-4 750 PPB P021517C

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031403.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031403.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 12:21  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB ICAL-3 500 PPB P021517D  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 3 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1016\_1260.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |            | AMOUNTS |        |
|----------------------------------|--------|--------|--------|------------|---------|--------|
|                                  |        |        |        |            | CAL-AMT | ON-COL |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE   | ( ppb)  | ( ppb) |
| =====                            | ==     | =====  | =====  | =====      | =====   | =====  |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.647  | 4.647  | 0.000  | 7758662279 | 100.000 | 99.8   |
| M 2 Aroclor-1016                 |        |        |        | 5285453527 | 500.000 | 496    |
| 3 Aroclor 1016 (1)               | 5.348  | 5.349  | -0.001 | 579039720  | 500.000 | 490    |
| 4 Aroclor 1016 (2)               | 5.888  | 5.888  | 0.000  | 1099011634 | 500.000 | 498    |
| 5 Aroclor 1016 (3)               | 6.463  | 6.464  | -0.001 | 2104177630 | 500.000 | 497    |
| 6 Aroclor 1016 (4)               | 6.632  | 6.632  | 0.000  | 961180399  | 500.000 | 496    |
| 7 Aroclor 1016 (5)               | 6.757  | 6.758  | -0.001 | 542044144  | 500.000 | 494    |
| M 8 Aroclor-1260                 |        |        |        | 5536929950 | 500.000 | 501    |
| 9 Aroclor 1260 (1)               | 8.916  | 8.917  | -0.001 | 1524414823 | 500.000 | 498    |
| 10 Aroclor 1260 (2)              | 9.426  | 9.427  | -0.001 | 1377613619 | 500.000 | 501    |
| 11 Aroclor 1260 (3)              | 9.761  | 9.762  | -0.001 | 1353178461 | 500.000 | 503    |
| 12 Aroclor 1260 (4)              | 10.924 | 10.923 | 0.001  | 468438749  | 500.000 | 499    |
| 13 Aroclor 1260 (5)              | 11.104 | 11.104 | 0.000  | 813284298  | 500.000 | 503    |
| T 56 Decachlorobiphenyl          | 11.764 | 11.763 | 0.001  | 7154440105 | 100.000 | 100    |

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Data File: /chem1/SV0A/GC\_58.i/170314.b/b17031403.d

Date : 14-MAR-2017 12:21

Client ID:

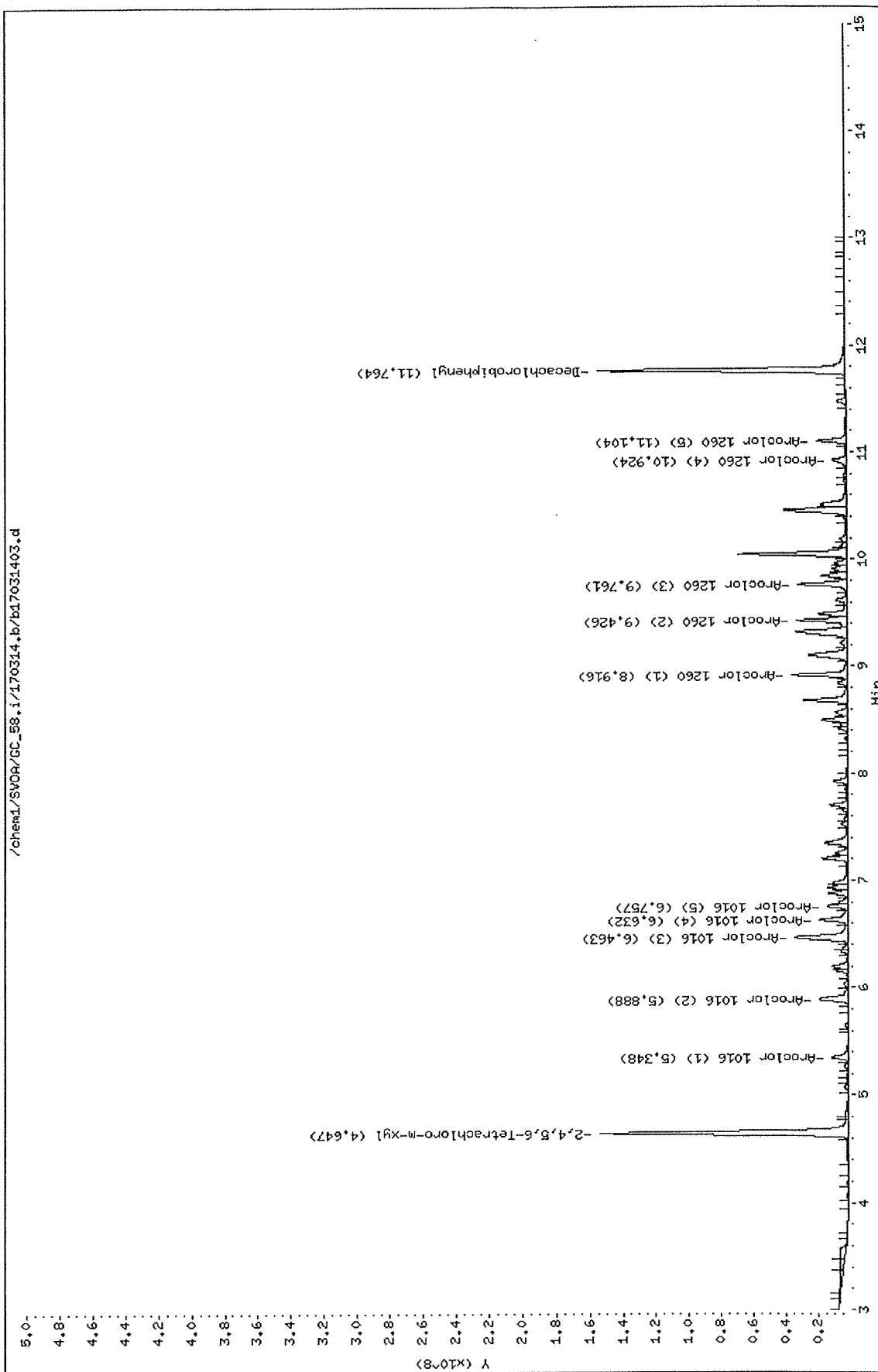
Sample Info: PCB ICAL-3 500 PPB P021517D

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031404.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031404.d

Lab Smp Id:

Inj Date : 14-MAR-2017 12:39

Operator : 944

Inst ID: GC\_58.i

Smp Info : PCB ICAL-2 250 PPB P021517E

Misc Info :

Comment : Rtx-CLPesticide II

Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m

Meth Date : 14-Mar-2017 15:36 src3

Quant Type: ESTD

Cal Date : 14-MAR-2017 12:39

Cal File: b17031404.d

Als bottle: 4

Calibration Sample, Level: 2

Dil Factor: 1.00000

Integrator: HP Genie

Compound Sublist: p1016\_1260.sub

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |            | AMOUNTS |        |
|----------------------------------|--------|--------|--------|------------|---------|--------|
|                                  |        |        |        |            | CAL-AMT | ON-COL |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE   | ( ppb)  | ( ppb) |
| =====                            | ==     | =====  | =====  | =====      | =====   | =====  |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.647  | 4.647  | 0.000  | 4157634229 | 50.0000 | 53.5   |
| M 2 Aroclor-1016                 |        |        |        | 2940018823 | 250.000 | 276    |
| 3 Aroclor 1016 (1)               | 5.348  | 5.349  | -0.001 | 327634559  | 250.000 | 277    |
| 4 Aroclor 1016 (2)               | 5.887  | 5.888  | -0.001 | 616279318  | 250.000 | 279    |
| 5 Aroclor 1016 (3)               | 6.464  | 6.464  | 0.000  | 1162616174 | 250.000 | 275    |
| 6 Aroclor 1016 (4)               | 6.632  | 6.632  | 0.000  | 532202461  | 250.000 | 275    |
| 7 Aroclor 1016 (5)               | 6.757  | 6.758  | -0.001 | 301286311  | 250.000 | 275    |
| M 8 Aroclor-1260                 |        |        |        | 3011041471 | 250.000 | 272    |
| 9 Aroclor 1260 (1)               | 8.917  | 8.917  | 0.000  | 835231245  | 250.000 | 273    |
| 10 Aroclor 1260 (2)              | 9.427  | 9.427  | 0.000  | 755650077  | 250.000 | 275    |
| 11 Aroclor 1260 (3)              | 9.762  | 9.762  | 0.000  | 730750130  | 250.000 | 272    |
| 12 Aroclor 1260 (4)              | 10.923 | 10.923 | 0.000  | 253721816  | 250.000 | 270    |
| 13 Aroclor 1260 (5)              | 11.104 | 11.104 | 0.000  | 435688203  | 250.000 | 269    |
| T 56 Decachlorobiphenyl          | 11.763 | 11.763 | 0.000  | 3782696961 | 50.0000 | 53.1   |

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Data File: /chem1/SVDA/GC\_58.i/170314.b/b17031404.d

Date : 14-MAR-2017 12:39

Client ID:

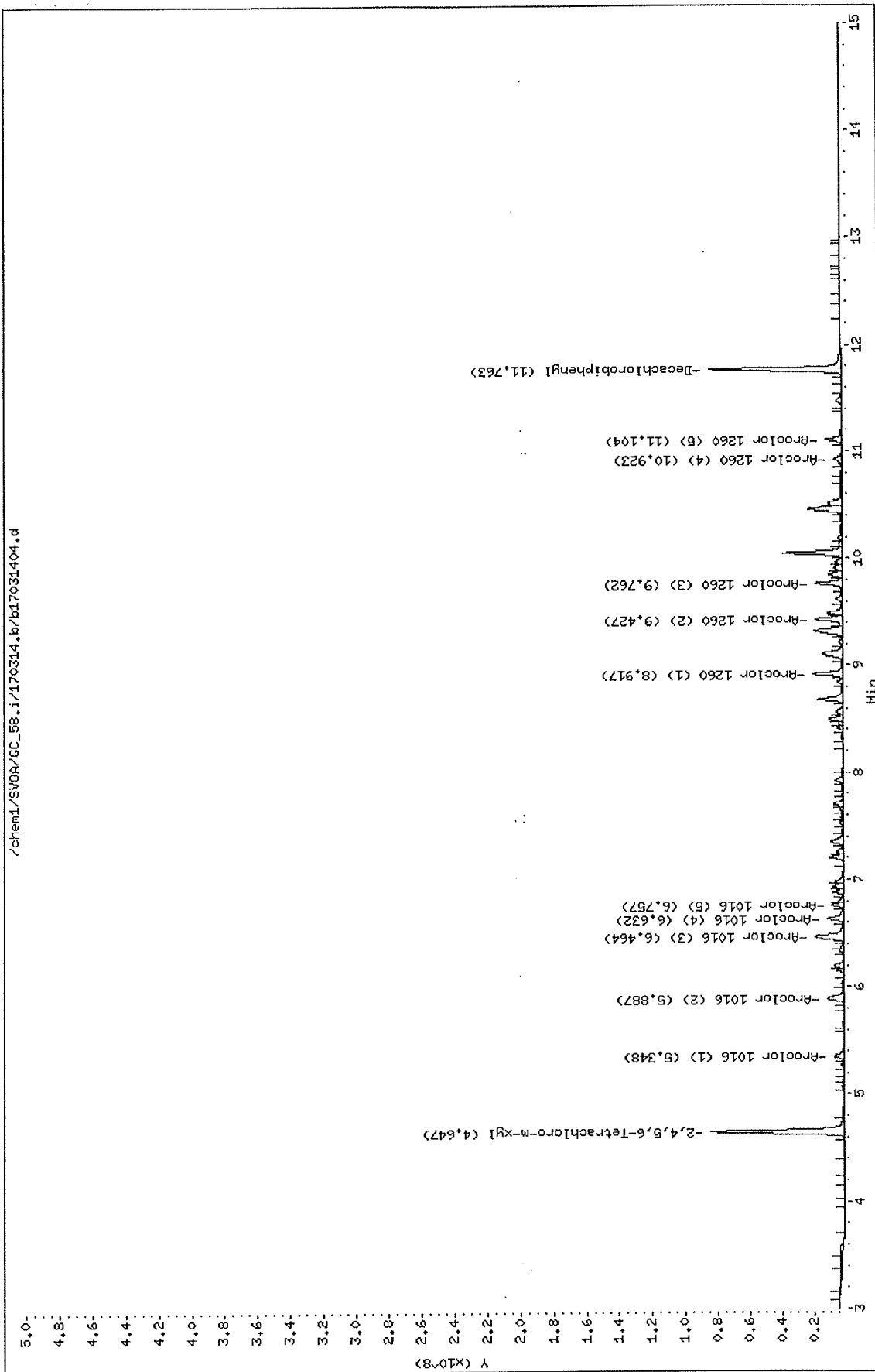
Sample Info: PCB ICAL-2 250 PPB P021517E

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031405.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031405.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 12:57  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB ICAL-1 100 PPB P021517F  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 12:57 Cal File: b17031405.d  
 Als bottle: 5 Calibration Sample, Level: 1  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1016\_1260.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |            | AMOUNTS |          |
|----------------------------------|--------|--------|--------|------------|---------|----------|
|                                  |        |        |        |            | CAL-AMT | ON-COL   |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE   | ( ppb)  | ( ppb)   |
| =====                            | ==     | =====  | =====  | =====      | =====   | =====    |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.646  | 4.647  | -0.001 | 1533816126 | 20.0000 | 19.7     |
| M 2 Aroclor-1016                 |        |        |        | 1144955281 | 100.000 | 107      |
| 3 Aroclor 1016 (1)               | 5.349  | 5.349  | 0.000  | 135544358  | 100.000 | 115      |
| 4 Aroclor 1016 (2)               | 5.888  | 5.888  | 0.000  | 241498581  | 100.000 | 109      |
| 5 Aroclor 1016 (3)               | 6.464  | 6.464  | 0.000  | 447219421  | 100.000 | 106      |
| 6 Aroclor 1016 (4)               | 6.632  | 6.632  | 0.000  | 204970027  | 100.000 | 106      |
| 7 Aroclor 1016 (5)               | 6.758  | 6.758  | 0.000  | 115722894  | 100.000 | 106      |
| M 8 Aroclor-1260                 |        |        |        | 1145977007 | 100.000 | 104      |
| 9 Aroclor 1260 (1)               | 8.917  | 8.917  | 0.000  | 316999250  | 100.000 | 104      |
| 10 Aroclor 1260 (2)              | 9.428  | 9.427  | 0.001  | 293311231  | 100.000 | 107      |
| 11 Aroclor 1260 (3)              | 9.761  | 9.762  | -0.001 | 273666891  | 100.000 | 102      |
| 12 Aroclor 1260 (4)              | 10.922 | 10.923 | -0.001 | 102664890  | 100.000 | 109      |
| 13 Aroclor 1260 (5)              | 11.103 | 11.104 | -0.001 | 159334745  | 100.000 | 98.6 (a) |
| T 56 Decachlorobiphenyl          | 11.763 | 11.763 | 0.000  | 1347996583 | 20.0000 | 18.9     |

## QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

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Data File: /chem1/SVDA/GC\_58.i/170314.b/b17031405.d

Date : 14-Mar-2017 12:57

Client ID:

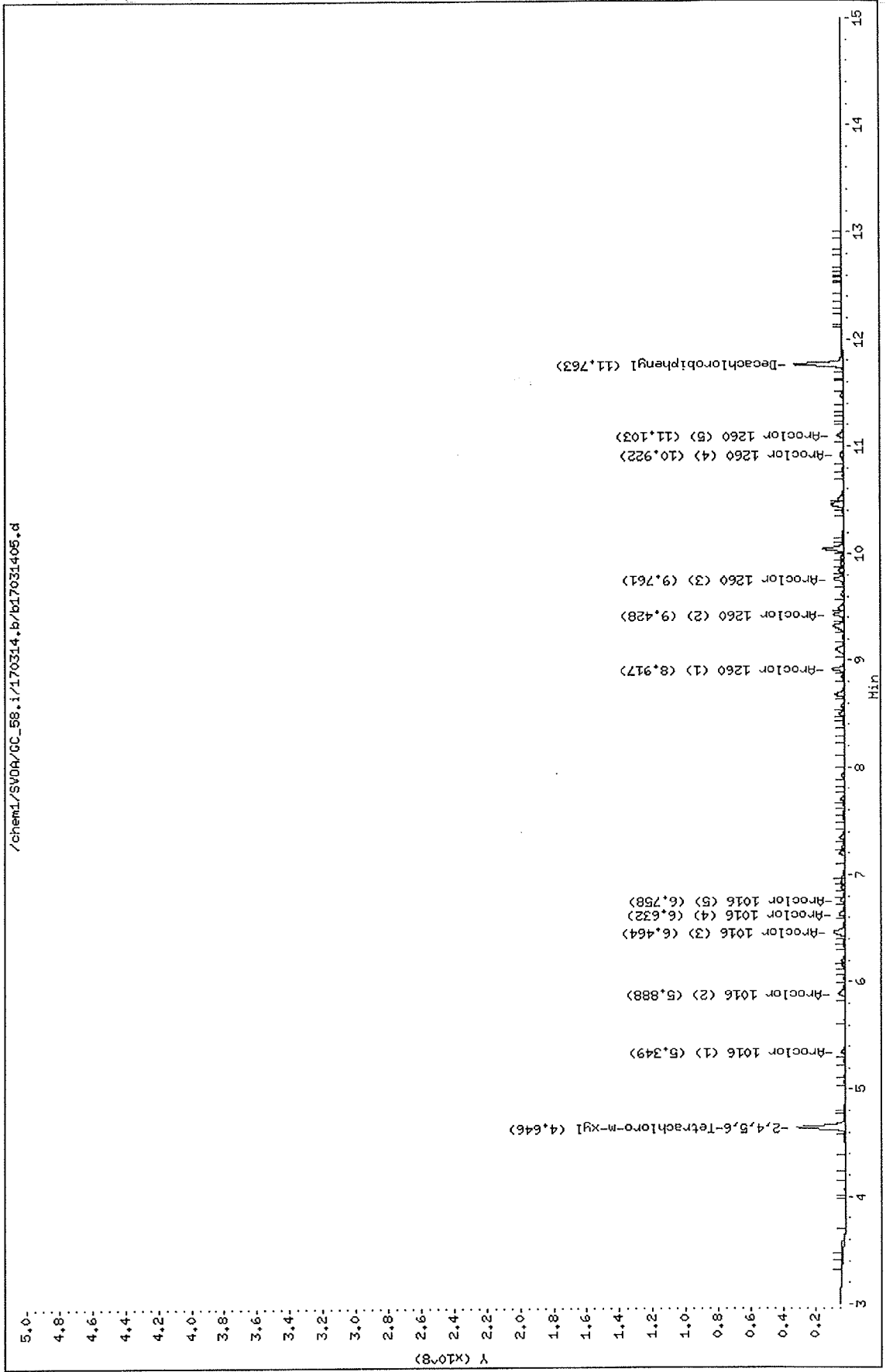
Sample Info: PCB ICAL-1 100 PPB P021517F

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031499.d  
 Report Date: 14-Mar-2017 15:37

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031499.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 13:55  
 Operator : 944  
 Smp Info : PCB ICV 500 PPB P021517H  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:37 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD

Cal File: b17031410.d

Continuing Calibration Sample

Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |            | AMOUNTS |        |
|----------------------------------|--------|--------|--------|------------|---------|--------|
|                                  |        |        |        |            | CAL-AMT | ON-COL |
|                                  |        |        |        |            | ( ppb)  | ( ppb) |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE   |         |        |
| =====                            | ==     | =====  | =====  | =====      | =====   | =====  |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.646  | 4.647  | -0.001 | 7409773135 | 100.000 | 95.3   |
| M 2 Aroclor-1016                 |        |        |        | 5530856878 | 500.000 | 519    |
| 3 Aroclor 1016 (1)               | 5.348  | 5.349  | -0.001 | 598302436  | 500.000 | 507    |
| 4 Aroclor 1016 (2)               | 5.888  | 5.888  | 0.000  | 1146836612 | 500.000 | 519    |
| 5 Aroclor 1016 (3)               | 6.464  | 6.464  | 0.000  | 2202537075 | 500.000 | 520    |
| 6 Aroclor 1016 (4)               | 6.631  | 6.632  | -0.001 | 1011378469 | 500.000 | 522    |
| 7 Aroclor 1016 (5)               | 6.757  | 6.758  | -0.001 | 571802286  | 500.000 | 521    |
| M 8 Aroclor-1260                 |        |        |        | 5880076933 | 500.000 | 532    |
| 9 Aroclor 1260 (1)               | 8.917  | 8.917  | 0.000  | 1640613872 | 500.000 | 536    |
| 10 Aroclor 1260 (2)              | 9.427  | 9.427  | 0.000  | 1411100886 | 500.000 | 513    |
| 11 Aroclor 1260 (3)              | 9.762  | 9.762  | 0.000  | 1442794521 | 500.000 | 536    |
| 12 Aroclor 1260 (4)              | 10.923 | 10.923 | 0.000  | 514743516  | 500.000 | 548    |
| 13 Aroclor 1260 (5)              | 11.103 | 11.104 | -0.001 | 870824138  | 500.000 | 539    |
| T 56 Decachlorobiphenyl          | 11.763 | 11.763 | 0.000  | 7198395390 | 100.000 | 101    |

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Data File: /chem1/SVDA/GC\_58.i/170314.b/b17031499.d

Date : 14-MAR-2017 13:55

Client ID:

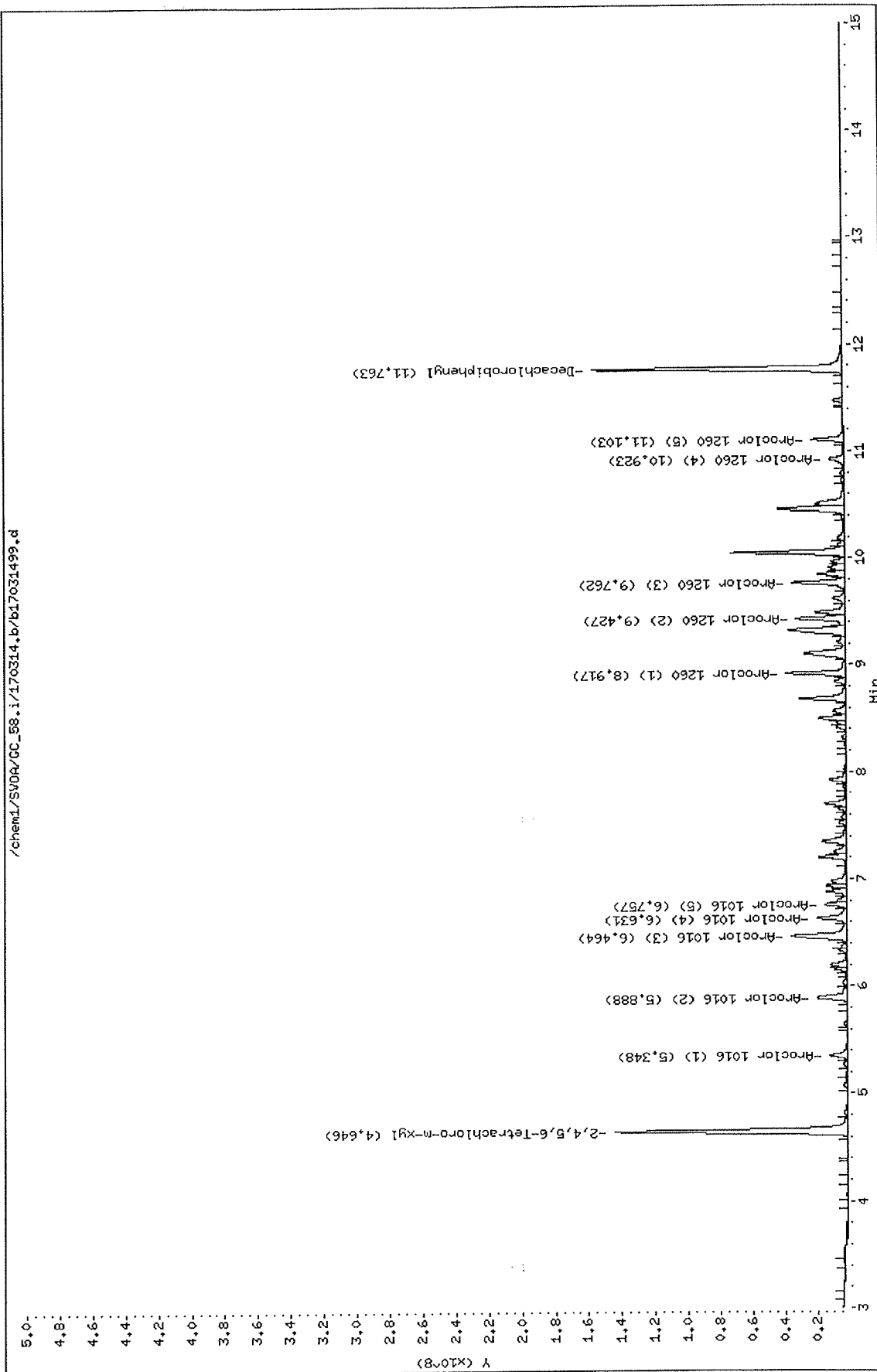
Sample Info: PCB ICV 500 PPB P021517H

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031407.d  
 Report Date: 14-Mar-2017 15:36

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031407.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 14:13  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB 1221/54 500 PPB P120616M  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 7 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1221\_1254.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds           | RT    | EXP RT | DLT RT | RESPONSE   | AMOUNTS           |                  |
|---------------------|-------|--------|--------|------------|-------------------|------------------|
|                     |       |        |        |            | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| =====               | ==    | =====  | =====  | =====      | =====             | =====            |
| M 14 Aroclor-1221   |       |        |        | 2072230925 | 500.000           | 500              |
| 15 Aroclor 1221 (1) | 3.994 | 3.994  | 0.000  | 323250426  | 500.000           | 500              |
| 16 Aroclor 1221 (2) | 5.073 | 5.073  | 0.000  | 417534561  | 500.000           | 500              |
| 17 Aroclor 1221 (3) | 5.266 | 5.266  | 0.000  | 237335299  | 500.000           | 500              |
| 18 Aroclor 1221 (4) | 5.349 | 5.349  | 0.000  | 950826248  | 500.000           | 500              |
| 19 Aroclor 1221 (5) | 5.883 | 5.883  | 0.000  | 143284391  | 500.000           | 500              |
| M 38 Aroclor-1254   |       |        |        | 7206368130 | 500.000           | 500              |
| 39 Aroclor 1254 (1) | 7.699 | 7.699  | 0.000  | 1266532975 | 500.000           | 500              |
| 40 Aroclor 1254 (2) | 7.993 | 7.993  | 0.000  | 676266677  | 500.000           | 500              |
| 41 Aroclor 1254 (3) | 8.456 | 8.456  | 0.000  | 2133557311 | 500.000           | 500              |
| 42 Aroclor 1254 (4) | 8.715 | 8.715  | 0.000  | 1432647154 | 500.000           | 500              |
| 43 Aroclor 1254 (5) | 9.109 | 9.109  | 0.000  | 1697364013 | 500.000           | 500              |

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Data File: /chem1/SV0A/GC\_58.i/170314.b/b17031407.d

Date : 14-Mar-2017 14:13

Client ID:

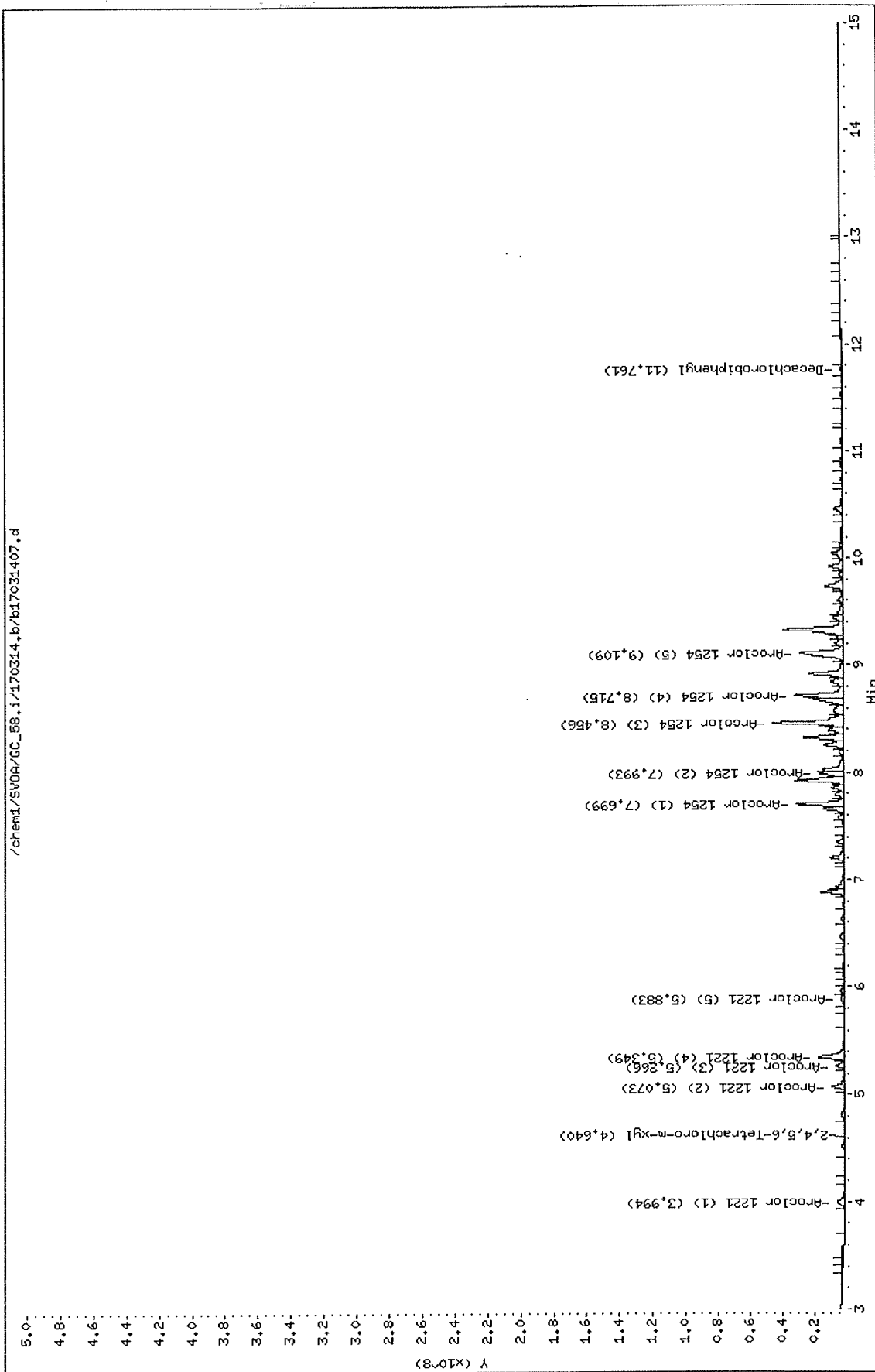
Sample Info: PCB 1221/54 500 PPB P120616M

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031408.d  
 Report Date: 14-Mar-2017 15:37

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031408.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 14:31  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB 1232/62 500 PPB P120616N  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:36 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 8 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1232\_1262.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds           | RT     | EXP RT | DLT RT | RESPONSE   | AMOUNTS           |                  |
|---------------------|--------|--------|--------|------------|-------------------|------------------|
|                     |        |        |        |            | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| =====               | ==     | =====  | =====  | =====      | =====             | =====            |
| M 20 Aroclor-1232   |        |        |        | 2992627417 | 500.000           | 500              |
| 21 Aroclor 1232 (1) | 5.349  | 5.349  | 0.000  | 653294179  | 500.000           | 500              |
| 22 Aroclor 1232 (2) | 5.887  | 5.887  | 0.000  | 528250047  | 500.000           | 500              |
| 23 Aroclor 1232 (3) | 6.464  | 6.464  | 0.000  | 1052289659 | 500.000           | 500              |
| 24 Aroclor 1232 (4) | 6.632  | 6.632  | 0.000  | 478026228  | 500.000           | 500              |
| 25 Aroclor 1232 (5) | 6.757  | 6.757  | 0.000  | 280767304  | 500.000           | 500              |
| M 44 Aroclor-1262   |        |        |        | 7189081647 | 500.000           | 500              |
| 45 Aroclor 1262 (1) | 8.917  | 8.917  | 0.000  | 1274138793 | 500.000           | 500              |
| 46 Aroclor 1262 (2) | 9.427  | 9.427  | 0.000  | 2029604433 | 500.000           | 500              |
| 47 Aroclor 1262 (3) | 9.762  | 9.762  | 0.000  | 1793919064 | 500.000           | 500              |
| 48 Aroclor 1262 (4) | 10.923 | 10.923 | 0.000  | 661719210  | 500.000           | 500              |
| 49 Aroclor 1262 (5) | 11.102 | 11.102 | 0.000  | 1429700147 | 500.000           | 500              |

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Data File: /chem1/SV08/CC\_58.i/170314.b/b17031408.d

Date: 14-Mar-2017 14:31

Client ID:

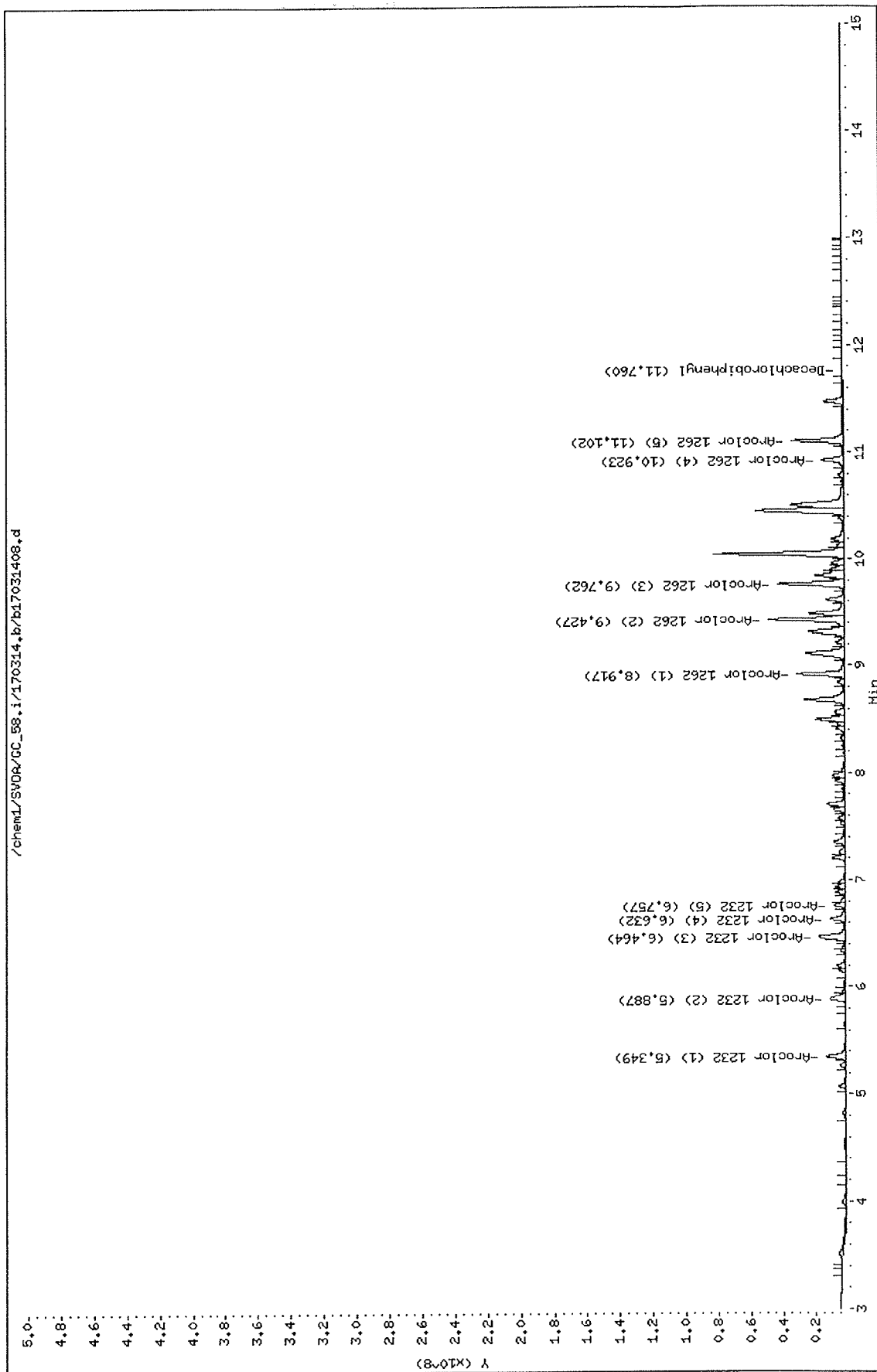
Sample Info: PCB 1232/62 500 PPB P120616N

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031409.d  
 Report Date: 14-Mar-2017 15:37

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031409.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 14:49  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB 1248/68 500 PPB P1206160  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:37 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 9 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1248\_1268.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |    |                  |        |        |        | AMOUNTS     |         |        |
|-----------|----|------------------|--------|--------|--------|-------------|---------|--------|
|           |    |                  |        |        |        | CAL-AMT     | ON-COL  |        |
| Compounds |    |                  | RT     | EXP RT | DLT RT | RESPONSE    | ( ppb)  | ( ppb) |
| =====     |    |                  | ==     | =====  | =====  | =====       | =====   | =====  |
| M         | 32 | Aroclor-1248     |        |        |        | 4413156871  | 500.000 | 500    |
|           | 33 | Aroclor 1248 (1) | 6.460  | 6.460  | 0.000  | 1171302859  | 500.000 | 500    |
|           | 34 | Aroclor 1248 (2) | 6.879  | 6.920  | -0.041 | 676007107   | 500.000 | 500    |
|           | 35 | Aroclor 1248 (3) | 6.930  | 6.966  | -0.036 | 643459898   | 500.000 | 500    |
|           | 36 | Aroclor 1248 (4) | 7.201  | 7.201  | 0.000  | 882809644   | 500.000 | 500    |
|           | 37 | Aroclor 1248 (5) | 7.347  | 7.347  | 0.000  | 1039577363  | 500.000 | 500    |
| M         | 50 | Aroclor-1268     |        |        |        | 28383466574 | 500.000 | 500    |
|           | 51 | Aroclor 1268 (1) | 10.501 | 10.458 | 0.043  | 5234957336  | 500.000 | 500    |
|           | 52 | Aroclor 1268 (2) | 10.447 | 10.490 | -0.043 | 4561805931  | 500.000 | 500    |
|           | 53 | Aroclor 1268 (3) | 10.786 | 10.786 | 0.000  | 4468506681  | 500.000 | 500    |
|           | 54 | Aroclor 1268 (4) | 11.104 | 11.104 | 0.000  | 1534634566  | 500.000 | 500    |
|           | 55 | Aroclor 1268 (5) | 11.472 | 11.472 | 0.000  | 12583562060 | 500.000 | 500    |

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Data File: /chem1/SV0A/GC\_58.i/170314.b/b17031409.d

Date : 14-MAR-2017 14:49

Client ID:

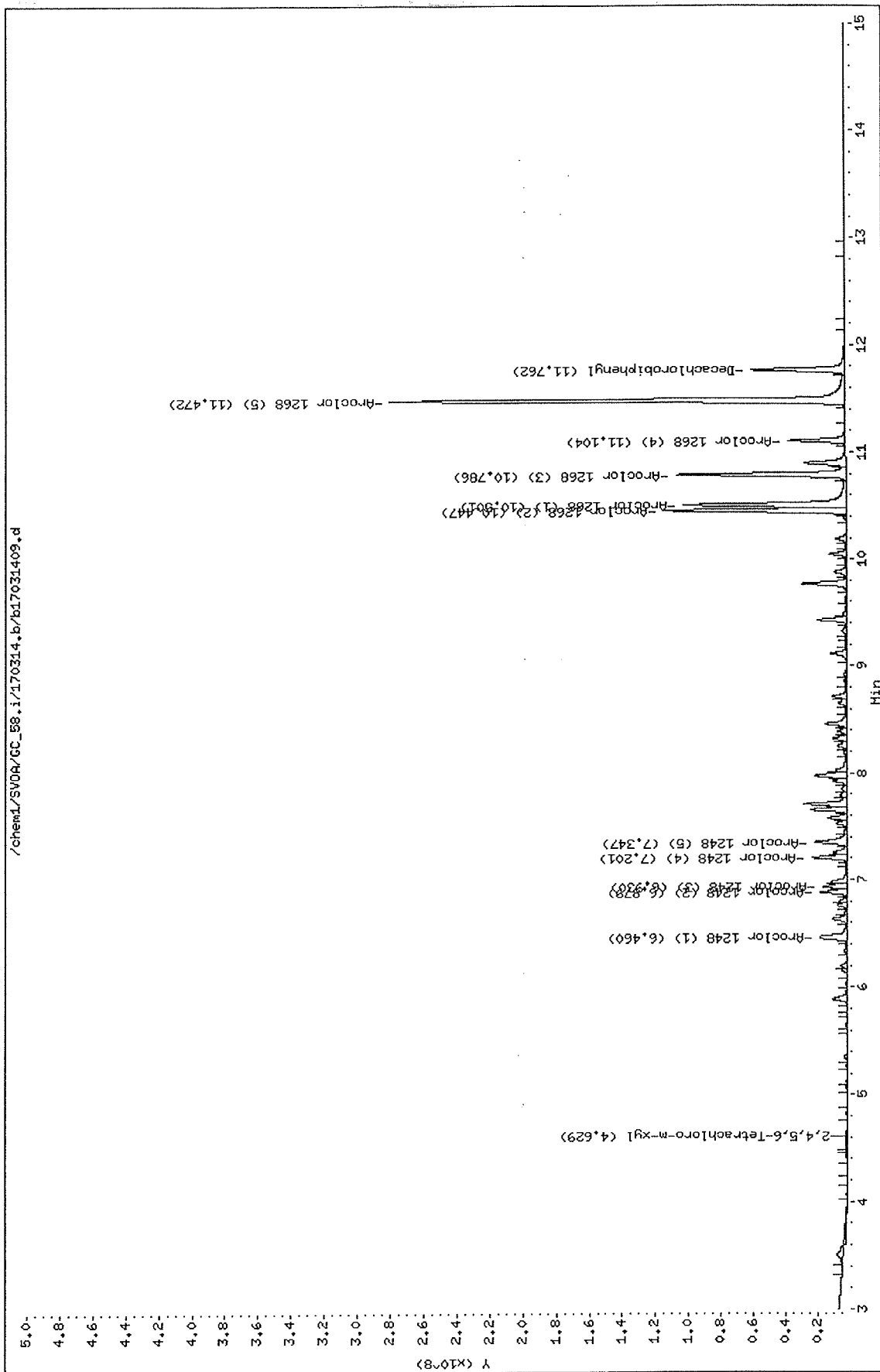
Sample Info: PCB 1248/68 500 PPB P1206160

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170314.b/b17031410.d  
 Report Date: 14-Mar-2017 15:37

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170314.b/b17031410.d  
 Lab Smp Id:  
 Inj Date : 14-MAR-2017 15:07  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : PCB 1242 500 PPB P120616P  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170314.b/b8082-n2.m  
 Meth Date : 14-Mar-2017 15:37 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 10 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1242.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable Local Compound Variable

| Compounds           | RT    | EXP RT | DLT RT | RESPONSE   | AMOUNTS           |                  |
|---------------------|-------|--------|--------|------------|-------------------|------------------|
|                     |       |        |        |            | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| =====               | ==    | =====  | =====  | =====      | =====             | =====            |
| M 26 Aroclor-1242   |       |        |        | 4296966254 | 500.000           | 500              |
| 27 Aroclor 1242 (1) | 5.348 | 5.348  | 0.000  | 455507506  | 500.000           | 500              |
| 28 Aroclor 1242 (2) | 5.888 | 5.888  | 0.000  | 899757495  | 500.000           | 500              |
| 29 Aroclor 1242 (3) | 6.464 | 6.464  | 0.000  | 1707003171 | 500.000           | 500              |
| 30 Aroclor 1242 (4) | 6.632 | 6.632  | 0.000  | 789145477  | 500.000           | 500              |
| 31 Aroclor 1242 (5) | 6.758 | 6.758  | 0.000  | 445552605  | 500.000           | 500              |

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Data File: /chem1/SVDA/GC\_58.i/170314.b/b17031410.d

Date : 14-MAR-2017 15:07

Client ID:

Sample Info: PCB 1242 500 PPB P120616P

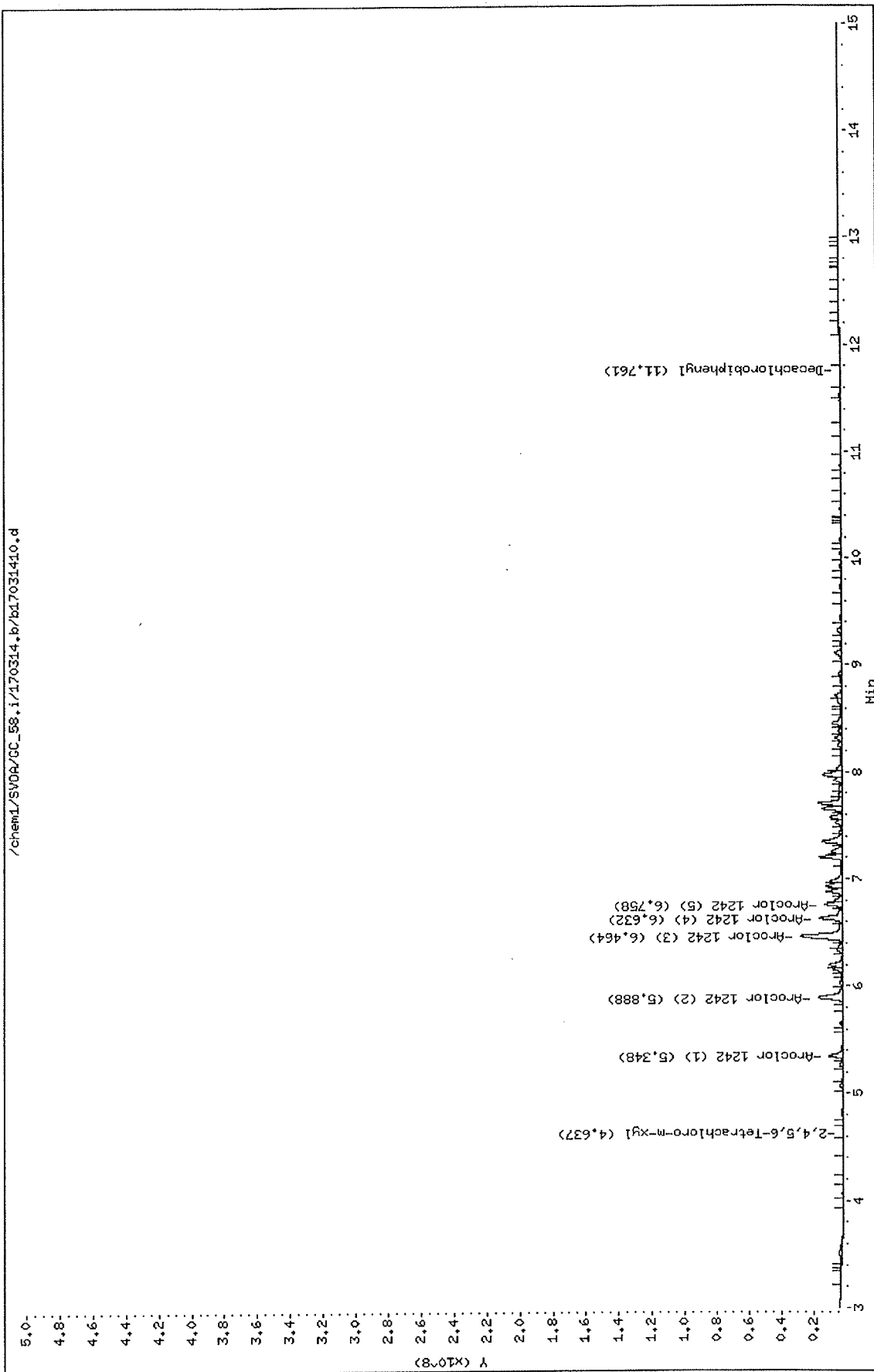
Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

/chem1/SVDA/GC\_58.i/170314.b/b17031410.d



# EPA METHOD 8082

## PCB Aroclors

### Sample Data

**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 17-03-1104

**INSTRUMENT:** GC 58

**EXTRACTION :** EPA 3545

**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944

**D/T ANALYZED:** 2017-03-20 18:08

**REVIEWED BY:** 421

**D/T REVIEWED:** 2017-03-23 09:32

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203417032034

**# 30**

**CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

**LCS/MB BATCH:** 170320L02

**SAMPLE VOLUME / WEIGHT:**

DEFAULT: 20.00 g / ACTUAL: 20.20 g

**MS/MSD BATCH:** 170320S02

**FINAL VOLUME / WEIGHT:**

DEFAULT: 10.00 ml / ACTUAL: 10.00 ml

**UNITS:** ug/kg

**ADJUSTMENT RATIO TO PF:**

0.99

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Aroclor-1016    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1221    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1232    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1242    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1248    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1254    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1260    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1262    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1268    | 0.000              | 1.00      | ND          | 50        | w           |

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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032034.d  
Lab Smp Id:  
Inj Date : 20-MAR-2017 18:08  
Operator : 944  
Smp Info : 17-03-1104-30  
Misc Info :  
Comment : Rtx-CLPesticide II  
Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
Meth Date : 20-Mar-2017 16:28 src3  
Cal Date : 14-MAR-2017 15:07  
Als bottle: 34  
Dil Factor: 1.00000  
Integrator: HP Genie  
Target Version: 3.50  
Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD  
Cal File: b17031410.d

Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable Local Compound Variable

|                                  |       |        |        |                        |  | CONCENTRATIONS |         |
|----------------------------------|-------|--------|--------|------------------------|--|----------------|---------|
|                                  |       |        |        |                        |  | ON-COLUMN      | FINAL   |
| Compounds                        | RT    | EXP RT | DLT RT | RESPONSE               |  | ( ppb)         | (ug/Kg) |
| =====                            | ==    | =====  | =====  | =====                  |  | =====          | =====   |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.650 | 4.647  | 0.003  | 5370087814             |  | 69.0510        | 69.0    |
| M 2 Aroclor-1016                 |       |        |        | Compound Not Detected. |  |                |         |
| 3 Aroclor 1016 (1)               |       |        |        | Compound Not Detected. |  |                |         |
| 4 Aroclor 1016 (2)               |       |        |        | Compound Not Detected. |  |                |         |
| 5 Aroclor 1016 (3)               |       |        |        | Compound Not Detected. |  |                |         |
| 6 Aroclor 1016 (4)               |       |        |        | Compound Not Detected. |  |                |         |
| 7 Aroclor 1016 (5)               |       |        |        | Compound Not Detected. |  |                |         |
| M 8 Aroclor-1260                 |       |        |        | Compound Not Detected. |  |                |         |
| 9 Aroclor 1260 (1)               |       |        |        | Compound Not Detected. |  |                |         |
| 10 Aroclor 1260 (2)              |       |        |        | Compound Not Detected. |  |                |         |
| 11 Aroclor 1260 (3)              |       |        |        | Compound Not Detected. |  |                |         |
| 12 Aroclor 1260 (4)              |       |        |        | Compound Not Detected. |  |                |         |
| 13 Aroclor 1260 (5)              |       |        |        | Compound Not Detected. |  |                |         |
| M 14 Aroclor-1221                |       |        |        | Compound Not Detected. |  |                |         |
| 15 Aroclor 1221 (1)              |       |        |        | Compound Not Detected. |  |                |         |
| 16 Aroclor 1221 (2)              |       |        |        | Compound Not Detected. |  |                |         |
| 17 Aroclor 1221 (3)              |       |        |        | Compound Not Detected. |  |                |         |
| 18 Aroclor 1221 (4)              |       |        |        | Compound Not Detected. |  |                |         |
| 19 Aroclor 1221 (5)              |       |        |        | Compound Not Detected. |  |                |         |
| M 20 Aroclor-1232                |       |        |        | Compound Not Detected. |  |                |         |
| 21 Aroclor 1232 (1)              |       |        |        | Compound Not Detected. |  |                |         |

| Compounds |                       | CONCENTRATIONS |        |        |                        |                                           |
|-----------|-----------------------|----------------|--------|--------|------------------------|-------------------------------------------|
|           |                       | RT             | EXP RT | DLT RT | RESPONSE               | ON-COLUMN<br>( ppb)      FINAL<br>(ug/Kg) |
| =====     |                       | ==             | =====  | =====  | =====                  | =====                                     |
|           | 22 Aroclor 1232 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 23 Aroclor 1232 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 24 Aroclor 1232 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 25 Aroclor 1232 (5)   |                |        |        | Compound Not Detected. |                                           |
| M         | 26 Aroclor-1242       |                |        |        | Compound Not Detected. |                                           |
|           | 27 Aroclor 1242 (1)   |                |        |        | Compound Not Detected. |                                           |
|           | 28 Aroclor 1242 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 29 Aroclor 1242 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 30 Aroclor 1242 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 31 Aroclor 1242 (5)   |                |        |        | Compound Not Detected. |                                           |
| M         | 32 Aroclor-1248       |                |        |        | Compound Not Detected. |                                           |
|           | 33 Aroclor 1248 (1)   |                |        |        | Compound Not Detected. |                                           |
|           | 34 Aroclor 1248 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 35 Aroclor 1248 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 36 Aroclor 1248 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 37 Aroclor 1248 (5)   |                |        |        | Compound Not Detected. |                                           |
| M         | 38 Aroclor-1254       |                |        |        | Compound Not Detected. |                                           |
|           | 39 Aroclor 1254 (1)   |                |        |        | Compound Not Detected. |                                           |
|           | 40 Aroclor 1254 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 41 Aroclor 1254 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 42 Aroclor 1254 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 43 Aroclor 1254 (5)   |                |        |        | Compound Not Detected. |                                           |
| M         | 44 Aroclor-1262       |                |        |        | Compound Not Detected. |                                           |
|           | 45 Aroclor 1262 (1)   |                |        |        | Compound Not Detected. |                                           |
|           | 46 Aroclor 1262 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 47 Aroclor 1262 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 48 Aroclor 1262 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 49 Aroclor 1262 (5)   |                |        |        | Compound Not Detected. |                                           |
| M         | 50 Aroclor-1268       |                |        |        | Compound Not Detected. |                                           |
|           | 51 Aroclor 1268 (1)   |                |        |        | Compound Not Detected. |                                           |
|           | 52 Aroclor 1268 (2)   |                |        |        | Compound Not Detected. |                                           |
|           | 53 Aroclor 1268 (3)   |                |        |        | Compound Not Detected. |                                           |
|           | 54 Aroclor 1268 (4)   |                |        |        | Compound Not Detected. |                                           |
|           | 55 Aroclor 1268 (5)   |                |        |        | Compound Not Detected. |                                           |
| T         | 56 Decachlorobiphenyl | 11.766         | 11.764 | 0.002  | 5740559244             | 80.6351      80.6                         |

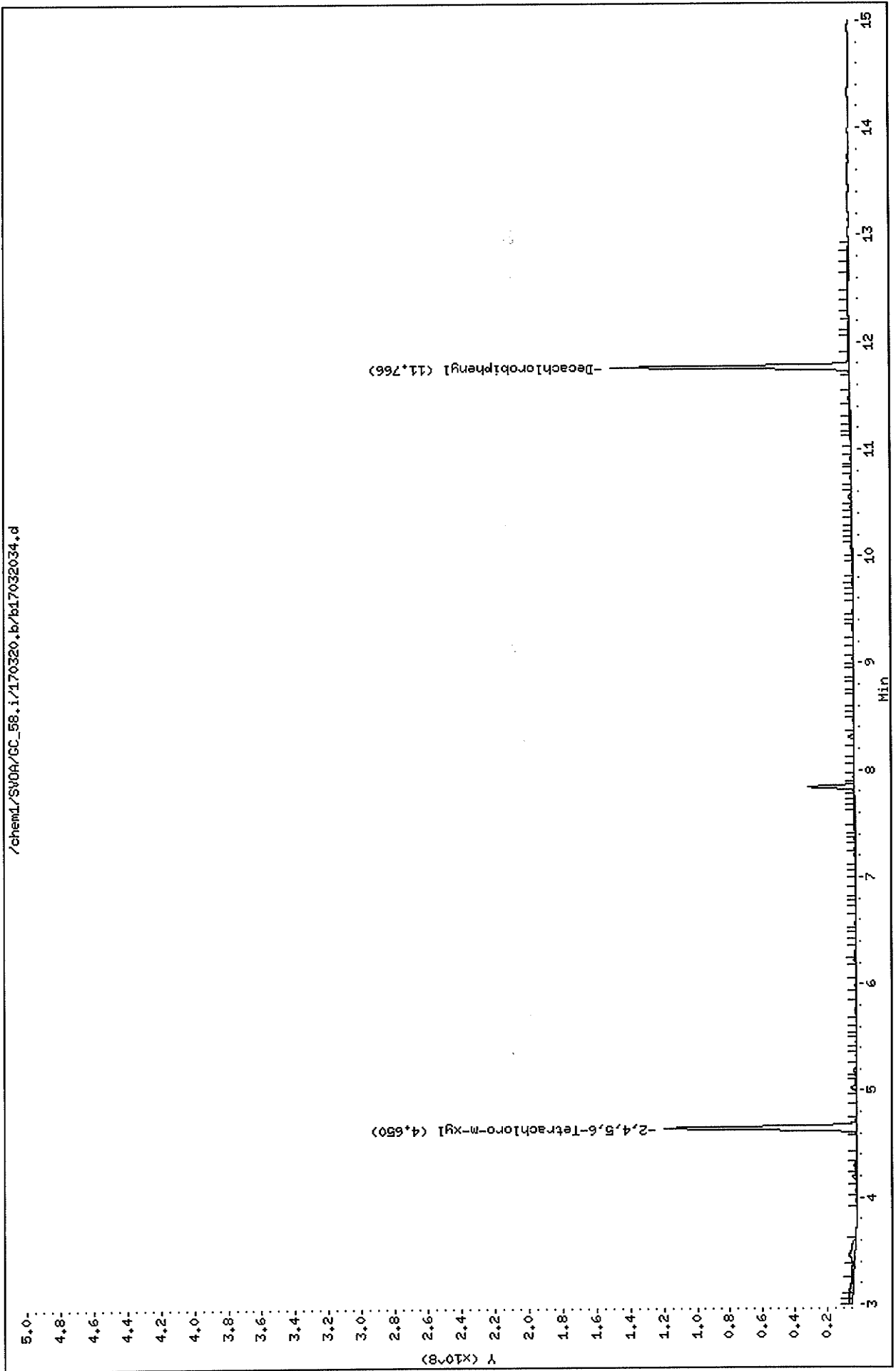
Data File: /chem1/SV0A/GC\_58.i/170320.b/b17032034.d  
Date : 20-MAR-2017 18:08  
Client ID:  
Sample Info: 17-03-1104-30

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



# RAW DATA SHEET FOR METHOD: EPA 8082

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**WORK ORDER:** 17-03-1104

**INSTRUMENT:** GC 58

**EXTRACTION :** EPA 3545

**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944

**D/T ANALYZED:** 2017-03-20 18:26

**REVIEWED BY:** 421

**D/T REVIEWED:** 2017-03-23 09:32

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203517032035

**# 31** **CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

**LCS/MB BATCH:** 170320L02

**SAMPLE VOLUME / WEIGHT:**

DEFAULT: 20.00 g / ACTUAL: 20.10 g

**MS/MSD BATCH:** 170320S02

**FINAL VOLUME / WEIGHT:**

DEFAULT: 10.00 ml / ACTUAL: 10.00 ml

**UNITS:** ug/kg

**ADJUSTMENT RATIO TO PF:**

1.00

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Aroclor-1016    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1221    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1232    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1242    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1248    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1254    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1260    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1262    | 0.000              | 1.00      | ND          | 50        | W           |
| Aroclor-1268    | 0.000              | 1.00      | ND          | 50        | W           |

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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032035.d  
Lab Smp Id:  
Inj Date : 20-MAR-2017 18:26  
Operator : 944  
Smp Info : 17-03-1104-31  
Misc Info :  
Comment : Rtx-CLPesticide II  
Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
Meth Date : 20-Mar-2017 16:28 src3  
Cal Date : 14-MAR-2017 15:07  
Als bottle: 35  
Dil Factor: 1.00000  
Integrator: HP Genie  
Target Version: 3.50  
Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD  
Cal File: b17031410.d

Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable Local Compound Variable

| Compounds |                                | RT    |        |        |                        |          | CONCENTRATIONS |         |
|-----------|--------------------------------|-------|--------|--------|------------------------|----------|----------------|---------|
|           |                                |       |        |        |                        |          | ON-COLUMN      | FINAL   |
|           |                                | RT    | EXP RT | DLT RT | RT                     | RESPONSE | ( ppb)         | (ug/Kg) |
| =====     |                                | ==    | =====  | =====  | =====                  | =====    | =====          | =====   |
| T         | 1 2,4,5,6-Tetrachloro-m-xylene | 4.653 | 4.647  | 0.006  | 5159171258             | 66.3389  | 66.3           |         |
| M         | 2 Aroclor-1016                 |       |        |        | Compound Not Detected. |          |                |         |
|           | 3 Aroclor 1016 (1)             |       |        |        | Compound Not Detected. |          |                |         |
|           | 4 Aroclor 1016 (2)             |       |        |        | Compound Not Detected. |          |                |         |
|           | 5 Aroclor 1016 (3)             |       |        |        | Compound Not Detected. |          |                |         |
|           | 6 Aroclor 1016 (4)             |       |        |        | Compound Not Detected. |          |                |         |
|           | 7 Aroclor 1016 (5)             |       |        |        | Compound Not Detected. |          |                |         |
| M         | 8 Aroclor-1260                 |       |        |        | Compound Not Detected. |          |                |         |
|           | 9 Aroclor 1260 (1)             |       |        |        | Compound Not Detected. |          |                |         |
|           | 10 Aroclor 1260 (2)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 11 Aroclor 1260 (3)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 12 Aroclor 1260 (4)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 13 Aroclor 1260 (5)            |       |        |        | Compound Not Detected. |          |                |         |
| M         | 14 Aroclor-1221                |       |        |        | Compound Not Detected. |          |                |         |
|           | 15 Aroclor 1221 (1)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 16 Aroclor 1221 (2)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 17 Aroclor 1221 (3)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 18 Aroclor 1221 (4)            |       |        |        | Compound Not Detected. |          |                |         |
|           | 19 Aroclor 1221 (5)            |       |        |        | Compound Not Detected. |          |                |         |
| M         | 20 Aroclor-1232                |       |        |        | Compound Not Detected. |          |                |         |
|           | 21 Aroclor 1232 (1)            |       |        |        | Compound Not Detected. |          |                |         |

| Compounds               | CONCENTRATIONS |        |        |            |         | RESPONSE               | ON-COLUMN |         | FINAL |
|-------------------------|----------------|--------|--------|------------|---------|------------------------|-----------|---------|-------|
|                         | RT             | EXP RT | DLT RT | RT         |         |                        | ( ppb)    | (ug/Kg) |       |
| =====                   | ==             | =====  | =====  |            |         | =====                  | =====     | =====   |       |
| 22 Aroclor 1232 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 23 Aroclor 1232 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 24 Aroclor 1232 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 25 Aroclor 1232 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| M 26 Aroclor-1242       |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 27 Aroclor 1242 (1)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 28 Aroclor 1242 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 29 Aroclor 1242 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 30 Aroclor 1242 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 31 Aroclor 1242 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| M 32 Aroclor-1248       |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 33 Aroclor 1248 (1)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 34 Aroclor 1248 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 35 Aroclor 1248 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 36 Aroclor 1248 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 37 Aroclor 1248 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| M 38 Aroclor-1254       |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 39 Aroclor 1254 (1)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 40 Aroclor 1254 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 41 Aroclor 1254 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 42 Aroclor 1254 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 43 Aroclor 1254 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| M 44 Aroclor-1262       |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 45 Aroclor 1262 (1)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 46 Aroclor 1262 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 47 Aroclor 1262 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 48 Aroclor 1262 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 49 Aroclor 1262 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| M 50 Aroclor-1268       |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 51 Aroclor 1268 (1)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 52 Aroclor 1268 (2)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 53 Aroclor 1268 (3)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 54 Aroclor 1268 (4)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| 55 Aroclor 1268 (5)     |                |        |        |            |         | Compound Not Detected. |           |         |       |
| T 56 Decachlorobiphenyl | 11.765         | 11.764 | 0.001  | 5654035926 | 79.4197 |                        |           | 79.4    |       |

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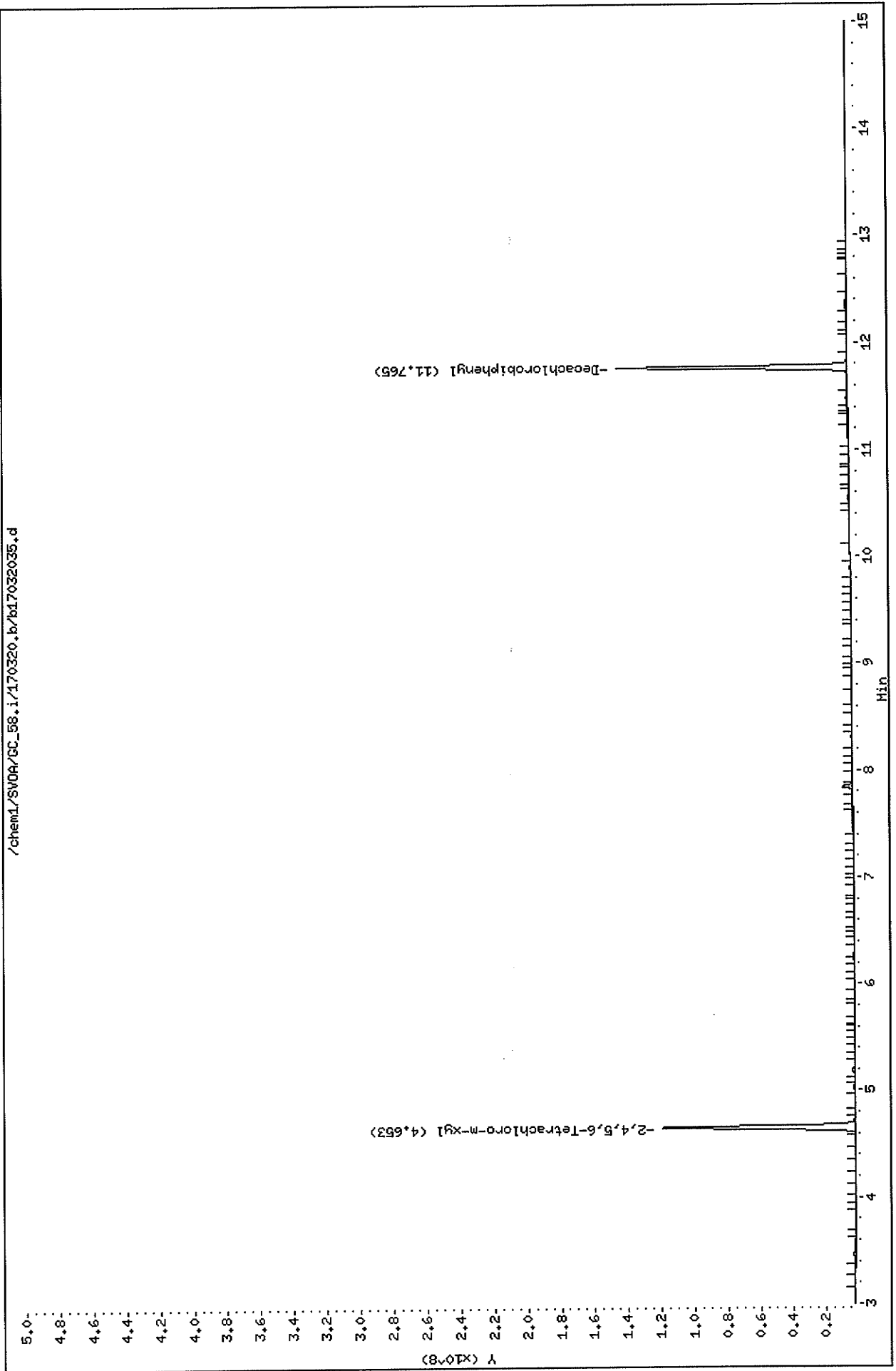
Data File: /chem1/SV0A/GC\_58.i/170320.b/17032035.d  
Date : 20-MAR-2017 18:26  
Client ID:  
Sample Info: 17-03-1104-31

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

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# **RAW DATA SHEET FOR METHOD: EPA 8082**

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 58  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944  
**D/T ANALYZED:** 2017-03-20 18:44  
**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-23 09:32

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203617032036

**# 32**      **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

**LCS/MB BATCH:** 170320L02      **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.20 g  
**MS/MSD BATCH:** 170320S02      **FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
**UNITS:** ug/kg      **ADJUSTMENT RATIO TO PF:** 0.99

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Aroclor-1016    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1221    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1232    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1242    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1248    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1254    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1260    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1262    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1268    | 0.000              | 1.00      | ND          | 50        | w           |

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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032036.d  
Lab Smp Id:  
Inj Date : 20-MAR-2017 18:44  
Operator : 944  
Smp Info : 17-03-1104-32  
Misc Info :  
Comment : Rtx-CLPesticide II  
Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
Meth Date : 20-Mar-2017 16:28 src3  
Cal Date : 14-MAR-2017 15:07  
Als bottle: 36  
Dil Factor: 1.00000  
Integrator: HP Genie  
Target Version: 3.50  
Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD  
Cal File: b17031410.d

Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds |                                | CONCENTRATIONS         |        |        |            |                 |
|-----------|--------------------------------|------------------------|--------|--------|------------|-----------------|
|           |                                | RT                     | EXP RT | DLT RT | RESPONSE   | ON-COLUMN FINAL |
|           |                                |                        |        |        |            | ( ppb) (ug/Kg)  |
| =====     |                                | ==                     | =====  | =====  | =====      | =====           |
| T         | 1 2,4,5,6-Tetrachloro-m-xylene | 4.652                  | 4.647  | 0.005  | 5607676226 | 72.1060 72.1    |
| M         | 2 Aroclor-1016                 | Compound Not Detected. |        |        |            |                 |
|           | 3 Aroclor 1016 (1)             | Compound Not Detected. |        |        |            |                 |
|           | 4 Aroclor 1016 (2)             | Compound Not Detected. |        |        |            |                 |
|           | 5 Aroclor 1016 (3)             | Compound Not Detected. |        |        |            |                 |
|           | 6 Aroclor 1016 (4)             | Compound Not Detected. |        |        |            |                 |
|           | 7 Aroclor 1016 (5)             | Compound Not Detected. |        |        |            |                 |
| M         | 8 Aroclor-1260                 | Compound Not Detected. |        |        |            |                 |
|           | 9 Aroclor 1260 (1)             | Compound Not Detected. |        |        |            |                 |
|           | 10 Aroclor 1260 (2)            | Compound Not Detected. |        |        |            |                 |
|           | 11 Aroclor 1260 (3)            | Compound Not Detected. |        |        |            |                 |
|           | 12 Aroclor 1260 (4)            | Compound Not Detected. |        |        |            |                 |
|           | 13 Aroclor 1260 (5)            | Compound Not Detected. |        |        |            |                 |
| M         | 14 Aroclor-1221                | Compound Not Detected. |        |        |            |                 |
|           | 15 Aroclor 1221 (1)            | Compound Not Detected. |        |        |            |                 |
|           | 16 Aroclor 1221 (2)            | Compound Not Detected. |        |        |            |                 |
|           | 17 Aroclor 1221 (3)            | Compound Not Detected. |        |        |            |                 |
|           | 18 Aroclor 1221 (4)            | Compound Not Detected. |        |        |            |                 |
|           | 19 Aroclor 1221 (5)            | Compound Not Detected. |        |        |            |                 |
| M         | 20 Aroclor-1232                | Compound Not Detected. |        |        |            |                 |
|           | 21 Aroclor 1232 (1)            | Compound Not Detected. |        |        |            |                 |

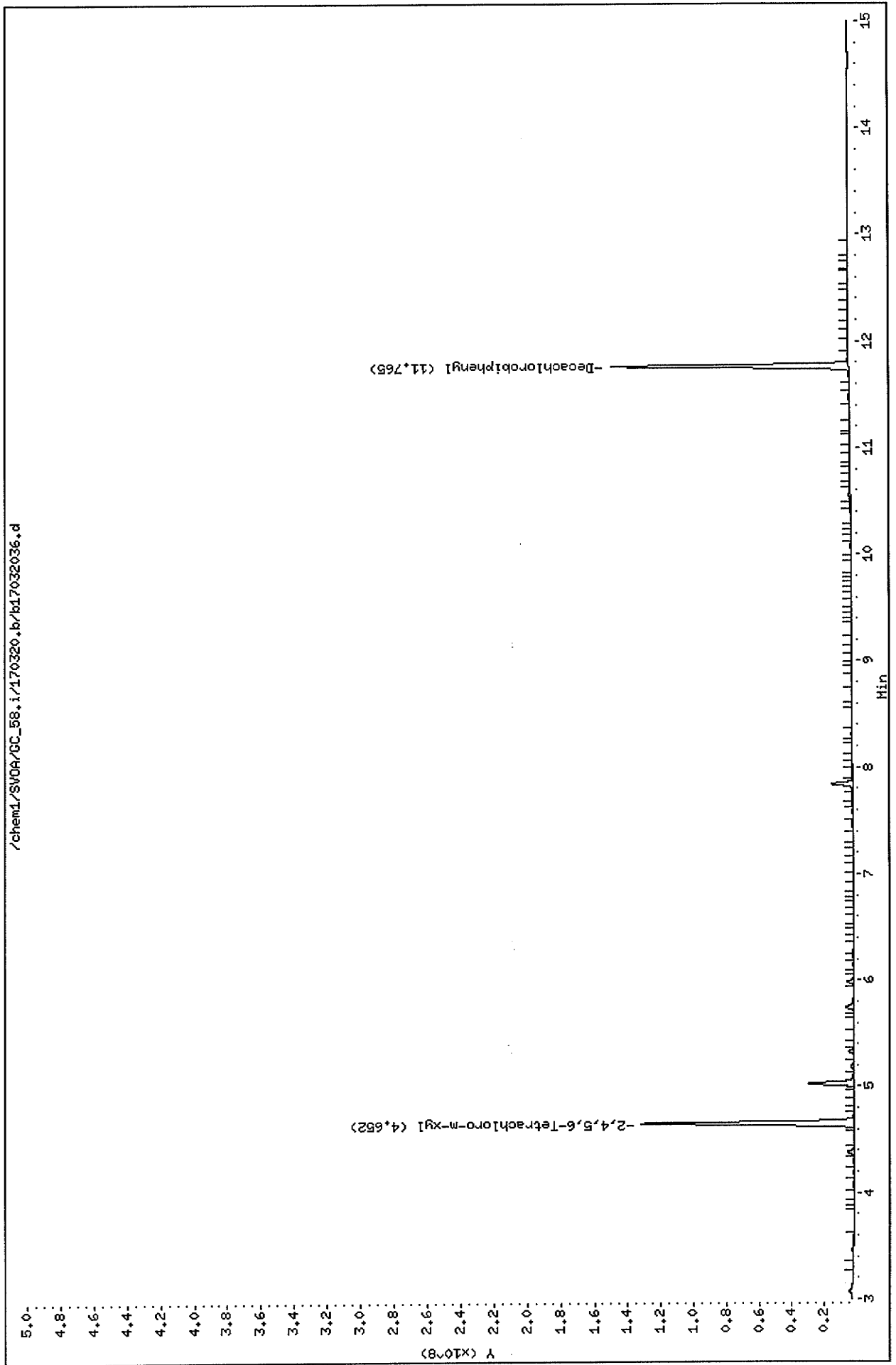
| Compounds               |        |        |        |                        | CONCENTRATIONS      |                  |
|-------------------------|--------|--------|--------|------------------------|---------------------|------------------|
|                         | RT     | EXP RT | DLT RT | RESPONSE               | ON-COLUMN<br>( ppb) | FINAL<br>(ug/Kg) |
| =====                   | ==     | =====  | =====  | =====                  | =====               | =====            |
| 22 Aroclor 1232 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 23 Aroclor 1232 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 24 Aroclor 1232 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 25 Aroclor 1232 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| M 26 Aroclor-1242       |        |        |        | Compound Not Detected. |                     |                  |
| 27 Aroclor 1242 (1)     |        |        |        | Compound Not Detected. |                     |                  |
| 28 Aroclor 1242 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 29 Aroclor 1242 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 30 Aroclor 1242 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 31 Aroclor 1242 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| M 32 Aroclor-1248       |        |        |        | Compound Not Detected. |                     |                  |
| 33 Aroclor 1248 (1)     |        |        |        | Compound Not Detected. |                     |                  |
| 34 Aroclor 1248 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 35 Aroclor 1248 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 36 Aroclor 1248 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 37 Aroclor 1248 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| M 38 Aroclor-1254       |        |        |        | Compound Not Detected. |                     |                  |
| 39 Aroclor 1254 (1)     |        |        |        | Compound Not Detected. |                     |                  |
| 40 Aroclor 1254 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 41 Aroclor 1254 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 42 Aroclor 1254 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 43 Aroclor 1254 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| M 44 Aroclor-1262       |        |        |        | Compound Not Detected. |                     |                  |
| 45 Aroclor 1262 (1)     |        |        |        | Compound Not Detected. |                     |                  |
| 46 Aroclor 1262 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 47 Aroclor 1262 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 48 Aroclor 1262 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 49 Aroclor 1262 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| M 50 Aroclor-1268       |        |        |        | Compound Not Detected. |                     |                  |
| 51 Aroclor 1268 (1)     |        |        |        | Compound Not Detected. |                     |                  |
| 52 Aroclor 1268 (2)     |        |        |        | Compound Not Detected. |                     |                  |
| 53 Aroclor 1268 (3)     |        |        |        | Compound Not Detected. |                     |                  |
| 54 Aroclor 1268 (4)     |        |        |        | Compound Not Detected. |                     |                  |
| 55 Aroclor 1268 (5)     |        |        |        | Compound Not Detected. |                     |                  |
| T 56 Decachlorobiphenyl | 11.765 | 11.764 | 0.001  | 5965955954             | 83.8011             | 83.8             |

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Data File: /chem1/SV0A/GC\_58.i/170320.b/b17032036.d  
Date : 20-MAR-2017 18:44  
Client ID:  
Sample Info: 17-03-1104-32

Instrument: GC\_58.i  
Operator: 944  
Column diameter: 2.00

Column phase:

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# RAW DATA SHEET FOR METHOD: EPA 8082

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC 58  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944  
**D/T ANALYZED:** 2017-03-20 19:02  
**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-23 09:32

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203717032037

**# 33** **CLIENT SAMPLE NUMBER:** B-DU3-ISM4-3

**LCS/MB BATCH:** 170320L02 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.10 g  
**MS/MSD BATCH:** 170320S02 **FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
**UNITS:** ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Aroclor-1016    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1221    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1232    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1242    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1248    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1254    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1260    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1262    | 0.000              | 1.00      | ND          | 50        | w           |
| Aroclor-1268    | 0.000              | 1.00      | ND          | 50        | w           |

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EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032037.d  
Lab Smp Id:  
Inj Date : 20-MAR-2017 19:02  
Operator : 944  
Smp Info : 17-03-1104-33  
Misc Info :  
Comment : Rtx-CLPesticide II  
Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
Meth Date : 20-Mar-2017 16:28 src3  
Cal Date : 14-MAR-2017 15:07  
Als bottle: 37  
Dil Factor: 1.00000  
Integrator: HP Genie  
Target Version: 3.50  
Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD  
Cal File: b17031410.d

Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |       |        |        |                        |  | CONCENTRATIONS |         |
|----------------------------------|-------|--------|--------|------------------------|--|----------------|---------|
|                                  |       |        |        |                        |  | ON-COLUMN      | FINAL   |
| Compounds                        | RT    | EXP RT | DLT RT | RESPONSE               |  | ( ppb)         | (ug/Kg) |
| =====                            | ==    | =====  | =====  | =====                  |  | =====          | =====   |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.652 | 4.647  | 0.005  | 5290580264             |  | 68.0286        | 68.0    |
| M 2 Aroclor-1016                 |       |        |        | Compound Not Detected. |  |                |         |
| 3 Aroclor 1016 (1)               |       |        |        | Compound Not Detected. |  |                |         |
| 4 Aroclor 1016 (2)               |       |        |        | Compound Not Detected. |  |                |         |
| 5 Aroclor 1016 (3)               |       |        |        | Compound Not Detected. |  |                |         |
| 6 Aroclor 1016 (4)               |       |        |        | Compound Not Detected. |  |                |         |
| 7 Aroclor 1016 (5)               |       |        |        | Compound Not Detected. |  |                |         |
| M 8 Aroclor-1260                 |       |        |        | Compound Not Detected. |  |                |         |
| 9 Aroclor 1260 (1)               |       |        |        | Compound Not Detected. |  |                |         |
| 10 Aroclor 1260 (2)              |       |        |        | Compound Not Detected. |  |                |         |
| 11 Aroclor 1260 (3)              |       |        |        | Compound Not Detected. |  |                |         |
| 12 Aroclor 1260 (4)              |       |        |        | Compound Not Detected. |  |                |         |
| 13 Aroclor 1260 (5)              |       |        |        | Compound Not Detected. |  |                |         |
| M 14 Aroclor-1221                |       |        |        | Compound Not Detected. |  |                |         |
| 15 Aroclor 1221 (1)              |       |        |        | Compound Not Detected. |  |                |         |
| 16 Aroclor 1221 (2)              |       |        |        | Compound Not Detected. |  |                |         |
| 17 Aroclor 1221 (3)              |       |        |        | Compound Not Detected. |  |                |         |
| 18 Aroclor 1221 (4)              |       |        |        | Compound Not Detected. |  |                |         |
| 19 Aroclor 1221 (5)              |       |        |        | Compound Not Detected. |  |                |         |
| M 20 Aroclor-1232                |       |        |        | Compound Not Detected. |  |                |         |
| 21 Aroclor 1232 (1)              |       |        |        | Compound Not Detected. |  |                |         |

|                         |        |        |       |            |         | CONCENTRATIONS         |           |       |
|-------------------------|--------|--------|-------|------------|---------|------------------------|-----------|-------|
| Compounds               | RT     | EXP    | RT    | DLT        | RT      | RESPONSE               | ON-COLUMN | FINAL |
|                         |        |        |       |            |         | ( ppb)                 | (ug/Kg)   |       |
| =====                   | ==     | =====  | ===== |            |         | =====                  | =====     | ===== |
| 22 Aroclor 1232 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 23 Aroclor 1232 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 24 Aroclor 1232 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 25 Aroclor 1232 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| M 26 Aroclor-1242       |        |        |       |            |         | Compound Not Detected. |           |       |
| 27 Aroclor 1242 (1)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 28 Aroclor 1242 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 29 Aroclor 1242 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 30 Aroclor 1242 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 31 Aroclor 1242 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| M 32 Aroclor-1248       |        |        |       |            |         | Compound Not Detected. |           |       |
| 33 Aroclor 1248 (1)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 34 Aroclor 1248 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 35 Aroclor 1248 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 36 Aroclor 1248 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 37 Aroclor 1248 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| M 38 Aroclor-1254       |        |        |       |            |         | Compound Not Detected. |           |       |
| 39 Aroclor 1254 (1)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 40 Aroclor 1254 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 41 Aroclor 1254 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 42 Aroclor 1254 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 43 Aroclor 1254 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| M 44 Aroclor-1262       |        |        |       |            |         | Compound Not Detected. |           |       |
| 45 Aroclor 1262 (1)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 46 Aroclor 1262 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 47 Aroclor 1262 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 48 Aroclor 1262 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 49 Aroclor 1262 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| M 50 Aroclor-1268       |        |        |       |            |         | Compound Not Detected. |           |       |
| 51 Aroclor 1268 (1)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 52 Aroclor 1268 (2)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 53 Aroclor 1268 (3)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 54 Aroclor 1268 (4)     |        |        |       |            |         | Compound Not Detected. |           |       |
| 55 Aroclor 1268 (5)     |        |        |       |            |         | Compound Not Detected. |           |       |
| T 56 Decachlorobiphenyl | 11.765 | 11.764 | 0.001 | 5638138533 | 79.1964 | 79.2                   |           |       |

Data File: /chem1/SV0A/GC\_58.i/170320.b/17032037.d

Date : 20-MAR-2017 19:02

Client ID:

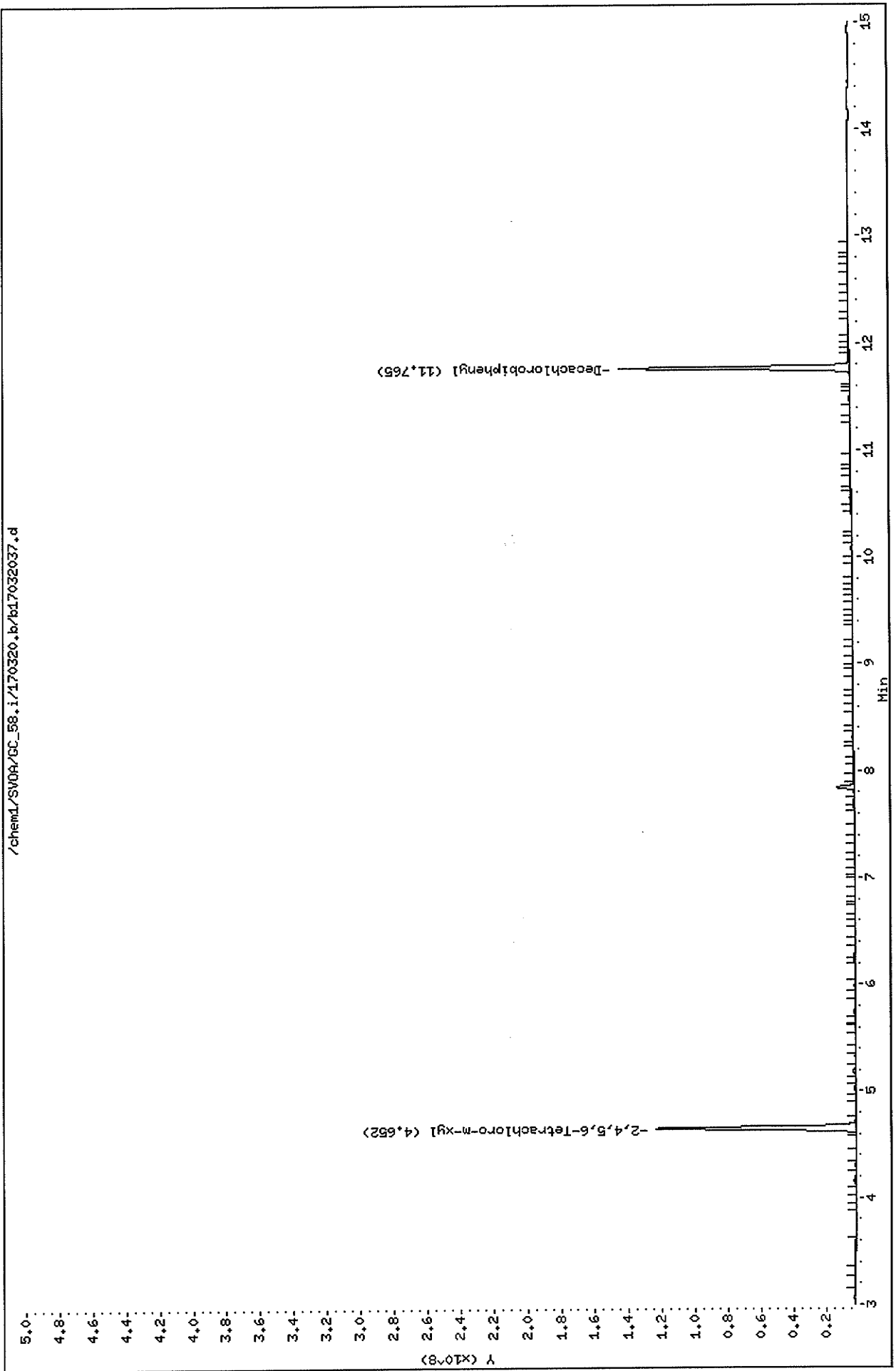
Sample Info: 17-03-1104-33

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



# EPA METHOD 8082

## PCB Aroclors

### Quality Control

### Method Blank

### LCS/LCSD

### MS/MSD

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 8082

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**MB SAMPLE ID:** 099-12-535-4111  
**MB BATCH ID:** 170320L02  
**INSTRUMENT:** GC 58  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944  
**D/T ANALYZED:** 2017-03-20 16:53  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203017032030

### CLIENT WORK ORDER: 17-03-1104

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                           |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------|
| 30        | B-DU3-ISM1-3    |                         | 2017-03-20 18:08    | /chem1/SVOA/GC_58/170320/b1703203417032034 |
| 31        | B-DU3-ISM2-3    |                         | 2017-03-20 18:26    | /chem1/SVOA/GC_58/170320/b1703203517032035 |
| 32        | B-DU3-ISM3-3    |                         | 2017-03-20 18:44    | /chem1/SVOA/GC_58/170320/b1703203617032036 |
| 33        | B-DU3-ISM4-3    |                         | 2017-03-20 19:02    | /chem1/SVOA/GC_58/170320/b1703203717032037 |

  
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**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 099-12-535  
**INSTRUMENT:** GC 58  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 944  
**D/T ANALYZED:** 2017-03-20 16:53  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** /chem1/SVOA/GC\_58/170320/b1703203017032030

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

|                                |                                                                  |
|--------------------------------|------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170320L02 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 1.00 / ACTUAL: 1.00      |
| <b>MS/MSD BATCH:</b>           | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 1.00 ml / ACTUAL: 1.00 ml |
| <b>UNITS:</b> ug/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 1.00                              |

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Aroclor-1016    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1221    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1232    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1242    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1248    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1254    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1260    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1262    | 0.000              | 1.00      | ND          | 50        |             |
| Aroclor-1268    | 0.000              | 1.00      | ND          | 50        |             |

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# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8082

LCS SAMPLE ID: 099-12-535- 4111  
LCS/MB BATCH ID: 170320L02  
INSTRUMENT: GC 58

EXTRACTION: EPA 3545  
D/T EXTRACTED: 2017-03-20 00:00

ANALYZED BY: 944  
D/T ANALYZED: 2017-03-20 17:11  
REVIEWED BY:  
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC\_58/170320/b/1703203117032031

| <u>COMPOUND NAME</u> | <u>CONC ADDED</u> | <u>CONC REC</u> | <u>%RECOVERY</u> | <u>%REC CONTROL LIMIT</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|----------------------|-------------------|-----------------|------------------|---------------------------|---------------|-------------------|
| Aroclor-1016         | 100.0             | 88.00           | 88               | 50-135                    | PASS          |                   |
| Aroclor-1260         | 100.0             | 91.00           | 91               | 50-135                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

SPIKED SAMPLE ID: 17-03-1104-30  
MS/MSD BATCH: 170320S02  
INSTRUMENTS:  
SAMPLE: GC 58  
MS: GC 58  
MSD: GC 58

EXTRACTION: EPA 3545  
D/T EXTRACTED:  
SAMPLE: 2017-03-20 00:00  
MS: 2017-03-20 00:00  
MSD: 2017-03-20 00:00

ANALYZED BY: 944  
D/T ANALYZED:  
SAMPLE: 2017-03-20 18:08  
MS: 2017-03-20 17:32  
MSD: 2017-03-20 17:50  
REVIEWED BY:  
D/T REVIEWED:

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL | FINAL | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC.CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|---------|-------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Aroclor-1016  | ND     | 200.0   | 100.0 | 86.00   | 86       | 87.00    | 87        | 50-135   | 1   | 0-20   | PASS   |            |
| Aroclor-1260  | ND     | 200.0   | 100.0 | 85.00   | 85       | 82.50    | 82        | 50-135   | 3   | 0-20   | PASS   |            |

Data Files:

| TYPE | DATA FILE | DATA FILE PATH                     |
|------|-----------|------------------------------------|
| MS   | 17032032  | /chem1/SVOA/GC_58/170320/b17032032 |
| MSD  | 17032033  | /chem1/SVOA/GC_58/170320/b17032033 |

## SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-03-1104

BATCH ID:

LCS/MB: 170320L02MS: 170320S02

EXTRACTION: EPA 3545

REVIEWED BY:D/T REVIEWED:# 30 CLIENT SAMPLE NUMBER : B-DU3-ISM1-3INSTRUMENT: GC 58D/T EXTRACTED: 2017-03-20 00:00DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203417032034ANALYZED BY: 944D/T ANALYZED 2017-03-20 18:08COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 81           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 69           | 25-145          | PASS          |                   |

# 31 CLIENT SAMPLE NUMBER : B-DU3-ISM2-3INSTRUMENT: GC 58D/T EXTRACTED: 2017-03-20 00:00DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203517032035ANALYZED BY: 944D/T ANALYZED 2017-03-20 18:26COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 79           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 66           | 25-145          | PASS          |                   |

# 32 CLIENT SAMPLE NUMBER : B-DU3-ISM3-3INSTRUMENT: GC 58D/T EXTRACTED: 2017-03-20 00:00DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203617032036ANALYZED BY: 944D/T ANALYZED 2017-03-20 18:44COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 84           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 72           | 25-145          | PASS          |                   |

# 33 CLIENT SAMPLE NUMBER : B-DU3-ISM4-3INSTRUMENT: GC 58D/T EXTRACTED: 2017-03-20 00:00DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203717032037ANALYZED BY: 944D/T ANALYZED 2017-03-20 19:02COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 79           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 68           | 25-145          | PASS          |                   |

# SURROGATE RECOVERIES FOR METHOD: EPA 8082

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WORK ORDER: 17-03-1104

BATCH ID:

**LCS/MB:** 170320L02**MS:**

EXTRACTION: EPA 3545

REVIEWED BY:

D/T REVIEWED:

# **MB** CLIENT SAMPLE NUMBER : **Method Blank**

INSTRUMENT: GC 58  
D/T EXTRACTED: 2017-03-20 00:00  
DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203017032030

ANALYZED BY: 944  
D/T ANALYZED 2017-03-20 16:53

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 78    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 68    | 25-145   | PASS   |            |

# **LCS** CLIENT SAMPLE NUMBER : **Lab Control Sample**

INSTRUMENT: GC 58  
D/T EXTRACTED: 2017-03-20 00:00  
DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203117032031

ANALYZED BY: 944  
D/T ANALYZED 2017-03-20 17:11

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 81    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 69    | 25-145   | PASS   |            |

# **MS** CLIENT SAMPLE NUMBER : **Matrix Spike**

INSTRUMENT: GC 58  
D/T EXTRACTED: 2017-03-20 00:00  
DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203217032032

ANALYZED BY: 944  
D/T ANALYZED 2017-03-20 17:32

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 74    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 62    | 25-145   | PASS   |            |

# **MSD** CLIENT SAMPLE NUMBER : **Matrix Spike Duplicate**

INSTRUMENT: GC 58  
D/T EXTRACTED: 2017-03-20 00:00  
DATA FILE: /chem1/SVOA/GC\_58/170320/b1703203317032033

ANALYZED BY: 944  
D/T ANALYZED 2017-03-20 17:50

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 75    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 64    | 25-145   | PASS   |            |

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032030.d  
 Report Date: 20-Mar-2017 17:16

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032030.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 16:53  
 Operator : 944  
 Smp Info : MB 170320L02  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 20-Mar-2017 16:28 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 30  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i

Quant Type: ESTD

Cal File: b17031410.d

QC Sample: BLANK

Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |                              | CONCENTRATIONS |        |        |                        |          |
|-----------|------------------------------|----------------|--------|--------|------------------------|----------|
|           |                              | ON-COLUMN      |        |        | FINAL                  |          |
| Compounds |                              | RT             | EXP RT | DLT RT | RESPONSE               | ( ug/Kg) |
| =====     |                              | ==             | =====  | =====  | =====                  | =====    |
| T 1       | 2,4,5,6-Tetrachloro-m-xylene | 4.649          | 4.647  | 0.002  | 5323779200             | 68.4555  |
| M 2       | Aroclor-1016                 |                |        |        | Compound Not Detected. | 68.4     |
|           | 3 Aroclor 1016 (1)           |                |        |        | Compound Not Detected. |          |
|           | 4 Aroclor 1016 (2)           |                |        |        | Compound Not Detected. |          |
|           | 5 Aroclor 1016 (3)           |                |        |        | Compound Not Detected. |          |
|           | 6 Aroclor 1016 (4)           |                |        |        | Compound Not Detected. |          |
|           | 7 Aroclor 1016 (5)           |                |        |        | Compound Not Detected. |          |
| M 8       | Aroclor-1260                 |                |        |        | Compound Not Detected. |          |
|           | 9 Aroclor 1260 (1)           |                |        |        | Compound Not Detected. |          |
|           | 10 Aroclor 1260 (2)          |                |        |        | Compound Not Detected. |          |
|           | 11 Aroclor 1260 (3)          |                |        |        | Compound Not Detected. |          |
|           | 12 Aroclor 1260 (4)          |                |        |        | Compound Not Detected. |          |
|           | 13 Aroclor 1260 (5)          |                |        |        | Compound Not Detected. |          |
| M 14      | Aroclor-1221                 |                |        |        | Compound Not Detected. |          |
|           | 15 Aroclor 1221 (1)          |                |        |        | Compound Not Detected. |          |
|           | 16 Aroclor 1221 (2)          |                |        |        | Compound Not Detected. |          |
|           | 17 Aroclor 1221 (3)          |                |        |        | Compound Not Detected. |          |
|           | 18 Aroclor 1221 (4)          |                |        |        | Compound Not Detected. |          |
|           | 19 Aroclor 1221 (5)          |                |        |        | Compound Not Detected. |          |
| M 20      | Aroclor-1232                 |                |        |        | Compound Not Detected. |          |
|           | 21 Aroclor 1232 (1)          |                |        |        | Compound Not Detected. |          |

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032030.d  
 Report Date: 20-Mar-2017 17:16

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| Compounds               | RT     | EXP    | RT    | DLT        | RT                     | RESPONSE | CONCENTRATIONS |         |
|-------------------------|--------|--------|-------|------------|------------------------|----------|----------------|---------|
|                         |        |        |       |            |                        |          | ON-COLUMN      | FINAL   |
|                         |        |        |       |            |                        |          | ( ppb)         | (ug/Kg) |
| =====                   | ==     | =====  | ===== | =====      | =====                  | =====    | =====          | =====   |
| 22 Aroclor 1232 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 23 Aroclor 1232 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 24 Aroclor 1232 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 25 Aroclor 1232 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| M 26 Aroclor-1242       |        |        |       |            | Compound Not Detected. |          |                |         |
| 27 Aroclor 1242 (1)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 28 Aroclor 1242 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 29 Aroclor 1242 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 30 Aroclor 1242 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 31 Aroclor 1242 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| M 32 Aroclor-1248       |        |        |       |            | Compound Not Detected. |          |                |         |
| 33 Aroclor 1248 (1)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 34 Aroclor 1248 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 35 Aroclor 1248 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 36 Aroclor 1248 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 37 Aroclor 1248 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| M 38 Aroclor-1254       |        |        |       |            | Compound Not Detected. |          |                |         |
| 39 Aroclor 1254 (1)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 40 Aroclor 1254 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 41 Aroclor 1254 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 42 Aroclor 1254 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 43 Aroclor 1254 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| M 44 Aroclor-1262       |        |        |       |            | Compound Not Detected. |          |                |         |
| 45 Aroclor 1262 (1)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 46 Aroclor 1262 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 47 Aroclor 1262 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 48 Aroclor 1262 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 49 Aroclor 1262 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| M 50 Aroclor-1268       |        |        |       |            | Compound Not Detected. |          |                |         |
| 51 Aroclor 1268 (1)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 52 Aroclor 1268 (2)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 53 Aroclor 1268 (3)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 54 Aroclor 1268 (4)     |        |        |       |            | Compound Not Detected. |          |                |         |
| 55 Aroclor 1268 (5)     |        |        |       |            | Compound Not Detected. |          |                |         |
| T 56 Decachlorobiphenyl | 11.765 | 11.764 | 0.001 | 5537814923 | 77.7872                |          | 77.8           |         |

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Data File: /chem1/SV00A/GC\_58.i/170320.b/b17032030.d

Date : 20-HAR-2017 16:53

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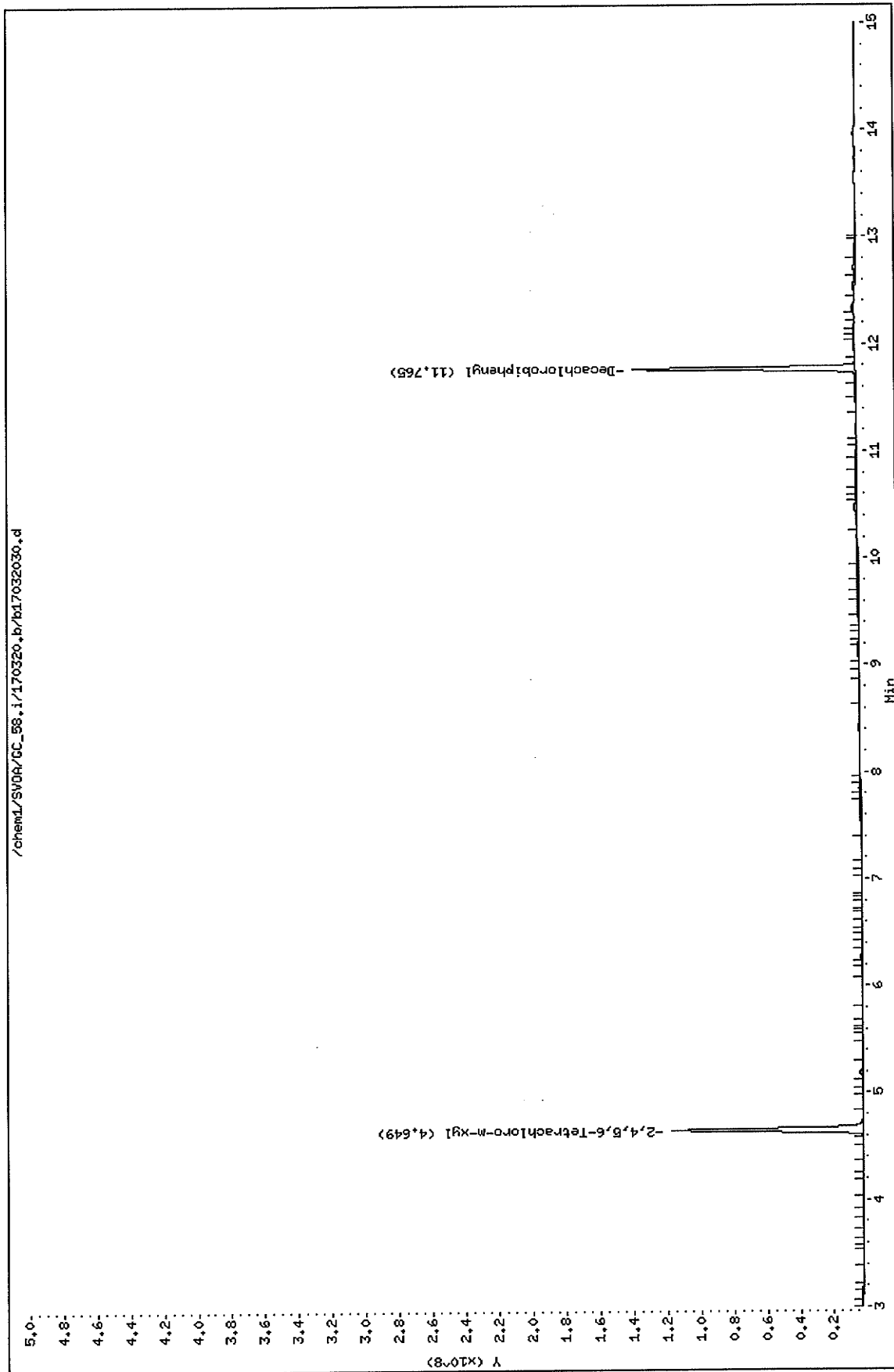
Sample Info: MB 170320L02

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032031.d  
 Report Date: 20-Mar-2017 17:50

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032031.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 17:11  
 Operator : 944  
 Smp Info : LCS 170320L02  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 20-Mar-2017 16:28 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 31  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i  
 Quant Type: ESTD  
 Cal File: b17031410.d  
 QC Sample: LCS  
 Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |                                |        |        |        |            | CONCENTRATIONS      |                  |
|-----------|--------------------------------|--------|--------|--------|------------|---------------------|------------------|
| Compounds |                                | RT     | EXP RT | DLT RT | RESPONSE   | ON-COLUMN<br>( ppb) | FINAL<br>(ug/Kg) |
| =====     |                                | ==     | =====  | =====  | =====      | =====               | =====            |
| T         | 1 2,4,5,6-Tetrachloro-m-xylene | 4.650  | 4.647  | 0.003  | 5368343354 | 69.0285             | 69.0             |
| M         | 2 Aroclor-1016                 |        |        |        | 1879058855 | 176.375             | 176              |
|           | 3 Aroclor 1016 (1)             | 5.350  | 5.349  | 0.001  | 203102733  | 172.011             | 172              |
|           | 4 Aroclor 1016 (2)             | 5.889  | 5.888  | 0.001  | 358558425  | 162.384             | 162              |
|           | 5 Aroclor 1016 (3)             | 6.466  | 6.465  | 0.001  | 782612938  | 184.928             | 185              |
|           | 6 Aroclor 1016 (4)             | 6.634  | 6.633  | 0.001  | 327756216  | 169.279             | 169              |
|           | 7 Aroclor 1016 (5)             | 6.760  | 6.758  | 0.002  | 207028543  | 188.761             | 189              |
| M         | 8 Aroclor-1260                 |        |        |        | 2009583968 | 181.847             | 182              |
|           | 9 Aroclor 1260 (1)             | 8.920  | 8.918  | 0.002  | 596054138  | 194.952             | 195              |
|           | 10 Aroclor 1260 (2)            | 9.430  | 9.428  | 0.002  | 449259935  | 163.429             | 163              |
|           | 11 Aroclor 1260 (3)            | 9.764  | 9.763  | 0.001  | 478754630  | 178.028             | 178              |
|           | 12 Aroclor 1260 (4)            | 10.927 | 10.924 | 0.003  | 142694844  | 152.035             | 152              |
|           | 13 Aroclor 1260 (5)            | 11.107 | 11.105 | 0.002  | 342820421  | 212.041             | 212              |
| T         | 56 Decachlorobiphenyl          | 11.765 | 11.764 | 0.001  | 5744658734 | 80.6927             | 80.7             |

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Data File: /chem1/SV0A/GC\_58.i/170320.b/b17032031.d

Date : 20-MAR-2017 17:11

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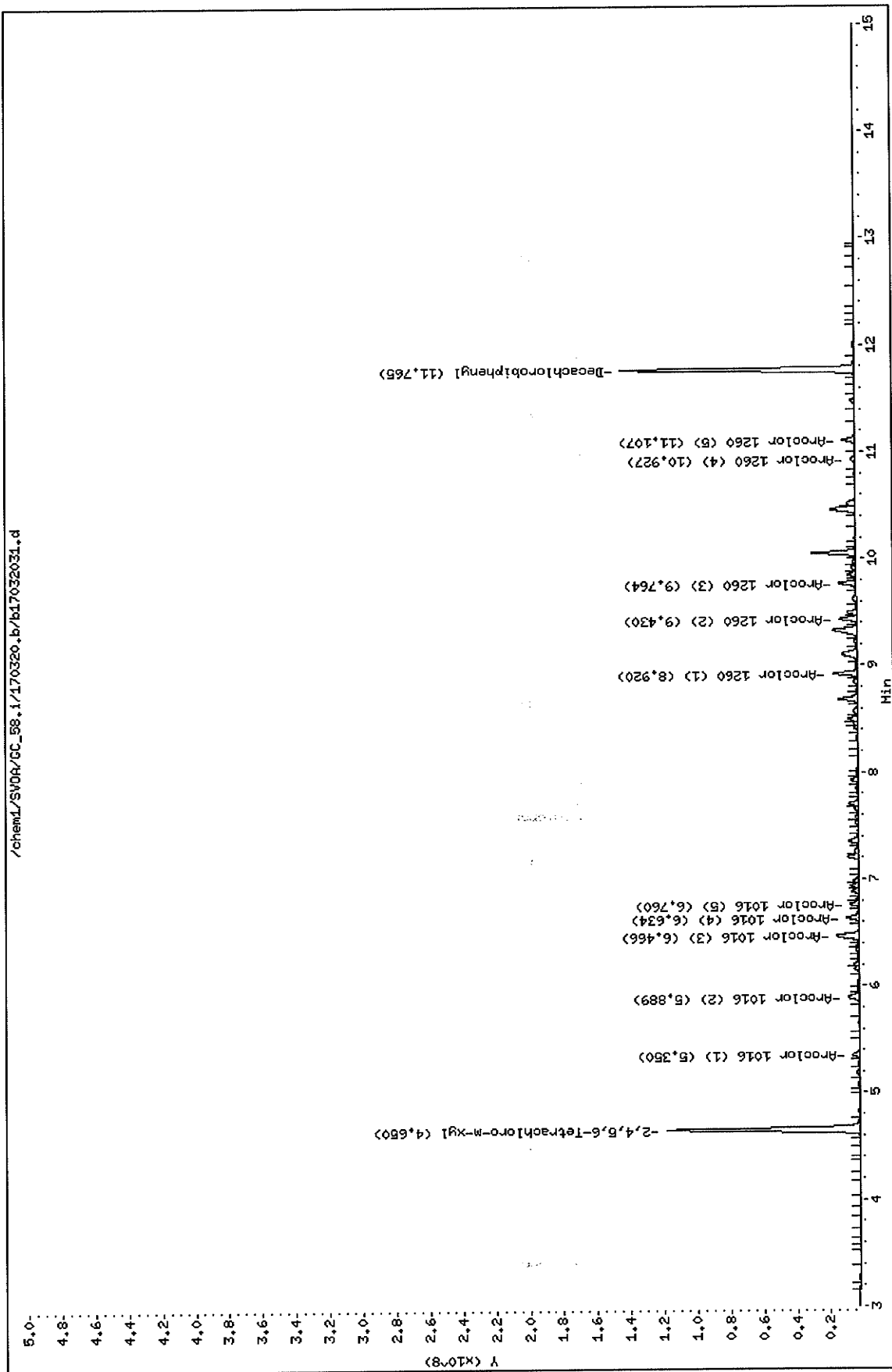
Sample Info: LCS 170320L02

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032032.d  
 Report Date: 20-Mar-2017 17:56

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032032.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 17:32  
 Operator : 944 Inst ID: GC\_58.i  
 Smp Info : MS 17-03-1104-30 170320S02  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 20-Mar-2017 16:28 src3 Quant Type: ESTD  
 Cal Date : 14-MAR-2017 15:07 Cal File: b17031410.d  
 Als bottle: 32 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1016\_1260.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |                                |        |        |        |            | CONCENTRATIONS      |                  |
|-----------|--------------------------------|--------|--------|--------|------------|---------------------|------------------|
| Compounds |                                | RT     | EXP RT | DLT RT | RESPONSE   | ON-COLUMN<br>( ppb) | FINAL<br>(ug/Kg) |
| =====     |                                | ==     | =====  | =====  | =====      | =====               | =====            |
| T         | 1 2,4,5,6-Tetrachloro-m-xylene | 4.644  | 4.647  | -0.003 | 4855155304 | 62.4297             | 62.4             |
| M         | 2 Aroclor-1016                 |        |        |        | 1834050358 | 172.150             | 172              |
|           | 3 Aroclor 1016 (1)             | 5.346  | 5.349  | -0.003 | 230867226  | 195.526             | 196              |
|           | 4 Aroclor 1016 (2)             | 5.886  | 5.888  | -0.002 | 348031025  | 157.617             | 158              |
|           | 5 Aroclor 1016 (3)             | 6.463  | 6.465  | -0.002 | 765424312  | 180.866             | 181              |
|           | 6 Aroclor 1016 (4)             | 6.632  | 6.633  | -0.001 | 298626247  | 154.234             | 154              |
|           | 7 Aroclor 1016 (5)             | 6.758  | 6.758  | 0.000  | 191101548  | 174.239             | 174              |
| M         | 8 Aroclor-1260                 |        |        |        | 1874147440 | 169.592             | 170              |
|           | 9 Aroclor 1260 (1)             | 8.920  | 8.918  | 0.002  | 556422902  | 181.990             | 182              |
|           | 10 Aroclor 1260 (2)            | 9.430  | 9.428  | 0.002  | 407245572  | 148.145             | 148              |
|           | 11 Aroclor 1260 (3)            | 9.764  | 9.763  | 0.001  | 458877587  | 170.636             | 171              |
|           | 12 Aroclor 1260 (4)            | 10.926 | 10.924 | 0.002  | 138179219  | 147.224             | 147              |
|           | 13 Aroclor 1260 (5)            | 11.107 | 11.105 | 0.002  | 313422160  | 193.858             | 194              |
| T         | 56 Decachlorobiphenyl          | 11.766 | 11.764 | 0.002  | 5305837028 | 74.5287             | 74.5             |

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Data File: /chem1/SV00A/GC\_58.i/170320.b/b17032032.d

Date : 20-HAR-2017 17:32

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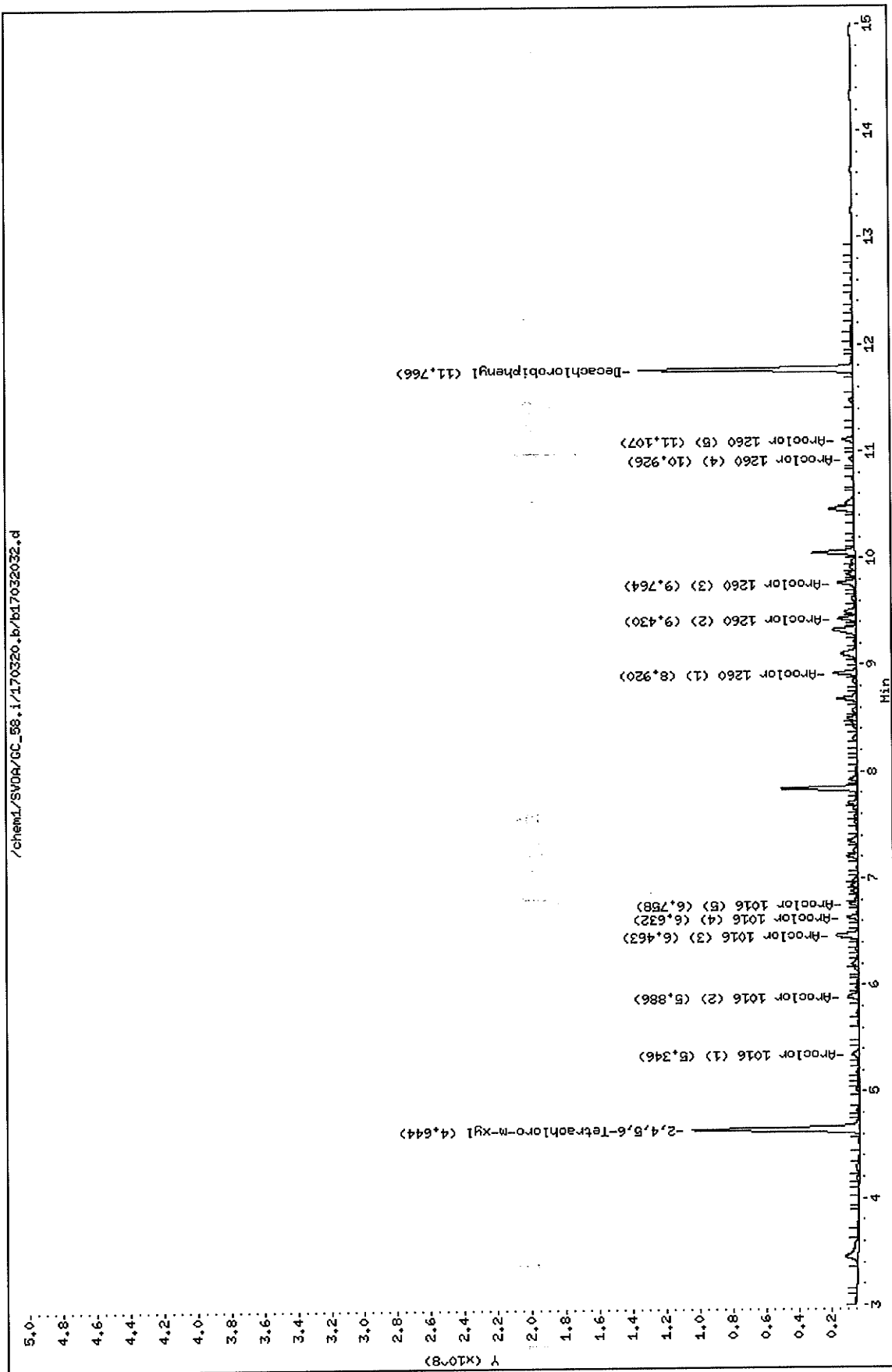
Sample Info: MS 17-03-1104-30 170320S02

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032033.d  
 Report Date: 21-Mar-2017 09:02

Page 1

## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032033.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 17:50  
 Operator : 944  
 Smp Info : MSD 17-03-1104-30 170320S02  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 20-Mar-2017 16:28 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 33  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i  
 Quant Type: ESTD  
 Cal File: b17031410.d  
 QC Sample: MSD  
 Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                  |        |        |        |            |  | CONCENTRATIONS |         |
|----------------------------------|--------|--------|--------|------------|--|----------------|---------|
|                                  |        |        |        |            |  | ON-COLUMN      | FINAL   |
| Compounds                        | RT     | EXP RT | DLT RT | RESPONSE   |  | ( ppb)         | (ug/Kg) |
| =====                            | ==     | =====  | =====  | =====      |  | =====          | =====   |
| T 1 2,4,5,6-Tetrachloro-m-xylene | 4.650  | 4.647  | 0.003  | 5004668588 |  | 64.3522        | 64.4    |
| M 2 Aroclor-1016                 |        |        |        | 1854340388 |  | 174.054        | 174     |
| 3 Aroclor 1016 (1)               | 5.351  | 5.349  | 0.002  | 198836598  |  | 168.398        | 168     |
| 4 Aroclor 1016 (2)               | 5.890  | 5.888  | 0.002  | 357944774  |  | 162.106        | 162     |
| 5 Aroclor 1016 (3)               | 6.467  | 6.465  | 0.002  | 769070161  |  | 181.728        | 182     |
| 6 Aroclor 1016 (4)               | 6.635  | 6.633  | 0.002  | 324214378  |  | 167.450        | 167     |
| 7 Aroclor 1016 (5)               | 6.761  | 6.758  | 0.003  | 204274477  |  | 186.250        | 186     |
| M 8 Aroclor-1260                 |        |        |        | 1821040774 |  | 164.786        | 165     |
| 9 Aroclor 1260 (1)               | 8.921  | 8.918  | 0.003  | 536146172  |  | 175.358        | 175     |
| 10 Aroclor 1260 (2)              | 9.431  | 9.428  | 0.003  | 408576648  |  | 148.630        | 149     |
| 11 Aroclor 1260 (3)              | 9.765  | 9.763  | 0.002  | 430834156  |  | 160.208        | 160     |
| 12 Aroclor 1260 (4)              | 10.926 | 10.924 | 0.002  | 130540465  |  | 139.085        | 139     |
| 13 Aroclor 1260 (5)              | 11.107 | 11.105 | 0.002  | 314943333  |  | 194.798        | 195     |
| T 56 Decachlorobiphenyl          | 11.766 | 11.764 | 0.002  | 5341629579 |  | 75.0315        | 75.0    |

Page 1

Data File: /chem1/SV00A/GC\_58.i/170320.b/b17032033.d

Date : 20-HAR-2017 17:50

Client ID:

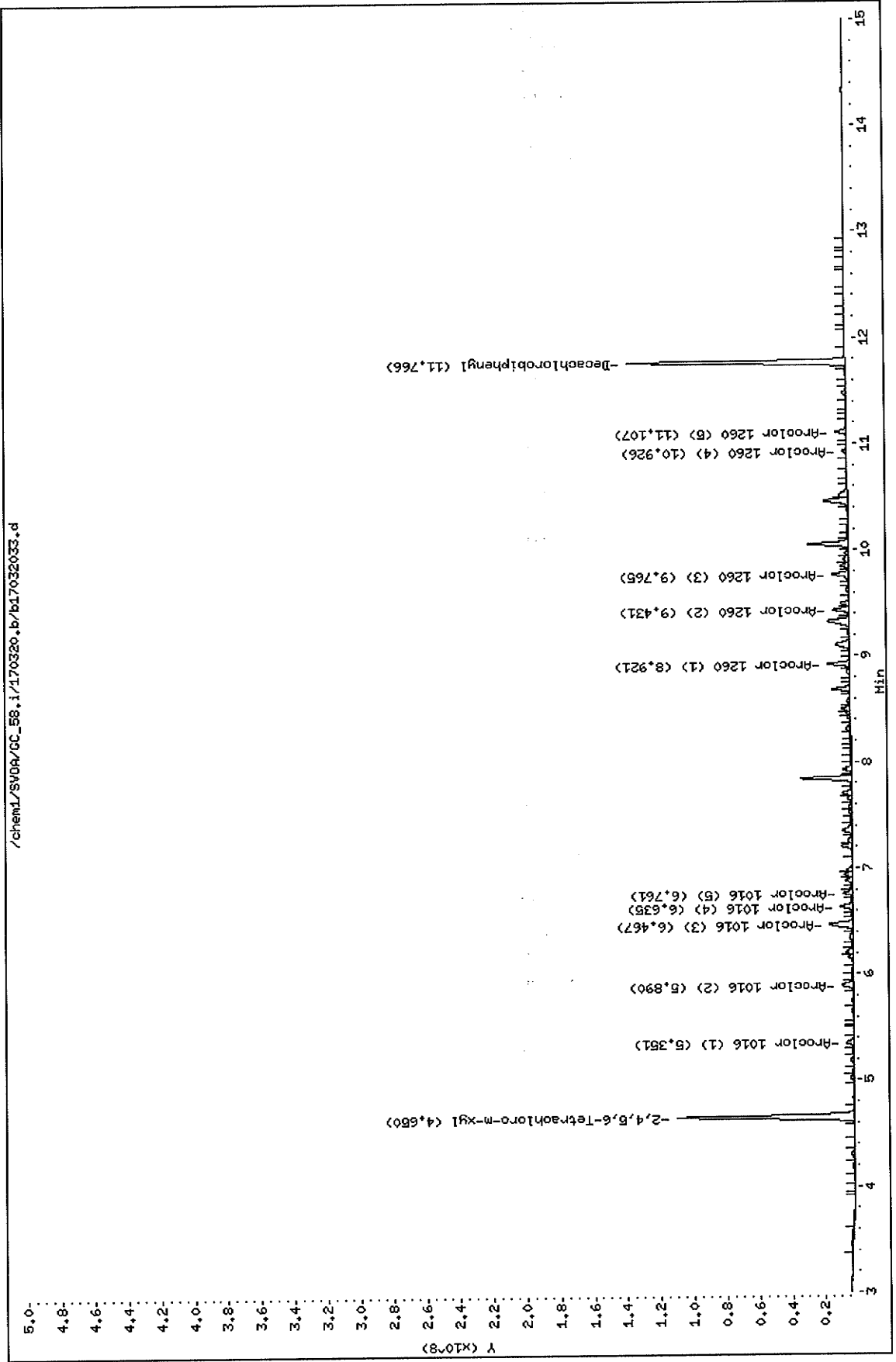
Sample Info: MSD 17-03-1104-30 170320S02

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



# EPA METHOD 8082

## PCB Aroclors

### Continuing Calibration

# CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8082

**BATCH ID:** 170320A004  
**INSTRUMENT:** GC 58

**ANALYZED BY:** 944

**WORK ORDER:** 099-12-532  
**MATRIX:** Water

**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-20 18:12

| <u>CEL</u><br><u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                           |
|-------------------------------|-------------------------|---------------------|--------------------------------------------|
| 9466                          | Daily Calibration       | 2017-03-20 15:54    | /chem1/SVOA/GC_58/170320/b1703202717032027 |

**WORK ORDER:** 17-03-1104  
**MATRIX:** Soil

**REVIEWED BY:**  
**D/T REVIEWED:**

| <u>CEL</u><br><u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                           |
|-------------------------------|-------------------------|---------------------|--------------------------------------------|
| 30                            | B-DU3-ISM1-3            | 2017-03-20 17:32    | /chem1/SVOA/GC_58/170320/b1703203217032032 |
| 30                            | B-DU3-ISM1-3            | 2017-03-20 17:50    | /chem1/SVOA/GC_58/170320/b1703203317032033 |
| 30                            | B-DU3-ISM1-3            | 2017-03-20 18:08    | /chem1/SVOA/GC_58/170320/b1703203417032034 |
| 31                            | B-DU3-ISM2-3            | 2017-03-20 18:26    | /chem1/SVOA/GC_58/170320/b1703203517032035 |
| 32                            | B-DU3-ISM3-3            | 2017-03-20 18:44    | /chem1/SVOA/GC_58/170320/b1703203617032036 |
| 33                            | B-DU3-ISM4-3            | 2017-03-20 19:02    | /chem1/SVOA/GC_58/170320/b1703203717032037 |

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9466-5154

BATCH ID:

170314I001

170320A004

GC 58

INITIAL:

CCV:

INSTRUMENT:

DATA FILE:

/chem1/SVOA/GC\_58/170320/b1703202717032027

ANALYZED BY: 944

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2017-03-14 12:57

2017-03-20 15:54

421

2017-03-20 18:12

| COMPOUND NAME | TYPE | CALIB MODEL | MIN RF | AVG RF       | CCV RF       | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------|------|-------------|--------|--------------|--------------|--------|----------|--------|-----------|--------|
| Aroclor-1016  | C    | Avg Resp    | 0.00   | 10653795.233 | 10458189.766 |        |          | 2      | 0-15      | PASS   |
| Aroclor-1260  | C    | Avg Resp    | 0.00   | 11050938.420 | 10462720.534 |        |          | 5      | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032027.d  
 Report Date: 03/20/2017 16:29

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_58.i      Injection Date and Time: 20-MAR-2017 15:54  
 Sample Name: PCB CCV 500 PPB P021517I      Initial Calibration Date(s): 04-OCT-2016    14-MAR-2017  
 Sublist used: p1016\_1260.sub      Initial Calibration Time(s):      21:49      15:07  
 Method used: /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
|------------------------------|--------------------|--------------|----------|-------------|---------------|------------|
| =====                        |                    |              |          |             |               |            |
| Aroclor-1016                 | 10653795.233       | 10458189.766 | 0.01     | 2           | 15            | Averaged   |
| Aroclor 1016 (1)             | 1180751.717        | 1041631.004  | 0.01     | 12          | 15            | Averaged   |
| Aroclor 1016 (2)             | 2208084.188        | 1987503.318  | 0.01     | 10          | 15            | Averaged   |
| Aroclor 1016 (3)             | 4231992.885        | 4437116.170  | 0.01     | -5          | 15            | Averaged   |
| Aroclor 1016 (4)             | 1936191.176        | 1813305.374  | 0.01     | 6           | 15            | Averaged   |
| Aroclor 1016 (5)             | 1096775.268        | 1178633.900  | 0.01     | -7          | 15            | Averaged   |
| Aroclor 1260 (4)             | 938562.907         | 723745.700   | 0.01     | 23          | 15            | Averaged   |
| Aroclor-1260                 | 11050938.420       | 10462720.534 | 0.01     | 5           | 15            | Averaged   |
| Aroclor 1260 (5)             | 1616765.700        | 1683846.272  | 0.01     | -4          | 15            | Averaged   |
| Aroclor 1260 (1)             | 3057436.633        | 3076031.808  | 0.01     | -1          | 15            | Averaged   |
| Aroclor 1260 (2)             | 2748959.018        | 2414933.350  | 0.01     | 12          | 15            | Averaged   |
| Aroclor 1260 (3)             | 2689214.162        | 2564163.404  | 0.01     | 5           | 15            | Averaged   |
| =====                        |                    |              |          |             |               |            |
| Surrogate Standards          | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
| =====                        |                    |              |          |             |               |            |
| 2,4,5,6-Tetrachloro-m-xylene | 77769923.209       | 71978184.331 | 0.01     | 7           | 15            | Averaged   |
| Decachlorobiphenyl           | 71191842.305       | 70631971.593 | 0.01     | 1           | 15            | Averaged   |

<-Failed

page 1

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032027.d  
 Report Date: 20-Mar-2017 16:28

Page 1

## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032027.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 15:54  
 Operator : 944  
 Smp Info : PCB CCV 500 PPB P021517I  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 20-Mar-2017 16:28 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 27  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i  
 Quant Type: ESTD  
 Cal File: b17031410.d  
 Continuing Calibration Sample  
 Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |                                |        |        |        |            | AMOUNTS  |        |
|-----------|--------------------------------|--------|--------|--------|------------|----------|--------|
|           |                                |        |        |        |            | CAL-AMT  | ON-COL |
|           |                                |        |        |        |            | ( ppb)   | ( ppb) |
| Compounds |                                | RT     | EXP RT | DLT RT | RT         | RESPONSE |        |
| =====     |                                | ==     | =====  | =====  |            | =====    | =====  |
| T         | 1 2,4,5,6-Tetrachloro-m-xylene | 4.648  | 4.647  | 0.001  | 7197818433 | 100.000  | 92.6   |
| M         | 2 Aroclor-1016                 |        |        |        | 5229094883 | 500.000  | 491    |
|           | 3 Aroclor 1016 (1)             | 5.350  | 5.349  | 0.001  | 520815502  | 500.000  | 441    |
|           | 4 Aroclor 1016 (2)             | 5.890  | 5.888  | 0.002  | 993751659  | 500.000  | 450    |
|           | 5 Aroclor 1016 (3)             | 6.467  | 6.465  | 0.002  | 2218558085 | 500.000  | 524    |
|           | 6 Aroclor 1016 (4)             | 6.635  | 6.633  | 0.002  | 906652687  | 500.000  | 468    |
|           | 7 Aroclor 1016 (5)             | 6.760  | 6.758  | 0.002  | 589316950  | 500.000  | 537    |
| M         | 8 Aroclor-1260                 |        |        |        | 5231360267 | 500.000  | 473    |
|           | 9 Aroclor 1260 (1)             | 8.921  | 8.918  | 0.003  | 1538015904 | 500.000  | 503    |
|           | 10 Aroclor 1260 (2)            | 9.431  | 9.428  | 0.003  | 1207466675 | 500.000  | 439    |
|           | 11 Aroclor 1260 (3)            | 9.765  | 9.763  | 0.002  | 1282081702 | 500.000  | 477    |
|           | 12 Aroclor 1260 (4)            | 10.927 | 10.924 | 0.003  | 361872850  | 500.000  | 386    |
|           | 13 Aroclor 1260 (5)            | 11.109 | 11.105 | 0.004  | 841923136  | 500.000  | 521    |
| T         | 56 Decachlorobiphenyl          | 11.766 | 11.764 | 0.002  | 7063197159 | 100.000  | 99.2   |

Page 1

Data File: /chem1/SV04/GC\_58.i/170320.b/b17032027.d

Date : 20-HAR-2017 15:54

Client ID:

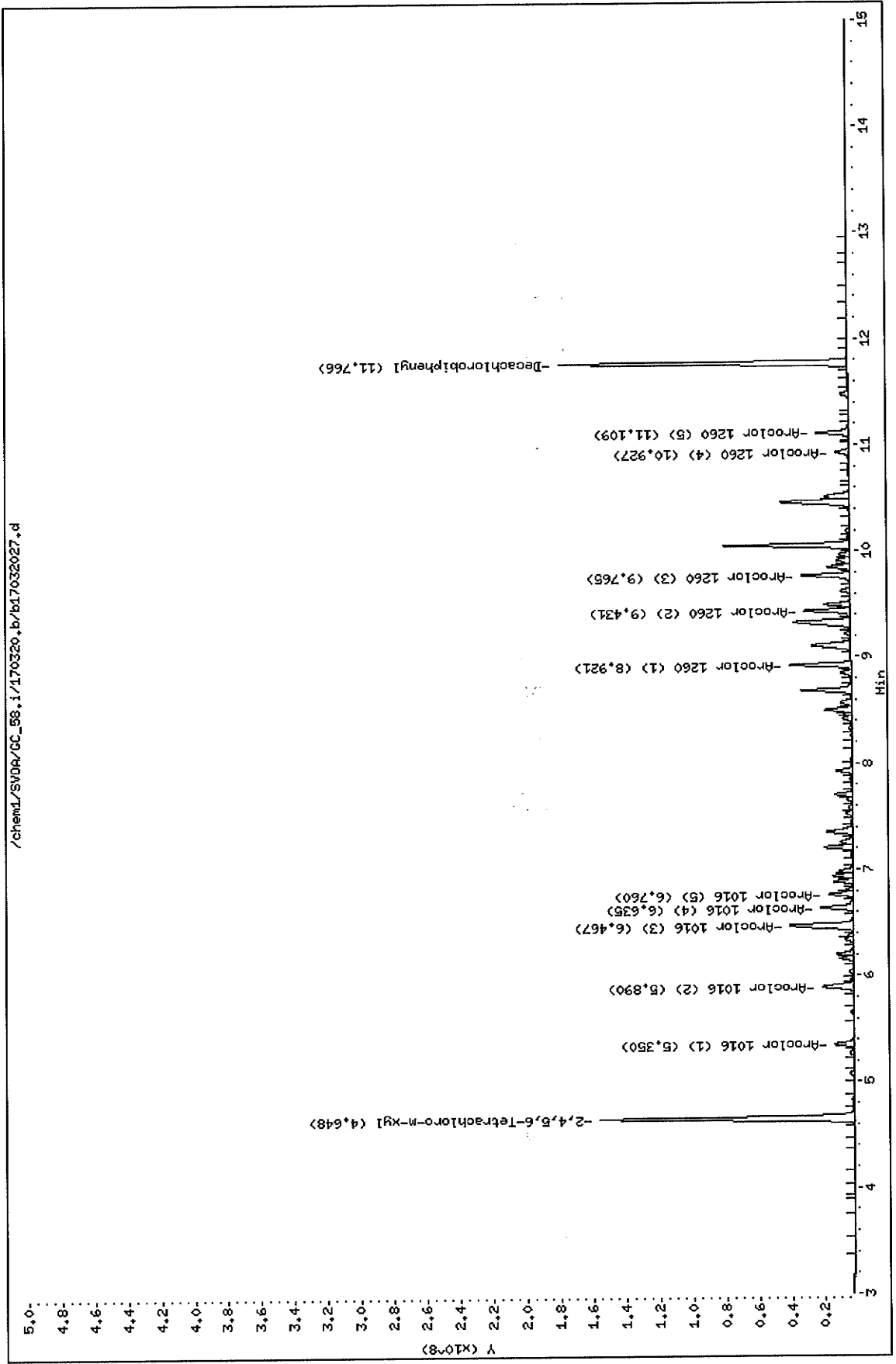
Sample Info: PCB CCV 500 PPB P0215171

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9479-5154

BATCH ID:

170314I001

INITIAL:

170320A005

CCV:

GC 58

INSTRUMENT:

DATA FILE: /chem1/SVOA/GC\_58/170320/b/1703203817032038

ANALYZED BY: 944

D/T ANALYZED:

INITIAL:

2017-03-14 12:57

CCV:

2017-03-20 19:44

REVIEWED BY:

D/T REVIEWED:

| COMPOUND NAME | TYPE | CALIB MODEL | MIN RF | AVG RF       | CCV RF       | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------|------|-------------|--------|--------------|--------------|--------|----------|--------|-----------|--------|
| Aroclor-1016  | C    | Avg Resp    | 0.00   | 10653795.233 | 10255410.710 |        |          | 4      | 0-15      | PASS   |
| Aroclor-1260  | C    | Avg Resp    | 0.00   | 11050938.420 | 10186758.656 |        |          | 8      | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032038.d  
 Report Date: 03/21/2017 09:03

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_58.i      Injection Date and Time: 20-MAR-2017 19:44  
 Sample Name: PCB CCV 500 PPB P021517I      Initial Calibration Date(s): 04-OCT-2016    14-MAR-2017  
 Sublist used: p1016\_1260.sub      Initial Calibration Time(s):    21:49    15:07  
 Method used: /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |          |
|------------------------------|--------------------|--------------|----------|-------------|---------------|------------|----------|
| Aroclor-1016                 | 10653795.233       | 10255410.709 | 0.01     | 4           | 15            | Averaged   |          |
| Aroclor 1016 (1)             | 1180751.717        | 992086.008   | 0.01     | 16          | 15            | Averaged   | <-Failed |
| Aroclor 1016 (2)             | 2208084.188        | 1914738.796  | 0.01     | 13          | 15            | Averaged   |          |
| Aroclor 1016 (3)             | 4231992.885        | 4242276.215  | 0.01     | 0           | 15            | Averaged   |          |
| Aroclor 1016 (4)             | 1936191.176        | 1734021.182  | 0.01     | 10          | 15            | Averaged   |          |
| Aroclor 1016 (5)             | 1096775.268        | 1372288.508  | 0.01     | -25         | 15            | Averaged   | <-Failed |
| Aroclor 1260 (4)             | 938562.907         | 702634.088   | 0.01     | 25          | 15            | Averaged   |          |
| Aroclor-1260                 | 11050938.420       | 10186758.656 | 0.01     | 8           | 15            | Averaged   |          |
| Aroclor 1260 (5)             | 1616765.700        | 1621251.500  | 0.01     | 0           | 15            | Averaged   |          |
| Aroclor 1260 (1)             | 3057436.633        | 2981501.672  | 0.01     | 2           | 15            | Averaged   |          |
| Aroclor 1260 (2)             | 2748959.018        | 2339287.726  | 0.01     | 15          | 15            | Averaged   |          |
| Aroclor 1260 (3)             | 2689214.162        | 2542083.670  | 0.01     | 5           | 15            | Averaged   |          |
| Surrogate Standards          | ICAL RRF or Amount | ICV RRF      | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |          |
| 2,4,5,6-Tetrachloro-m-xylene | 77769923.209       | 69166181.670 | 0.01     | 11          | 15            | Averaged   |          |
| Decachlorobiphenyl           | 71191842.305       | 65118919.834 | 0.01     | 9           | 15            | Averaged   |          |

page 1

Data File: /chem1/SVOA/GC\_58.i/170320.b/b17032038.d  
 Report Date: 21-Mar-2017 09:02

Page 1

## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_58.i/170320.b/b17032038.d  
 Lab Smp Id:  
 Inj Date : 20-MAR-2017 19:44  
 Operator : 944  
 Smp Info : PCB CCV 500 PPB P021517I  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_58.i/170320.b/b8082-n2.m  
 Meth Date : 21-Mar-2017 09:02 src3  
 Cal Date : 14-MAR-2017 15:07  
 Als bottle: 38  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_58.i  
 Quant Type: ESTD  
 Cal File: b17031410.d  
 Continuing Calibration Sample  
 Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|           |    |                              |        |        |        |            | AMOUNTS           |                  |
|-----------|----|------------------------------|--------|--------|--------|------------|-------------------|------------------|
| Compounds |    |                              | RT     | EXP RT | DLT RT | RESPONSE   | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| =====     |    |                              | ==     | =====  | =====  | =====      | =====             | =====            |
| T         | 1  | 2,4,5,6-Tetrachloro-m-xylene | 4.648  | 4.647  | 0.001  | 6916618167 | 100.000           | 88.9             |
| M         | 2  | Aroclor-1016                 |        |        |        | 5127705355 | 500.000           | 481              |
|           | 3  | Aroclor 1016 (1)             | 5.349  | 5.349  | 0.000  | 496043004  | 500.000           | 420              |
|           | 4  | Aroclor 1016 (2)             | 5.888  | 5.888  | 0.000  | 957369398  | 500.000           | 434              |
|           | 5  | Aroclor 1016 (3)             | 6.465  | 6.464  | 0.001  | 2121138108 | 500.000           | 501              |
|           | 6  | Aroclor 1016 (4)             | 6.634  | 6.633  | 0.001  | 867010591  | 500.000           | 448              |
|           | 7  | Aroclor 1016 (5)             | 6.759  | 6.758  | 0.001  | 686144254  | 500.000           | 626              |
| M         | 8  | Aroclor-1260                 |        |        |        | 5093379328 | 500.000           | 461              |
|           | 9  | Aroclor 1260 (1)             | 8.920  | 8.918  | 0.002  | 1490750836 | 500.000           | 488              |
|           | 10 | Aroclor 1260 (2)             | 9.429  | 9.428  | 0.001  | 1169643863 | 500.000           | 425              |
|           | 11 | Aroclor 1260 (3)             | 9.765  | 9.762  | 0.003  | 1271041835 | 500.000           | 473              |
|           | 12 | Aroclor 1260 (4)             | 10.927 | 10.924 | 0.003  | 351317044  | 500.000           | 374              |
|           | 13 | Aroclor 1260 (5)             | 11.108 | 11.105 | 0.003  | 810625750  | 500.000           | 501              |
| T         | 56 | Decachlorobiphenyl           | 11.765 | 11.763 | 0.002  | 6511891983 | 100.000           | 91.5             |

Page 1

Data File: /chem1/SV04/GC\_58.i/170320.b/17032038.d

Date : 20-MAR-2017 19:44

Client ID:

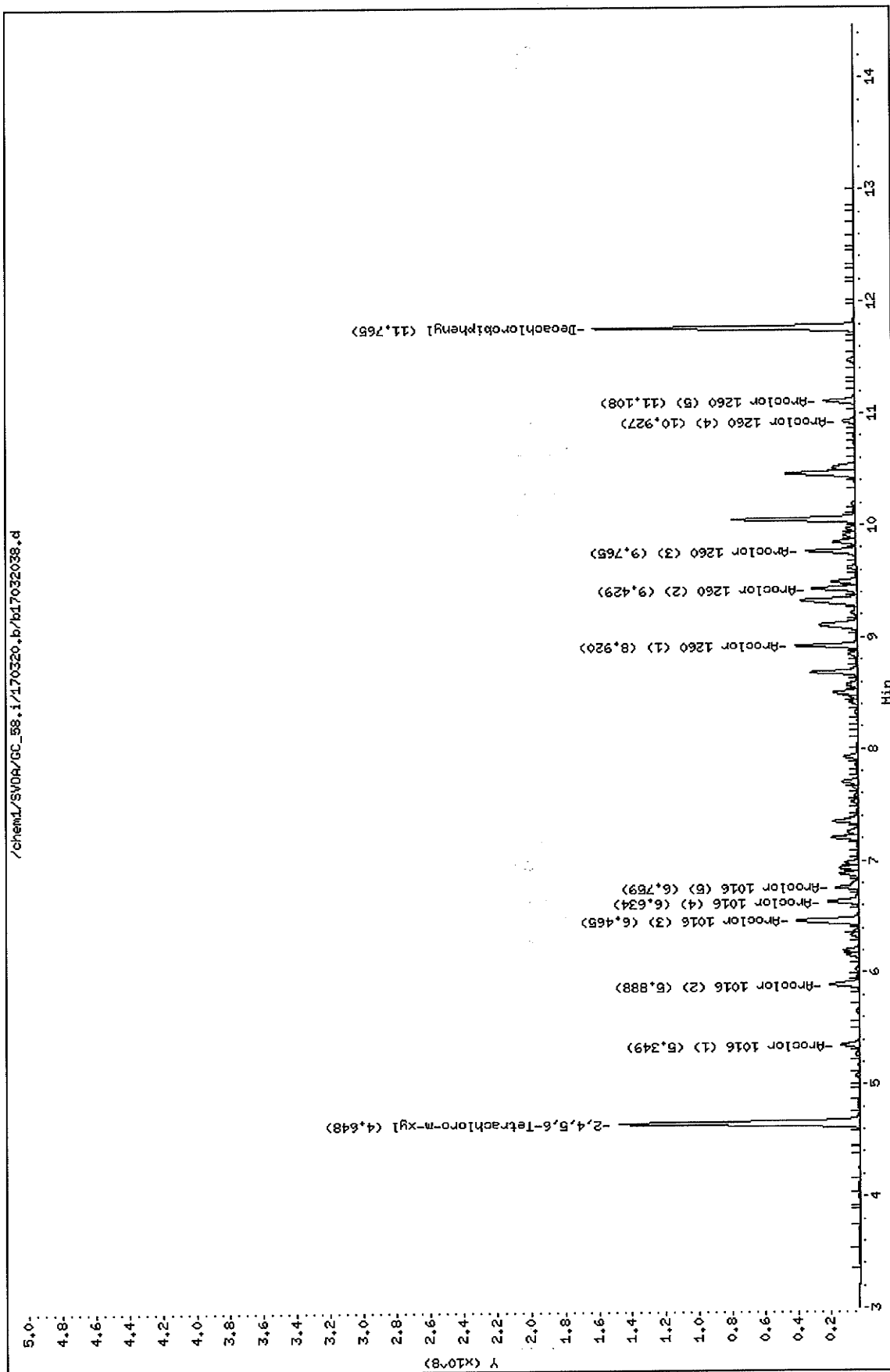
Sample Info: PCB CCV 500 PPB P0215171

Instrument: GC\_58.i

Operator: 944

Column diameter: 2.00

Column phase:



# EPA METHOD 8082 PCB Aroclors

## Run Logs

| Line | Vial | File     | Name                         | Method  | InjVolume                  | Acquired            |
|------|------|----------|------------------------------|---------|----------------------------|---------------------|
| 1    | 100  | 17031400 | IB S007-46-21                | 8082-N2 |                            | 14-Mar-17, 11:27:16 |
| 2    | 1    | 17031401 | PCB ICAL-5 2000 PPB P021517B | 8082-N2 |                            | 14-Mar-17, 11:45:14 |
| 3    | 2    | 17031402 | PCB ICAL-4 750 PPB P021517C  | 8082-N2 |                            | 14-Mar-17, 12:03:15 |
| 4    | 3    | 17031403 | PCB ICAL-3 500 PPB P021517D  | 8082-N2 |                            | 14-Mar-17, 12:21:10 |
| 5    | 4    | 17031404 | PCB ICAL-2 250 PPB P021517E  | 8082-N2 |                            | 14-Mar-17, 12:39:13 |
| 6    | 5    | 17031405 | PCB ICAL-1 100 PPB P021517F  | 8082-N2 |                            | 14-Mar-17, 12:57:09 |
| 7    | 6    | 17031406 | PCB ICV 500 PPB P021517H     | 8082-N2 | <i>SUPP.<br/>-faked PR</i> | 14-Mar-17, 13:15:08 |
| 8    | 6    | 17031499 | PCB ICV 500 PPB P021517H     | 8082-N2 |                            | 14-Mar-17, 13:55:58 |
| 9    | 7    | 17031407 | PCB 1221/54 500 PPB P120616M | 8082-N2 |                            | 14-Mar-17, 14:13:56 |
| 10   | 8    | 17031408 | PCB 1232/62 500 PPB P120616N | 8082-N2 |                            | 14-Mar-17, 14:31:54 |
| 11   | 9    | 17031409 | PCB 1248/68 500 PPB P120616O | 8082-N2 |                            | 14-Mar-17, 14:49:53 |
| 12   | 10   | 17031410 | PCB 1242 500 PPB P120616P    | 8082-N2 |                            | 14-Mar-17, 15:07:57 |
| 13   | 11   | 17031411 | MB 170313L09                 | 8082-N2 |                            |                     |
| 14   | 12   | 17031412 | LCS 170313L09                | 8082-N2 |                            |                     |
| 15   | 13   | 17031413 | MS 17-03-0899-2 170313S09    | 8082-N2 |                            |                     |
| 16   | 14   | 17031414 | MSD 17-03-0899-2 170313S09   | 8082-N2 |                            |                     |
| 17   | 15   | 17031415 | 17-03-0899-1                 | 8082-N2 |                            |                     |
| 18   | 16   | 17031416 | 17-03-0899-2                 | 8082-N2 |                            |                     |
| 19   | 17   | 17031417 | PCB CCV 500 PPB P021517I     | 8082-N2 |                            |                     |

| Line | Vial | File     | Name                        | Method  | InjVolume        | Acquired            |
|------|------|----------|-----------------------------|---------|------------------|---------------------|
| 1    | 100  |          | IB S007-46-21               | 8082-N2 |                  |                     |
| 2    | 1    | 17032001 | PCB CCV 500 PPB P021517I    | 8082-N2 | Ab01             | 20-Mar-17, 04:56:01 |
| 3    | 2    | 17032002 | IB                          | 8082-N2 | gas tank leakage | 20-Mar-17, 05:14:05 |
| 4    | 3    | 17032003 | 17-03-1275-1                | 8082-N2 | Just . stopped   | 20-Mar-17, 05:32:01 |
| 5    | 4    | 17032004 | 17-03-1275-2                | 8082-N2 |                  | 20-Mar-17, 05:50:00 |
| 6    | 12   | 17032012 | PCB CCV 500 PPB P021517I    | 8082-N2 |                  | 20-Mar-17, 09:19:22 |
| 7    | 13   | 17032013 | IB                          | 8082-N2 | Ab02             | 20-Mar-17, 09:37:15 |
| 8    | 5    | 17032005 | 17-03-1275-3                | 8082-N2 |                  | 20-Mar-17, 09:55:11 |
| 9    | 6    | 17032006 | 17-03-1275-4                | 8082-N2 |                  | 20-Mar-17, 10:13:09 |
| 10   | 7    | 17032007 | 17-03-1275-5                | 8082-N2 |                  | 20-Mar-17, 10:31:12 |
| 11   | 8    | 17032008 | 17-03-1275-6                | 8082-N2 |                  | 20-Mar-17, 10:49:10 |
| 12   | 9    | 17032009 | 17-03-1275-7                | 8082-N2 |                  | 20-Mar-17, 11:07:06 |
| 13   | 10   | 17032010 | 17-03-1275-8                | 8082-N2 |                  | 20-Mar-17, 11:25:03 |
| 14   | 11   | 17032011 | 17-03-1275-9                | 8082-N2 |                  | 20-Mar-17, 11:43:05 |
| 15   | 14   | 17032014 | 17-03-1275-10               | 8082-N2 |                  | 20-Mar-17, 12:01:03 |
| 16   | 15   | 17032015 | 17-03-1275-11               | 8082-N2 |                  | 20-Mar-17, 12:18:57 |
| 17   | 23   | 17032023 | PCB CCV 500 PPB P021517I    | 8082-N2 | Ab03             | 20-Mar-17, 12:36:56 |
| 18   | 24   | 17032024 | IB                          | 8082-N2 |                  | 20-Mar-17, 12:54:57 |
| 19   | 16   | 17032016 | 17-03-1275-12               | 8082-N2 |                  | 20-Mar-17, 13:12:53 |
| 20   | 17   | 17032017 | 17-03-1275-13               | 8082-N2 |                  | 20-Mar-17, 13:30:50 |
| 21   | 18   | 17032018 | 17-03-1275-14               | 8082-N2 |                  | 20-Mar-17, 13:48:46 |
| 22   | 19   | 17032019 | 17-03-1275-15               | 8082-N2 |                  | 20-Mar-17, 14:06:49 |
| 23   | 20   | 17032020 | 17-03-1275-16               | 8082-N2 |                  | 20-Mar-17, 14:24:43 |
| 24   | 21   | 17032021 | 17-03-1275-17               | 8082-N2 |                  | 20-Mar-17, 14:42:40 |
| 25   | 22   | 17032022 | 17-03-1275-18               | 8082-N2 |                  | 20-Mar-17, 15:00:36 |
| 26   | 25   | 17032025 | 17-03-1275-19               | 8082-N2 |                  | 20-Mar-17, 15:18:38 |
| 27   | 26   | 17032026 | 17-03-1275-20               | 8082-N2 |                  | 20-Mar-17, 15:36:36 |
| 28   | 27   | 17032027 | PCB CCV 500 PPB P021517I    | 8082-N2 | Ab04             | 20-Mar-17, 15:54:31 |
| 29   | 28   | 17032028 | IB                          | 8082-N2 |                  | 20-Mar-17, 16:17:48 |
| 30   | 29   | 17032029 | 17-03-1275-12 Hg            | 8082-N2 |                  | 20-Mar-17, 16:35:44 |
| 31   | 30   | 17032030 | MB 170320L02                | 8082-N2 |                  | 20-Mar-17, 16:53:39 |
| 32   | 31   | 17032031 | LCS 170320L02               | 8082-N2 |                  | 20-Mar-17, 17:11:36 |
| 33   | 32   | 17032032 | MS 17-03-1104-30 170320S02  | 8082-N2 |                  | 20-Mar-17, 17:32:36 |
| 34   | 33   | 17032033 | MSD 17-03-1104-30 170320S02 | 8082-N2 |                  | 20-Mar-17, 17:50:31 |
| 35   | 34   | 17032034 | 17-03-1104-30               | 8082-N2 |                  | 20-Mar-17, 18:08:29 |
| 36   | 35   | 17032035 | 17-03-1104-31               | 8082-N2 |                  | 20-Mar-17, 18:26:22 |
| 37   | 36   | 17032036 | 17-03-1104-32               | 8082-N2 |                  | 20-Mar-17, 18:44:28 |
| 38   | 37   | 17032037 | 17-03-1104-33               | 8082-N2 |                  | 20-Mar-17, 19:02:24 |
| 39   | 38   | 17032038 | PCB CCV 500 PPB P021517I    | 8082-N2 | Ab05             | 20-Mar-17, 19:44:36 |

# EPA METHOD 8082 PCB Aroclors

## Preparation Logs

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              |                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------|--|
| <b>Analysis Method (EPA Method):</b> <input type="checkbox"/> 608 <input type="checkbox"/> 8081 <input checked="" type="checkbox"/> 8082 <input type="checkbox"/> 8141 <input type="checkbox"/> 8310 <input type="checkbox"/> TO-13 <input type="checkbox"/> TO-4<br><input type="checkbox"/> 8270 ( <input type="checkbox"/> Soil <input type="checkbox"/> Soil SIM SUPER <input type="checkbox"/> PAH <input type="checkbox"/> SIM PAH <input type="checkbox"/> SIM Pest <input type="checkbox"/> SIM PCB cong. <input type="checkbox"/> SIM FL ) |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Extraction Method (EPA Method):</b> <input type="checkbox"/> 3510 <input type="checkbox"/> 3520 <input type="checkbox"/> 3540 <input type="checkbox"/> 3541 <input checked="" type="checkbox"/> 3545 <input type="checkbox"/> 3550 <input type="checkbox"/> 3580                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Analyst ID#:</b> Measuring Sample- 701 <b>Start Extraction-</b> 610/787 <b>Blow Down-</b> 610 <b>Clean Up-</b> 944                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Matrix:</b> <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Aqueous <input type="checkbox"/> Oil <input type="checkbox"/> Wipe <input type="checkbox"/> Filter <input type="checkbox"/> Tissue <input type="checkbox"/> Air                                                                                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Balance ID#:</b> 70 <b>Filter ID#:</b> 507-17-17 <b>ASE ID#:</b> 7 <b>Soxtherm ID#:</b> <b>Orbit Shaker ID#:</b> <b>Sonicator ID#:</b>                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Ext. Start Date/Time:</b> 03/20/17 8:00 <b>Ext. End Date/Time:</b> 03/20/17 13:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Sand or Wipe ID#:</b><br>507-19-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>Drying Agent:</b> <input checked="" type="checkbox"/> Na <sub>2</sub> SO <sub>4</sub> <input checked="" type="checkbox"/> Diatomaceous Earth<br><b>Drying Agent(s) ID#:</b> 507-44-18 / 507-22-03 |              |                                                               |  |
| <b>Surrogate Std ID# &amp; Volume Added (mL):</b> S101316 A 0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Spike Std ID# &amp; Volume Added (mL):</b> S020317 A 0.5 <b>Spike Added to:</b> <input checked="" type="checkbox"/> LCS <input type="checkbox"/> LCSD <input checked="" type="checkbox"/> MS <input checked="" type="checkbox"/> MSD                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Extraction Solvent:</b> <input type="checkbox"/> MeCl <sub>2</sub> <input checked="" type="checkbox"/> 1:1 Hexane-Acetone <input type="checkbox"/> 1:1 MeCl <sub>2</sub> -Acetone <input type="checkbox"/> 9:1 Hexane-Diethyl-ether <input type="checkbox"/> Acetonitrile                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Extraction Solvent ID#:</b> 507-44-07 / 507-44-08 <b>Exchange Solvent (<input checked="" type="checkbox"/> Hexane <input type="checkbox"/> Acetonitrile) ID#:</b> 507-44-07                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Clean Up Start Date &amp; Time:</b> 3/20/17 13:00 <b>Clean Up End Date &amp; Time:</b> 3/20/17 14:00                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                      |              |                                                               |  |
| <b>Clean Up:</b> <input type="checkbox"/> 3620 Florisil <input type="checkbox"/> 3630 SGC <input type="checkbox"/> 3660 Sulfur <input checked="" type="checkbox"/> 3665 Acid <input type="checkbox"/> Other                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                      |              | <b>Cartridge ID#:</b>                                         |  |
| <b>Clean Up Reagent ID#:</b> 507-52-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                      |              | <b>Cartridge Conditioning Column Pre-Elution Reagent ID#:</b> |  |
| <b>MB/LCS/MS Batch #:</b><br>170320L02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | <b>Sample W(g) / V (mL)</b>                                                                                                                                                                          |              | <b>Clean Up Performed</b> <b>Comments</b>                     |  |
| <b>Cel ID#:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | <b>Initial</b>                                                                                                                                                                                       | <b>Final</b> |                                                               |  |
| MB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                                                                                 | 20.0         | <input checked="" type="checkbox"/>                           |  |
| LCS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 20.0                                                                                                                                                                                                 | 20.0         | <input checked="" type="checkbox"/>                           |  |
| LCSD NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | —                                                                                                                                                                                                    | —            | <input type="checkbox"/>                                      |  |
| MS 17-03-1104-30 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| MSD 17-03-1104-30 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1104-30 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.2                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1104-31 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1104-32 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.2                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1104-33 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1105-30 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1105-31 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.0                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1105-32 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.2                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1105-33 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1106-30 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.0                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1106-31 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.2                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1106-32 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.1                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
| 17-03-1106-33 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 20.2                                                                                                                                                                                                 | 10.0         | <input checked="" type="checkbox"/>                           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                      |              | <input type="checkbox"/>                                      |  |

Peer Reviewed by: 944

Peer Reviewed Date: 3/20/17

Revision Date: 10/20/16

# EPA METHOD 8270C PAHSIM

## RAW DATA

# EPA METHOD 8270C PAHSIM

## Initial Calibration

# INITIAL CALIBRATION QUALITY CONTROL SUMMARY

## FOR METHOD: EPA 8270C SIM PAHS

ICAL WORK ORDER: 099-06-009-4979-4741  
ICAL BATCH ID: 1703131001  
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907  
ICAL D/T ANALYZED: 2017-03-13 14:13  
REVIEWED BY: 262  
D/T REVIEWED: 2017-03-14 12:54

| COMPOUND                  | COMP. TYPE | CALIB. MODEL | 1     | 2     | 3     | 4     | 5     | 6 | 7 | 8 | 9 | AVG. RF | MIN. RF | %RSD CL | %RSD CL | R or R <sup>2</sup> CL | R or R <sup>2</sup> CL | STATUS |
|---------------------------|------------|--------------|-------|-------|-------|-------|-------|---|---|---|---|---------|---------|---------|---------|------------------------|------------------------|--------|
| Naphthalene               |            | Avg RF       | 1.116 | 1.006 | 1.100 | 1.129 | 1.071 |   |   |   |   | 1.085   | 0.00    | 4       | 0-15    | 4.487                  |                        | PASS   |
| 2-Methylnaphthalene       |            | Avg RF       | 0.652 | 0.598 | 0.675 | 0.704 | 0.679 |   |   |   |   | 0.661   | 0.00    | 6       | 0-15    | 6.043                  |                        | PASS   |
| 1-Methylnaphthalene       |            | Avg RF       | 0.707 | 0.604 | 0.670 | 0.683 | 0.650 |   |   |   |   | 0.663   | 0.00    | 6       | 0-15    | 5.855                  |                        | PASS   |
| Acenaphthylene            |            | Avg RF       | 2.585 | 2.328 | 2.575 | 2.640 | 2.513 |   |   |   |   | 2.528   | 0.00    | 5       | 0-15    | 4.766                  |                        | PASS   |
| Acenaphthene              | C          | Avg RF       | 1.539 | 1.413 | 1.552 | 1.581 | 1.501 |   |   |   |   | 1.517   | 0.00    | 4       | 0-15    | 4.263                  |                        | PASS   |
| Fluorene                  |            | Avg RF       | 1.678 | 1.586 | 1.751 | 1.767 | 1.664 |   |   |   |   | 1.689   | 0.00    | 4       | 0-15    | 4.314                  |                        | PASS   |
| Phenanthrene              |            | Avg RF       | 1.080 | 0.981 | 1.087 | 1.105 | 1.053 |   |   |   |   | 1.061   | 0.00    | 5       | 0-15    | 4.587                  |                        | PASS   |
| Anthracene                |            | Avg RF       | 1.036 | 0.984 | 0.969 | 1.116 | 1.083 |   |   |   |   | 1.037   | 0.00    | 6       | 0-15    | 6.047                  |                        | PASS   |
| Fluoranthene              | C          | Avg RF       | 1.376 | 1.262 | 1.391 | 1.425 | 1.371 |   |   |   |   | 1.365   | 0.00    | 4       | 0-15    | 4.487                  |                        | PASS   |
| Pyrene                    |            | Avg RF       | 1.387 | 1.261 | 1.393 | 1.422 | 1.344 |   |   |   |   | 1.362   | 0.00    | 5       | 0-15    | 4.620                  |                        | PASS   |
| Benzo (a) Anthracene      |            | Avg RF       | 1.432 | 1.208 | 1.306 | 1.343 | 1.298 |   |   |   |   | 1.317   | 0.00    | 6       | 0-15    | 6.146                  |                        | PASS   |
| Chrysene                  |            | Avg RF       | 1.217 | 1.108 | 1.220 | 1.253 | 1.186 |   |   |   |   | 1.197   | 0.00    | 5       | 0-15    | 4.604                  |                        | PASS   |
| Benzo (k) Fluoranthene    |            | Avg RF       | 1.363 | 1.261 | 1.425 | 1.424 | 1.358 |   |   |   |   | 1.366   | 0.00    | 5       | 0-15    | 4.922                  |                        | PASS   |
| Benzo (b) Fluoranthene    |            | Avg RF       | 1.221 | 1.183 | 1.395 | 1.380 | 1.336 |   |   |   |   | 1.303   | 0.00    | 7       | 0-15    | 7.367                  |                        | PASS   |
| Benzo (a) Pyrene          | C          | Avg RF       | 1.253 | 1.166 | 1.268 | 1.329 | 1.265 |   |   |   |   | 1.256   | 0.00    | 5       | 0-15    | 4.648                  |                        | PASS   |
| Indeno (1,2,3-c,d) Pyrene |            | Avg RF       | 1.472 | 1.337 | 1.583 | 1.587 | 1.530 |   |   |   |   | 1.502   | 0.00    | 7       | 0-15    | 6.876                  |                        | PASS   |
| Dibenz (a,h) Anthracene   |            | Avg RF       | 1.022 | 1.057 | 1.229 | 1.228 | 1.159 |   |   |   |   | 1.139   | 0.00    | 8       | 0-15    | 8.436                  |                        | PASS   |
| Benzo (g,h,i) Perylene    |            | Avg RF       | 1.197 | 1.089 | 1.261 | 1.263 | 1.221 |   |   |   |   | 1.207   | 0.00    | 6       | 0-15    | 5.902                  |                        | PASS   |

### Data Files:

INITIAL CALIBRATION QUALITY CONTROL SUMMARY  
FOR METHOD: EPA 8270C SIM PAHS

ICAL WORK ORDER: 099-06-009-4979-4741  
ICAL BATCH ID: 170313I001  
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907  
ICAL D/T ANALYZED: 2017-03-13 14:13  
REVIEWED BY: 262  
D/T REVIEWED: 2017-03-14 12:54

| LEVEL # | D/T ANALYZED     | DATA FILE                                                    |
|---------|------------------|--------------------------------------------------------------|
| 1       | 2017-03-13 14:13 | Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar010.d\13mar010.rr |
| 2       | 2017-03-13 13:53 | Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar009.d\13mar009.rr |
| 3       | 2017-03-13 13:33 | Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr |
| 4       | 2017-03-13 13:13 | Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar007.d\13mar007.rr |
| 5       | 2017-03-13 12:52 | Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar006.d\13mar006.rr |

# INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHS

ICV WORK ORDER: 099-06-009-4979-4741  
 INITIAL BATCH ID: 170313I001  
 INSTRUMENT: GC/MS EEE

ANALYZED BY: 907  
 D/T ANALYZED: 2017-03-13 14:13  
 INITIAL: 2017-03-13 14:34  
 ICV: 262  
 REVIEWED BY: 2017-03-14 12:54  
 D/T REVIEWED:

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\20171170313113mar011.d\13mar011.r

| COMPOUND                  | COMP TYPE  | CALIB MODEL | MIN RF | AVG RF | ICV RF | AMOUNT | ICV | ICV %D | ICV %D CL | STATUS |
|---------------------------|------------|-------------|--------|--------|--------|--------|-----|--------|-----------|--------|
| Naphthalene               | Avg Resp   |             | 0.00   | 1.085  | 1.135  |        |     | -5     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.661  | 0.783  |        |     | -18    | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.663  | 0.698  |        |     | -5     | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp   |             | 0.00   | 2.528  | 2.579  |        |     | -2     | 0-20      | PASS   |
| Acenaphthene              | C Avg Resp |             | 0.00   | 1.517  | 1.642  |        |     | -8     | 0-20      | PASS   |
| Fluorene                  | Avg Resp   |             | 0.00   | 1.689  | 1.833  |        |     | -9     | 0-20      | PASS   |
| Phenanthrene              | Avg Resp   |             | 0.00   | 1.061  | 1.203  |        |     | -13    | 0-20      | PASS   |
| Anthracene                | Avg Resp   |             | 0.00   | 1.037  | 1.123  |        |     | -8     | 0-20      | PASS   |
| Fluoranthene              | C Avg Resp |             | 0.00   | 1.365  | 1.484  |        |     | -9     | 0-20      | PASS   |
| Pyrene                    | Avg Resp   |             | 0.00   | 1.362  | 1.480  |        |     | -9     | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp   |             | 0.00   | 1.317  | 1.360  |        |     | -3     | 0-20      | PASS   |
| Chrysene                  | Avg Resp   |             | 0.00   | 1.197  | 1.249  |        |     | -4     | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp   |             | 0.00   | 1.366  | 1.424  |        |     | -4     | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp   |             | 0.00   | 1.303  | 1.418  |        |     | -9     | 0-20      | PASS   |
| Benzo (a) Pyrene          | C Avg Resp |             | 0.00   | 1.256  | 1.318  |        |     | -5     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp   |             | 0.00   | 1.502  | 1.570  |        |     | -5     | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp   |             | 0.00   | 1.139  | 1.243  |        |     | -9     | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp   |             | 0.00   | 1.207  | 1.334  |        |     | -11    | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 15:04

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59  
 End Cal Date : 13-MAR-2017 14:13  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m  
 Cal Date : 13-Mar-2017 14:59 ev7p  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar010.d  
 Level 2: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar009.d  
 Level 3: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar008.d  
 Level 4: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar007.d  
 Level 5: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar006.d

| Compound                      | 0.10000 | 0.50000 | 1.000   | 2.000   | 5.000   | RRF     | % RSD |
|-------------------------------|---------|---------|---------|---------|---------|---------|-------|
| Level 1                       | Level 2 | Level 3 | Level 4 | Level 5 |         |         |       |
| 4 Naphthalene                 | 1.11581 | 1.00634 | 1.10029 | 1.12879 | 1.07133 | 1.08451 | 4     |
| 5 2-Methylnaphthalene         | 0.65197 | 0.59811 | 0.67457 | 0.70415 | 0.67863 | 0.66149 | 6     |
| 6 1-Methylnaphthalene         | 0.70747 | 0.60440 | 0.67039 | 0.68304 | 0.65028 | 0.66312 | 6     |
| 8 Biphenyl                    | 2.35823 | 2.11929 | 2.30021 | 2.29717 | 2.12271 | 2.23952 | 5     |
| 9 2,6-Dimethylnaphthalene     | 1.61703 | 1.47875 | 1.60729 | 1.63394 | 1.52299 | 1.57200 | 4     |
| 10 Acenaphthylene             | 2.58512 | 2.32846 | 2.57549 | 2.63987 | 2.51288 | 2.52836 | 5     |
| 12 Acenaphthene               | 1.53912 | 1.41348 | 1.55163 | 1.58080 | 1.50094 | 1.51719 | 4     |
| 13 Dibenzofuran               | 2.16158 | 2.04374 | 2.26236 | 2.30541 | 2.19584 | 2.19379 | 5     |
| 14 1,6,7-Trimethylnaphthalene | 1.63669 | 1.46201 | 1.59794 | 1.62883 | 1.52745 | 1.57058 | 5     |
| 15 Fluorene                   | 1.67753 | 1.58594 | 1.75075 | 1.76676 | 1.66409 | 1.68901 | 4     |
| 16 Dibenzothiophene           | 4.72855 | 4.27529 | 4.71886 | 4.80185 | 4.58747 | 4.62241 | 5     |
| 18 Phenanthrene               | 1.07962 | 0.98082 | 1.08700 | 1.10520 | 1.05266 | 1.06106 | 5     |
| 19 Anthracene                 | 1.03555 | 0.98375 | 0.96886 | 1.11560 | 1.08257 | 1.03727 | 6     |
| 20 1-Methylphenanthrene       | 0.97116 | 0.92998 | 1.02072 | 1.05271 | 1.00870 | 0.99665 | 5     |
| 21 Fluoranthene               | 1.37602 | 1.26225 | 1.39052 | 1.42534 | 1.37085 | 1.36500 | 4     |
| 22 Pyrene                     | 1.38699 | 1.26059 | 1.39347 | 1.42216 | 1.34443 | 1.36153 | 5     |
| 24 Benzo (a) Anthracene       | 1.43152 | 1.20758 | 1.30623 | 1.34262 | 1.29815 | 1.31722 | 6     |
| 26 Chrysene                   | 1.21702 | 1.10798 | 1.22017 | 1.25314 | 1.18561 | 1.19678 | 5     |
| 27 Benzo (b) Fluoranthene     | 1.22069 | 1.18251 | 1.39522 | 1.38038 | 1.33563 | 1.30289 | 7     |
| 28 Benzo (k) Fluoranthene     | 1.36330 | 1.26057 | 1.42543 | 1.42402 | 1.35775 | 1.36621 | 5     |
| 29 Benzo (e) pyrene           | 1.59986 | 1.40940 | 1.63930 | 1.60515 | 1.53257 | 1.55726 | 6     |
| 30 Benzo (a) Pyrene           | 1.25298 | 1.16587 | 1.26774 | 1.32867 | 1.26501 | 1.25606 | 5     |

Report Date : 13-Mar-2017 15:04

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59  
 End Cal Date : 13-MAR-2017 14:13  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m  
 Cal Date : 13-Mar-2017 14:59 ev7p  
 Curve Type : Average

|                              | 0.10000 | 0.50000 | 1.000   | 2.000   | 5.000   | _____   |       |
|------------------------------|---------|---------|---------|---------|---------|---------|-------|
| Compound                     | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | RRF     | % RSD |
| =====                        | =====   | =====   | =====   | =====   | =====   | =====   | ===== |
| 32 Perylene                  | 1.53641 | 1.41079 | 1.50876 | 1.54399 | 1.46685 | 1.49336 | 4     |
| 33 Indeno (1,2,3-c,d) Pyrene | 1.47205 | 1.33679 | 1.58268 | 1.58673 | 1.52950 | 1.50155 | 7     |
| 34 Dibenz (a,h) Anthracene   | 1.02180 | 1.05709 | 1.22915 | 1.22831 | 1.15856 | 1.13898 | 8     |
| 35 Benzo (g,h,i) Perylene    | 1.19737 | 1.08929 | 1.26132 | 1.26340 | 1.22141 | 1.20656 | 6     |
| =====                        | =====   | =====   | =====   | =====   | =====   | =====   | ===== |
| \$ 2 Nitrobenzene-d5         | 0.30130 | 0.29496 | 0.33923 | 0.35910 | 0.36136 | 0.33119 | 10    |
| \$ 7 2-Fluorobiphenyl        | 1.88477 | 1.69943 | 1.88233 | 1.85964 | 1.69885 | 1.80500 | 5     |
| \$ 23 p-Terphenyl-d14        | 0.78803 | 0.71467 | 0.79649 | 0.80490 | 0.77019 | 0.77486 | 5     |
| =====                        | =====   | =====   | =====   | =====   | =====   | =====   | ===== |

Report Date : 13-Mar-2017 15:04

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59  
End Cal Date : 13-MAR-2017 14:13  
Quant Method : ISTD  
Origin : Disabled  
Target Version : 3.50  
Integrator : HP RTE  
Method file : /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m  
Cal Date : 13-Mar-2017 14:59 ev7p  
Curve Type : Average

|                             |          |
|-----------------------------|----------|
| Average %RSD Results.       |          |
| =====                       |          |
| Calculated Average %RSD =   | 5.35528  |
| Maximum Average %RSD =      | 15.00000 |
| * Passed Average %RSD Test. |          |

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar011.d  
 Report Date: 03/13/2017 15:04

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_EEE.i Injection Date and Time: 13-MAR-2017 14:34  
 Sample Name: ICV S010317I 1PPM Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 11:59 14:13  
 Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m

| Target Compounds           | ICAL RRF or Amount | ICV RRF | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
|----------------------------|--------------------|---------|----------|-------------|---------------|------------|
| =====                      |                    |         |          |             |               |            |
| Naphthalene                | 1.085              | 1.135   | 0.00     | -5          | 20            | Averaged   |
| 2-Methylnaphthalene        | 0.661              | 0.783   | 0.00     | -18         | 20            | Averaged   |
| 1-Methylnaphthalene        | 0.663              | 0.698   | 0.00     | -5          | 20            | Averaged   |
| Acenaphthylene             | 2.528              | 2.579   | 0.00     | -2          | 20            | Averaged   |
| Acenaphthene               | 1.517              | 1.642   | 0.00     | -8          | 20            | Averaged   |
| Fluorene                   | 1.689              | 1.833   | 0.00     | -9          | 20            | Averaged   |
| Phenanthrene               | 1.061              | 1.203   | 0.00     | -13         | 20            | Averaged   |
| Anthracene                 | 1.037              | 1.123   | 0.00     | -8          | 20            | Averaged   |
| Fluoranthene               | 1.365              | 1.484   | 0.00     | -9          | 20            | Averaged   |
| Pyrene                     | 1.362              | 1.480   | 0.00     | -9          | 20            | Averaged   |
| Benzo (a) Anthracene       | 1.317              | 1.360   | 0.00     | -3          | 20            | Averaged   |
| Chrysene                   | 1.197              | 1.249   | 0.00     | -4          | 20            | Averaged   |
| Benzo (b) Fluoranthene     | 1.303              | 1.418   | 0.00     | -9          | 20            | Averaged   |
| Benzo (k) Fluoranthene     | 1.366              | 1.424   | 0.00     | -4          | 20            | Averaged   |
| Benzo (a) Pyrene           | 1.256              | 1.318   | 0.00     | -5          | 20            | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.502              | 1.570   | 0.00     | -5          | 20            | Averaged   |
| Dibenz (a,h) Anthracene    | 1.139              | 1.243   | 0.00     | -9          | 20            | Averaged   |
| Benzo (g,h,i) Perylene     | 1.207              | 1.334   | 0.00     | -11         | 20            | Averaged   |
| Biphenyl                   | 2.240              | 2.047   | 0.00     | 9           | 20            | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.572              | 1.418   | 0.00     | 10          | 20            | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.571              | 1.354   | 0.00     | 14          | 20            | Averaged   |
| Dibenzothiophene           | 4.622              | 4.193   | 0.00     | 9           | 20            | Averaged   |
| 1-Methylphenanthrene       | 0.997              | 0.912   | 0.00     | 9           | 20            | Averaged   |
| Benzo (e) pyrene           | 1.557              | 1.395   | 0.00     | 10          | 20            | Averaged   |
| Perylene                   | 1.493              | 1.264   | 0.00     | 15          | 20            | Averaged   |
| Dibenzofuran               | 2.194              | 2.418   | 0.00     | -10         | 20            | Averaged   |
| =====                      |                    |         |          |             |               |            |
| Surrogate Standards        | ICAL RRF or Amount | ICV RRF | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
| =====                      |                    |         |          |             |               |            |
| Nitrobenzene-d5            | 0.331              | 0.397   | 0.00     | -20         | 20            | Averaged   |
| 2-Fluorobiphenyl           | 1.805              | 2.154   | 0.00     | -19         | 20            | Averaged   |
| p-Terphenyl-d14            | 0.775              | 0.898   | 0.00     | -16         | 20            | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar006.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |              |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.415  | 152   | 39443  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.657  | 136   | 113690 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.542  | 164   | 52246  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.138  | 188   | 176924 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.826 | 264   | 181619 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)          | 11.060 | 240   | 185442 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.966  | 82    | 41083  | 5.455                         | 0.00     |
| SpikedAmount 5.000             | Recovery =   | 0.000  |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.833  | 172   | 88758  | 4.706                         | 0.00     |
| SpikedAmount 5.000             | Recovery =   | 0.000  |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.934  | 244   | 142825 | 4.970                         | 0.00     |
| SpikedAmount 5.000             | Recovery =   | 0.000  |       |        |                               |          |
| Target Compounds               |              |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)          | 4.677  | 128   | 121800 | 4.939                         | 99       |
| 5) 2-Methylnaphthalene         | (2)          | 5.405  | 142   | 77154  | 5.130                         | 98       |
| 6) 1-Methylnaphthalene         | (2)          | 5.518  | 142   | 73930  | 4.903                         | 100      |
| 10) Acenaphthylene             | (3)          | 6.373  | 152   | 131288 | 4.969                         | 99       |
| 12) Acenaphthene               | (3)          | 6.575  | 153   | 78418  | 4.946                         | 99       |
| 15) Fluorene                   | (3)          | 7.125  | 166   | 86942  | 4.926                         | 100      |
| 18) Phenanthrene               | (4)          | 8.163  | 178   | 186241 | 4.960                         | 100      |
| 19) Anthracene                 | (4)          | 8.211  | 178   | 191533 | 5.218                         | 100      |
| 21) Fluoranthene               | (4)          | 9.471  | 202   | 242537 | 5.021                         | 99       |
| 22) Pyrene                     | (5)          | 9.711  | 202   | 249314 | 4.937                         | 99       |
| 24) Benzo (a) Anthracene       | (5)          | 11.042 | 228   | 240732 | 4.928                         | 100      |
| 26) Chrysene                   | (5)          | 11.088 | 228   | 219861 | 4.953                         | 99       |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.366 | 252   | 242576 | 5.126                         | 99       |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.396 | 252   | 246593 | 4.969                         | 99       |
| 30) Benzo (a) Pyrene           | (6)          | 12.757 | 252   | 229750 | 5.036                         | 99       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 14.070 | 276   | 277787 | 5.093                         | 92       |
| 34) Dibenzo (a,h) Anthracene   | (6)          | 14.094 | 278   | 210417 | 5.086                         | 98       |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.348 | 276   | 221831 | 5.062                         | 99       |
| 8) Biphenyl                    | (3)          | 5.922  | 154   | 110903 | 4.739                         | 99       |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.084  | 156   | 79570  | 4.844                         | 99       |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 7.006  | 170   | 79803  | 4.863                         | 99       |
| 16) Dibenzothiophene           | (3)          | 8.027  | 184   | 239677 | 4.962                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar006.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:59  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

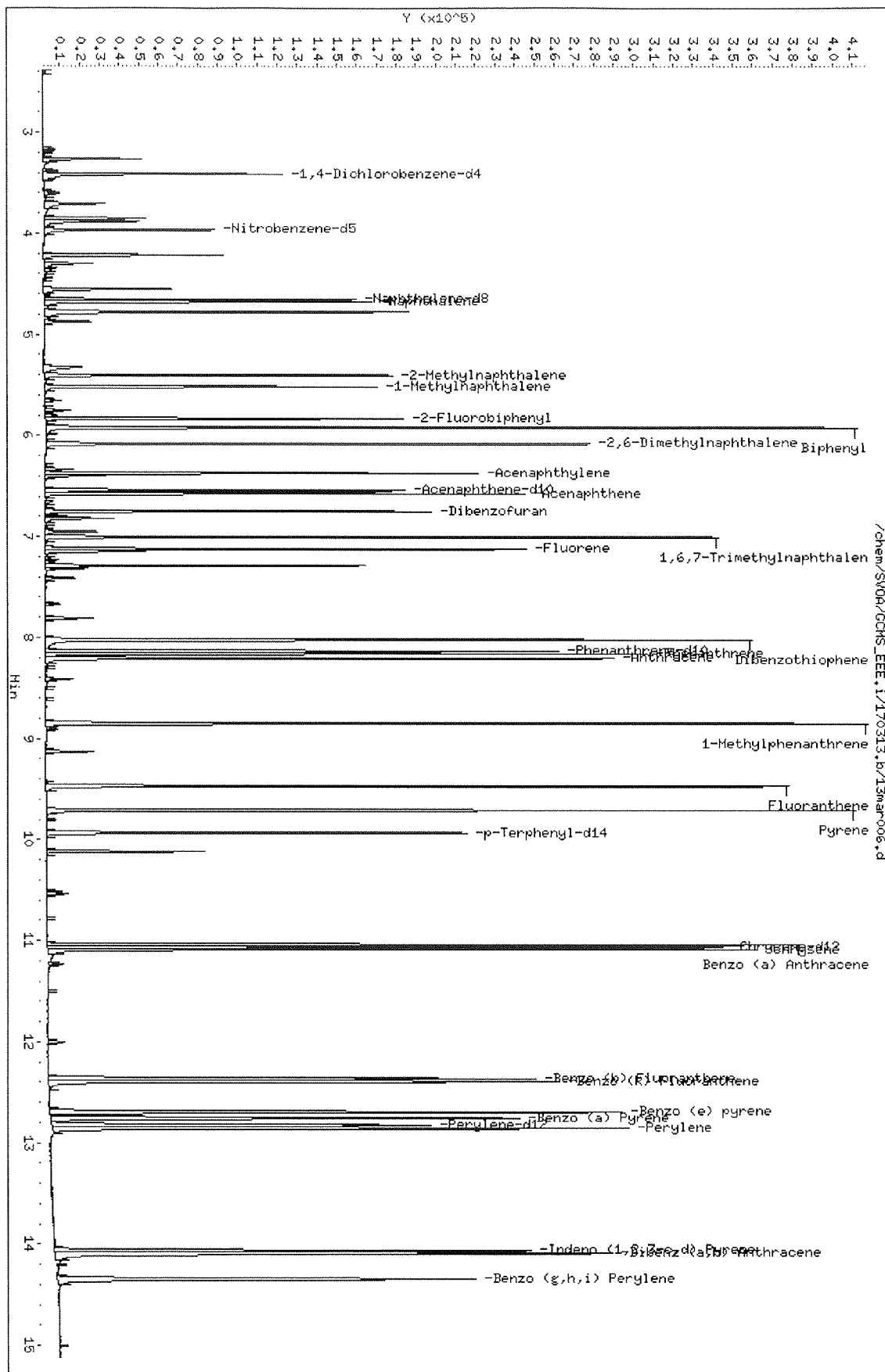
Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area   | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|--------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.852  | 192  | 187056 | 5.060                         | 98     |
| 29) Benzo (e) pyrene     | (6)          | 12.697 | 252  | 278344 | 4.921                         | 97     |
| 32) Perylene             | (6)          | 12.859 | 252  | 266407 | 4.911                         | 98     |
| 13) Dibenzofuran         | (3)          | 6.749  | 168  | 114724 | 5.005                         | 99     |

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Data File: /chem/SV08/GCHS\_EEE.i/170313.b/13mar006.d  
 Date : 13-MAR-2017 12:52  
 Client ID:  
 Sample Info: ICAL-1 SOL0317D SPPM  
 Column phase: J&M DB-SMS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar007.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM  
 Response via Initial Calibration

Misc Info:

| Compounds                      | I.S.               | RT     | QIon  | Area   | On-Column        | DEV (Min) |
|--------------------------------|--------------------|--------|-------|--------|------------------|-----------|
|                                | Ref.               |        |       |        | Amount<br>(mg/L) |           |
| =====                          | =====              | =====  | ===== | =====  | =====            | =====     |
| Internal Standards             |                    |        |       |        |                  |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.415  | 152   | 43537  | 5.000            | 0.00      |
| 3)*Naphthalene-d8              | (2)                | 4.656  | 136   | 128027 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)                | 6.541  | 164   | 58252  | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)                | 8.138  | 188   | 195969 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)                | 12.826 | 264   | 200691 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)                | 11.058 | 240   | 204739 | 5.000            | 0.00      |
| System Monitoring Compounds    |                    |        |       |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)                | 3.965  | 82    | 18390  | 2.169            | 0.00      |
| SpikedAmount 2.000             | Recovery = 204.796 |        |       |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)                | 5.832  | 172   | 43331  | 2.061            | 0.00      |
| SpikedAmount 2.000             | Recovery = 201.236 |        |       |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)                | 9.931  | 244   | 65918  | 2.078            | 0.00      |
| SpikedAmount 2.000             | Recovery = 204.185 |        |       |        |                  |           |
| Target Compounds               |                    |        |       |        |                  | QValue    |
| 4) Naphthalene                 | (2)                | 4.676  | 128   | 57806  | 2.082            | 99        |
| 5) 2-Methylnaphthalene         | (2)                | 5.404  | 142   | 36060  | 2.129            | 97        |
| 6) 1-Methylnaphthalene         | (2)                | 5.518  | 142   | 34979  | 2.060            | 99        |
| 10) Acenaphthylene             | (3)                | 6.371  | 152   | 61511  | 2.088            | 99        |
| 12) Acenaphthene               | (3)                | 6.574  | 153   | 36834  | 2.084            | 99        |
| 15) Fluorene                   | (3)                | 7.123  | 166   | 41167  | 2.092            | 100       |
| 18) Phenanthrene               | (4)                | 8.161  | 178   | 86634  | 2.083            | 100       |
| 19) Anthracene                 | (4)                | 8.209  | 178   | 87449  | 2.151            | 99        |
| 21) Fluoranthene               | (4)                | 9.469  | 202   | 111729 | 2.088            | 99        |
| 22) Pyrene                     | (5)                | 9.708  | 202   | 116469 | 2.089            | 100       |
| 24) Benzo (a) Anthracene       | (5)                | 11.039 | 228   | 109955 | 2.039            | 100       |
| 26) Chrysene                   | (5)                | 11.085 | 228   | 102627 | 2.094            | 99        |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.363 | 252   | 110812 | 2.119            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.391 | 252   | 114315 | 2.085            | 99        |
| 30) Benzo (a) Pyrene           | (6)                | 12.752 | 252   | 106661 | 2.116            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.066 | 276   | 127377 | 2.113            | 91        |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.093 | 278   | 98604  | 2.157            | 98        |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.343 | 276   | 101421 | 2.094            | 100       |
| 8) Biphenyl                    | (3)                | 5.921  | 154   | 53526  | 2.051            | 99        |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.081  | 156   | 38072  | 2.079            | 99        |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.004  | 170   | 37953  | 2.074            | 99        |
| 16) Dibenzothiophene           | (3)                | 8.024  | 184   | 111887 | 2.078            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar007.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:59  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM  
Response via Initial Calibration

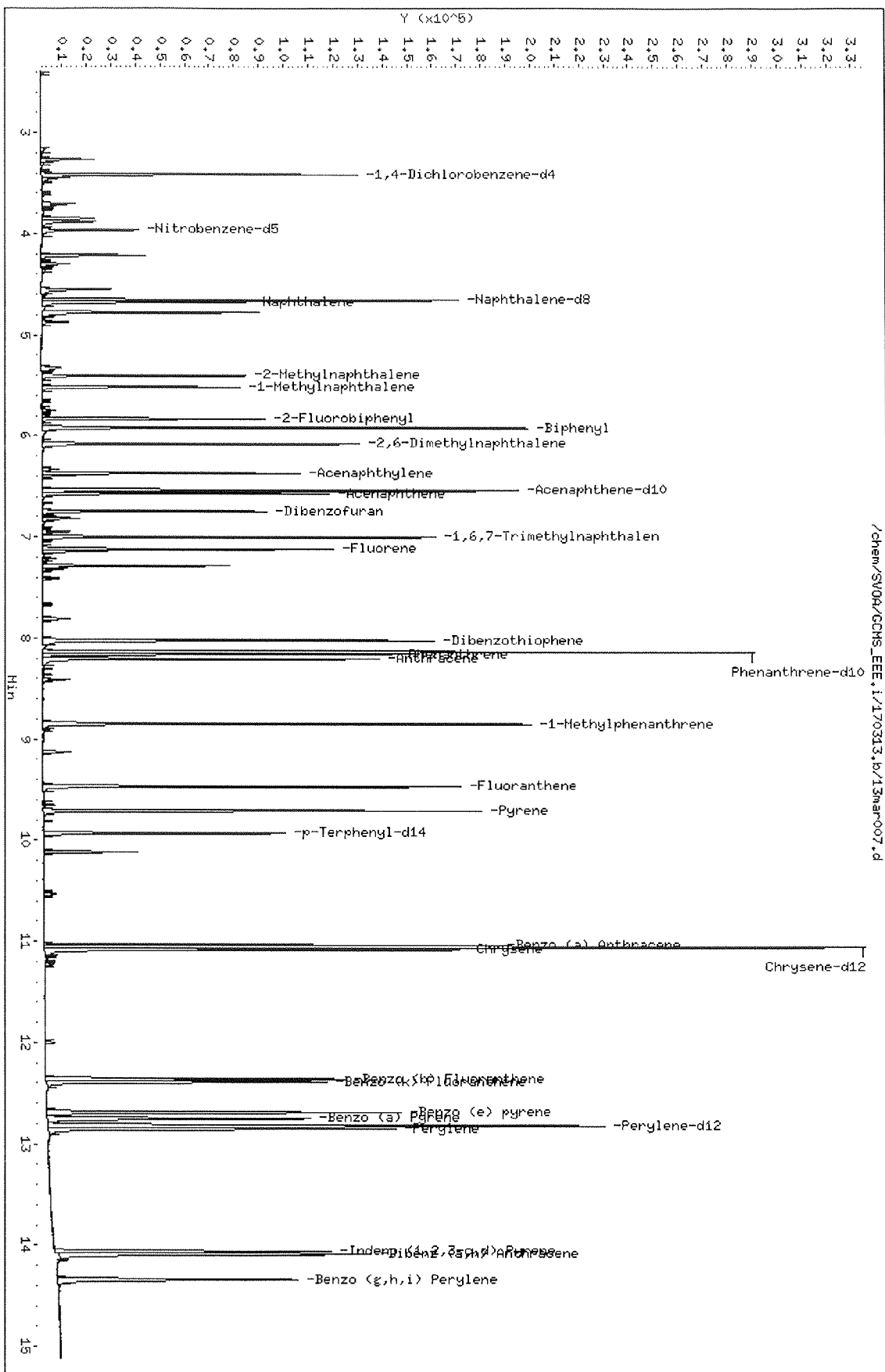
Misc Info:

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area   | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|--------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.850  | 192  | 86212  | 2.112                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.694 | 252  | 128856 | 2.062                         | 98     |
| 32) Perylene             | (6)          | 12.855 | 252  | 123946 | 2.068                         | 99     |
| 13) Dibenzofuran         | (3)          | 6.749  | 168  | 53718  | 2.102                         | 99     |

page 2 of 2

Data File: /chem/SV04/GCHS\_EEE.i/170313.b/13mar007.d  
 Date : 13-MAR-2017 13:13  
 Client ID:  
 Sample Info: ICAL-2 SOL0317E 2PPM  
 Column phase: J&M DB-SMS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar008.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:  
 Response via Initial Calibration

|                                |  | I.S.       |        |         | On-Column |            |
|--------------------------------|--|------------|--------|---------|-----------|------------|
| Compounds                      |  | Ref.       | RT     | QIon    | Amount    | DEV(Min)   |
|                                |  |            |        |         | (mg/L)    |            |
| =====                          |  | =====      | =====  | =====   | =====     | =====      |
| Internal Standards             |  |            |        |         |           |            |
| 1)*1,4-Dichlorobenzene-d4      |  | (1)        | 3.414  | 152     | 46489     | 5.000 0.01 |
| 3)*Naphthalene-d8              |  | (2)        | 4.656  | 136     | 140022    | 5.000 0.00 |
| 11)*Acenaphthene-d10           |  | (3)        | 6.541  | 164     | 63153     | 5.000 0.00 |
| 17)*Phenanthrene-d10           |  | (4)        | 8.136  | 188     | 210133    | 5.000 0.00 |
| 31)*Perylene-d12               |  | (6)        | 12.823 | 264     | 208071    | 5.000 0.00 |
| 25)*Chrysene-d12               |  | (5)        | 11.056 | 240     | 220711    | 5.000 0.00 |
| System Monitoring Compounds    |  |            |        |         |           |            |
| 2)\$Nitrobenzene-d5            |  | (2)        | 3.966  | 82      | 9500      | 1.024 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 97.033  |           |            |
| 7)\$2-Fluorobiphenyl           |  | (3)        | 5.833  | 172     | 23775     | 1.043 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 100.830 |           |            |
| 23)\$p-Terphenyl-d14           |  | (5)        | 9.932  | 244     | 35159     | 1.028 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 101.689 |           |            |
| Target Compounds               |  |            |        |         |           | QValue     |
| 4) Naphthalene                 |  | (2)        | 4.676  | 128     | 30813     | 1.015 100  |
| 5) 2-Methylnaphthalene         |  | (2)        | 5.404  | 142     | 18891     | 1.020 100  |
| 6) 1-Methylnaphthalene         |  | (2)        | 5.517  | 142     | 18774     | 1.011 100  |
| 10) Acenaphthylene             |  | (3)        | 6.371  | 152     | 32530     | 1.019 100  |
| 12) Acenaphthene               |  | (3)        | 6.574  | 153     | 19598     | 1.023 100  |
| 15) Fluorene                   |  | (3)        | 7.123  | 166     | 22113     | 1.037 100  |
| 18) Phenanthrene               |  | (4)        | 8.159  | 178     | 45683     | 1.024 100  |
| 19) Anthracene                 |  | (4)        | 8.211  | 178     | 40718     | 0.934 100  |
| 21) Fluoranthene               |  | (4)        | 9.470  | 202     | 58439     | 1.019 100  |
| 22) Pyrene                     |  | (5)        | 9.707  | 202     | 61511     | 1.023 100  |
| 24) Benzo (a) Anthracene       |  | (5)        | 11.040 | 228     | 57660     | 0.992 100  |
| 26) Chrysene                   |  | (5)        | 11.084 | 228     | 53861     | 1.020 100  |
| 27) Benzo (b) Fluoranthene     |  | (6)        | 12.362 | 252     | 58061     | 1.071 100  |
| 28) Benzo (k) Fluoranthene     |  | (6)        | 12.391 | 252     | 59318     | 1.043 100  |
| 30) Benzo (a) Pyrene           |  | (6)        | 12.750 | 252     | 52756     | 1.009 100  |
| 33) Indeno (1,2,3-c,d) Pyrene  |  | (6)        | 14.064 | 276     | 65862     | 1.054 100  |
| 34) Dibenz (a,h) Anthracene    |  | (6)        | 14.094 | 278     | 51150     | 1.079 100  |
| 35) Benzo (g,h,i) Perylene     |  | (6)        | 14.342 | 276     | 52489     | 1.045 100  |
| 8) Biphenyl                    |  | (3)        | 5.922  | 154     | 29053     | 1.027 100  |
| 9) 2,6-Dimethylnaphthalene     |  | (3)        | 6.081  | 156     | 20301     | 1.022 100  |
| 14) 1,6,7-Trimethylnaphthalene |  | (3)        | 7.003  | 170     | 20183     | 1.017 100  |
| 16) Dibenzothiophene           |  | (3)        | 8.024  | 184     | 59602     | 1.021 100  |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar008.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:59  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM  
Response via Initial Calibration

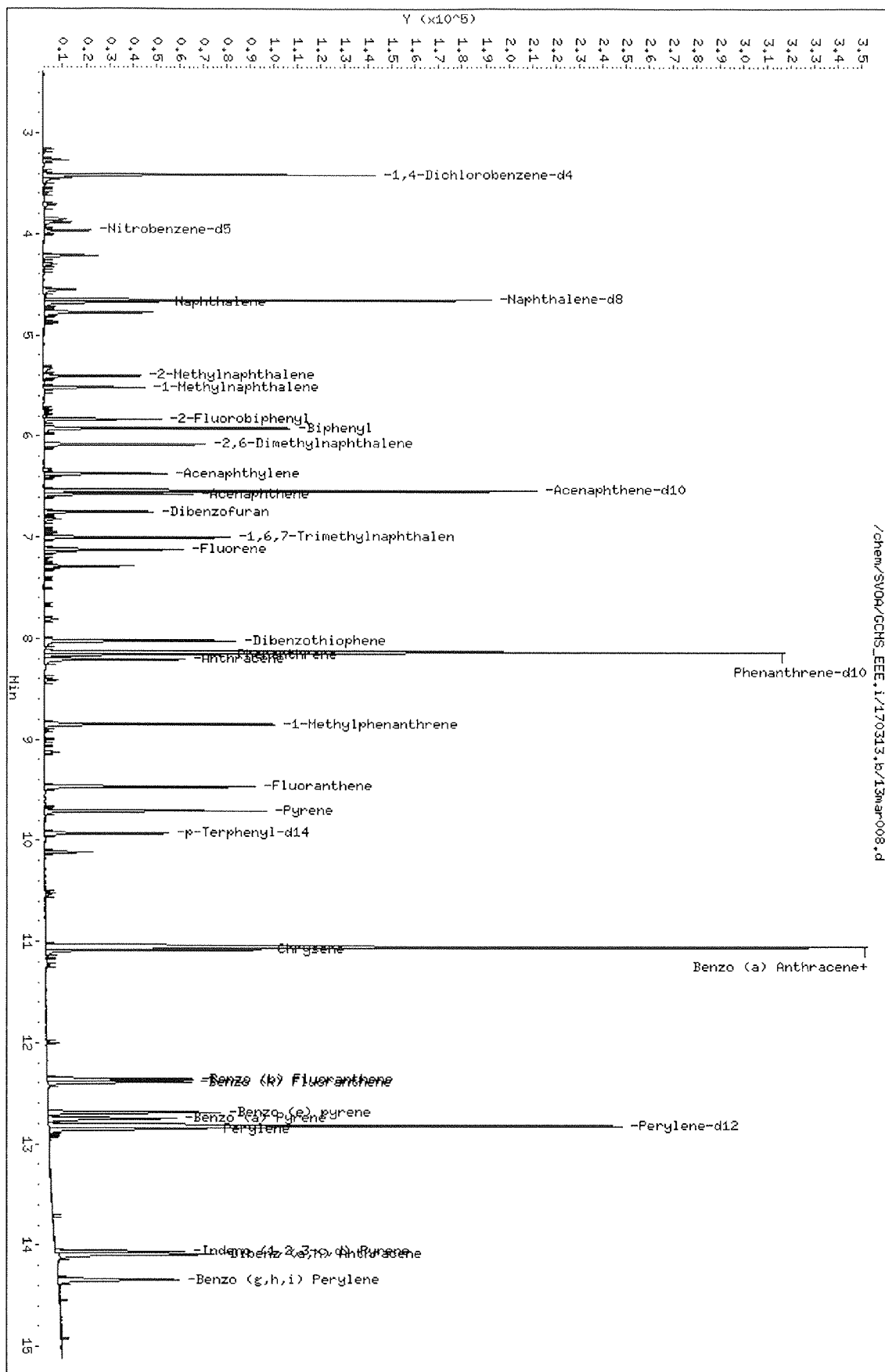
Misc Info:

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.850  | 192  | 45057 | 1.024                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.690 | 252  | 68218 | 1.053                         | 100    |
| 32) Perylene             | (6)          | 12.854 | 252  | 62786 | 1.010                         | 100    |
| 13) Dibenzofuran         | (3)          | 6.749  | 168  | 28575 | 1.031                         | 100    |

page 2 of 2

Data File: /chem/SV04/GCHS\_EEE.i/170313.b/13mar008.d  
 Date: 13-MAR-2017 13:33  
 Client ID:  
 Sample Info: ICAL-3 SOL0317F 1PPH  
 Column phase: J&W DB-SMS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar009.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:  
 Response via Initial Calibration

| Compounds                      | I.S.              | RT     | QIon  | Area   | On-Column        | DEV (Min) |
|--------------------------------|-------------------|--------|-------|--------|------------------|-----------|
|                                | Ref.              |        |       |        | Amount<br>(mg/L) |           |
| =====                          | =====             | =====  | ===== | =====  | =====            | =====     |
| Internal Standards             |                   |        |       |        |                  |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)               | 3.414  | 152   | 46816  | 5.000            | 0.01      |
| 3)*Naphthalene-d8              | (2)               | 4.654  | 136   | 141612 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)               | 6.540  | 164   | 65116  | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)               | 8.136  | 188   | 215147 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)               | 12.825 | 264   | 224201 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)               | 11.057 | 240   | 226005 | 5.000            | 0.00      |
| System Monitoring Compounds    |                   |        |       |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)               | 3.967  | 82    | 4177   | 0.445            | 0.00      |
| SpikedAmount 0.500             | Recovery = 43.133 |        |       |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)               | 5.831  | 172   | 11066  | 0.471            | 0.00      |
| SpikedAmount 0.500             | Recovery = 45.627 |        |       |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)               | 9.931  | 244   | 16152  | 0.461            | 0.00      |
| SpikedAmount 0.500             | Recovery = 45.890 |        |       |        |                  |           |
| Target Compounds               |                   |        |       |        |                  | QValue    |
| 4) Naphthalene                 | (2)               | 4.676  | 128   | 14251  | 0.464            | 98        |
| 5) 2-Methylnaphthalene         | (2)               | 5.404  | 142   | 8470   | 0.452            | 96        |
| 6) 1-Methylnaphthalene         | (2)               | 5.516  | 142   | 8559   | 0.456            | 99        |
| 10) Acenaphthylene             | (3)               | 6.371  | 152   | 15162  | 0.460            | 99        |
| 12) Acenaphthene               | (3)               | 6.574  | 153   | 9204   | 0.466            | 99        |
| 15) Fluorene                   | (3)               | 7.123  | 166   | 10327  | 0.469            | 99        |
| 18) Phenanthrene               | (4)               | 8.160  | 178   | 21102  | 0.462            | 99        |
| 19) Anthracene                 | (4)               | 8.209  | 178   | 21165  | 0.474            | 99        |
| 21) Fluoranthene               | (4)               | 9.469  | 202   | 27157  | 0.462            | 99        |
| 22) Pyrene                     | (5)               | 9.707  | 202   | 28490  | 0.463            | 99        |
| 24) Benzo (a) Anthracene       | (5)               | 11.040 | 228   | 27292  | 0.458            | 99        |
| 26) Chrysene                   | (5)               | 11.085 | 228   | 25041  | 0.463            | 99        |
| 27) Benzo (b) Fluoranthene     | (6)               | 12.361 | 252   | 26512  | 0.454            | 99        |
| 28) Benzo (k) Fluoranthene     | (6)               | 12.393 | 252   | 28262  | 0.461            | 98        |
| 30) Benzo (a) Pyrene           | (6)               | 12.752 | 252   | 26139  | 0.464            | 99        |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)               | 14.065 | 276   | 29971  | 0.445            | 92        |
| 34) Dibenz (a,h) Anthracene    | (6)               | 14.093 | 278   | 23700  | 0.464            | 99        |
| 35) Benzo (g,h,i) Perylene     | (6)               | 14.344 | 276   | 24422  | 0.451            | 100       |
| 8) Biphenyl                    | (3)               | 5.921  | 154   | 13800  | 0.473            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)               | 6.081  | 156   | 9629   | 0.470            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)               | 7.001  | 170   | 9520   | 0.465            | 99        |
| 16) Dibenzothiophene           | (3)               | 8.024  | 184   | 27839  | 0.462            | 99        |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar009.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:59  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

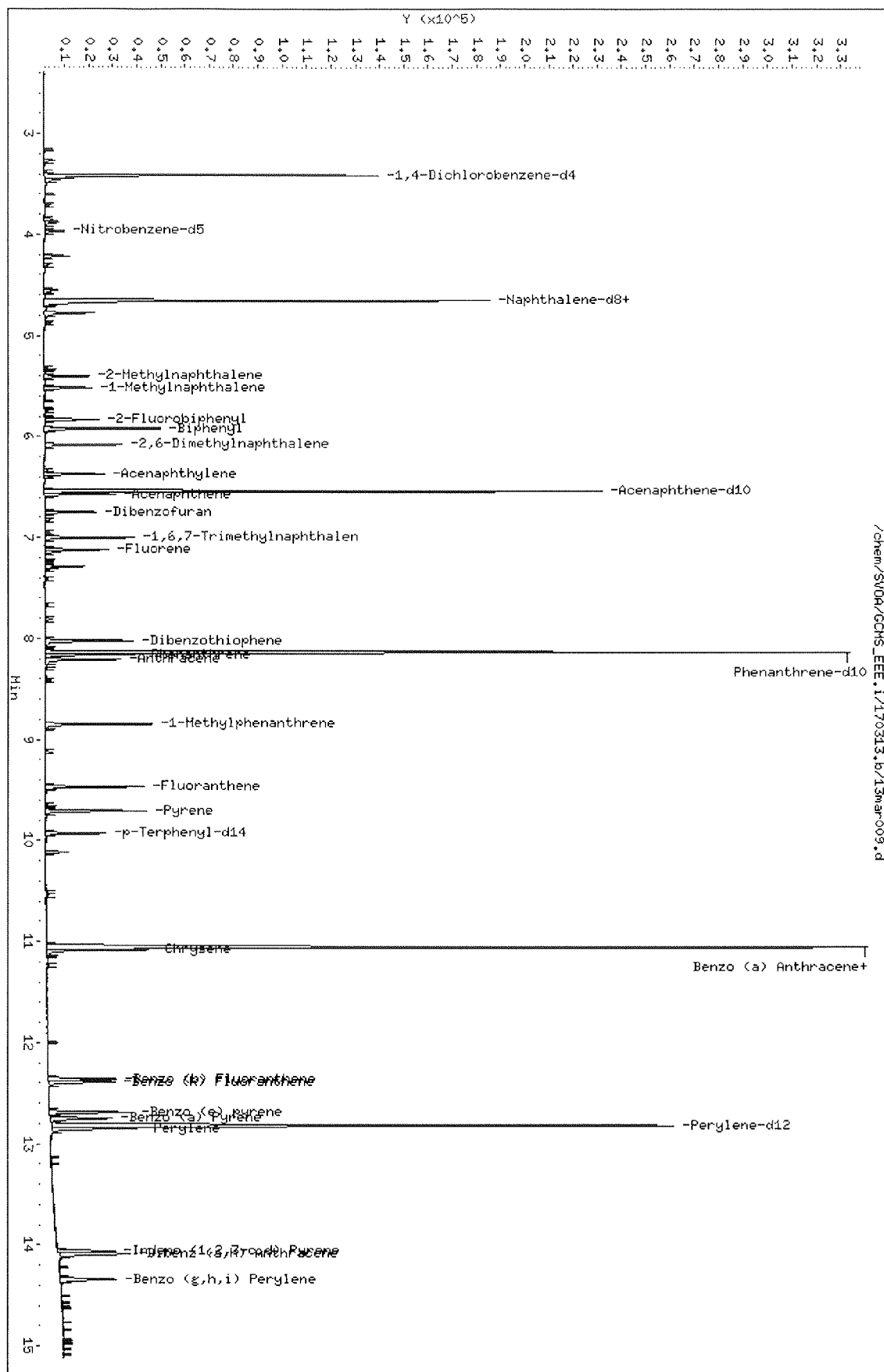
Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.850  | 192  | 21018 | 0.467                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.691 | 252  | 31599 | 0.453                         | 99     |
| 32) Perylene             | (6)          | 12.853 | 252  | 31630 | 0.472                         | 100    |
| 13) Dibenzofuran         | (3)          | 6.749  | 168  | 13308 | 0.466                         | 100    |

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Data File: /chem/SV04/GCHS\_EEE.i/170313.b/13mar009.d  
 Date : 13-MAR-2017 13:53  
 Client ID:  
 Sample Info: ICAL-4 50103176 0.5PPM  
 Column phase: J&W DB-5MS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar010.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV (Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|-----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====     |
| Internal Standards             |              |        |       |        |                               |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.414  | 152   | 46155  | 5.000                         | 0.01      |
| 3)*Naphthalene-d8              | (2)          | 4.655  | 136   | 138733 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.539  | 164   | 66109  | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.135  | 188   | 215586 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 12.823 | 264   | 222988 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 11.057 | 240   | 227975 | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |       |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 3.971  | 82    | 836    | 0.091                         | -0.01     |
| SpikedAmount 0.100             | Recovery =   | 8.992  |       |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.833  | 172   | 2492   | 0.104                         | 0.00      |
| SpikedAmount 0.100             | Recovery =   | 10.221 |       |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 9.933  | 244   | 3593   | 0.102                         | 0.00      |
| SpikedAmount 0.100             | Recovery =   | 10.183 |       |        |                               |           |
| Target Compounds               |              |        |       |        |                               |           |
|                                |              |        |       |        | QValue                        |           |
| 4) Naphthalene                 | (2)          | 4.676  | 128   | 3096   | 0.103                         | 100       |
| 5) 2-Methylnaphthalene         | (2)          | 5.404  | 142   | 1809   | 0.099                         | 97        |
| 6) 1-Methylnaphthalene         | (2)          | 5.517  | 142   | 1963   | 0.107                         | 96        |
| 10) Acenaphthylene             | (3)          | 6.371  | 152   | 3418   | 0.102                         | 99        |
| 12) Acenaphthene               | (3)          | 6.571  | 153   | 2035   | 0.101                         | 97        |
| 15) Fluorene                   | (3)          | 7.124  | 166   | 2218   | 0.099                         | 99        |
| 18) Phenanthrene               | (4)          | 8.162  | 178   | 4655   | 0.102                         | 98        |
| 19) Anthracene                 | (4)          | 8.211  | 178   | 4465   | 0.100                         | 100       |
| 21) Fluoranthene               | (4)          | 9.471  | 202   | 5933   | 0.101                         | 100       |
| 22) Pyrene                     | (5)          | 9.708  | 202   | 6324   | 0.102                         | 99        |
| 24) Benzo (a) Anthracene       | (5)          | 11.039 | 228   | 6527   | 0.109                         | 97        |
| 26) Chrysene                   | (5)          | 11.084 | 228   | 5549   | 0.102                         | 99        |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.361 | 252   | 5444   | 0.094                         | 93        |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.393 | 252   | 6080   | 0.100                         | 91        |
| 30) Benzo (a) Pyrene           | (6)          | 12.752 | 252   | 5588   | 0.100                         | 93        |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 14.068 | 276   | 6565   | 0.098                         | 81        |
| 34) Dibenz (a,h) Anthracene    | (6)          | 14.096 | 278   | 4557   | 0.090                         | 91        |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.346 | 276   | 5340   | 0.099                         | 97        |
| 8) Biphenyl                    | (3)          | 5.922  | 154   | 3118   | 0.105                         | 90        |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.081  | 156   | 2138   | 0.103                         | 99        |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 7.003  | 170   | 2164   | 0.104                         | 100       |
| 16) Dibenzothiophene           | (3)          | 8.024  | 184   | 6252   | 0.102                         | 98        |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar010.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:59  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

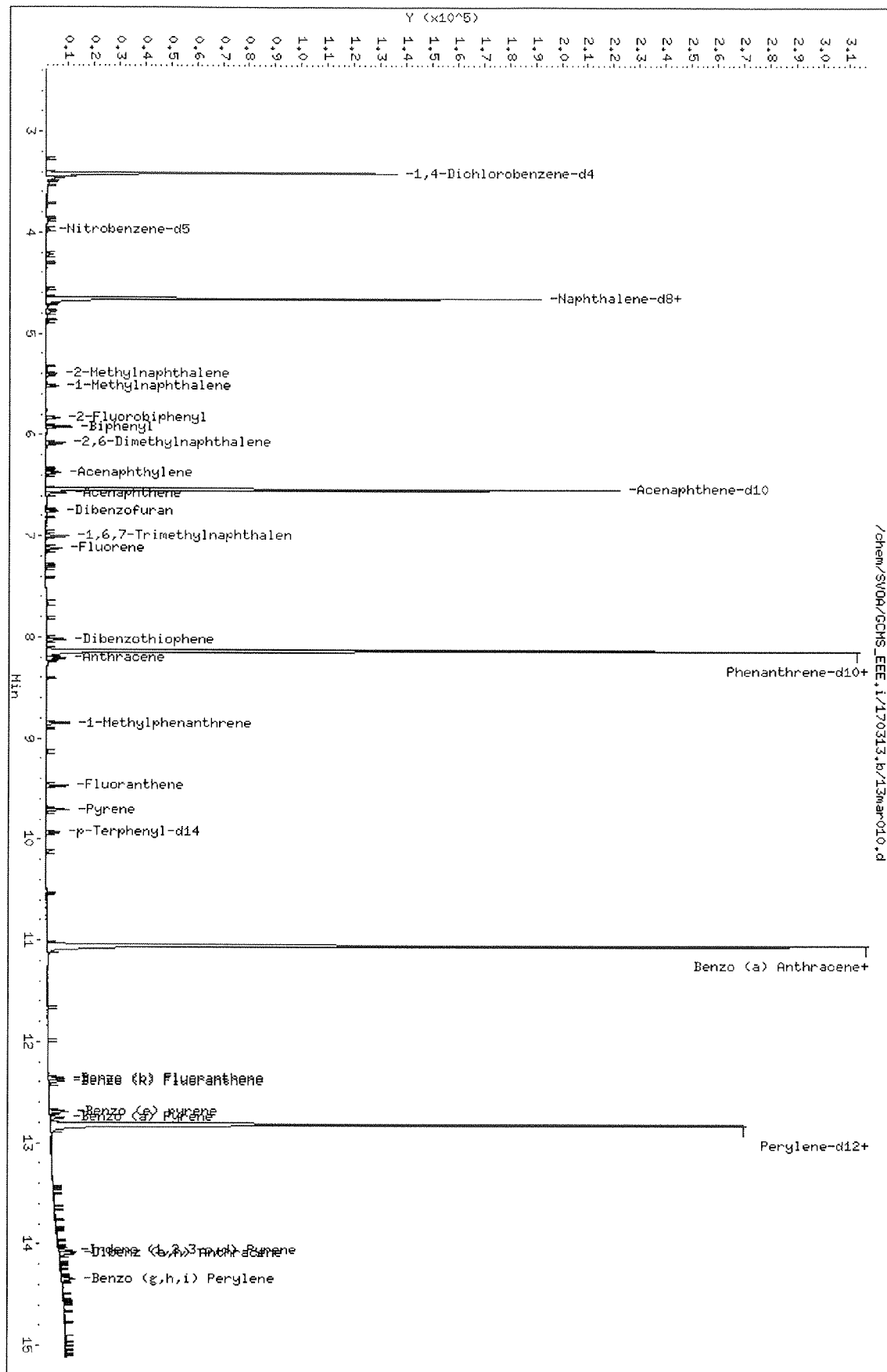
Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.850  | 192  | 4428 | 0.097                         | 98     |
| 29) Benzo (e) pyrene     | (6)          | 12.691 | 252  | 7135 | 0.103                         | 99     |
| 32) Perylene             | (6)          | 12.853 | 252  | 6852 | 0.103                         | 98     |
| 13) Dibenzofuran         | (3)          | 6.748  | 168  | 2858 | 0.099                         | 98     |

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Date File: /chem/SV04/GCHS\_EEE.i/170313.b/13mar010.d  
 Date : 13-MAR-2017 14:13  
 Client ID:  
 Sample Info: ICAL-5 SOL0317H 0.1PPM  
 Column phase: J&W DB-SMS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar011.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                      | I.S.       | RT     | QIon  | Area   | On-Column        | DEV (Min) |
|--------------------------------|------------|--------|-------|--------|------------------|-----------|
|                                | Ref.       |        |       |        | Amount<br>(mg/L) |           |
| =====                          | =====      | =====  | ===== | =====  | =====            | =====     |
| Internal Standards             |            |        |       |        |                  |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)        | 3.419  | 152   | 44664  | 5.000            | 0.00      |
| 3)*Naphthalene-d8              | (2)        | 4.653  | 136   | 134376 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)        | 6.538  | 164   | 61082  | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)        | 8.136  | 188   | 200519 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)        | 12.823 | 264   | 200860 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)        | 11.055 | 240   | 207148 | 5.000            | 0.00      |
| System Monitoring Compounds    |            |        |       |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)        | 3.965  | 82    | 10658  | 1.197            | 0.00      |
| SpikedAmount 1.000             | Recovery = | 0.000  |       |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)        | 5.831  | 172   | 26320  | 1.194            | 0.00      |
| SpikedAmount 1.000             | Recovery = | 0.000  |       |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)        | 9.929  | 244   | 37191  | 1.159            | 0.00      |
| SpikedAmount 1.000             | Recovery = | 0.000  |       |        |                  |           |
| Target Compounds               |            |        |       |        |                  |           |
|                                |            |        |       |        |                  | QValue    |
| 4) Naphthalene                 | (2)        | 4.673  | 128   | 30493  | 1.046            | 100       |
| 5) 2-Methylnaphthalene         | (2)        | 5.402  | 142   | 21043  | 1.184            | 100       |
| 6) 1-Methylnaphthalene         | (2)        | 5.516  | 142   | 18763  | 1.053            | 100       |
| 10) Acenaphthylene             | (3)        | 6.370  | 152   | 31506  | 1.020            | 100       |
| 12) Acenaphthene               | (3)        | 6.572  | 153   | 20057  | 1.082            | 100       |
| 15) Fluorene                   | (3)        | 7.122  | 166   | 22387  | 1.085            | 100       |
| 18) Phenanthrene               | (4)        | 8.160  | 178   | 48240  | 1.134            | 100       |
| 19) Anthracene                 | (4)        | 8.209  | 178   | 45040  | 1.083            | 100       |
| 21) Fluoranthene               | (4)        | 9.469  | 202   | 59504  | 1.087            | 100       |
| 22) Pyrene                     | (5)        | 9.707  | 202   | 61311  | 1.087            | 100       |
| 24) Benzo (a) Anthracene       | (5)        | 11.038 | 228   | 56357  | 1.033            | 100       |
| 26) Chrysene                   | (5)        | 11.083 | 228   | 51734  | 1.043            | 100       |
| 27) Benzo (b) Fluoranthene     | (6)        | 12.360 | 252   | 56960  | 1.088            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)        | 12.391 | 252   | 57224  | 1.043            | 100       |
| 30) Benzo (a) Pyrene           | (6)        | 12.752 | 252   | 52949  | 1.049            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)        | 14.065 | 276   | 63053  | 1.045            | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)        | 14.091 | 278   | 49952  | 1.092            | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)        | 14.339 | 276   | 53577  | 1.105            | 100       |
| 8) Biphenyl                    | (3)        | 5.919  | 154   | 25012  | 0.914            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)        | 6.079  | 156   | 17327  | 0.902            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)        | 7.001  | 170   | 16542  | 0.862            | 100       |
| 16) Dibenzothiophene           | (3)        | 8.024  | 184   | 51223  | 0.907            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170313.b/13mar011.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:59  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

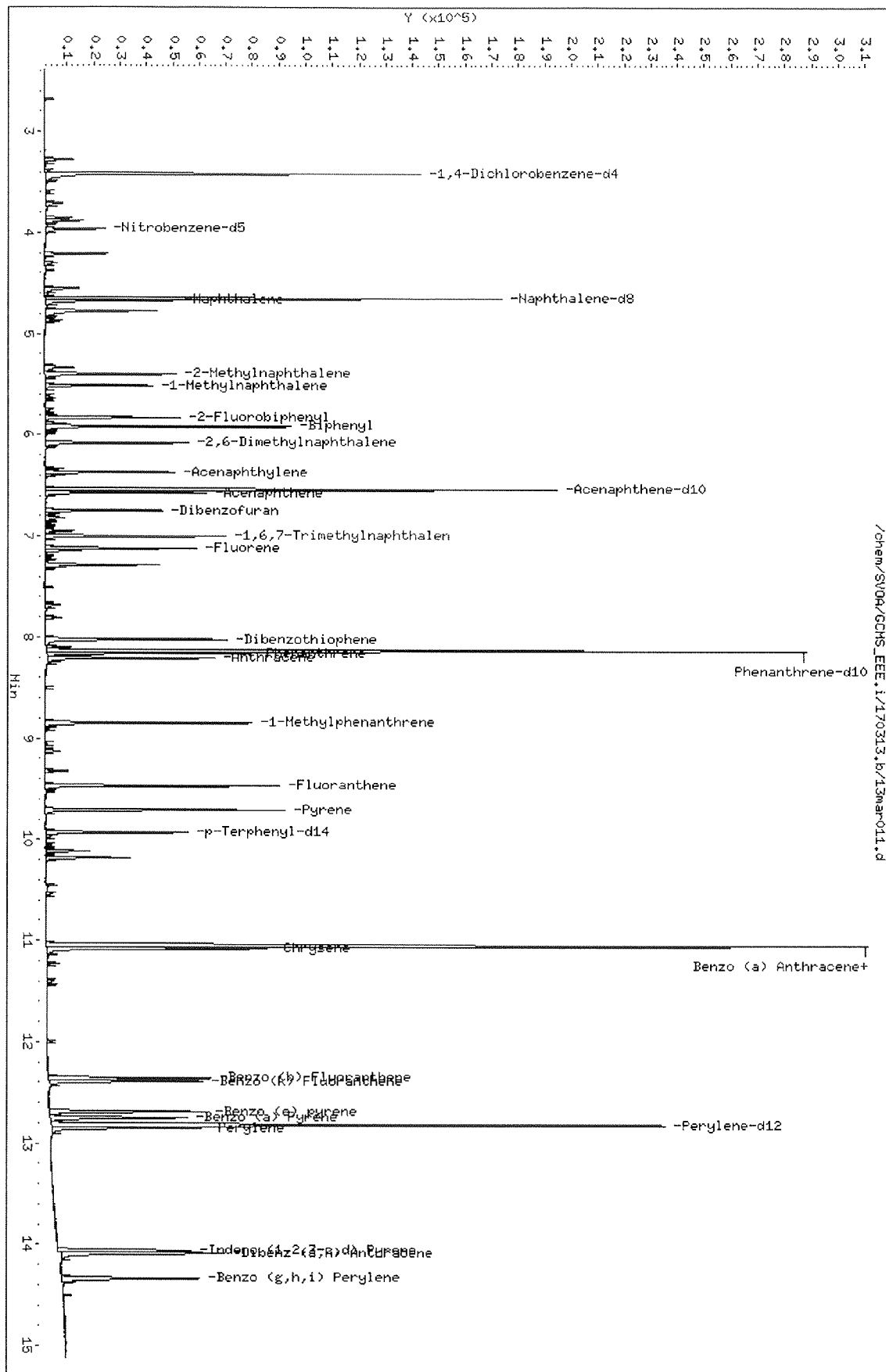
Sample Name: ICV S010317I 1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.848  | 192  | 37778 | 0.915                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.691 | 252  | 56048 | 0.896                         | 100    |
| 32) Perylene             | (6)          | 12.851 | 252  | 50780 | 0.846                         | 100    |
| 13) Dibenzofuran         | (3)          | 6.748  | 168  | 29537 | 1.102                         | 100    |

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Date File: /chem/SV04/GCHS\_EEE.i/170313.b/13mar011.d  
 Date : 13-Mar-2017 14:34  
 Client ID:  
 Sample Info: ICV S0103171 1PPH  
 Column phase: J&W DB-5MS

Instrument: GCHS\_EEE.i  
 Operator: 907  
 Column diameter: 0.18



# EPA METHOD 8270C PAHSIM

## Sample Data

# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-20 15:30  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar010.d\20mar010.rr

**# 26** **CLIENT SAMPLE NUMBER:** B-DU3-ISM1-3

**LCS/MB BATCH:** 170317L004 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g  
**MS/MSD BATCH:** 170317S004 **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.000              | 1.00      | ND          | 0.010     | w           |
| 2-Methylnaphthalene       | 0.0174             | 1.00      | ND          | 0.010     | w           |
| 1-Methylnaphthalene       | 0.0226             | 1.00      | ND          | 0.010     | w           |
| Acenaphthylene            | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthene              | 0.0217             | 1.00      | ND          | 0.010     | w           |
| Fluorene                  | 0.0211             | 1.00      | ND          | 0.010     | w           |
| Phenanthrene              | 0.0356             | 1.00      | ND          | 0.010     | w           |
| Anthracene                | 0.0313             | 1.00      | ND          | 0.010     | w           |
| Fluoranthene              | 0.0485             | 1.00      | ND          | 0.010     | w           |
| Pyrene                    | 0.0579             | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Anthracene      | 0.0724             | 1.00      | ND          | 0.010     | w           |
| Chrysene                  | 0.0823             | 1.00      | ND          | 0.010     | w           |
| Benzo (k) Fluoranthene    | 0.0843             | 1.00      | ND          | 0.010     | w           |
| Benzo (b) Fluoranthene    | 0.0808             | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Pyrene          | 0.0728             | 1.00      | ND          | 0.010     | w           |
| Indeno (1,2,3-c,d) Pyrene | 0.0898             | 1.00      | ND          | 0.010     | w           |
| Dibenz (a,h) Anthracene   | 0.0825             | 1.00      | ND          | 0.010     | w           |
| Benzo (g,h,i) Perylene    | 0.115              | 1.00      | 0.0115      | 0.010     | w           |

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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar010.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 15:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-26 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon   | Area   | On-Column<br>Amount<br>(mg/L) | DEV (Min) |
|--------------------------------|--------------|--------|--------|--------|-------------------------------|-----------|
| =====                          | =====        | =====  | =====  | =====  | =====                         | =====     |
| Internal Standards             |              |        |        |        |                               |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.333  | 152    | 53091  | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)          | 4.565  | 136    | 156238 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.448  | 164    | 87746  | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.042  | 188    | 253837 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 12.699 | 264    | 249462 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 10.956 | 240    | 263068 | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |        |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 3.885  | 82     | 4355   | 0.421                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 42.086 |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.744  | 172    | 12498  | 0.395                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 39.455 |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 9.838  | 244    | 26187  | 0.642                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 64.236 |        |                               |           |
| Target Compounds               |              |        |        |        | QValue                        |           |
| 4) Naphthalene                 | (2)          | 0.000  |        | 0      | N.D.                          |           |
| 5) 2-Methylnaphthalene         | (2)          | 5.314  | 142    | 360    | 0.017                         | 62        |
| 6) 1-Methylnaphthalene         | (2)          | 5.428  | 142    | 469    | 0.023                         | 84        |
| 10) Acenaphthylene             | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 12) Acenaphthene               | (3)          | 6.482  | 153    | 578    | 0.022                         | 96        |
| 15) Fluorene                   | (3)          | 7.037  | 166    | 626    | 0.021                         | 97        |
| 18) Phenanthrene               | (4)          | 8.067  | 178    | 1920   | 0.036                         | 93        |
| 19) Anthracene                 | (4)          | 8.120  | 178    | 1649   | 0.031                         | 95        |
| 21) Fluoranthene               | (4)          | 9.376  | 202    | 3360   | 0.048                         | 98        |
| 22) Pyrene                     | (5)          | 9.613  | 202    | 4147   | 0.058                         | 99        |
| 24) Benzo (a) Anthracene       | (5)          | 10.941 | 228    | 5016   | 0.072                         | 93        |
| 26) Chrysene                   | (5)          | 10.985 | 228    | 5181   | 0.082                         | 97        |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.244 | 252    | 5255   | 0.081                         | 93        |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.272 | 252    | 5745   | 0.084                         | 83        |
| 30) Benzo (a) Pyrene           | (6)          | 12.631 | 252    | 4563   | 0.073                         | 90        |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 13.942 | 276    | 6725   | 0.090                         | 93        |
| 34) Dibenz (a,h) Anthracene    | (6)          | 13.969 | 278    | 4689   | 0.083                         | 94        |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.214 | 276    | 6932   | 0.115                         | 98        |
| 8) Biphenyl                    | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 16) Dibenzothiophene           | (3)          | 0.000  |        | 0      | N.D.                          |           |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar010.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 20-MAR-2017 15:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
Calibration date and time: 20-MAR-2017 10:33  
Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-26

Misc Info: S101716B 10UL

Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 0.000  |      | 0    | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000  |      | 0    | N.D.                          |        |
| 32) Perylene             | (6)          | 12.700 | 252  | 987  | 0.013                         | 88     |
| 13) Dibenzofuran         | (3)          | 6.661  | 168  | 791  | 0.021                         | 93     |

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Data File: /chem/SV0A/GCHS\_EEE.i/170320.b/20mar010.d

Date : 20-MAR-2017 15:30

Client ID:

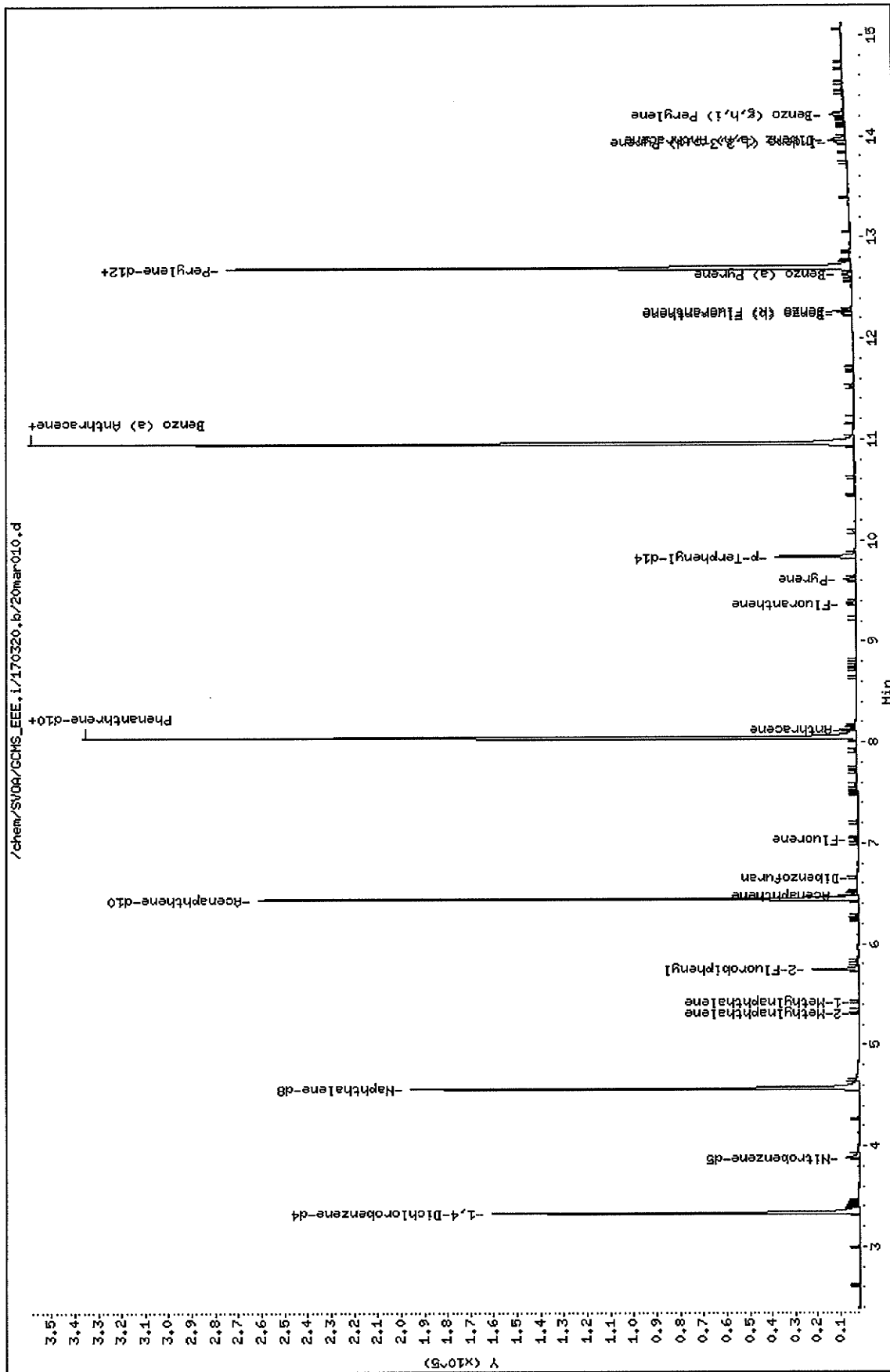
Sample Info: 17-03-1104-26

Instrument: GCHS\_EEE.i

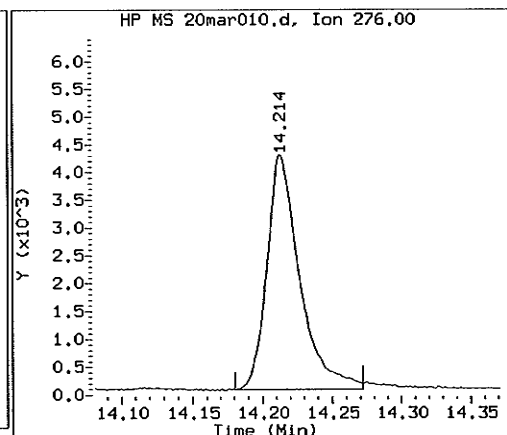
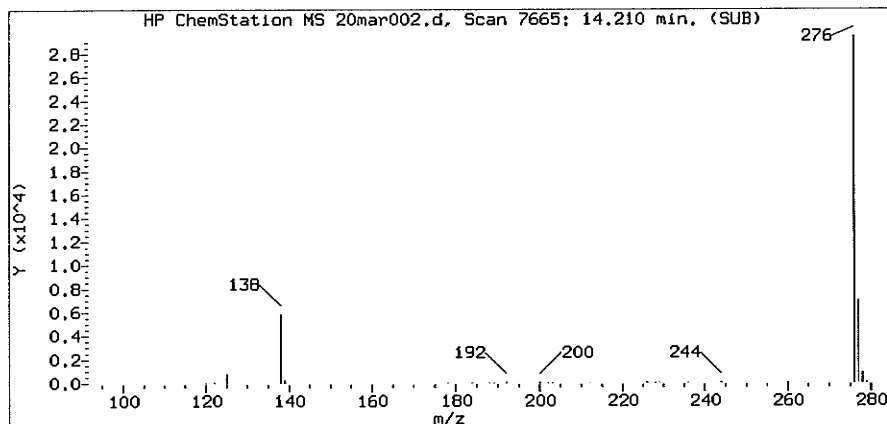
Operator: 907

Column diameter: 0.18

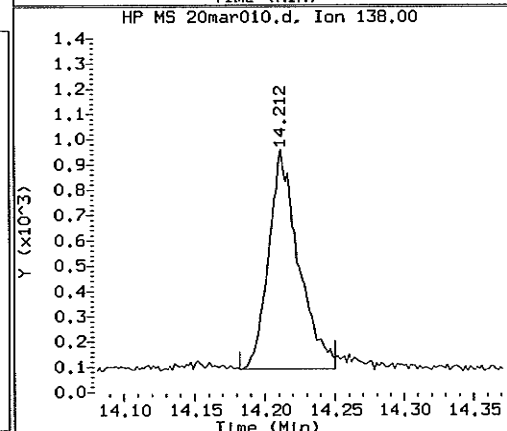
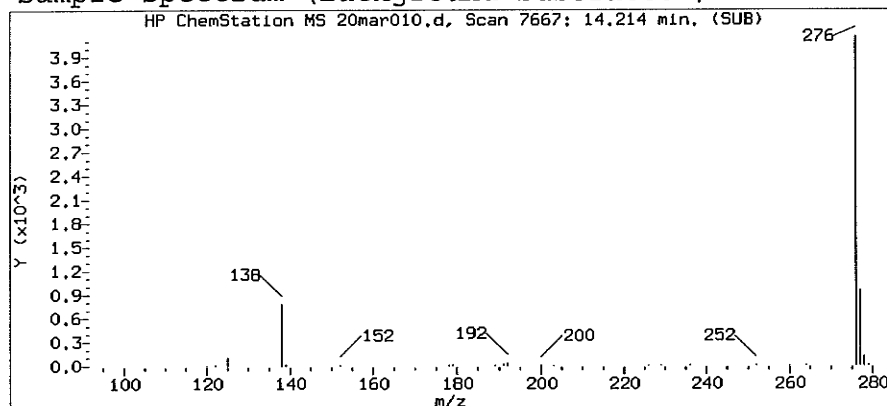
Column phase: J&amp;W DB-5MS

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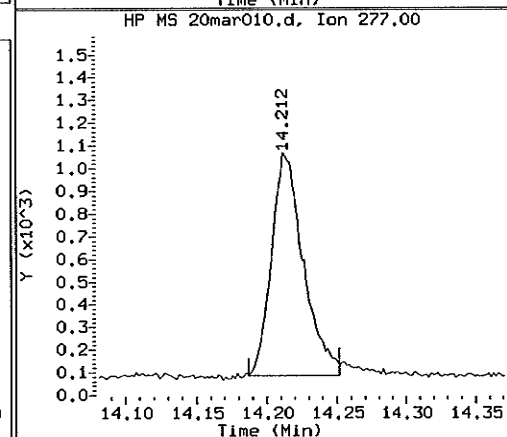
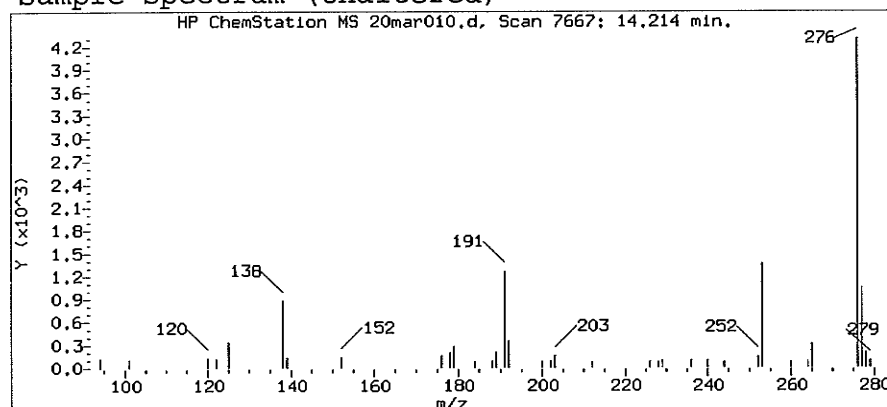
## Reference Standard Spectrum for Benzo (g,h,i) Perylene



## Sample Spectrum (Background Subtracted)



## Sample Spectrum (Unaltered)



Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar010.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 15:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-26

Compound Number : 35  
 Compound Name : Benzo (g,h,i) Perylene  
 Scan Number : 7667  
 Retention Time (minutes): 14.214  
 Relative Retention Time : -0.00041  
 Quant Ion : 276.00  
 Area (flag) : 6932  
 On-Column Amount (mg/L) : 0.1152

# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-20 15:50  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar011.d\20mar011.rr

**# 27** **CLIENT SAMPLE NUMBER:** B-DU3-ISM2-3

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170317L004 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.00 g |
| <b>MS/MSD BATCH:</b> 170317S004 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 2.00 ml / ACTUAL: 2.00 ml  |
| <b>UNITS:</b> mg/kg             | <b>ADJUSTMENT RATIO TO PF:</b> 1.00                               |

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.000              | 1.00      | ND          | 0.010     | w           |
| 2-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| 1-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthylene            | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluorene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Phenanthrene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Anthracene                | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluoranthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Pyrene                    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Anthracene      | 0.000              | 1.00      | ND          | 0.010     | w           |
| Chrysene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (k) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (b) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Pyrene          | 0.000              | 1.00      | ND          | 0.010     | w           |
| Indeno (1,2,3-c,d) Pyrene | 0.000              | 1.00      | ND          | 0.010     | w           |
| Dibenz (a,h) Anthracene   | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (g,h,i) Perylene    | 0.000              | 1.00      | ND          | 0.010     | w           |

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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar011.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 15:50 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-27 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon   | Area   | On-Column<br>Amount<br>(mg/L) | DEV (Min) |
|--------------------------------|--------------|--------|--------|--------|-------------------------------|-----------|
| =====                          | =====        | =====  | =====  | =====  | =====                         | =====     |
| Internal Standards             |              |        |        |        |                               |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.331  | 152    | 50047  | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)          | 4.566  | 136    | 148884 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.449  | 164    | 92628  | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.043  | 188    | 273396 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 12.699 | 264    | 270810 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 10.954 | 240    | 280950 | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |        |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 3.886  | 82     | 4675   | 0.474                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 47.414 |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.744  | 172    | 12982  | 0.388                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 38.825 |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 9.837  | 244    | 27381  | 0.629                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 62.889 |        |                               |           |
| Target Compounds               |              |        |        |        |                               |           |
|                                |              |        |        |        |                               | QValue    |
| 4) Naphthalene                 | (2)          | 0.000  |        | 0      | N.D.                          |           |
| 5) 2-Methylnaphthalene         | (2)          | 0.000  |        | 0      | N.D.                          |           |
| 6) 1-Methylnaphthalene         | (2)          | 0.000  |        | 0      | N.D.                          |           |
| 10) Acenaphthylene             | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 12) Acenaphthene               | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 15) Fluorene                   | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 18) Phenanthrene               | (4)          | 0.000  |        | 0      | N.D.                          |           |
| 19) Anthracene                 | (4)          | 0.000  |        | 0      | N.D.                          |           |
| 21) Fluoranthene               | (4)          | 0.000  |        | 0      | N.D.                          |           |
| 22) Pyrene                     | (5)          | 0.000  |        | 0      | N.D.                          |           |
| 24) Benzo (a) Anthracene       | (5)          | 0.000  |        | 0D     | N.D.                          |           |
| 26) Chrysene                   | (5)          | 0.000  |        | 0D     | N.D.                          |           |
| 27) Benzo (b) Fluoranthene     | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 28) Benzo (k) Fluoranthene     | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 30) Benzo (a) Pyrene           | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 34) Dibenz (a,h) Anthracene    | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 35) Benzo (g,h,i) Perylene     | (6)          | 0.000  |        | 0      | N.D.                          |           |
| 8) Biphenyl                    | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 0.000  |        | 0      | N.D.                          |           |
| 16) Dibenzothiophene           | (3)          | 0.000  |        | 0      | N.D.                          |           |

D = Compound was deleted.

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar011.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 20-MAR-2017 15:50 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
Calibration date and time: 20-MAR-2017 10:33  
Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-27 Misc Info: S101716B 10UL  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT    | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 0.000 |      | 0    | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000 |      | 0    | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |      | 0    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |      | 0    | N.D.                          |        |

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Data File: /chem/SV0A/GCHS\_EEE.i/170320.b/20mar011.d

Date : 20-MAR-2017 15:50

Client ID:

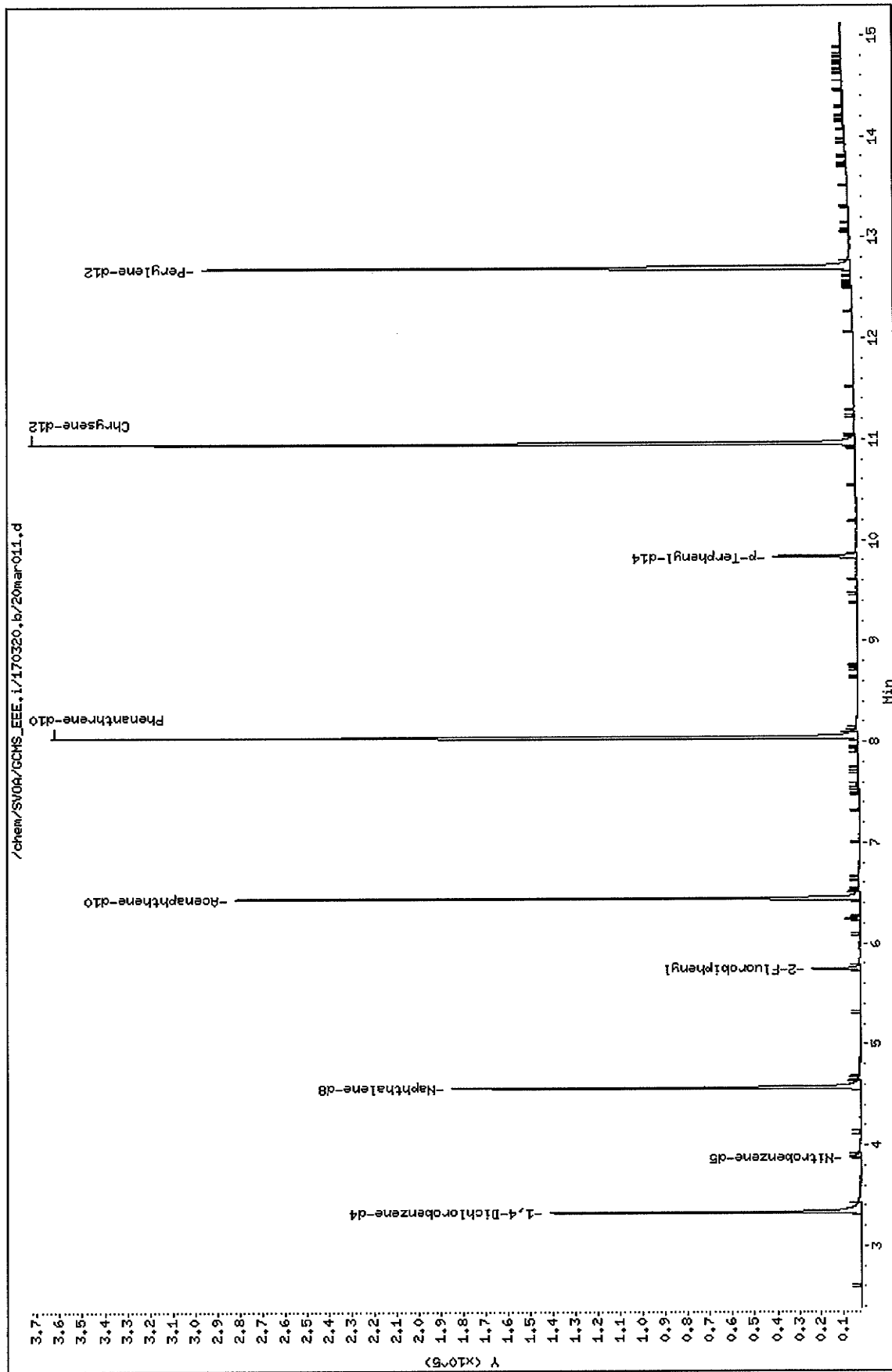
Sample Info: 17-03-1104-27

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS



# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-20 16:10  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar012.d\20mar012.rr

**# 28** **CLIENT SAMPLE NUMBER:** B-DU3-ISM3-3

**LCS/MB BATCH:** 170317L004 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g  
**MS/MSD BATCH:** 170317S004 **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.000              | 1.00      | ND          | 0.010     | w           |
| 2-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| 1-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthylene            | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluorene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Phenanthrene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Anthracene                | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluoranthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Pyrene                    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Anthracene      | 0.000              | 1.00      | ND          | 0.010     | w           |
| Chrysene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (k) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (b) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Pyrene          | 0.000              | 1.00      | ND          | 0.010     | w           |
| Indeno (1,2,3-c,d) Pyrene | 0.000              | 1.00      | ND          | 0.010     | w           |
| Dibenz (a,h) Anthracene   | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (g,h,i) Perylene    | 0.000              | 1.00      | ND          | 0.010     | w           |

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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar012.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 16:10 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-28 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |              |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.330  | 152   | 54347  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.567  | 136   | 160917 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.449  | 164   | 93410  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.042  | 188   | 271454 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.701 | 264   | 261130 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)          | 10.957 | 240   | 278067 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.887  | 82    | 4161   | 0.390                         | -0.01    |
| SpikedAmount 1.000             | Recovery =   | 39.039 |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.745  | 172   | 11411  | 0.338                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 33.842 |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.837  | 244   | 30370  | 0.705                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 70.477 |       |        |                               |          |
| Target Compounds               |              |        |       |        |                               |          |
|                                |              |        |       |        | QValue                        |          |
| 4) Naphthalene                 | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 5) 2-Methylnaphthalene         | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 6) 1-Methylnaphthalene         | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 10) Acenaphthylene             | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 12) Acenaphthene               | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 15) Fluorene                   | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 18) Phenanthrene               | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 19) Anthracene                 | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 21) Fluoranthene               | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 22) Pyrene                     | (5)          | 0.000  |       | 0      | N.D.                          |          |
| 24) Benzo (a) Anthracene       | (5)          | 0.000  |       | 0      | N.D.                          |          |
| 26) Chrysene                   | (5)          | 0.000  |       | 0D     | N.D.                          |          |
| 27) Benzo (b) Fluoranthene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 28) Benzo (k) Fluoranthene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 30) Benzo (a) Pyrene           | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 34) Dibenz (a,h) Anthracene    | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 35) Benzo (g,h,i) Perylene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 8) Biphenyl                    | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 16) Dibenzothiophene           | (3)          | 0.000  |       | 0      | N.D.                          |          |

D = Compound was deleted.

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar012.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 20-MAR-2017 16:10 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
Calibration date and time: 20-MAR-2017 10:33  
Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-28 Misc Info: S101716B 10UL  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT    | QIon  | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|-------|-------|-------------------------------|--------|
| =====                    | =====        | ===== | ===== | ===== | =====                         | =====  |
| 20) 1-Methylphenanthrene | (5)          | 0.000 |       | 0     | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000 |       | 0     | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |       | 0D    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |       | 0     | N.D.                          |        |

D = Compound was deleted.

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Data File: /chem/SV0A/GCHS\_EEE.i/170320.b/20mar012.d

Date : 20-MAR-2017 16:10

Client ID:

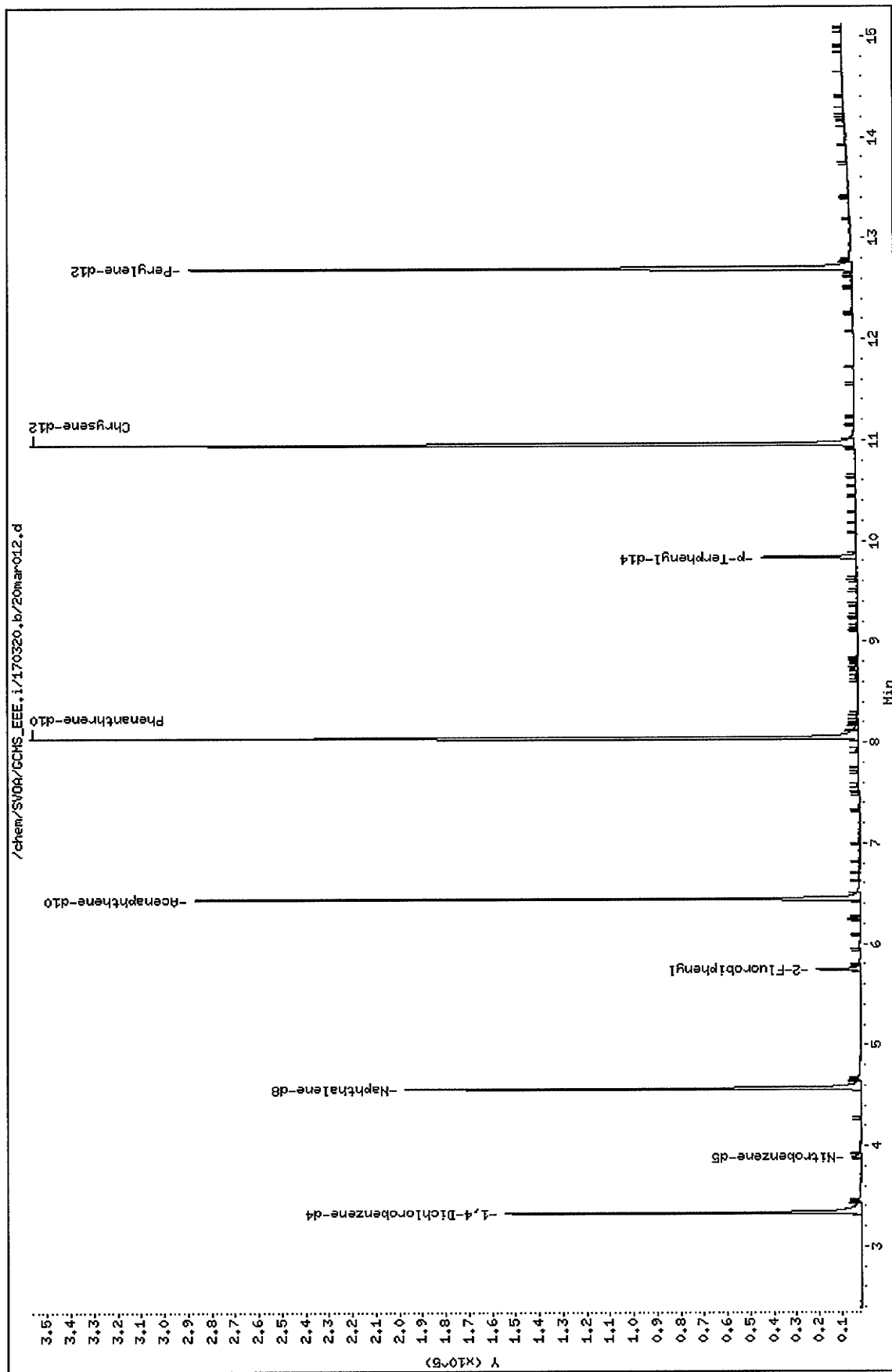
Sample Info: 17-03-1104-28

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS



# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 17-03-1104  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-20 16:30  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar013.d\20mar013.rr

**# 29** **CLIENT SAMPLE NUMBER:** B-DU3-ISM4-3

**LCS/MB BATCH:** 170317L004 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g  
**MS/MSD BATCH:** 170317S004 **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:** Sample extracted outside recommended holding time.

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.000              | 1.00      | ND          | 0.010     | w           |
| 2-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| 1-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthylene            | 0.000              | 1.00      | ND          | 0.010     | w           |
| Acenaphthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluorene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Phenanthrene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Anthracene                | 0.000              | 1.00      | ND          | 0.010     | w           |
| Fluoranthene              | 0.000              | 1.00      | ND          | 0.010     | w           |
| Pyrene                    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Anthracene      | 0.000              | 1.00      | ND          | 0.010     | w           |
| Chrysene                  | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (k) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (b) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (a) Pyrene          | 0.000              | 1.00      | ND          | 0.010     | w           |
| Indeno (1,2,3-c,d) Pyrene | 0.000              | 1.00      | ND          | 0.010     | w           |
| Dibenz (a,h) Anthracene   | 0.000              | 1.00      | ND          | 0.010     | w           |
| Benzo (g,h,i) Perylene    | 0.000              | 1.00      | ND          | 0.010     | w           |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar013.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 16:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-29 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |              |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.330  | 152   | 59799  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.565  | 136   | 174686 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.448  | 164   | 97462  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.042  | 188   | 284156 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.699 | 264   | 280465 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)          | 10.957 | 240   | 292243 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.884  | 82    | 7414   | 0.641                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 64.075 |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.745  | 172   | 21201  | 0.603                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 60.258 |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.838  | 244   | 16722  | 0.369                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 36.923 |       |        |                               |          |
| Target Compounds               |              |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)          | 0.000  |       | 0      |                               | N.D.     |
| 5) 2-Methylnaphthalene         | (2)          | 0.000  |       | 0      |                               | N.D.     |
| 6) 1-Methylnaphthalene         | (2)          | 0.000  |       | 0      |                               | N.D.     |
| 10) Acenaphthylene             | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 12) Acenaphthene               | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 15) Fluorene                   | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 18) Phenanthrene               | (4)          | 0.000  |       | 0      |                               | N.D.     |
| 19) Anthracene                 | (4)          | 0.000  |       | 0      |                               | N.D.     |
| 21) Fluoranthene               | (4)          | 0.000  |       | 0      |                               | N.D.     |
| 22) Pyrene                     | (5)          | 0.000  |       | 0      |                               | N.D.     |
| 24) Benzo (a) Anthracene       | (5)          | 0.000  |       | 0D     |                               | N.D.     |
| 26) Chrysene                   | (5)          | 0.000  |       | 0D     |                               | N.D.     |
| 27) Benzo (b) Fluoranthene     | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 28) Benzo (k) Fluoranthene     | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 30) Benzo (a) Pyrene           | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 34) Dibenz (a,h) Anthracene    | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 35) Benzo (g,h,i) Perylene     | (6)          | 0.000  |       | 0      |                               | N.D.     |
| 8) Biphenyl                    | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 0.000  |       | 0      |                               | N.D.     |
| 16) Dibenzothiophene           | (3)          | 0.000  |       | 0      |                               | N.D.     |

D = Compound was deleted.

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar013.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 20-MAR-2017 16:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
Calibration date and time: 20-MAR-2017 10:33  
Date, time and analyst ID of latest file update: 20-Mar-2017 17:16 ev7p

Sample Name: 17-03-1104-29 Misc Info: S101716B 10UL  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT    | QIon  | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|-------|-------|-------------------------------|--------|
| =====                    | =====        | ===== | ===== | ===== | =====                         | =====  |
| 20) 1-Methylphenanthrene | (5)          | 0.000 |       | 0     | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000 |       | 0     | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |       | 0D    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |       | 0     | N.D.                          |        |

D = Compound was deleted.

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Data File: /chem/SV04/GCMS\_EEE.i/170320.b/20mar013.d

Date : 20-MAR-2017 16:30

Client ID:

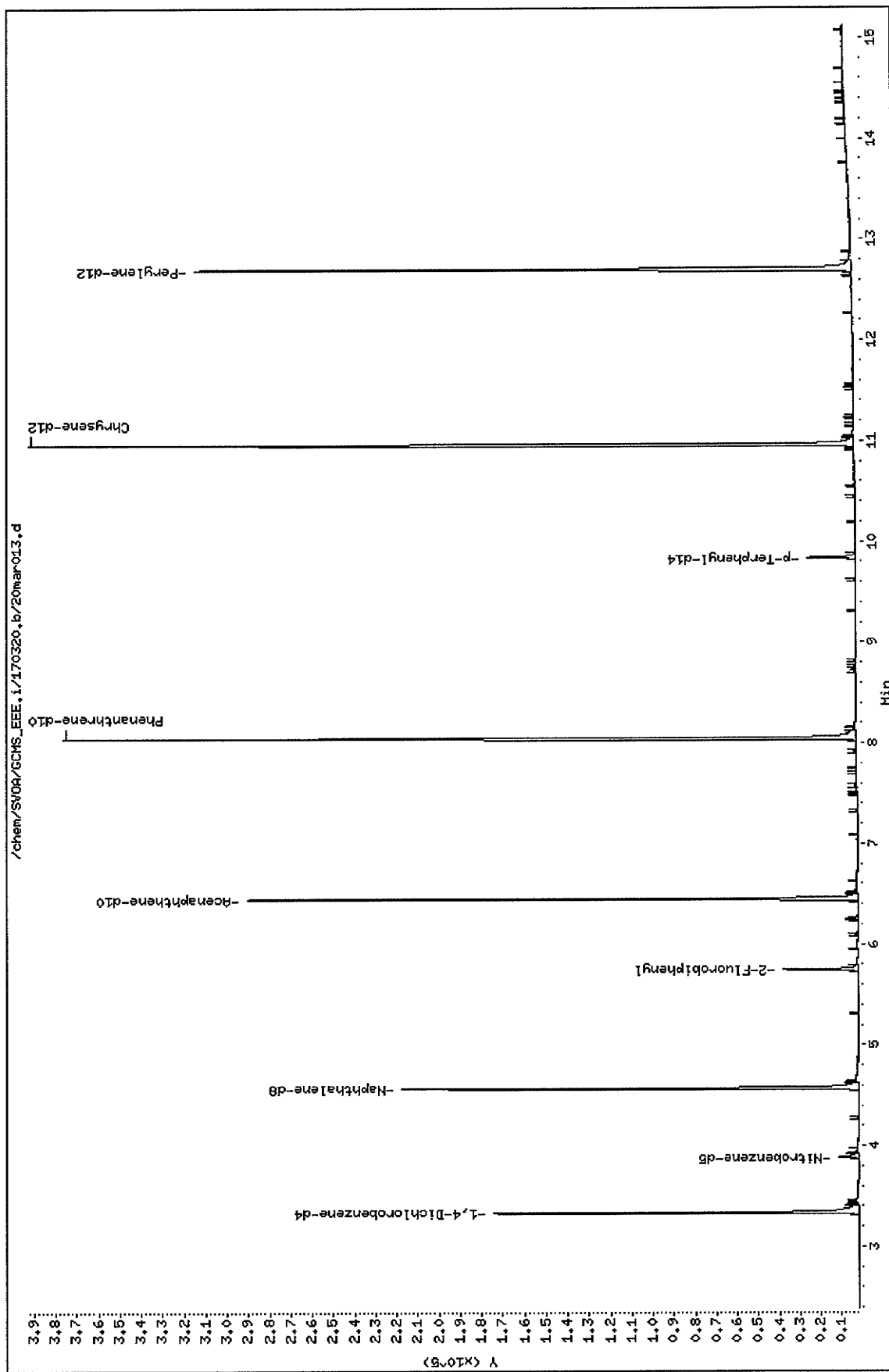
Sample Info: 17-03-1104-29

Instrument: GCMS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS

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# EPA METHOD 8270C PAHSIM

## Quality Control

### Method Blank LCS/LCSD MS/MSD

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 8270C SIM PAHs

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**MB SAMPLE ID:** 099-14-035-384  
**MB BATCH ID:** 170317L004  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-17 19:49  
**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-20 15:20  
**MATRIX:** Soil

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar008.d\17mar008.rr

### CLIENT WORK ORDER: 17-03-1104

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                             |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------------------------|
| 26        | B-DU3-ISM1-3    |                         | 2017-03-20 15:30    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar010.d\20mar010.rr |
| 27        | B-DU3-ISM2-3    |                         | 2017-03-20 15:50    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar011.d\20mar011.rr |
| 28        | B-DU3-ISM3-3    |                         | 2017-03-20 16:10    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar012.d\20mar012.rr |
| 29        | B-DU3-ISM4-3    |                         | 2017-03-20 16:30    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar013.d\20mar013.rr |

  
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# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 099-14-035  
**INSTRUMENT:** GC/MS EEE  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-17 19:49  
**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-20 15:20

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar008.d\17mar008.rr

**# MB** **CLIENT SAMPLE NUMBER:** Method Blank

**LCS/MB BATCH:** 170317L004 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g  
**MS/MSD BATCH:** **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml  
**UNITS:** mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

**COMMENT:**

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.000              | 1.00      | ND          | 0.010     |             |
| 2-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     |             |
| 1-Methylnaphthalene       | 0.000              | 1.00      | ND          | 0.010     |             |
| Acenaphthylene            | 0.000              | 1.00      | ND          | 0.010     |             |
| Acenaphthene              | 0.000              | 1.00      | ND          | 0.010     |             |
| Fluorene                  | 0.000              | 1.00      | ND          | 0.010     |             |
| Phenanthrene              | 0.000              | 1.00      | ND          | 0.010     |             |
| Anthracene                | 0.000              | 1.00      | ND          | 0.010     |             |
| Fluoranthene              | 0.000              | 1.00      | ND          | 0.010     |             |
| Pyrene                    | 0.000              | 1.00      | ND          | 0.010     |             |
| Benzo (a) Anthracene      | 0.000              | 1.00      | ND          | 0.010     |             |
| Chrysene                  | 0.000              | 1.00      | ND          | 0.010     |             |
| Benzo (k) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     |             |
| Benzo (b) Fluoranthene    | 0.000              | 1.00      | ND          | 0.010     |             |
| Benzo (a) Pyrene          | 0.000              | 1.00      | ND          | 0.010     |             |
| Indeno (1,2,3-c,d) Pyrene | 0.000              | 1.00      | ND          | 0.010     |             |
| Dibenz (a,h) Anthracene   | 0.000              | 1.00      | ND          | 0.010     |             |
| Benzo (g,h,i) Perylene    | 0.000              | 1.00      | ND          | 0.010     |             |

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# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8270C SIM PAHs

**LCS SAMPLE ID:** 099-14-035-384  
**LCS/MB BATCH ID:** 170317L004  
**INSTRUMENT:** GC/MS EEE

**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-17 20:09  
**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-20 15:20

**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar009.d\17mar009.rr

| COMPOUND                  | CONC   | CONC REC | %REC | %REC CL | ME CL  | STATUS | QUALIFIERS |
|---------------------------|--------|----------|------|---------|--------|--------|------------|
| Naphthalene               | 0.1000 | 0.1010   | 101  | 51-129  | 38-142 | PASS   |            |
| 2-Methylnaphthalene       | 0.1000 | 0.1230   | 123  | 50-127  | 37-140 | PASS   |            |
| 1-Methylnaphthalene       | 0.1000 | 0.1075   | 108  | 54-132  | 41-145 | PASS   |            |
| Acenaphthylene            | 0.1000 | 0.08448  | 84   | 50-123  | 38-135 | PASS   |            |
| Acenaphthene              | 0.1000 | 0.08883  | 89   | 53-125  | 41-137 | PASS   |            |
| Fluorene                  | 0.1000 | 0.08967  | 90   | 55-127  | 43-139 | PASS   |            |
| Phenanthrene              | 0.1000 | 0.1028   | 103  | 50-122  | 38-134 | PASS   |            |
| Anthracene                | 0.1000 | 0.09697  | 97   | 50-132  | 36-146 | PASS   |            |
| Fluoranthene              | 0.1000 | 0.1005   | 101  | 55-127  | 43-139 | PASS   |            |
| Pyrene                    | 0.1000 | 0.09908  | 99   | 50-134  | 36-148 | PASS   |            |
| Benzo (a) Anthracene      | 0.1000 | 0.09393  | 94   | 50-133  | 36-147 | PASS   |            |
| Chrysene                  | 0.1000 | 0.09799  | 98   | 51-129  | 38-142 | PASS   |            |
| Benzo (k) Fluoranthene    | 0.1000 | 0.09899  | 99   | 49-150  | 32-167 | PASS   |            |
| Benzo (b) Fluoranthene    | 0.1000 | 0.09724  | 97   | 50-142  | 35-157 | PASS   |            |
| Benzo (a) Pyrene          | 0.1000 | 0.09223  | 92   | 50-134  | 36-148 | PASS   |            |
| Indeno (1,2,3-c,d) Pyrene | 0.1000 | 0.09202  | 92   | 50-148  | 34-164 | PASS   |            |
| Dibenz (a,h) Anthracene   | 0.1000 | 0.09609  | 96   | 50-133  | 36-147 | PASS   |            |
| Benzo (g,h,i) Perylene    | 0.1000 | 0.09917  | 99   | 50-130  | 37-143 | PASS   |            |

Total number of LCS compounds: 18  
Total number of ME compounds: 0  
Total number of ME compounds allowed: 1  
LCS ME CL validation result: Pass

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHS

**SPIKED SAMPLE ID:** 17-03-1220-2  
**MS/MSD BATCH:** 170317S004  
**INSTRUMENTS:**  
**SAMPLE:** GC/MS EEE  
**MS:** GC/MS EEE  
**MSD:** GC/MS EEE

**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:**  
**SAMPLE:** 2017-03-17 00:00  
**MS:** 2017-03-17 00:00  
**MSD:** 2017-03-17 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:**  
**SAMPLE:** 2017-03-17 21:30  
**MS:** 2017-03-17 22:51  
**MSD:** 2017-03-17 23:12  
**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-20 15:21

### COMMENT:

| COMPOUND NAME             | SAMPLE | INITIAL | FINAL  | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------------------|--------|---------|--------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Naphthalene               | ND     | 1.000   | 0.1000 | 0.07501 | 75       | 0.07439  | 74        | 20-150   | 1   | 0-33   | PASS   |            |
| 2-Methylnaphthalene       | ND     | 1.000   | 0.1000 | 0.08873 | 89       | 0.08749  | 87        | 29-137   | 1   | 0-31   | PASS   |            |
| 1-Methylnaphthalene       | ND     | 1.000   | 0.1000 | 0.07660 | 77       | 0.07581  | 76        | 34-136   | 1   | 0-29   | PASS   |            |
| Acenaphthylene            | ND     | 1.000   | 0.1000 | 0.06213 | 62       | 0.06146  | 61        | 29-131   | 1   | 0-32   | PASS   |            |
| Acenaphthene              | ND     | 1.000   | 0.1000 | 0.06414 | 64       | 0.06387  | 64        | 29-137   | 0   | 0-28   | PASS   |            |
| Fluorene                  | ND     | 1.000   | 0.1000 | 0.06462 | 65       | 0.06442  | 64        | 36-132   | 0   | 0-27   | PASS   |            |
| Phenanthrene              | ND     | 1.000   | 0.1000 | 0.07565 | 76       | 0.07538  | 75        | 20-144   | 0   | 0-27   | PASS   |            |
| Anthracene                | ND     | 1.000   | 0.1000 | 0.07528 | 75       | 0.07567  | 76        | 26-134   | 1   | 0-27   | PASS   |            |
| Fluoranthene              | ND     | 1.000   | 0.1000 | 0.07161 | 72       | 0.07067  | 71        | 20-151   | 1   | 0-26   | PASS   |            |
| Pyrene                    | ND     | 1.000   | 0.1000 | 0.07508 | 75       | 0.07520  | 75        | 20-150   | 0   | 0-32   | PASS   |            |
| Benzo (a) Anthracene      | ND     | 1.000   | 0.1000 | 0.07108 | 71       | 0.06936  | 69        | 24-150   | 2   | 0-24   | PASS   |            |
| Chrysene                  | ND     | 1.000   | 0.1000 | 0.07212 | 72       | 0.07085  | 71        | 25-145   | 2   | 0-28   | PASS   |            |
| Benzo (k) Fluoranthene    | ND     | 1.000   | 0.1000 | 0.07042 | 70       | 0.06999  | 70        | 28-148   | 1   | 0-26   | PASS   |            |
| Benzo (b) Fluoranthene    | ND     | 1.000   | 0.1000 | 0.06998 | 70       | 0.06719  | 67        | 21-153   | 4   | 0-26   | PASS   |            |
| Benzo (a) Pyrene          | ND     | 1.000   | 0.1000 | 0.07075 | 71       | 0.06997  | 70        | 29-149   | 1   | 0-22   | PASS   |            |
| Indeno (1,2,3-c,d) Pyrene | ND     | 1.000   | 0.1000 | 0.06552 | 66       | 0.06488  | 65        | 20-154   | 1   | 0-25   | PASS   |            |
| Dibenz (a,h) Anthracene   | ND     | 1.000   | 0.1000 | 0.06699 | 67       | 0.06688  | 67        | 20-132   | 0   | 0-26   | PASS   |            |
| Benzo (g,h,i) Perylene    | ND     | 1.000   | 0.1000 | 0.06926 | 69       | 0.06851  | 69        | 20-148   | 1   | 0-27   | PASS   |            |

### Data Files:

| TYPE | DATA FILE   | DATA FILE PATH                                    |
|------|-------------|---------------------------------------------------|
| MS   | 17mar017.rr | Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar017.d\ |
| MSD  | 17mar018.rr | Z:\GCMS_EEE\GCMS_EEE_data\2017\170317\17mar018.d\ |

## SURROGATE RECOVERIES FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-1104

BATCH ID:

**LCS/MB:** 170317L004**MS:** 170317S004

EXTRACTION: EPA 3545

REVIEWED BY:

D/T REVIEWED:

**# 26**      **CLIENT SAMPLE NUMBER : B-DU3-ISM1-3**

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar010.d\20mar010.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-20 15:30

COMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| 2-Fluorobiphenyl | 39           | 13-127          | PASS          |                   |
| Nitrobenzene-d5  | 42           | 17-137          | PASS          |                   |
| p-Terphenyl-d14  | 64           | 4-160           | PASS          |                   |

**# 27**      **CLIENT SAMPLE NUMBER : B-DU3-ISM2-3**

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar011.d\20mar011.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-20 15:50

COMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| p-Terphenyl-d14  | 63           | 4-160           | PASS          |                   |
| Nitrobenzene-d5  | 47           | 17-137          | PASS          |                   |
| 2-Fluorobiphenyl | 39           | 13-127          | PASS          |                   |

**# 28**      **CLIENT SAMPLE NUMBER : B-DU3-ISM3-3**

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar012.d\20mar012.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-20 16:10

COMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| 2-Fluorobiphenyl | 34           | 13-127          | PASS          |                   |
| Nitrobenzene-d5  | 39           | 17-137          | PASS          |                   |
| p-Terphenyl-d14  | 70           | 4-160           | PASS          |                   |

# SURROGATE RECOVERIES FOR METHOD: EPA 8270C SIM PAHs

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WORK ORDER: 17-03-1104

BATCH ID:

**LCS/MB:** 170317L004**MS:** 170317S004

EXTRACTION: EPA 3545

REVIEWED BY:

D/T REVIEWED:

## # 29 CLIENT SAMPLE NUMBER : B-DU3-ISM4-3

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar013.d\20mar013.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-20 16:30

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| p-Terphenyl-d14  | 37    | 4-160    | PASS   |            |
| 2-Fluorobiphenyl | 60    | 13-127   | PASS   |            |
| Nitrobenzene-d5  | 64    | 17-137   | PASS   |            |

## # MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar008.d\17mar008.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-17 19:49

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| 2-Fluorobiphenyl | 76    | 13-127   | PASS   |            |
| Nitrobenzene-d5  | 80    | 17-137   | PASS   |            |
| p-Terphenyl-d14  | 90    | 4-160    | PASS   |            |

## # LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar009.d\17mar009.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-17 20:09

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| p-Terphenyl-d14  | 90    | 4-160    | PASS   |            |
| Nitrobenzene-d5  | 93    | 17-137   | PASS   |            |
| 2-Fluorobiphenyl | 82    | 13-127   | PASS   |            |

## # MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS EEE

D/T EXTRACTED: 2017-03-17 00:00

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar017.d\17mar017.rr

ANALYZED BY: 907

D/T ANALYZED 2017-03-17 22:51

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| 2-Fluorobiphenyl | 80    | 13-127   | PASS   |            |
| Nitrobenzene-d5  | 109   | 17-137   | PASS   |            |
| p-Terphenyl-d14  | 88    | 4-160    | PASS   |            |

**SURROGATE RECOVERIES  
FOR METHOD: EPA 8270C SIM PAHs**

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WORK ORDER: 17-03-1104

BATCH ID:

LCS/MB:

MS: **170317S004**

EXTRACTION: EPA 3545

REVIEWED BY: 262

D/T REVIEWED: 2017-03-20 15:21

**# MSD      CLIENT SAMPLE NUMBER: Matrix Spike Duplicate**

INSTRUMENT: GC/MS EEE

ANALYZED BY: 907

D/T EXTRACTED: 2017-03-17 00:00

D/T ANALYZED 2017-03-17 23:12

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar018.d\17mar018.rr

COMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| p-Terphenyl-d14  | 91           | 4-160           | PASS          |                   |
| 2-Fluorobiphenyl | 82           | 13-127          | PASS          |                   |
| Nitrobenzene-d5  | 116          | 17-137          | PASS          |                   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar008.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 19:49 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 20-Mar-2017 09:09 ev7p

Sample Name: MB 170317L004  
 Response via Initial Calibration

Misc Info: S101716B 10UL

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |              |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.346  | 152   | 58069  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.581  | 136   | 168219 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.465  | 164   | 90197  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.059  | 188   | 263347 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.720 | 264   | 266971 | 5.000                         | 0.01     |
| 25)*Chrysene-d12               | (5)          | 10.972 | 240   | 276527 | 5.000                         | 0.01     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.898  | 82    | 8939   | 0.802                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 80.224 |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.759  | 172   | 24740  | 0.760                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 75.980 |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.853  | 244   | 38360  | 0.895                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 89.514 |       |        |                               |          |
| Target Compounds               |              |        |       |        | QValue                        |          |
| 4) Naphthalene                 | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 5) 2-Methylnaphthalene         | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 6) 1-Methylnaphthalene         | (2)          | 0.000  |       | 0      | N.D.                          |          |
| 10) Acenaphthylene             | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 12) Acenaphthene               | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 15) Fluorene                   | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 18) Phenanthrene               | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 19) Anthracene                 | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 21) Fluoranthene               | (4)          | 0.000  |       | 0      | N.D.                          |          |
| 22) Pyrene                     | (5)          | 0.000  |       | 0      | N.D.                          |          |
| 24) Benzo (a) Anthracene       | (5)          | 0.000  |       | 0D     | N.D.                          |          |
| 26) Chrysene                   | (5)          | 0.000  |       | 0D     | N.D.                          |          |
| 27) Benzo (b) Fluoranthene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 28) Benzo (k) Fluoranthene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 30) Benzo (a) Pyrene           | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 34) Dibenz (a,h) Anthracene    | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 35) Benzo (g,h,i) Perylene     | (6)          | 0.000  |       | 0      | N.D.                          |          |
| 8) Biphenyl                    | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 0.000  |       | 0      | N.D.                          |          |
| 16) Dibenzothiophene           | (3)          | 0.000  |       | 0      | N.D.                          |          |

D = Compound was deleted.

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar008.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 19:49 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 20-Mar-2017 09:09 ev7p

Sample Name: MB 170317L004  
Response via Initial Calibration

Misc Info: S101716B 10UL

| Compounds                | I.S.<br>Ref. | RT    | QIon  | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|-------|-------|-------------------------------|--------|
| =====                    | =====        | ===== | ===== | ===== | =====                         | =====  |
| 20) 1-Methylphenanthrene | (5)          | 0.000 |       | 0     | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000 |       | 0     | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |       | 0D    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |       | 0     | N.D.                          |        |

D = Compound was deleted.

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Page 1

Data File: /chem/SV00A/GCHS\_EEE.i/170317.b/17mar008.d

Date : 17-MAR-2017 19:49

Client ID:

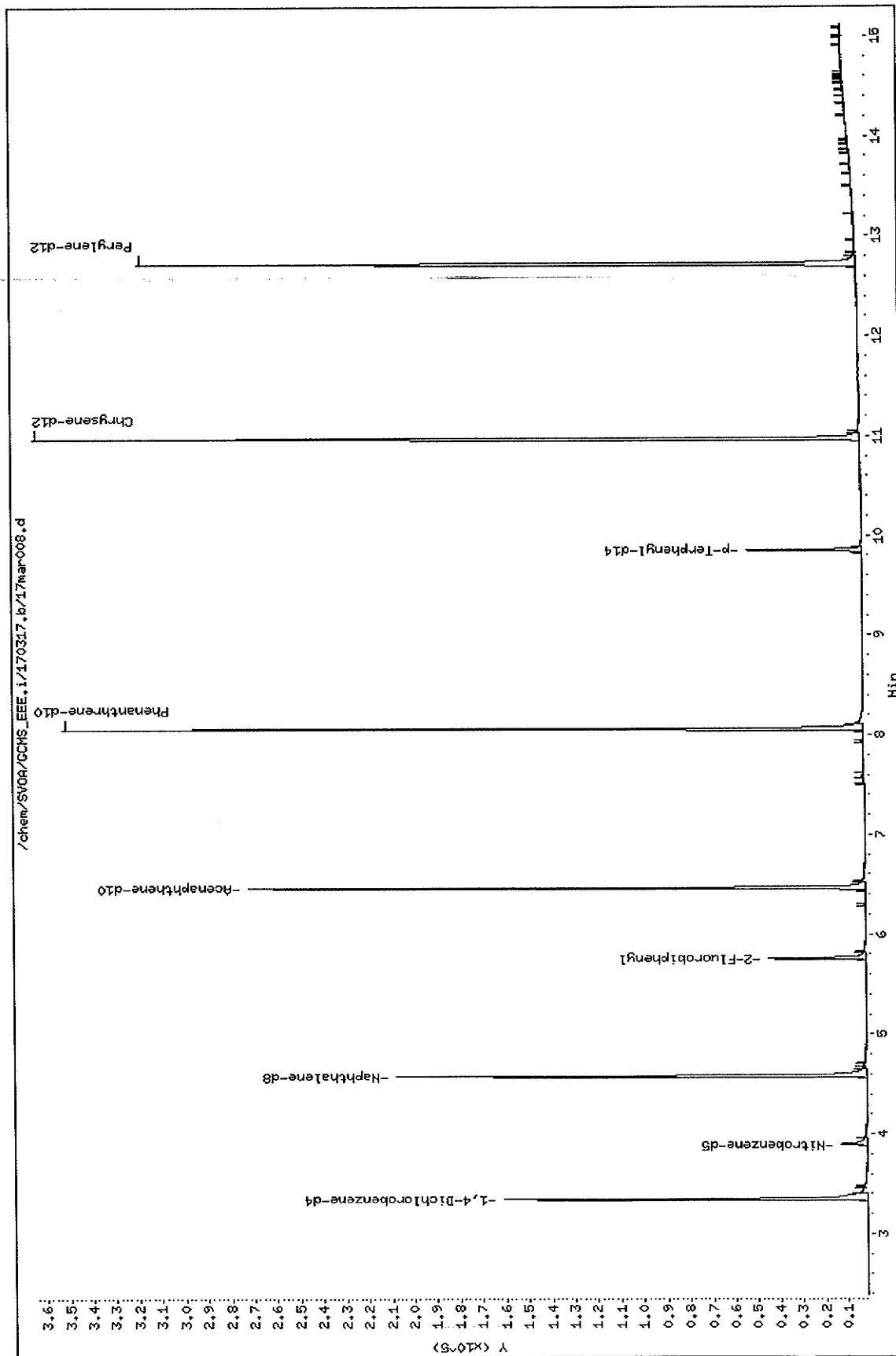
Sample Info: HB 170317L004

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-6MS

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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar009.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 20:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 17-Mar-2017 20:32 Unknown

Sample Name: LCS 170317L004 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|------|--------|-------------------------------|----------|
| =====                          |              |        |      |        |                               |          |
| Internal Standards             |              |        |      |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.347  | 152  | 57900  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.581  | 136  | 163113 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.465  | 164  | 88966  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.060  | 188  | 256565 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.722 | 264  | 260398 | 5.000                         | 0.01     |
| 25)*Chrysene-d12               | (5)          | 10.974 | 240  | 269095 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |      |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.895  | 82   | 10044  | 0.930                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        |      | 92.964 |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.759  | 172  | 26371  | 0.821                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        |      | 82.111 |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.853  | 244  | 37339  | 0.895                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        |      | 89.538 |                               |          |
| Target Compounds               |              |        |      |        |                               | QValue   |
| 4) Naphthalene                 | (2)          | 4.601  | 128  | 35741  | 1.010                         | 99       |
| 5) 2-Methylnaphthalene         | (2)          | 5.330  | 142  | 26548  | 1.230                         | 97       |
| 6) 1-Methylnaphthalene         | (2)          | 5.442  | 142  | 23255  | 1.075                         | 99       |
| 10) Acenaphthylene             | (3)          | 6.296  | 152  | 38006  | 0.845                         | 99       |
| 12) Acenaphthene               | (3)          | 6.497  | 153  | 23979  | 0.888                         | 99       |
| 15) Fluorene                   | (3)          | 7.048  | 166  | 26947  | 0.897                         | 100      |
| 18) Phenanthrene               | (4)          | 8.083  | 178  | 55942  | 1.027                         | 99       |
| 19) Anthracene                 | (4)          | 8.133  | 178  | 51614  | 0.970                         | 97       |
| 21) Fluoranthene               | (4)          | 9.390  | 202  | 70423  | 1.005                         | 100      |
| 22) Pyrene                     | (5)          | 9.626  | 202  | 72602  | 0.991                         | 100      |
| 24) Benzo (a) Anthracene       | (5)          | 10.956 | 228  | 66587  | 0.939                         | 100      |
| 26) Chrysene                   | (5)          | 11.000 | 228  | 63118  | 0.980                         | 99       |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.262 | 252  | 65983  | 0.972                         | 99       |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.290 | 252  | 70433  | 0.990                         | 97       |
| 30) Benzo (a) Pyrene           | (6)          | 12.649 | 252  | 60334  | 0.922                         | 99       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 13.957 | 276  | 71956  | 0.920                         | 90       |
| 34) Dibenz (a,h) Anthracene    | (6)          | 13.984 | 278  | 56997  | 0.961                         | 98       |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.230 | 276  | 62313  | 0.992                         | 99       |
| 8) Biphenyl                    | (3)          | 5.847  | 154  | 33473  | 0.840                         | 98       |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.007  | 156  | 23054  | 0.824                         | 98       |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 6.928  | 170  | 23102  | 0.827                         | 100      |
| 16) Dibenzothiophene           | (3)          | 7.946  | 184  | 67655  | 0.823                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar009.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 20:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 17-Mar-2017 20:32 Unknown

Sample Name: LCS 170317L004  
Response via Initial Calibration

Misc Info: S101716B 10UL

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.772  | 192  | 50853 | 0.948                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.590 | 252  | 74642 | 0.920                         | 100    |
| 32) Perylene             | (6)          | 12.750 | 252  | 65722 | 0.845                         | 99     |
| 13) Dibenzofuran         | (3)          | 6.674  | 168  | 35342 | 0.905                         | 100    |

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Data File: /chem/SU04/GCHS\_EEE.i/170317.b/17mar009.d

Date : 17-MAR-2017 20:09

Client ID:

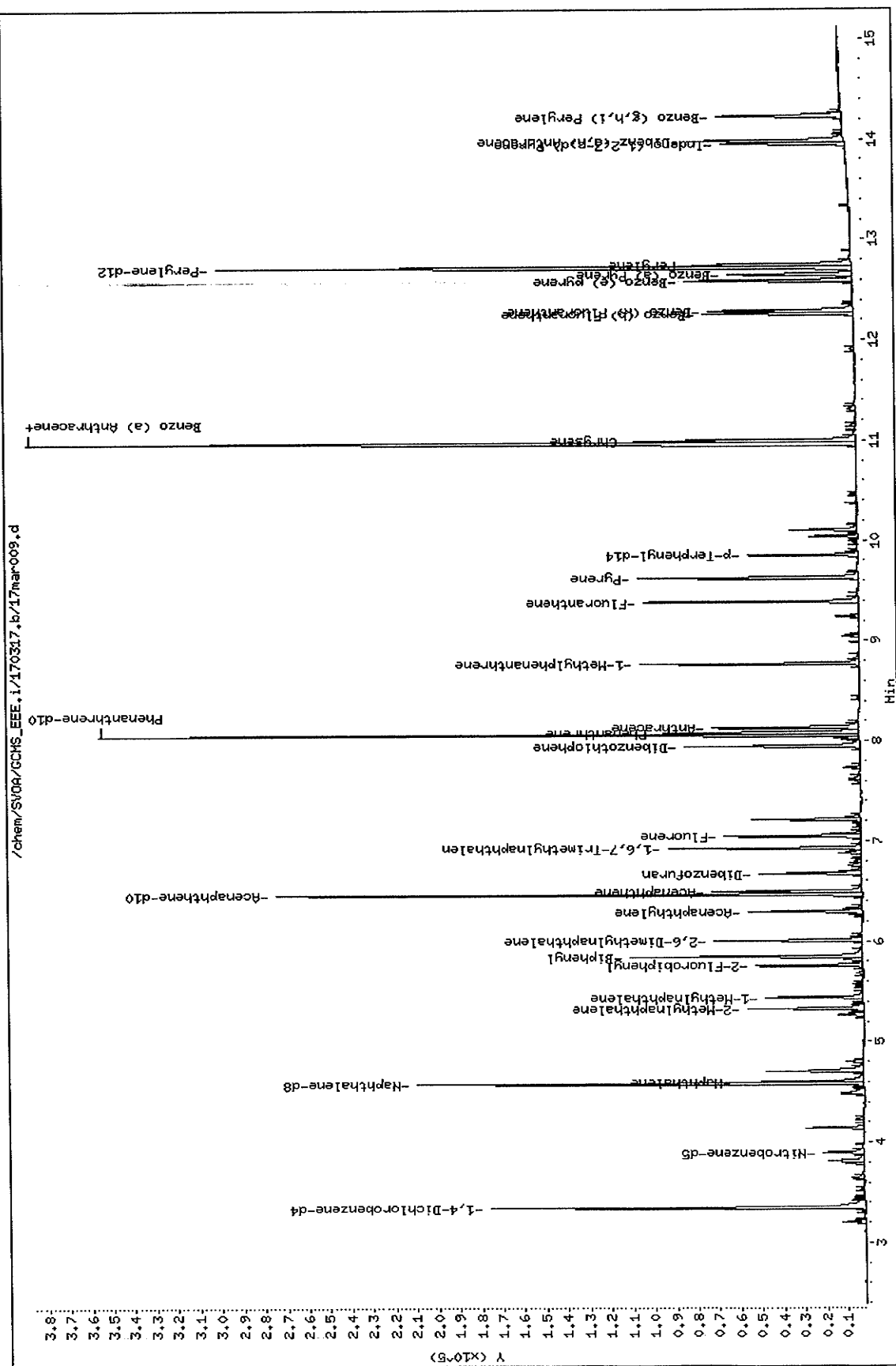
Sample Info: LCS 170317L004

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS



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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar017.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 22:51 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 17-Mar-2017 23:14 Unknown

Sample Name: 17-03-1220-2 MS Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref.       | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====              | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |                    |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.349  | 152   | 58765  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)                | 4.581  | 136   | 170543 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)                | 6.466  | 164   | 93067  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)                | 8.060  | 188   | 259549 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)                | 12.725 | 264   | 258905 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)                | 10.976 | 240   | 259166 | 5.000                         | 0.00     |
| System Monitoring Compounds    |                    |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)                | 3.894  | 82    | 12368  | 1.095                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 109.488 |        |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)                | 5.759  | 172   | 26848  | 0.799                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 79.911  |        |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)                | 9.855  | 244   | 35324  | 0.880                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 87.952  |        |       |        |                               |          |
| Target Compounds               |                    |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)                | 4.601  | 128   | 27746  | 0.750                         | 99       |
| 5) 2-Methylnaphthalene         | (2)                | 5.330  | 142   | 20018  | 0.887                         | 97       |
| 6) 1-Methylnaphthalene         | (2)                | 5.443  | 142   | 17324  | 0.766                         | 99       |
| 10) Acenaphthylene             | (3)                | 6.296  | 152   | 29237  | 0.621                         | 99       |
| 12) Acenaphthene               | (3)                | 6.497  | 153   | 18114  | 0.641                         | 99       |
| 15) Fluorene                   | (3)                | 7.048  | 166   | 20315  | 0.646                         | 99       |
| 18) Phenanthrene               | (4)                | 8.083  | 178   | 41669  | 0.757                         | 100      |
| 19) Anthracene                 | (4)                | 8.135  | 178   | 40533  | 0.753                         | 98       |
| 21) Fluoranthene               | (4)                | 9.393  | 202   | 50739  | 0.716                         | 99       |
| 22) Pyrene                     | (5)                | 9.630  | 202   | 52987  | 0.751                         | 99       |
| 24) Benzo (a) Anthracene       | (5)                | 10.959 | 228   | 48528  | 0.711                         | 99       |
| 26) Chrysene                   | (5)                | 11.000 | 228   | 44737  | 0.721                         | 99       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.265 | 252   | 47209  | 0.700                         | 98       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.293 | 252   | 49817  | 0.704                         | 95       |
| 30) Benzo (a) Pyrene           | (6)                | 12.654 | 252   | 46015  | 0.707                         | 97       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 13.962 | 276   | 50941  | 0.655                         | 98       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 13.989 | 278   | 39507  | 0.670                         | 95       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.235 | 276   | 43270  | 0.693                         | 99       |
| 8) Biphenyl                    | (3)                | 5.848  | 154   | 25615  | 0.614                         | 99       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.007  | 156   | 18214  | 0.623                         | 99       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 6.929  | 170   | 18193  | 0.622                         | 99       |
| 16) Dibenzothiophene           | (3)                | 7.948  | 184   | 49471  | 0.575                         | 99       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar017.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 22:51 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 17-Mar-2017 23:14 Unknown

Sample Name: 17-03-1220-2 MS  
Response via Initial Calibration

Misc Info: S101716B 10UL

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.774  | 192  | 72791 | 1.409                         | 69     |
| 29) Benzo (e) pyrene     | (6)          | 12.591 | 252  | 51585 | 0.640                         | 95     |
| 32) Perylene             | (6)          | 12.755 | 252  | 54606 | 0.706                         | 99     |
| 13) Dibenzofuran         | (3)          | 6.676  | 168  | 25989 | 0.636                         | 98     |

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Data File: /chem/SV00/GCHS\_EEE.i/170317.b/17mar017.d

Date : 17-MAR-2017 22:51

Client ID:

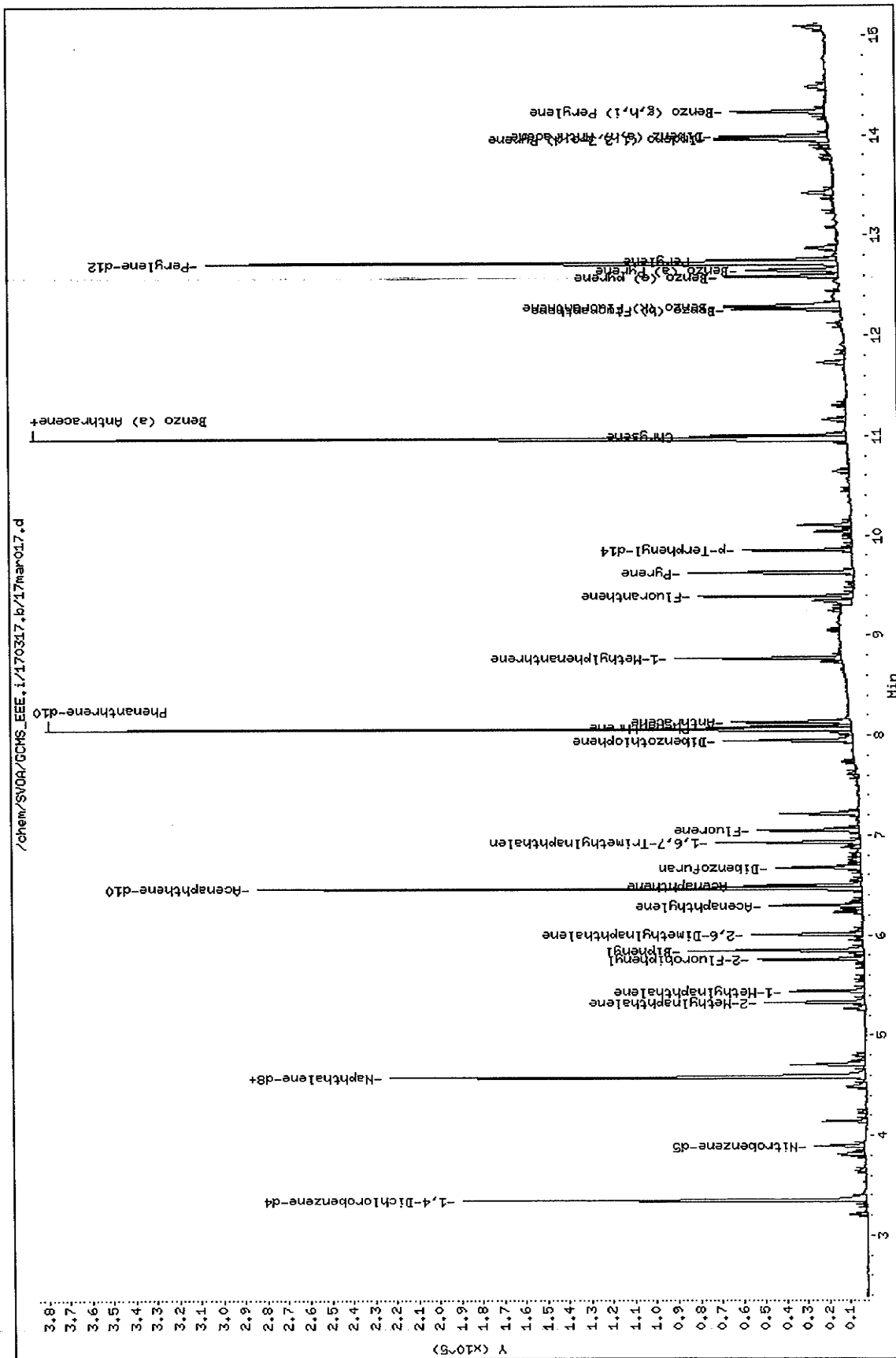
Sample Info: 17-03-1220-2 MS

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS


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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar018.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 23:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 17-Mar-2017 23:34 Unknown

Sample Name: 17-03-1220-2 MSD Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref.       | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====              | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |                    |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.350  | 152   | 58673  | 5.000                         | -0.01    |
| 3)*Naphthalene-d8              | (2)                | 4.581  | 136   | 168453 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)                | 6.466  | 164   | 92563  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)                | 8.060  | 188   | 256002 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)                | 12.727 | 264   | 259227 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)                | 10.977 | 240   | 255157 | 5.000                         | 0.00     |
| System Monitoring Compounds    |                    |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)                | 3.892  | 82    | 12951  | 1.161                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 116.072 |        |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)                | 5.759  | 172   | 27455  | 0.822                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 82.165  |        |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)                | 9.855  | 244   | 35989  | 0.910                         | 0.00     |
| SpikedAmount 1.000             | Recovery = 91.016  |        |       |        |                               |          |
| Target Compounds               |                    |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)                | 4.602  | 128   | 27181  | 0.744                         | 99       |
| 5) 2-Methylnaphthalene         | (2)                | 5.331  | 142   | 19498  | 0.875                         | 98       |
| 6) 1-Methylnaphthalene         | (2)                | 5.443  | 142   | 16936  | 0.758                         | 99       |
| 10) Acenaphthylene             | (3)                | 6.296  | 152   | 28768  | 0.615                         | 99       |
| 12) Acenaphthene               | (3)                | 6.499  | 153   | 17938  | 0.639                         | 98       |
| 15) Fluorene                   | (3)                | 7.048  | 166   | 20143  | 0.644                         | 100      |
| 18) Phenanthrene               | (4)                | 8.085  | 178   | 40949  | 0.754                         | 100      |
| 19) Anthracene                 | (4)                | 8.133  | 178   | 40188  | 0.757                         | 97       |
| 21) Fluoranthene               | (4)                | 9.391  | 202   | 49391  | 0.707                         | 97       |
| 22) Pyrene                     | (5)                | 9.630  | 202   | 52250  | 0.752                         | 100      |
| 24) Benzo (a) Anthracene       | (5)                | 10.959 | 228   | 46622  | 0.694                         | 100      |
| 26) Chrysene                   | (5)                | 11.002 | 228   | 43270  | 0.708                         | 99       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.265 | 252   | 45383  | 0.672                         | 98       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.293 | 252   | 49576  | 0.700                         | 98       |
| 30) Benzo (a) Pyrene           | (6)                | 12.653 | 252   | 45566  | 0.700                         | 97       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 13.962 | 276   | 50504  | 0.649                         | 98       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 13.988 | 278   | 39490  | 0.669                         | 95       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.237 | 276   | 42856  | 0.685                         | 98       |
| 8) Biphenyl                    | (3)                | 5.848  | 154   | 25388  | 0.612                         | 99       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.008  | 156   | 18087  | 0.622                         | 99       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 6.929  | 170   | 17911  | 0.616                         | 99       |
| 16) Dibenzothiophene           | (3)                | 7.946  | 184   | 48543  | 0.567                         | 98       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar018.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 23:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 17-Mar-2017 23:34 Unknown

Sample Name: 17-03-1220-2 MSD  
Response via Initial Calibration

Misc Info: S101716B 10UL

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.772  | 192  | 69991 | 1.376                         | 69     |
| 29) Benzo (e) pyrene     | (6)          | 12.595 | 252  | 51267 | 0.635                         | 96     |
| 32) Perylene             | (6)          | 12.755 | 252  | 54510 | 0.704                         | 99     |
| 13) Dibenzofuran         | (3)          | 6.676  | 168  | 25808 | 0.635                         | 99     |

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Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar018.d

Date : 17-MAR-2017 23:12

Client ID:

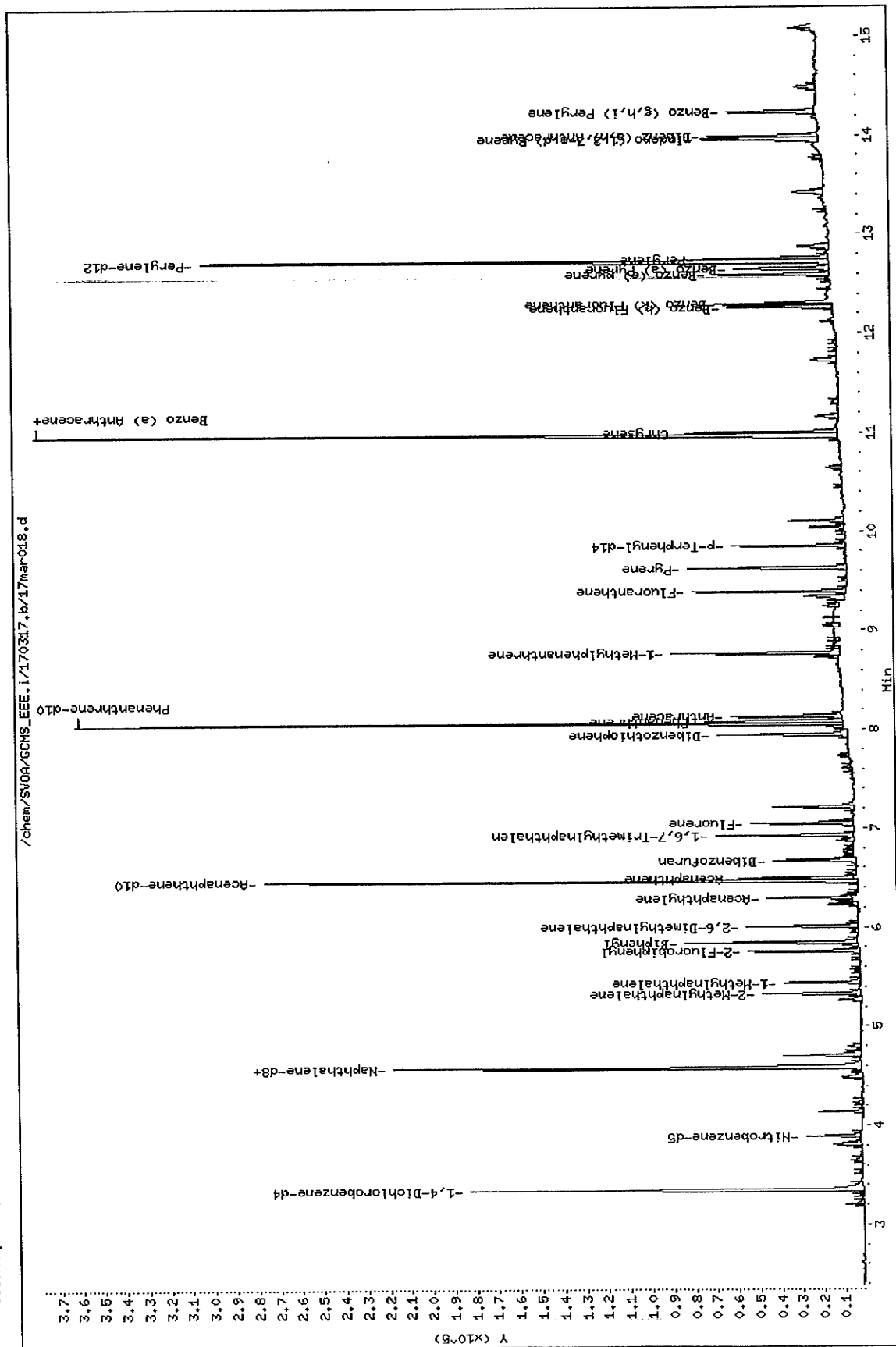
Sample Info: 17-03-1220-2 MSD

Instrument: GCMS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS



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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar013.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 21:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 20-Mar-2017 09:11 ev7p

Sample Name: 17-03-1220-2 Misc Info: S101716B 10UL  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref.       | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV (Min) |
|--------------------------------|--------------------|--------|-------|--------|-------------------------------|-----------|
| =====                          | =====              | =====  | ===== | =====  | =====                         | =====     |
| Internal Standards             |                    |        |       |        |                               |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.348  | 152   | 57015  | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)                | 4.581  | 136   | 168226 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)                | 6.465  | 164   | 91456  | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)                | 8.059  | 188   | 256233 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)                | 12.723 | 264   | 249073 | 5.000                         | 0.01      |
| 25)*Chrysene-d12               | (5)                | 10.974 | 240   | 249181 | 5.000                         | 0.00      |
| System Monitoring Compounds    |                    |        |       |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)                | 3.894  | 82    | 12074  | 1.084                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 108.355 |        |       |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)                | 5.760  | 172   | 28349  | 0.859                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 85.865  |        |       |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)                | 9.854  | 244   | 37973  | 0.983                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 98.335  |        |       |        |                               |           |
| Target Compounds               |                    |        |       |        |                               | QValue    |
| 4) Naphthalene                 | (2)                | 0.000  |       | 0      | N.D.                          |           |
| 5) 2-Methylnaphthalene         | (2)                | 0.000  |       | 0      | N.D.                          |           |
| 6) 1-Methylnaphthalene         | (2)                | 0.000  |       | 0      | N.D.                          |           |
| 10) Acenaphthylene             | (3)                | 0.000  |       | 0      | N.D.                          |           |
| 12) Acenaphthene               | (3)                | 0.000  |       | 0      | N.D.                          |           |
| 15) Fluorene                   | (3)                | 0.000  |       | 0      | N.D.                          |           |
| 18) Phenanthrene               | (4)                | 8.086  | 178   | 1010   | 0.019                         | 99        |
| 19) Anthracene                 | (4)                | 0.000  |       | 0D     | N.D.                          |           |
| 21) Fluoranthene               | (4)                | 9.392  | 202   | 751    | 0.011                         | 60        |
| 22) Pyrene                     | (5)                | 9.632  | 202   | 1100   | 0.016                         | 95        |
| 24) Benzo (a) Anthracene       | (5)                | 0.000  |       | 0D     | N.D.                          |           |
| 26) Chrysene                   | (5)                | 11.001 | 228   | 945    | 0.016                         | 90        |
| 27) Benzo (b) Fluoranthene     | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 28) Benzo (k) Fluoranthene     | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 30) Benzo (a) Pyrene           | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 34) Dibenz (a,h) Anthracene    | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 35) Benzo (g,h,i) Perylene     | (6)                | 0.000  |       | 0      | N.D.                          |           |
| 8) Biphenyl                    | (3)                | 0.000  |       | 0      | N.D.                          |           |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 0.000  |       | 0      | N.D.                          |           |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 6.931  | 170   | 374    | 0.013                         | 87        |
| 16) Dibenzothiophene           | (3)                | 0.000  |       | 0      | N.D.                          |           |

D = Compound was deleted.

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar013.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 21:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 20-Mar-2017 09:11 ev7p

Sample Name: 17-03-1220-2 Misc Info: S101716B 10UL  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 0.000  |      | 0    | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000  |      | 0    | N.D.                          |        |
| 32) Perylene             | (6)          | 12.751 | 252  | 1124 | 0.015                         | 67     |
| 13) Dibenzofuran         | (3)          | 0.000  |      | 0    | N.D.                          |        |

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Page 1

Data File: /chem/SV04/GCMS\_EEE.i/170317.b/17mar013.d

Date : 17-MAR-2017 21:30

Client ID:

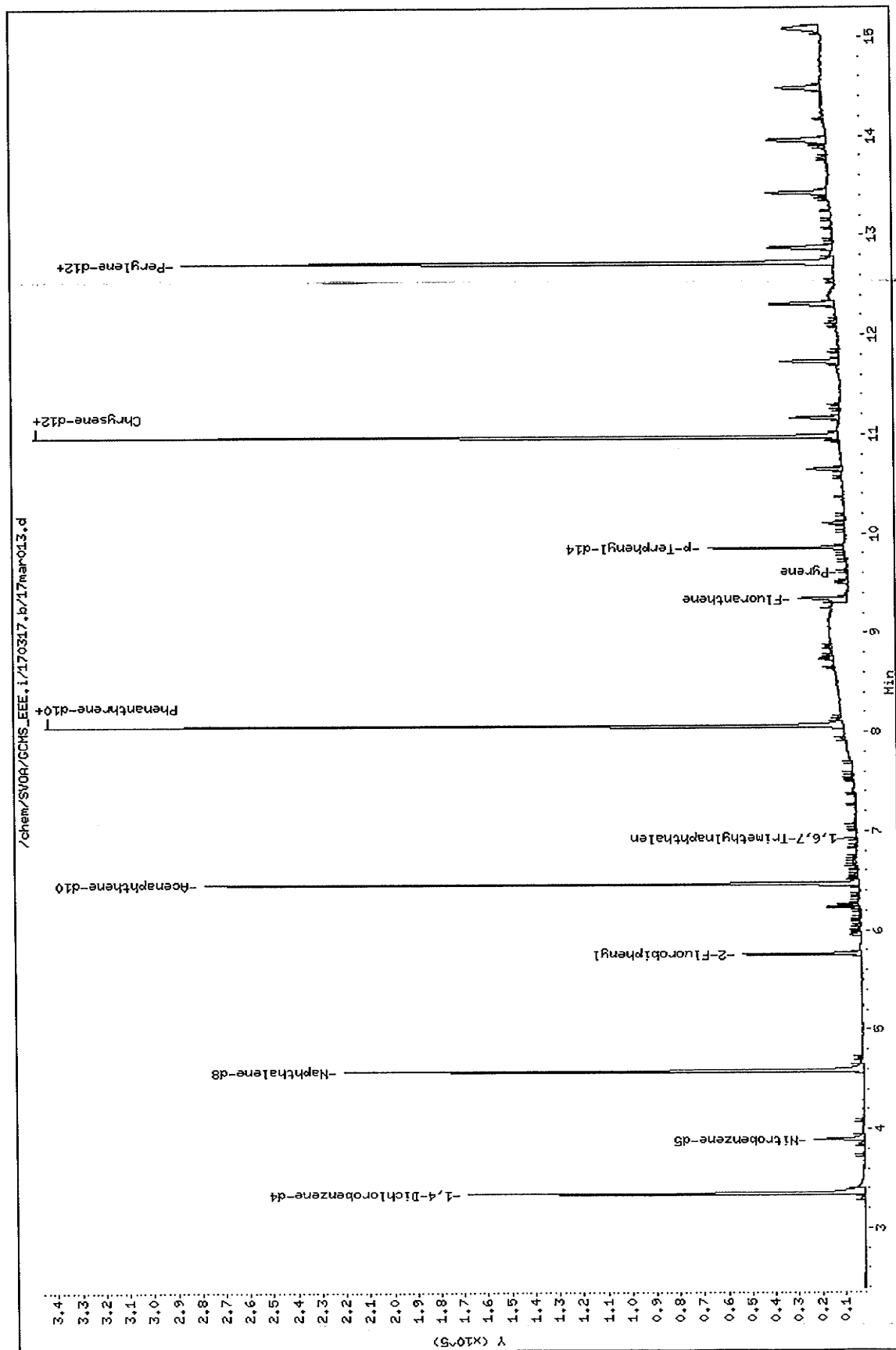
Sample Info: 17-03-1220-2

Instrument: GCMS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-6MS

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# EPA METHOD 8270C PAHSIM

## Continuing Calibration

# CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHS

CCV WORK ORDER: 099-06-009-4987-4741  
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907  
D/T ANALYZED:

BATCH ID: 170313I001  
INITIAL: 170317A019  
CCV:

INITIAL: 2017-03-13 14:13  
CCV: 2017-03-17 14:13  
REVIEWED BY: 262  
D/T REVIEWED: 2017-03-20 12:12

Data File: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar004.d\17mar004.ir

| COMPOUND                  | TYPE       | CALIB MODEL | MIN RF | AVG RF | CCV RF | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------------------|------------|-------------|--------|--------|--------|--------|----------|--------|-----------|--------|
| Naphthalene               | Avg Resp   |             | 0.00   | 1.085  | 1.172  |        |          | -8     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.661  | 0.746  |        |          | -13    | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.663  | 0.723  |        |          | -9     | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp   |             | 0.00   | 2.528  | 2.631  |        |          | -4     | 0-20      | PASS   |
| Acenaphthene              | C Avg Resp |             | 0.00   | 1.517  | 1.605  |        |          | -6     | 0-20      | PASS   |
| Fluorene                  | Avg Resp   |             | 0.00   | 1.689  | 1.796  |        |          | -6     | 0-20      | PASS   |
| Phenanthrene              | Avg Resp   |             | 0.00   | 1.061  | 1.101  |        |          | -4     | 0-20      | PASS   |
| Anthracene                | Avg Resp   |             | 0.00   | 1.037  | 1.107  |        |          | -7     | 0-20      | PASS   |
| Fluoranthene              | C Avg Resp |             | 0.00   | 1.365  | 1.430  |        |          | -5     | 0-20      | PASS   |
| Pyrene                    | Avg Resp   |             | 0.00   | 1.362  | 1.455  |        |          | -7     | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp   |             | 0.00   | 1.317  | 1.328  |        |          | -1     | 0-20      | PASS   |
| Chrysene                  | Avg Resp   |             | 0.00   | 1.197  | 1.282  |        |          | -7     | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp   |             | 0.00   | 1.366  | 1.464  |        |          | -7     | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp   |             | 0.00   | 1.303  | 1.373  |        |          | -5     | 0-20      | PASS   |
| Benzo (a) Pyrene          | C Avg Resp |             | 0.00   | 1.256  | 1.312  |        |          | -4     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp   |             | 0.00   | 1.502  | 1.543  |        |          | -3     | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp   |             | 0.00   | 1.139  | 1.203  |        |          | -6     | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp   |             | 0.00   | 1.207  | 1.245  |        |          | -3     | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

# INTERNAL STANDARD COMPOUNDS AREA REPORT

## FOR METHOD: EPA 8270C SIM PAHs

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ICAL BATCH ID: 170313I001

CCV BATCH ID: 170317A019

### ICAL MIDPOINT

SAMPLE ID: 099-06-009-4979

D/T ANALYZED: 2017-03-13 13:33

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170313\13mar008.d\13mar008.rr

| COMPOUND               | AREA   | RETENTION TIME |
|------------------------|--------|----------------|
| 1,4-Dichlorobenzene-d4 | 46489  | 3.41           |
| Naphthalene-d8         | 140022 | 4.66           |
| Acenaphthene-d10       | 63153  | 6.54           |
| Phenanthrene-d10       | 210133 | 8.14           |
| Chrysene-d12           | 220711 | 11.06          |
| Perylene-d12           | 208071 | 12.82          |

### ICV

SAMPLE ID 099-06-009-4979

D/T ANALYZED: 2017-03-13 14:34

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170313\13mar011.d\13mar011.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 44664  | 23244            | 92978            | 3.42           | PASS   |
| Naphthalene-d8         | 134376 | 70011            | 280044           | 4.65           | PASS   |
| Acenaphthene-d10       | 61082  | 31576            | 126306           | 6.54           | PASS   |
| Phenanthrene-d10       | 200519 | 105066           | 420266           | 8.14           | PASS   |
| Chrysene-d12           | 207148 | 110356           | 441422           | 11.06          | PASS   |
| Perylene-d12           | 200860 | 104036           | 416142           | 12.82          | PASS   |

### CCV

SAMPLE ID 099-06-009-4987

D/T ANALYZED: 2017-03-17 14:13

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar004.d\17mar004.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 59391  | 23244            | 92978            | 3.34           | PASS   |
| Naphthalene-d8         | 165360 | 70011            | 280044           | 4.58           | PASS   |
| Acenaphthene-d10       | 77007  | 31576            | 126306           | 6.47           | PASS   |
| Phenanthrene-d10       | 248233 | 105066           | 420266           | 8.06           | PASS   |
| Chrysene-d12           | 256278 | 110356           | 441422           | 10.98          | PASS   |
| Perylene-d12           | 241428 | 104036           | 416142           | 12.73          | PASS   |

### MB

SAMPLE ID 099-14-035-384

D/T ANALYZED: 2017-03-17 19:49

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar008.d\17mar008.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 58069  | 29696            | 118782           | 3.35           | PASS   |
| Naphthalene-d8         | 168219 | 82680            | 330720           | 4.58           | PASS   |
| Acenaphthene-d10       | 90197  | 38504            | 154014           | 6.46           | PASS   |
| Phenanthrene-d10       | 263347 | 124116           | 496466           | 8.06           | PASS   |
| Chrysene-d12           | 276527 | 128139           | 512556           | 10.97          | PASS   |
| Perylene-d12           | 266971 | 120714           | 482856           | 12.72          | PASS   |

**LCS****SAMPLE ID** 099-14-035-384**D/T ANALYZED:** 2017-03-17 20:09**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar009.d\17mar009.rr

| <u>COMPOUND</u>        | <u>AREA</u> | <u>LOWER AREA LIMIT</u> | <u>UPPER AREA LIMIT</u> | <u>RETENTION TIME</u> | <u>STATUS</u> |
|------------------------|-------------|-------------------------|-------------------------|-----------------------|---------------|
| 1,4-Dichlorobenzene-d4 | 57900       | 29696                   | 118782                  | 3.35                  | PASS          |
| Naphthalene-d8         | 163113      | 82680                   | 330720                  | 4.58                  | PASS          |
| Acenaphthene-d10       | 88966       | 38504                   | 154014                  | 6.46                  | PASS          |
| Phenanthrene-d10       | 256565      | 124116                  | 496466                  | 8.06                  | PASS          |
| Chrysene-d12           | 269095      | 128139                  | 512556                  | 10.97                 | PASS          |
| Perylene-d12           | 260398      | 120714                  | 482856                  | 12.72                 | PASS          |

**MS****SAMPLE ID** 17-03-1220-2**D/T ANALYZED:** 2017-03-17 22:51**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar017.d\17mar017.rr

| <u>COMPOUND</u>        | <u>AREA</u> | <u>LOWER AREA LIMIT</u> | <u>UPPER AREA LIMIT</u> | <u>RETENTION TIME</u> | <u>STATUS</u> |
|------------------------|-------------|-------------------------|-------------------------|-----------------------|---------------|
| 1,4-Dichlorobenzene-d4 | 58765       | 29696                   | 118782                  | 3.35                  | PASS          |
| Naphthalene-d8         | 170543      | 82680                   | 330720                  | 4.58                  | PASS          |
| Acenaphthene-d10       | 93067       | 38504                   | 154014                  | 6.47                  | PASS          |
| Phenanthrene-d10       | 259549      | 124116                  | 496466                  | 8.06                  | PASS          |
| Chrysene-d12           | 259166      | 128139                  | 512556                  | 10.98                 | PASS          |
| Perylene-d12           | 258905      | 120714                  | 482856                  | 12.73                 | PASS          |

**MSD****SAMPLE ID** 17-03-1220-2**D/T ANALYZED:** 2017-03-17 23:12**DATA FILE:** Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170317\17mar018.d\17mar018.rr

| <u>COMPOUND</u>        | <u>AREA</u> | <u>LOWER AREA LIMIT</u> | <u>UPPER AREA LIMIT</u> | <u>RETENTION TIME</u> | <u>STATUS</u> |
|------------------------|-------------|-------------------------|-------------------------|-----------------------|---------------|
| 1,4-Dichlorobenzene-d4 | 58673       | 29696                   | 118782                  | 3.35                  | PASS          |
| Naphthalene-d8         | 168453      | 82680                   | 330720                  | 4.58                  | PASS          |
| Acenaphthene-d10       | 92563       | 38504                   | 154014                  | 6.47                  | PASS          |
| Phenanthrene-d10       | 256002      | 124116                  | 496466                  | 8.06                  | PASS          |
| Chrysene-d12           | 255157      | 128139                  | 512556                  | 10.98                 | PASS          |
| Perylene-d12           | 259227      | 120714                  | 482856                  | 12.73                 | PASS          |

**Notes:**

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar004.d  
 Report Date: 03/20/2017 09:17

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_EEE.i Injection Date and Time: 17-MAR-2017 14:13  
 Sample Name: CCV S010317F 1PPM Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 11:59 14:13  
 Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m

| Target Compounds           | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|----------------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| Naphthalene                | 1.085                 | 1.172      | 0.00        | -8             | 20              | Averaged   |
| 2-Methylnaphthalene        | 0.661                 | 0.746      | 0.00        | -13            | 20              | Averaged   |
| 1-Methylnaphthalene        | 0.663                 | 0.723      | 0.00        | -9             | 20              | Averaged   |
| Acenaphthylene             | 2.528                 | 2.631      | 0.00        | -4             | 20              | Averaged   |
| Acenaphthene               | 1.517                 | 1.605      | 0.00        | -6             | 20              | Averaged   |
| Fluorene                   | 1.689                 | 1.796      | 0.00        | -6             | 20              | Averaged   |
| Phenanthrene               | 1.061                 | 1.101      | 0.00        | -4             | 20              | Averaged   |
| Anthracene                 | 1.037                 | 1.107      | 0.00        | -7             | 20              | Averaged   |
| Fluoranthene               | 1.365                 | 1.430      | 0.00        | -5             | 20              | Averaged   |
| Pyrene                     | 1.362                 | 1.455      | 0.00        | -7             | 20              | Averaged   |
| Benzo (a) Anthracene       | 1.317                 | 1.328      | 0.00        | -1             | 20              | Averaged   |
| Chrysene                   | 1.197                 | 1.282      | 0.00        | -7             | 20              | Averaged   |
| Benzo (b) Fluoranthene     | 1.303                 | 1.373      | 0.00        | -5             | 20              | Averaged   |
| Benzo (k) Fluoranthene     | 1.366                 | 1.464      | 0.00        | -7             | 20              | Averaged   |
| Benzo (a) Pyrene           | 1.256                 | 1.312      | 0.00        | -4             | 20              | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.502                 | 1.543      | 0.00        | -3             | 20              | Averaged   |
| Dibenz (a,h) Anthracene    | 1.139                 | 1.203      | 0.00        | -6             | 20              | Averaged   |
| Benzo (g,h,i) Perylene     | 1.207                 | 1.245      | 0.00        | -3             | 20              | Averaged   |
| Biphenyl                   | 2.240                 | 2.369      | 0.00        | -6             | 20              | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.572                 | 1.645      | 0.00        | -5             | 20              | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.571                 | 1.664      | 0.00        | -6             | 20              | Averaged   |
| Dibenzothiophene           | 4.622                 | 4.709      | 0.00        | -2             | 20              | Averaged   |
| 1-Methylphenanthrene       | 0.997                 | 1.067      | 0.00        | -7             | 20              | Averaged   |
| Benzo (e) pyrene           | 1.557                 | 1.635      | 0.00        | -5             | 20              | Averaged   |
| Perylene                   | 1.493                 | 1.548      | 0.00        | -4             | 20              | Averaged   |
| Dibenzofuran               | 2.194                 | 2.359      | 0.00        | -8             | 20              | Averaged   |
| Surrogate Standards        |                       |            |             |                |                 |            |
| Nitrobenzene-d5            | 0.331                 | 0.378      | 0.00        | -14            | 20              | Averaged   |
| 2-Fluorobiphenyl           | 1.805                 | 1.946      | 0.00        | -8             | 20              | Averaged   |
| p-Terphenyl-d14            | 0.775                 | 0.834      | 0.00        | -8             | 20              | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar004.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 17-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 17-MAR-2017 14:36  
 Date, time and analyst ID of latest file update: 17-Mar-2017 14:36 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170317A019  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column<br>Amount<br>(mg/L) | DEV(Min) |
|--------------------------------|--------------|--------|-------|--------|-------------------------------|----------|
| =====                          | =====        | =====  | ===== | =====  | =====                         | =====    |
| Internal Standards             |              |        |       |        |                               |          |
| 1)*1,4-Dichlorobenzene-d4      | (1)          | 3.344  | 152   | 59391  | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.584  | 136   | 165360 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.466  | 164   | 77007  | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.062  | 188   | 248233 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 12.729 | 264   | 241428 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)          | 10.979 | 240   | 256278 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 3.897  | 82    | 12489  | 1.140                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 5.759  | 172   | 29968  | 1.078                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 9.858  | 244   | 42762  | 1.077                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                               |          |
| Target Compounds               |              |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)          | 4.603  | 128   | 38753  | 1.080                         | 100      |
| 5) 2-Methylnaphthalene         | (2)          | 5.331  | 142   | 24659  | 1.127                         | 100      |
| 6) 1-Methylnaphthalene         | (2)          | 5.445  | 142   | 23922  | 1.091                         | 100      |
| 10) Acenaphthylene             | (3)          | 6.297  | 152   | 40520  | 1.041                         | 100      |
| 12) Acenaphthene               | (3)          | 6.499  | 153   | 24725  | 1.058                         | 100      |
| 15) Fluorene                   | (3)          | 7.050  | 166   | 27656  | 1.063                         | 100      |
| 18) Phenanthrene               | (4)          | 8.087  | 178   | 54643  | 1.037                         | 100      |
| 19) Anthracene                 | (4)          | 8.135  | 178   | 54981  | 1.068                         | 100      |
| 21) Fluoranthene               | (4)          | 9.393  | 202   | 70994  | 1.048                         | 100      |
| 22) Pyrene                     | (5)          | 9.631  | 202   | 74579  | 1.069                         | 100      |
| 24) Benzo (a) Anthracene       | (5)          | 10.962 | 228   | 68057  | 1.008                         | 100      |
| 26) Chrysene                   | (5)          | 11.007 | 228   | 65733  | 1.072                         | 100      |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.267 | 252   | 66320  | 1.054                         | 100      |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.297 | 252   | 70698  | 1.072                         | 100      |
| 30) Benzo (a) Pyrene           | (6)          | 12.657 | 252   | 63333  | 1.044                         | 100      |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 13.965 | 276   | 74523  | 1.028                         | 100      |
| 34) Dibenz (a,h) Anthracene    | (6)          | 13.992 | 278   | 58086  | 1.056                         | 100      |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.238 | 276   | 60094  | 1.032                         | 100      |
| 8) Biphenyl                    | (3)          | 5.850  | 154   | 36479  | 1.058                         | 100      |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.008  | 156   | 25338  | 1.047                         | 100      |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 6.931  | 170   | 25627  | 1.059                         | 100      |
| 16) Dibenzothiophene           | (3)          | 7.949  | 184   | 72527  | 1.019                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170317.b/17mar004.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 17-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170317.b/simpah-extra.m Sublist used: all  
Calibration date and time: 17-MAR-2017 14:36  
Date, time and analyst ID of latest file update: 17-Mar-2017 14:36 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170317A019  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.775  | 192  | 54702 | 1.071                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.595 | 252  | 78938 | 1.050                         | 100    |
| 32) Perylene             | (6)          | 12.757 | 252  | 74751 | 1.037                         | 100    |
| 13) Dibenzofuran         | (3)          | 6.676  | 168  | 36337 | 1.075                         | 100    |

page 2 of 2

Page 1

Data File: /chem/SV0A/GCHS\_EEE.i/170317.b/17mar004.d

Date : 17-MAR-2017 14:13

Client ID:

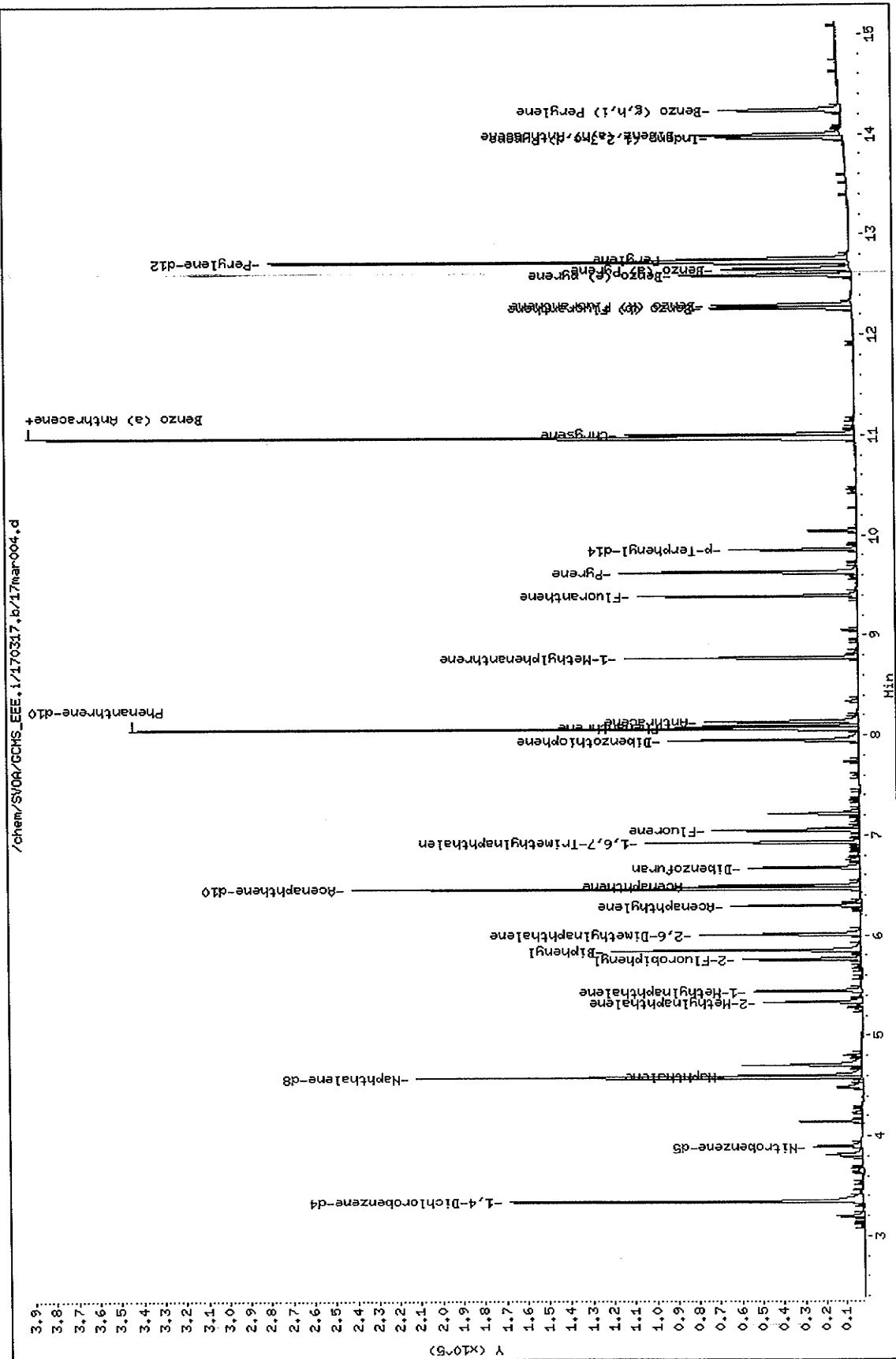
Sample Info: CCV S010317F 1PPH

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-6HS



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**CCV ASSOCIATION SUMMARY  
FOR METHOD: EPA 8270C SIM PAHs**

**BATCH ID:** 170320A011  
**INSTRUMENT:** GC/MS EEE

**ANALYZED BY:** 907

**WORK ORDER:** 099-06-009  
**MATRIX:** Water

**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-20 12:38

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                            |
|-------------------------|-------------------------|---------------------|-------------------------------------------------------------|
| 4988                    | Daily Calibration       | 2017-03-20 10:06    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar002.d\20mar002.r |

**WORK ORDER:** 17-03-1104  
**MATRIX:** Soil

**REVIEWED BY:**  
**D/T REVIEWED:**

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                            |
|-------------------------|-------------------------|---------------------|-------------------------------------------------------------|
| 26                      | B-DU3-ISM1-3            | 2017-03-20 15:30    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar010.d\20mar010.r |
| 27                      | B-DU3-ISM2-3            | 2017-03-20 15:50    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar011.d\20mar011.r |
| 28                      | B-DU3-ISM3-3            | 2017-03-20 16:10    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar012.d\20mar012.r |
| 29                      | B-DU3-ISM4-3            | 2017-03-20 16:30    | Z:\GCMS_EEE\GCMS_EEE_data\2017\170320\20mar013.d\20mar013.r |

# CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHS

**CCV WORK ORDER:** 099-06-009-4988-4741  
**INSTRUMENT:** GC/MS EEE

**BATCH ID:** 1703131001  
**INITIAL:** 170320A011  
**CCV:**

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 14:13  
**INITIAL:** 2017-03-20 10:06  
**CCV:** 262  
**REVIEWED BY:** 2017-03-20 12:38  
**D/T REVIEWED:**

**Data File:** Z:\GCMS\_III\GCMS\_EEE\_data\2017\170320\20mar002.d\20mar002.it

| COMPOUND                  | TYPE       | CALIB MODEL | MIN RF | AVG RF | CCV RF | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------------------|------------|-------------|--------|--------|--------|--------|----------|--------|-----------|--------|
| Naphthalene               | Avg Resp   |             | 0.00   | 1.085  | 1.179  |        |          | -9     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.661  | 0.715  |        |          | -8     | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.663  | 0.705  |        |          | -6     | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp   |             | 0.00   | 2.528  | 2.605  |        |          | -3     | 0-20      | PASS   |
| Acenaphthene              | C Avg Resp |             | 0.00   | 1.517  | 1.606  |        |          | -6     | 0-20      | PASS   |
| Fluorene                  | Avg Resp   |             | 0.00   | 1.689  | 1.776  |        |          | -5     | 0-20      | PASS   |
| Phenanthrene              | Avg Resp   |             | 0.00   | 1.061  | 1.102  |        |          | -4     | 0-20      | PASS   |
| Anthracene                | Avg Resp   |             | 0.00   | 1.037  | 1.071  |        |          | -3     | 0-20      | PASS   |
| Fluoranthene              | C Avg Resp |             | 0.00   | 1.365  | 1.394  |        |          | -2     | 0-20      | PASS   |
| Pyrene                    | Avg Resp   |             | 0.00   | 1.362  | 1.490  |        |          | -9     | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp   |             | 0.00   | 1.317  | 1.288  |        |          | 2      | 0-20      | PASS   |
| Chrysene                  | Avg Resp   |             | 0.00   | 1.197  | 1.285  |        |          | -7     | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp   |             | 0.00   | 1.366  | 1.487  |        |          | -9     | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp   |             | 0.00   | 1.303  | 1.349  |        |          | -4     | 0-20      | PASS   |
| Benzo (a) Pyrene          | C Avg Resp |             | 0.00   | 1.256  | 1.269  |        |          | -1     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp   |             | 0.00   | 1.502  | 1.460  |        |          | 3      | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp   |             | 0.00   | 1.139  | 1.120  |        |          | 2      | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp   |             | 0.00   | 1.207  | 1.191  |        |          | 1      | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

# INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C SIM PAHs

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ICAL BATCH ID: 170313I001

CCV BATCH ID: 170320A011

## ICAL MIDPOINT

SAMPLE ID: 099-06-009-4979

D/T ANALYZED: 2017-03-13 13:33

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170313\13mar008.d\13mar008.rr

| COMPOUND               | AREA   | RETENTION TIME |
|------------------------|--------|----------------|
| 1,4-Dichlorobenzene-d4 | 46489  | 3.41           |
| Naphthalene-d8         | 140022 | 4.66           |
| Acenaphthene-d10       | 63153  | 6.54           |
| Phenanthrene-d10       | 210133 | 8.14           |
| Chrysene-d12           | 220711 | 11.06          |
| Perylene-d12           | 208071 | 12.82          |

## ICV

SAMPLE ID 099-06-009-4979

D/T ANALYZED: 2017-03-13 14:34

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170313\13mar011.d\13mar011.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 44664  | 23244            | 92978            | 3.42           | PASS   |
| Naphthalene-d8         | 134376 | 70011            | 280044           | 4.65           | PASS   |
| Acenaphthene-d10       | 61082  | 31576            | 126306           | 6.54           | PASS   |
| Phenanthrene-d10       | 200519 | 105066           | 420266           | 8.14           | PASS   |
| Chrysene-d12           | 207148 | 110356           | 441422           | 11.06          | PASS   |
| Perylene-d12           | 200860 | 104036           | 416142           | 12.82          | PASS   |

## CCV

SAMPLE ID 099-06-009-4988

D/T ANALYZED: 2017-03-20 10:06

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar002.d\20mar002.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 51139  | 23244            | 92978            | 3.33           | PASS   |
| Naphthalene-d8         | 143766 | 70011            | 280044           | 4.57           | PASS   |
| Acenaphthene-d10       | 65569  | 31576            | 126306           | 6.45           | PASS   |
| Phenanthrene-d10       | 213312 | 105066           | 420266           | 8.04           | PASS   |
| Chrysene-d12           | 209072 | 110356           | 441422           | 10.96          | PASS   |
| Perylene-d12           | 191663 | 104036           | 416142           | 12.70          | PASS   |

## CS

SAMPLE ID 17-03-1104-26

D/T ANALYZED: 2017-03-20 15:30

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar010.d\20mar010.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 53091  | 25570            | 102278           | 3.33           | PASS   |
| Naphthalene-d8         | 156238 | 71883            | 287532           | 4.57           | PASS   |
| Acenaphthene-d10       | 87746  | 32784            | 131138           | 6.45           | PASS   |
| Phenanthrene-d10       | 253837 | 106656           | 426624           | 8.04           | PASS   |
| Chrysene-d12           | 263068 | 104536           | 418144           | 10.96          | PASS   |
| Perylene-d12           | 249462 | 95832            | 383326           | 12.70          | PASS   |

CS

SAMPLE ID 17-03-1104-27

D/T ANALYZED: 2017-03-20 15:50

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar011.d\20mar011.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 50047  | 25570            | 102278           | 3.33           | PASS   |
| Naphthalene-d8         | 148884 | 71883            | 287532           | 4.57           | PASS   |
| Acenaphthene-d10       | 92628  | 32784            | 131138           | 6.45           | PASS   |
| Phenanthrene-d10       | 273396 | 106656           | 426624           | 8.04           | PASS   |
| Chrysene-d12           | 280950 | 104536           | 418144           | 10.95          | PASS   |
| Perylene-d12           | 270810 | 95832            | 383326           | 12.70          | PASS   |

CS

SAMPLE ID 17-03-1104-28

D/T ANALYZED: 2017-03-20 16:10

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar012.d\20mar012.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 54347  | 25570            | 102278           | 3.33           | PASS   |
| Naphthalene-d8         | 160917 | 71883            | 287532           | 4.57           | PASS   |
| Acenaphthene-d10       | 93410  | 32784            | 131138           | 6.45           | PASS   |
| Phenanthrene-d10       | 271454 | 106656           | 426624           | 8.04           | PASS   |
| Chrysene-d12           | 278067 | 104536           | 418144           | 10.96          | PASS   |
| Perylene-d12           | 261130 | 95832            | 383326           | 12.70          | PASS   |

CS

SAMPLE ID 17-03-1104-29

D/T ANALYZED: 2017-03-20 16:30

DATA FILE: Z:\GCMS\_EEE\GCMS\_EEE\_data\2017\170320\20mar013.d\20mar013.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 59799  | 25570            | 102278           | 3.33           | PASS   |
| Naphthalene-d8         | 174686 | 71883            | 287532           | 4.57           | PASS   |
| Acenaphthene-d10       | 97462  | 32784            | 131138           | 6.45           | PASS   |
| Phenanthrene-d10       | 284156 | 106656           | 426624           | 8.04           | PASS   |
| Chrysene-d12           | 292243 | 104536           | 418144           | 10.96          | PASS   |
| Perylene-d12           | 280465 | 95832            | 383326           | 12.70          | PASS   |

**Notes:**

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar002.d  
 Report Date: 03/20/2017 12:27

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_EEE.i Injection Date and Time: 20-MAR-2017 10:06  
 Sample Name: CCV S010317F 1PPM Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 11:59 14:13  
 Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m

| Target Compounds           | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
|----------------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| Naphthalene                | 1.085                 | 1.179      | 0.00        | -9             | 20              | Averaged   |
| 2-Methylnaphthalene        | 0.661                 | 0.715      | 0.00        | -8             | 20              | Averaged   |
| 1-Methylnaphthalene        | 0.663                 | 0.705      | 0.00        | -6             | 20              | Averaged   |
| Acenaphthylene             | 2.528                 | 2.605      | 0.00        | -3             | 20              | Averaged   |
| Acenaphthene               | 1.517                 | 1.606      | 0.00        | -6             | 20              | Averaged   |
| Fluorene                   | 1.689                 | 1.776      | 0.00        | -5             | 20              | Averaged   |
| Phenanthrene               | 1.061                 | 1.102      | 0.00        | -4             | 20              | Averaged   |
| Anthracene                 | 1.037                 | 1.071      | 0.00        | -3             | 20              | Averaged   |
| Fluoranthene               | 1.365                 | 1.394      | 0.00        | -2             | 20              | Averaged   |
| Pyrene                     | 1.362                 | 1.490      | 0.00        | -9             | 20              | Averaged   |
| Benzo (a) Anthracene       | 1.317                 | 1.288      | 0.00        | 2              | 20              | Averaged   |
| Chrysene                   | 1.197                 | 1.285      | 0.00        | -7             | 20              | Averaged   |
| Benzo (b) Fluoranthene     | 1.303                 | 1.349      | 0.00        | -4             | 20              | Averaged   |
| Benzo (k) Fluoranthene     | 1.366                 | 1.487      | 0.00        | -9             | 20              | Averaged   |
| Benzo (a) Pyrene           | 1.256                 | 1.269      | 0.00        | -1             | 20              | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.502                 | 1.460      | 0.00        | 3              | 20              | Averaged   |
| Dibenz (a,h) Anthracene    | 1.139                 | 1.120      | 0.00        | 2              | 20              | Averaged   |
| Benzo (g,h,i) Perylene     | 1.207                 | 1.191      | 0.00        | 1              | 20              | Averaged   |
| Biphenyl                   | 2.240                 | 2.372      | 0.00        | -6             | 20              | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.572                 | 1.643      | 0.00        | -5             | 20              | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.571                 | 1.642      | 0.00        | -5             | 20              | Averaged   |
| Dibenzothiophene           | 4.622                 | 4.688      | 0.00        | -1             | 20              | Averaged   |
| 1-Methylphenanthrene       | 0.997                 | 1.091      | 0.00        | -9             | 20              | Averaged   |
| Benzo (e) pyrene           | 1.557                 | 1.637      | 0.00        | -5             | 20              | Averaged   |
| Perylene                   | 1.493                 | 1.553      | 0.00        | -4             | 20              | Averaged   |
| Dibenzofuran               | 2.194                 | 2.306      | 0.00        | -5             | 20              | Averaged   |
| Surrogate Standards        | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift | Max%D<br>/Drift | Curve Type |
| Nitrobenzene-d5            | 0.331                 | 0.377      | 0.00        | -14            | 20              | Averaged   |
| 2-Fluorobiphenyl           | 1.805                 | 1.952      | 0.00        | -8             | 20              | Averaged   |
| p-Terphenyl-d14            | 0.775                 | 0.844      | 0.00        | -9             | 20              | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar002.d Instrument ID: GCMS\_EEE.i  
 Injection date and time: 20-MAR-2017 10:06 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 20-MAR-2017 10:33  
 Date, time and analyst ID of latest file update: 20-Mar-2017 10:33 ev7p

Sample Name: CCV S010317F 1PPM  
 Response via Initial Calibration

Misc Info: 170320A011

| Compounds                      | I.S.<br>Ref. | RT     | QIon  | Area   | On-Column        | DEV (Min) |
|--------------------------------|--------------|--------|-------|--------|------------------|-----------|
|                                |              |        |       |        | Amount<br>(mg/L) |           |
| =====                          | =====        | =====  | ===== | =====  | =====            | =====     |
| Internal Standards             |              |        |       |        |                  |           |
| 1) *1,4-Dichlorobenzene-d4     | (1)          | 3.329  | 152   | 51139  | 5.000            | 0.00      |
| 3) *Naphthalene-d8             | (2)          | 4.567  | 136   | 143766 | 5.000            | 0.00      |
| 11) *Acenaphthene-d10          | (3)          | 6.448  | 164   | 65569  | 5.000            | 0.00      |
| 17) *Phenanthrene-d10          | (4)          | 8.044  | 188   | 213312 | 5.000            | 0.00      |
| 31) *Perylene-d12              | (6)          | 12.701 | 264   | 191663 | 5.000            | 0.00      |
| 25) *Chrysene-d12              | (5)          | 10.957 | 240   | 209072 | 5.000            | 0.00      |
| System Monitoring Compounds    |              |        |       |        |                  |           |
| 2) \$Nitrobenzene-d5           | (2)          | 3.881  | 82    | 10826  | 1.137            | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                  |           |
| 7) \$2-Fluorobiphenyl          | (3)          | 5.745  | 172   | 25601  | 1.082            | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                  |           |
| 23) \$p-Terphenyl-d14          | (5)          | 9.838  | 244   | 35307  | 1.090            | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 0.000 |        |                  |           |
| Target Compounds               |              |        |       |        |                  |           |
|                                |              |        |       |        | QValue           |           |
| 4) Naphthalene                 | (2)          | 4.587  | 128   | 33897  | 1.087            | 100       |
| 5) 2-Methylnaphthalene         | (2)          | 5.316  | 142   | 20545  | 1.080            | 100       |
| 6) 1-Methylnaphthalene         | (2)          | 5.428  | 142   | 20264  | 1.063            | 100       |
| 10) Acenaphthylene             | (3)          | 6.279  | 152   | 34163  | 1.030            | 100       |
| 12) Acenaphthene               | (3)          | 6.482  | 153   | 21059  | 1.058            | 100       |
| 15) Fluorene                   | (3)          | 7.031  | 166   | 23290  | 1.052            | 100       |
| 18) Phenanthrene               | (4)          | 8.067  | 178   | 47021  | 1.039            | 100       |
| 19) Anthracene                 | (4)          | 8.117  | 178   | 45710  | 1.033            | 100       |
| 21) Fluoranthene               | (4)          | 9.375  | 202   | 59483  | 1.021            | 100       |
| 22) Pyrene                     | (5)          | 9.612  | 202   | 62290  | 1.094            | 100       |
| 24) Benzo (a) Anthracene       | (5)          | 10.941 | 228   | 53866  | 0.978            | 100       |
| 26) Chrysene                   | (5)          | 10.984 | 228   | 53752  | 1.074            | 100       |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.240 | 252   | 51695  | 1.035            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.269 | 252   | 56997  | 1.088            | 100       |
| 30) Benzo (a) Pyrene           | (6)          | 12.629 | 252   | 48658  | 1.011            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 13.937 | 276   | 55952  | 0.972            | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)          | 13.965 | 278   | 42935  | 0.983            | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.210 | 276   | 45656  | 0.987            | 100       |
| 8) Biphenyl                    | (3)          | 5.833  | 154   | 31101  | 1.059            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 5.993  | 156   | 21540  | 1.045            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 6.912  | 170   | 21530  | 1.045            | 100       |
| 16) Dibenzothiophene           | (3)          | 7.931  | 184   | 61475  | 1.014            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_EEE.i/170320.b/20mar002.d Instrument ID: GCMS\_EEE.i  
Injection date and time: 20-MAR-2017 10:06 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_EEE.i/170320.b/simpah-extra.m Sublist used: all  
Calibration date and time: 20-MAR-2017 10:33  
Date, time and analyst ID of latest file update: 20-Mar-2017 10:33 ev7p

Sample Name: CCV S010317F 1PPM  
Response via Initial Calibration

Misc Info: 170320A011

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 8.756  | 192  | 45624 | 1.095                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.568 | 252  | 62736 | 1.051                         | 100    |
| 32) Perylene             | (6)          | 12.729 | 252  | 59549 | 1.040                         | 100    |
| 13) Dibenzofuran         | (3)          | 6.659  | 168  | 30246 | 1.051                         | 100    |

page 2 of 2

Page 1

Data File: /chem/SV0A/GCHS\_EEE.i/170320.b/20mar002.d

Date : 20-MAR-2017 10:06

Client ID:

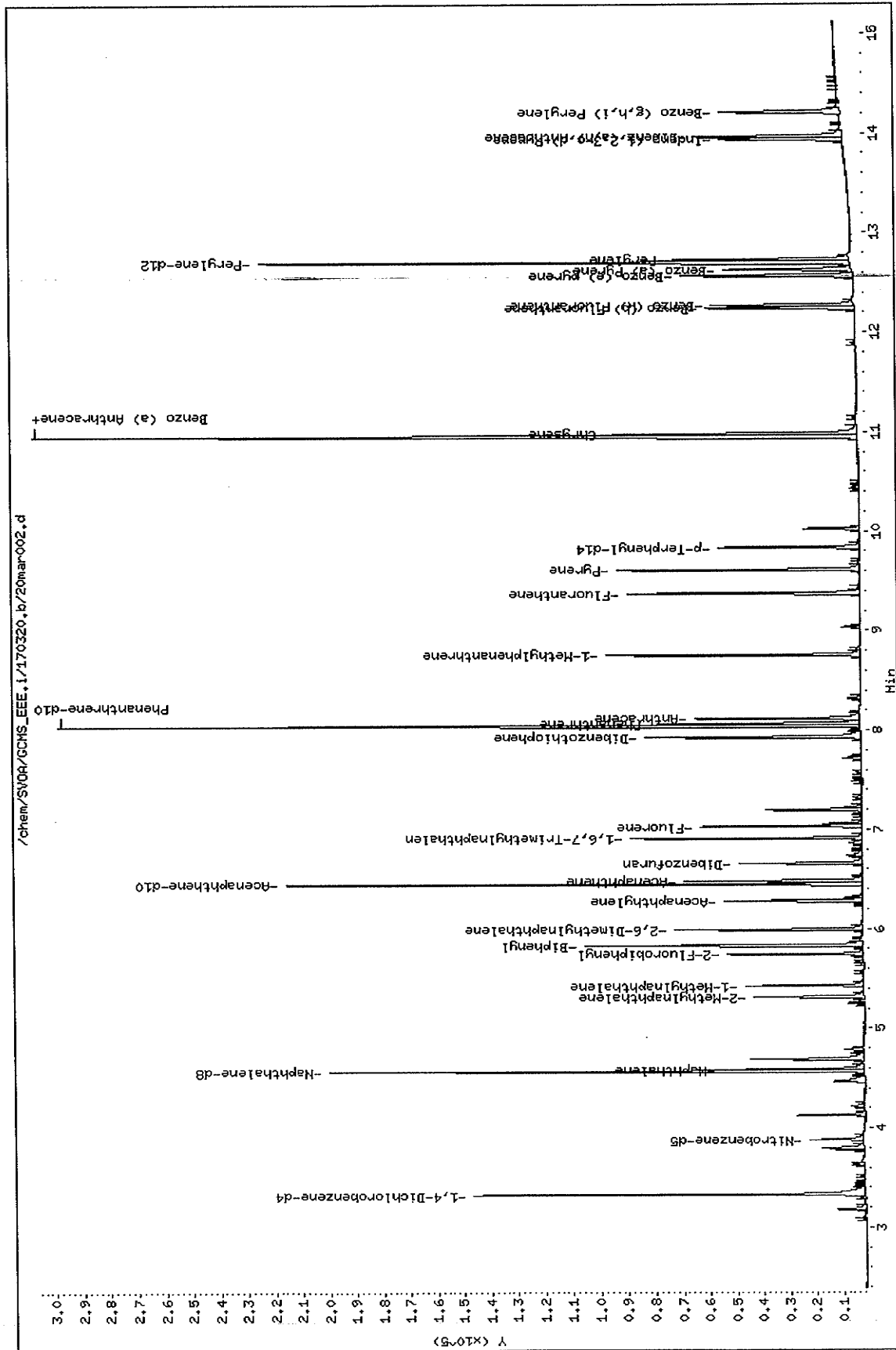
Sample Info: CCV S010317F 1PPH

Instrument: GCHS\_EEE.i

Operator: 907

Column diameter: 0.18

Column phase: J&amp;W DB-5MS

[Return to Contents](#)

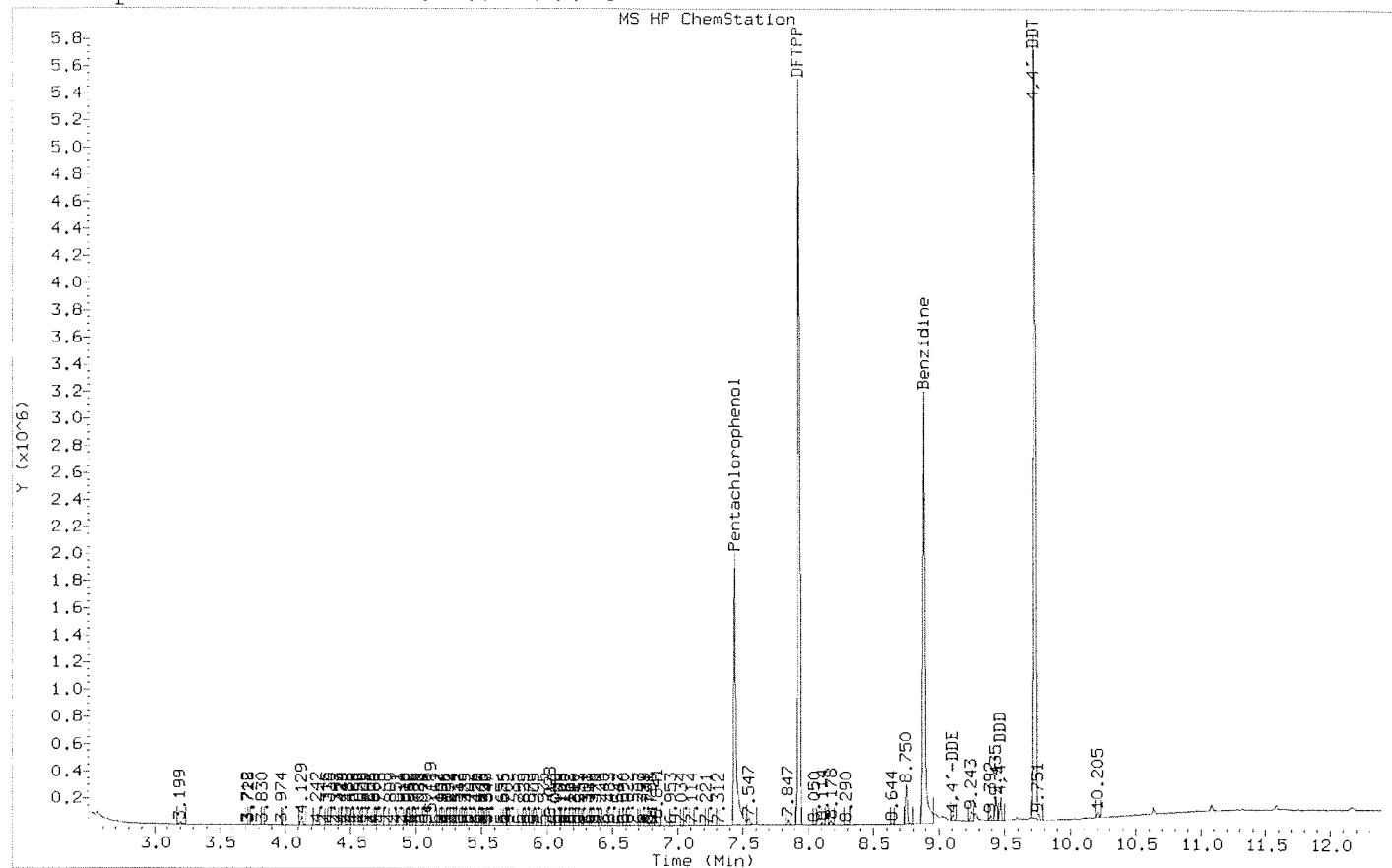
# EPA METHOD 8270C PAHSIM

## Tuning Reports

## DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 1  
 Acq on : 13-MAR-2017 11:49 Operator : 907  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Last Update : 07-MAR-2017 10:28

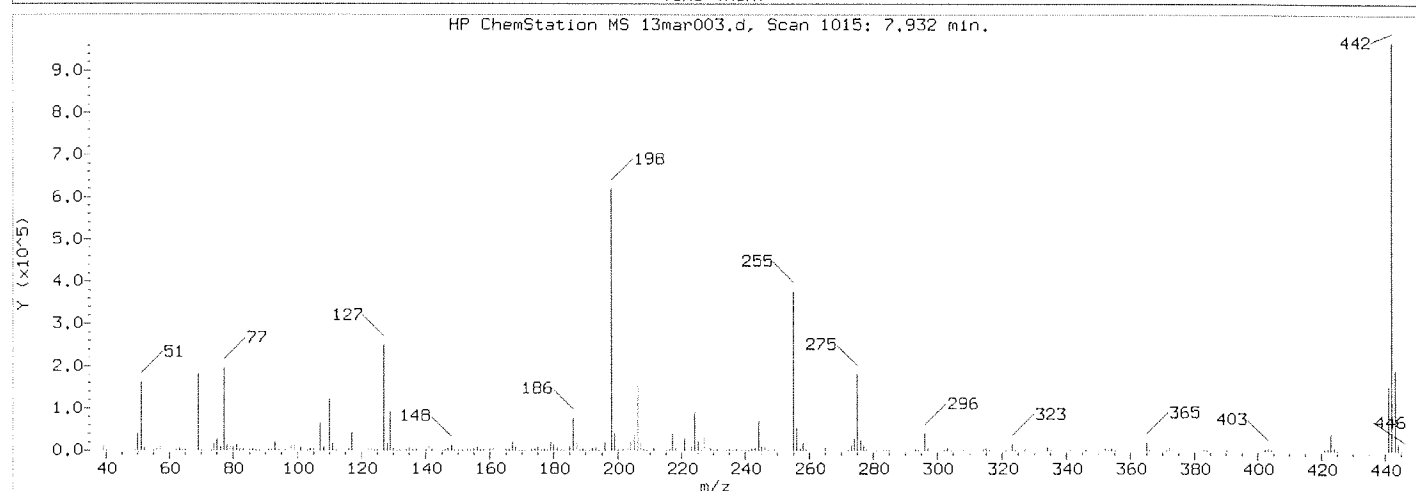
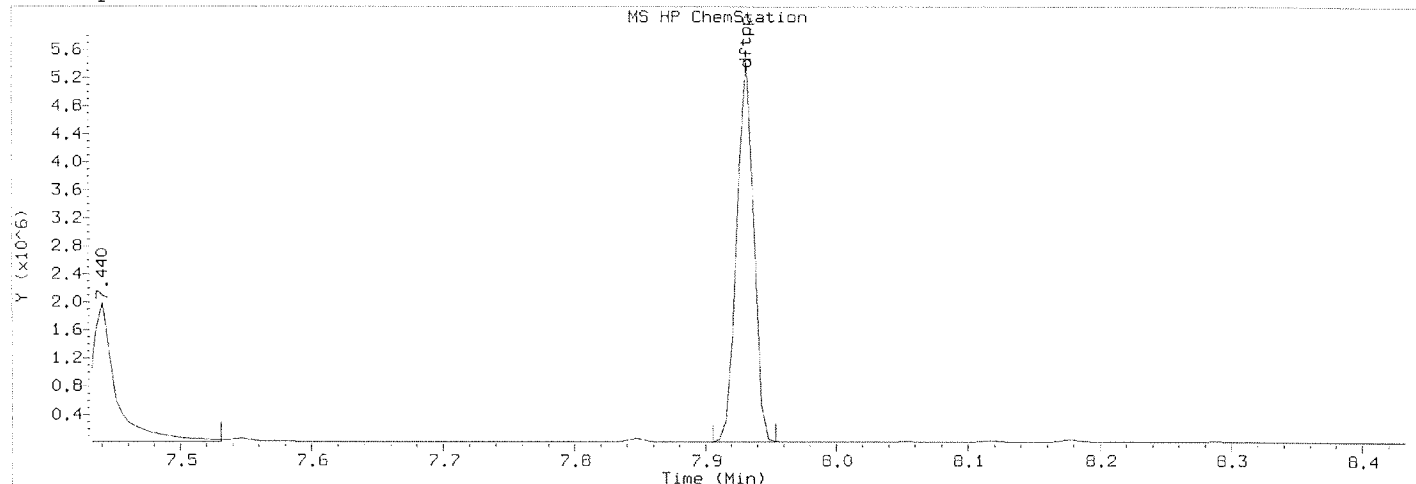


Tune \*\*\* PASSED \*\*\*  
 Pentachlorophenol Tailing \*\*\* PASSED \*\*\*  
 Benzidine Tailing \*\*\* PASSED \*\*\*  
 DDT degradation \*\*\* PASSED \*\*\*

Tuning Sample, /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d , \*\*\* PASSED \*\*\*

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 1  
 Acq on : 13-MAR-2017 11:49 Operator : 907  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/dftpptune.m  
 Last Update : 07-MAR-2017 10:28



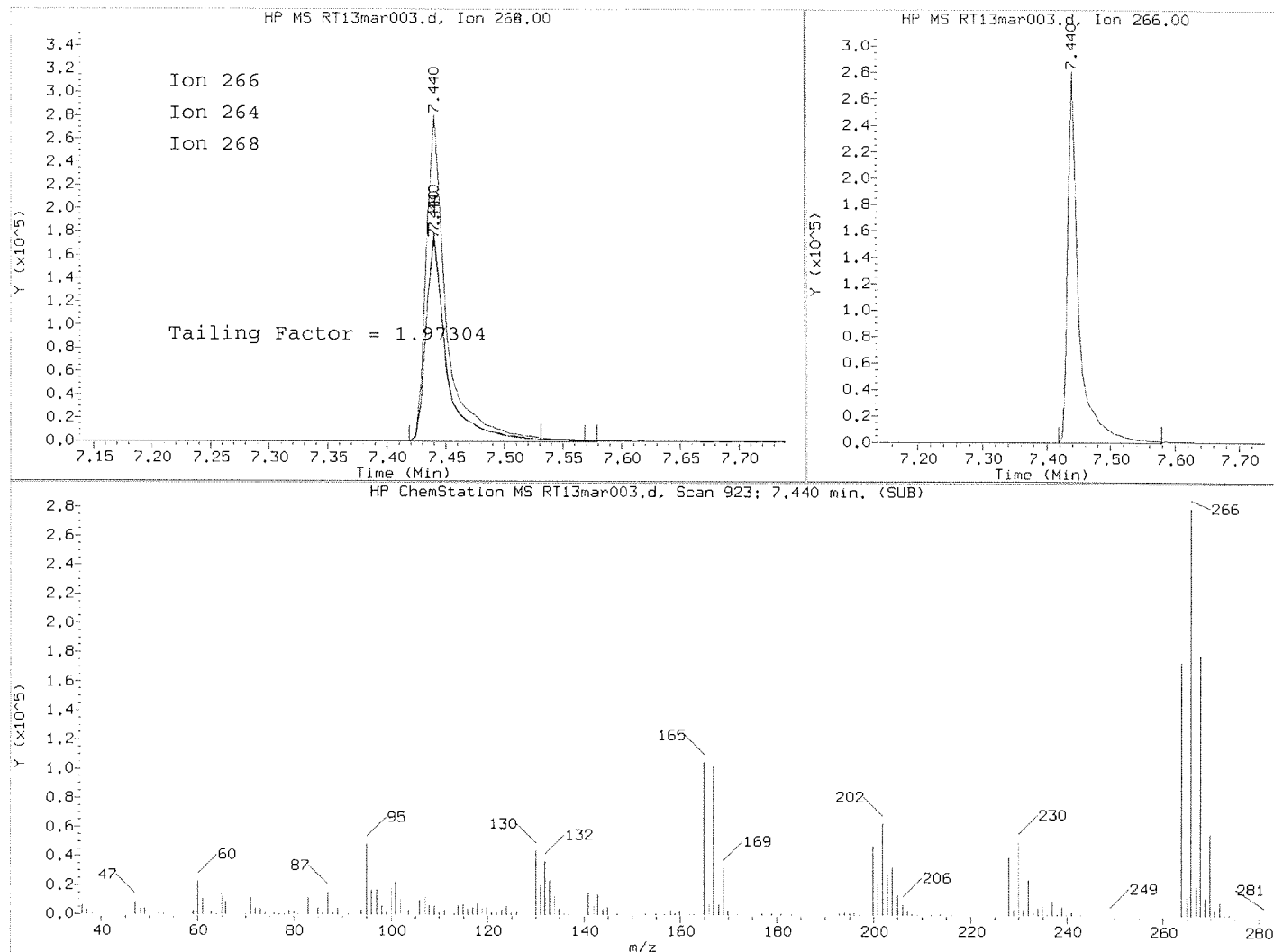
Spectrum: Avg. Scans 1014-1016 ( 7.93), Background Scan 1009

DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 461312   | PASS |
| 51  | 30 - 60% of mass 198               | 33.56     | 154816   | PASS |
| 68  | Less than 2% of mass 69            | 0.00      | 0        | PASS |
| 69  | Less than mass 198                 | 36.32     | 167552   | PASS |
| 70  | Less than 2% of mass 69            | 0.62      | 1045     | PASS |
| 127 | 40 - 60% of mass 198               | 44.77     | 206528   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 6.99      | 32256    | PASS |
| 275 | 10 - 30% of mass 198               | 25.66     | 118368   | PASS |
| 365 | 1 - 100% of mass 198               | 2.66      | 12269    | PASS |
| 441 | Present, but less than mass 443    | 74.01     | 76992    | PASS |
| 442 | 40 - 200% of mass 198              | 109.96    | 507264   | PASS |
| 443 | 17 - 23% of mass 442               | 20.51     | 104024   | PASS |

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d/resolut.m  
 Last Update : 13-MAR-2017 12:08



## Pentachlorophenol

=====  
 Exp. RT = 7.467  
 Found RT = 7.440

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 343885 | 100.00 |
| 264  | 216440 | 62.94  |
| 268  | 218874 | 63.65  |

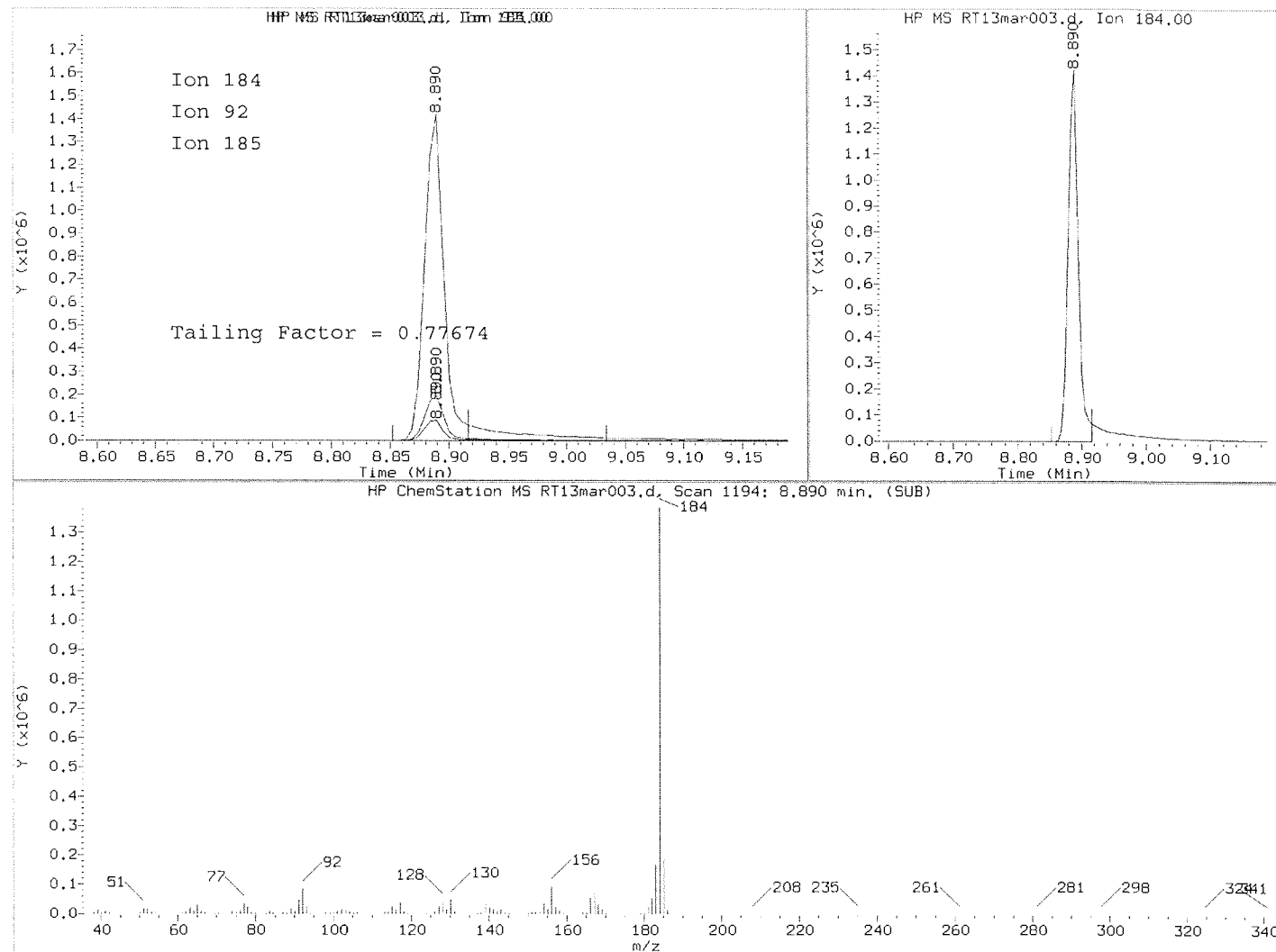
Peak baseline front width (sec) : 0.816  
 Peak baseline tail width (sec) : 1.610  
 Tail Factor = 1.610 / 0.816

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.973 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d/resolut.m  
 Last Update : 13-MAR-2017 12:08



Benzidine

=====

Exp. RT = 8.911

Found RT = 8.890

| Mass | Area    | Ratio  |
|------|---------|--------|
| 184  | 1603178 | 100.00 |
| 92   | 113552  | 7.08   |
| 185  | 222697  | 13.89  |

Peak baseline front width (sec) : 1.066

Peak baseline tail width (sec) : 0.828

Tail Factor = 0.828/ 1.066

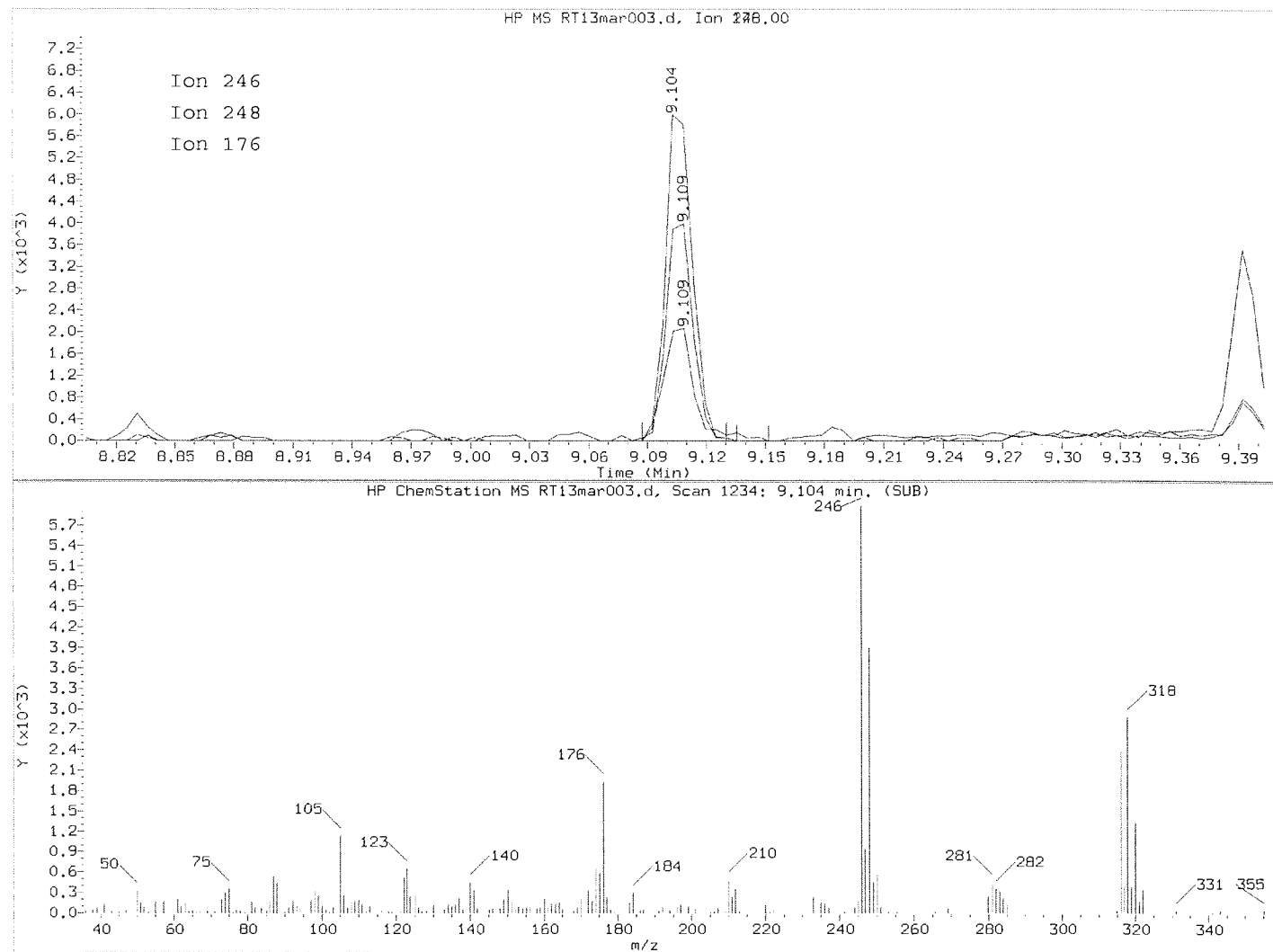
Tailing factor for Benzidine OK

Tail Factor = 0.777 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 11:49  
 Sample : TUNE S101716A DFTPP  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d/resolut.m  
 Last Update : 13-MAR-2017 12:08

Operator : Tim Matthews  
 Inst : GCMS\_EEE  
 Multiplier : 1



4,4'-DDE

=====

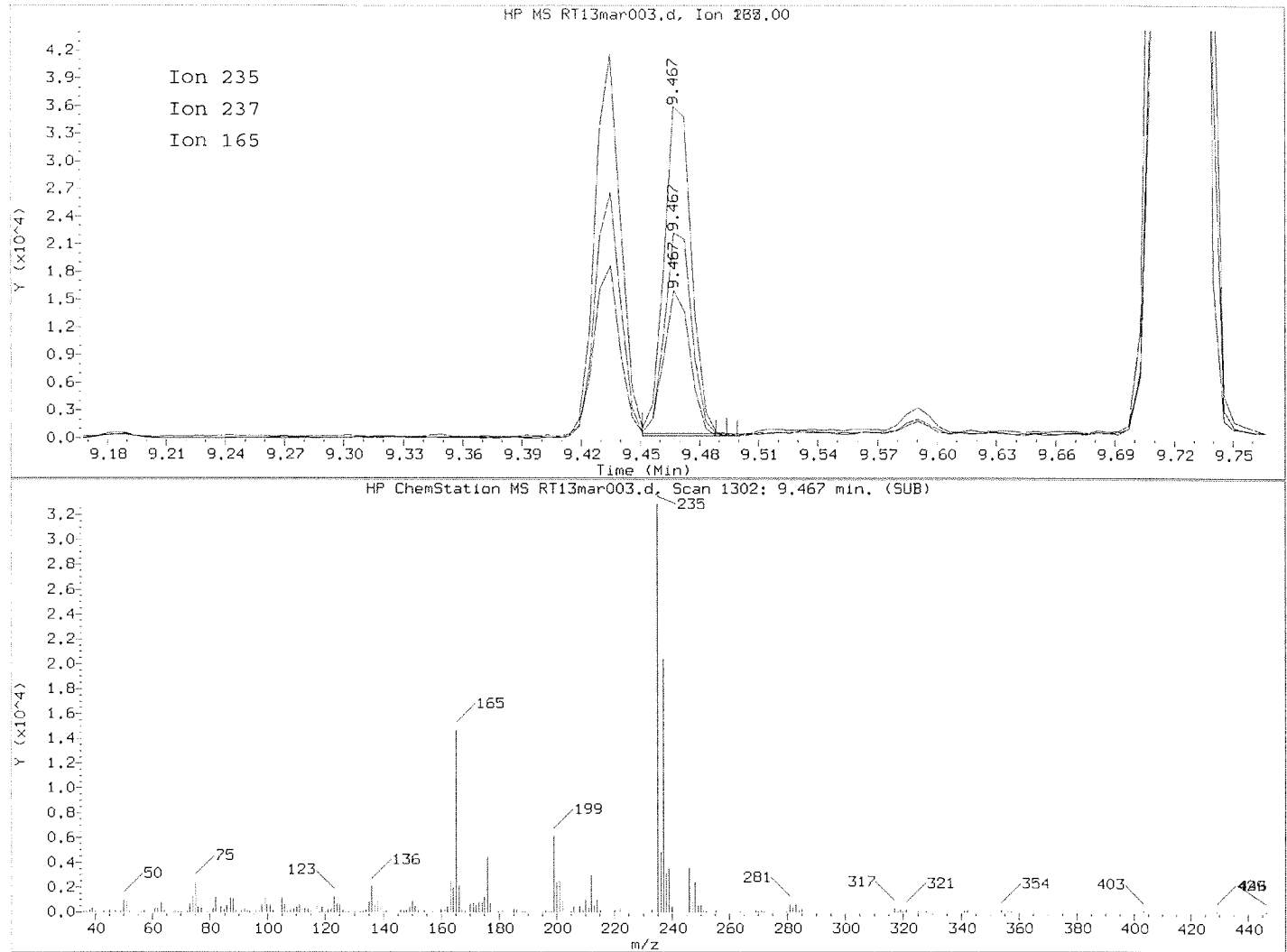
Exp. RT = 9.344

Found RT = 9.104

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 5722 | 100.00 |
| 248  | 3838 | 67.08  |
| 176  | 2263 | 39.55  |

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d/resolut.m  
 Last Update : 13-MAR-2017 12:08

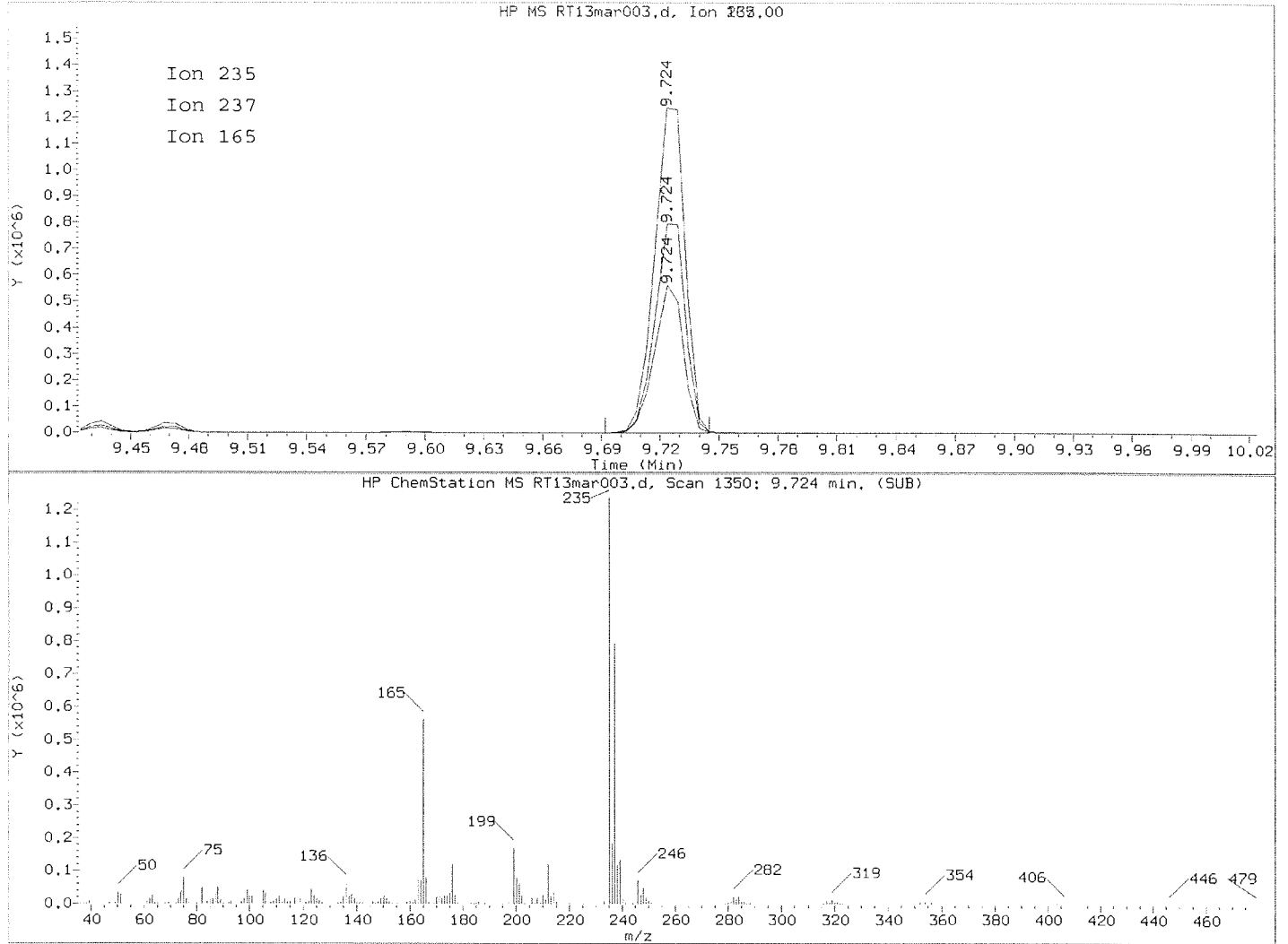


=====  
 Exp. RT = 9.499  
 Found RT = 9.467

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 34099 | 100.00 |
| 237  | 21311 | 62.50  |
| 165  | 14557 | 42.69  |

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170313.b/13mar003.d/resolut.m  
 Last Update : 13-MAR-2017 12:08



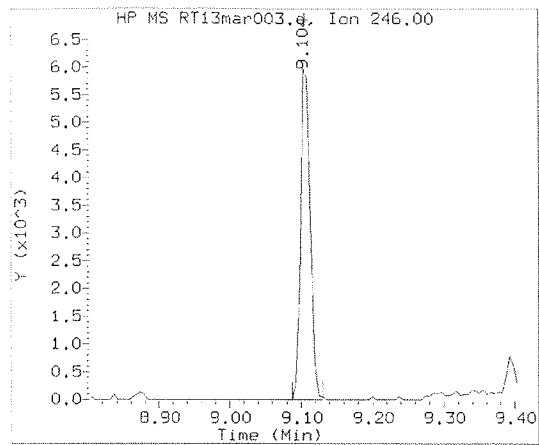
4,4'-DDT

=====

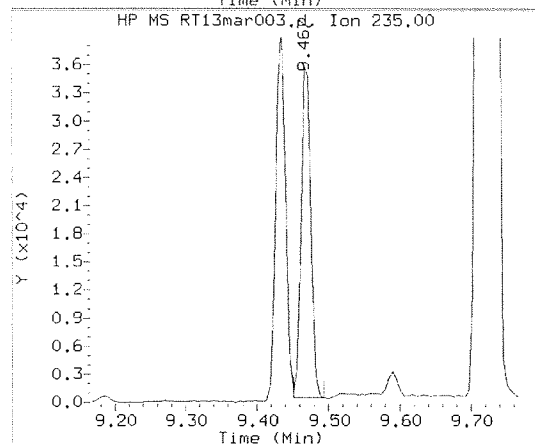
Exp. RT = 9.756

Found RT = 9.724

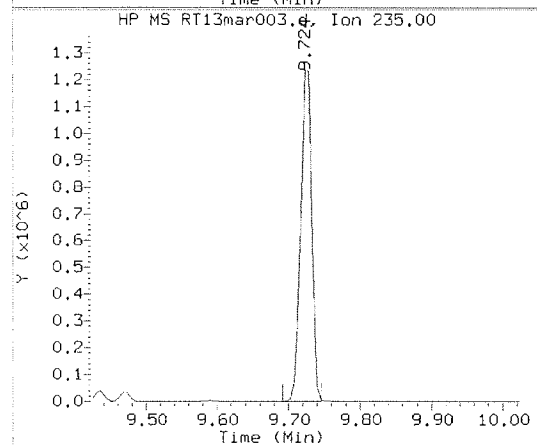
| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 1352361 | 100.00 |
| 237  | 866214  | 64.05  |
| 165  | 581673  | 43.01  |



Compound: 4,4'-DDE  
 Quant Mass: 246  
 RT: 9.104  
 Area: 5722



Compound: 4,4'-DDD  
 Quant Mass: 235  
 RT: 9.467  
 Area: 34099



Compound: 4,4'-DDT  
 Quant Mass: 235  
 RT: 9.724  
 Area: 1352361

#### DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

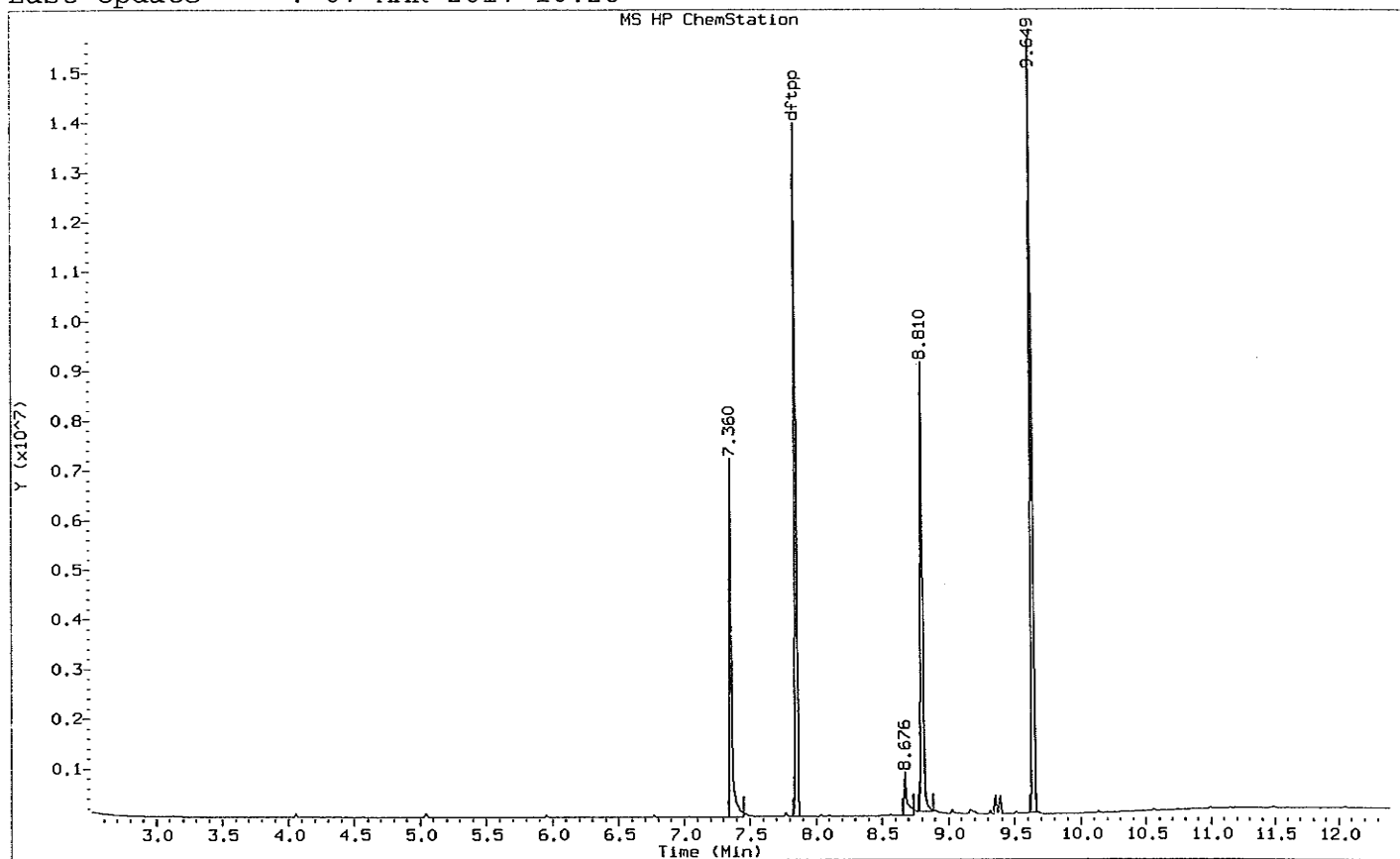
| Compound      | Response | %Breakdown | Max Allowed | Test |
|---------------|----------|------------|-------------|------|
| 4,4-DDT       | 1352361  |            |             | N/A  |
| 4,4-DDE       | 5722     | 0.42       | 20.0        | PASS |
| 4,4-DDD       | 34099    | 2.46       | 20.0        | PASS |
| 4,4-DDD + DDE | 39821    | 2.9        | 20.0        | PASS |

TUNE SAMPLE \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST

## DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
ALS Vial : 121  
Acq on : 17-MAR-2017 13:52 Operator : 907  
Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
Misc : Multiplier : 1  
Integrator Type : HP RTE  
Last Update : 07-MAR-2017 10:28



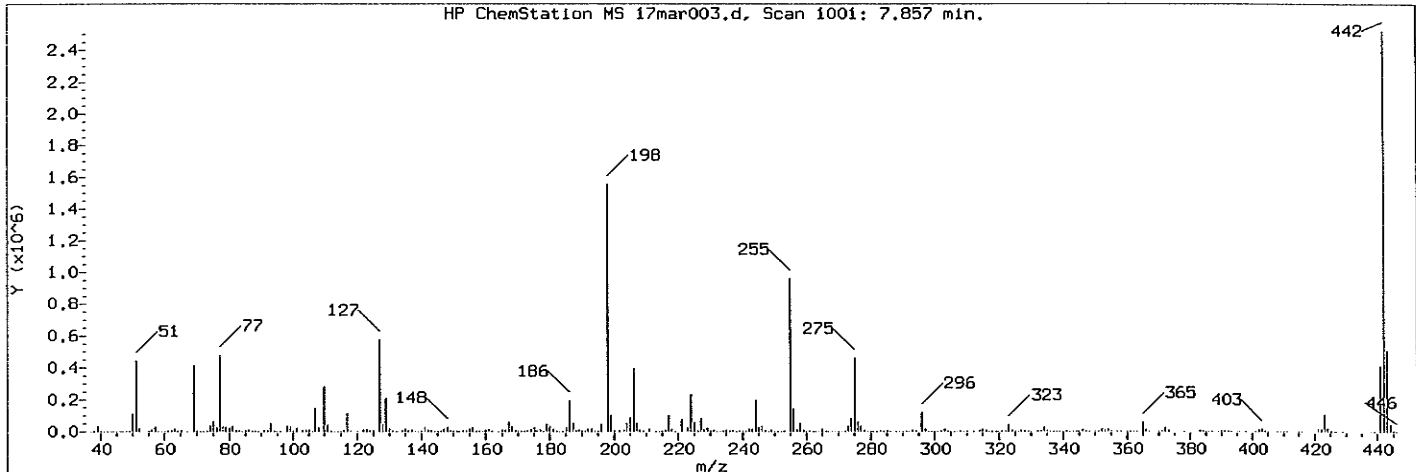
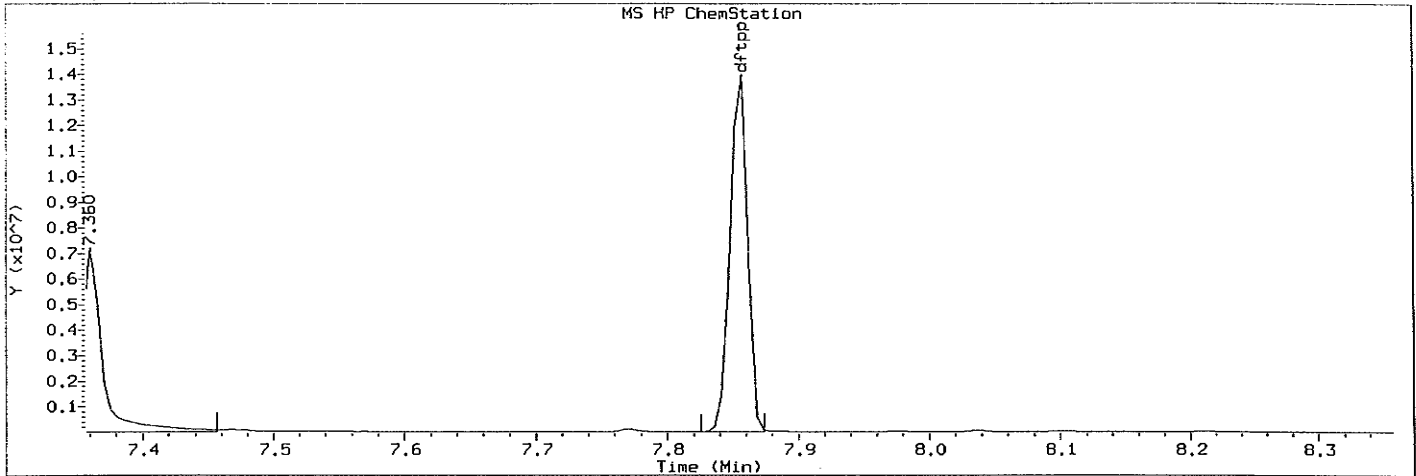
Tune \*\*\* PASSED \*\*\*  
Pentachlorophenol Tailing \*\*\* PASSED \*\*\*  
Benzidine Tailing \*\*\* PASSED \*\*\*  
DDT degradation \*\*\* PASSED \*\*\*

Tuning Sample, /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d, \*\*\* PASSED \*\*\*

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 121  
 Acq on : 17-MAR-2017 13:52  
 Sample : TUNE S101716A DFTPP  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/dftpp tune.m  
 Last Update : 07-MAR-2017 10:28

Operator : 907  
 Inst : GCMS\_EEE  
 Multiplier : 1<sup>-</sup>



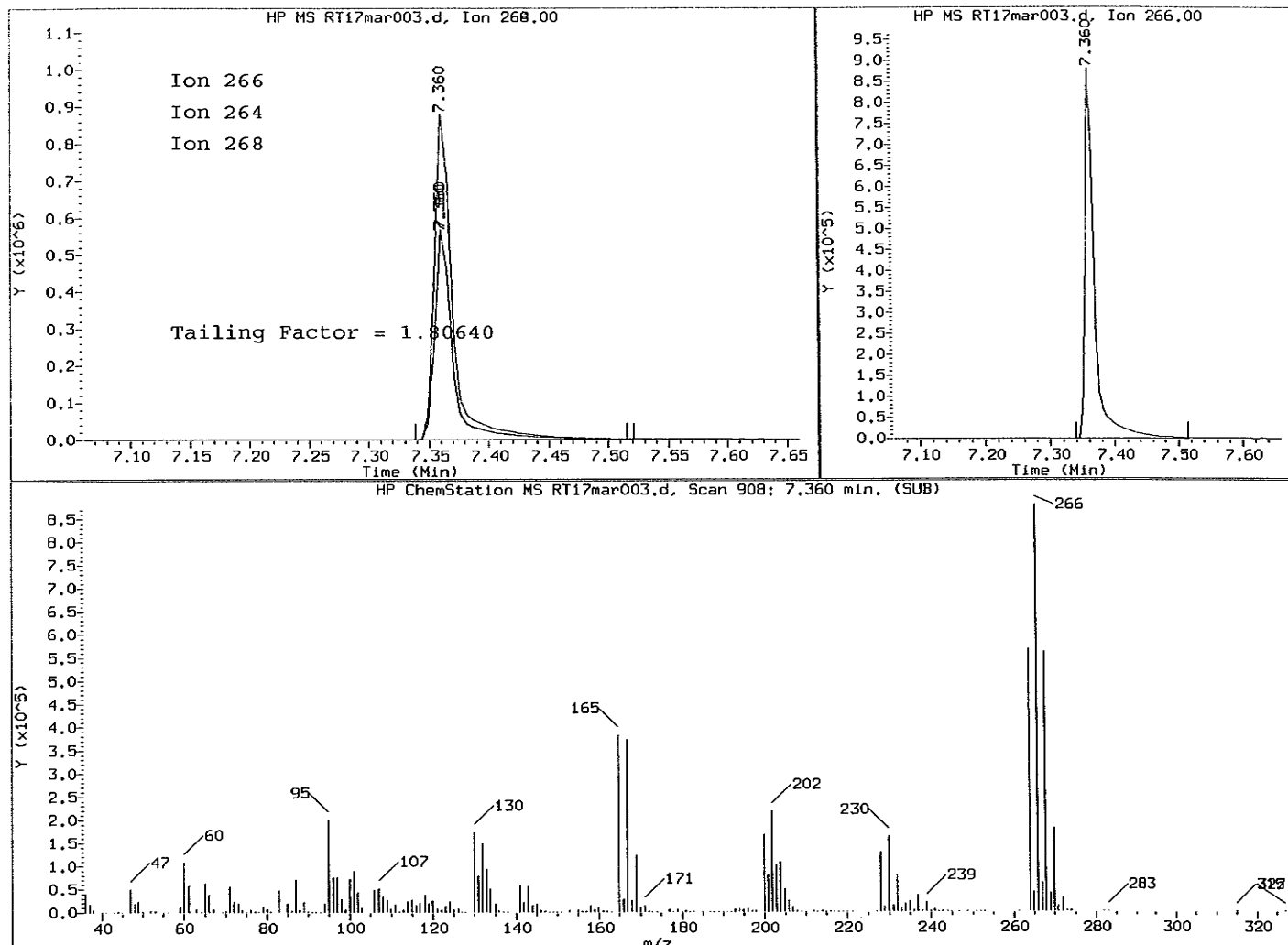
Spectrum: Avg. Scans 1000-1002 ( 7.86), Background Scan 994

DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 1454592  | PASS |
| 51  | 30 - 60% of mass 198               | 34.09     | 495936   | PASS |
| 68  | Less than 2% of mass 69            | 0.00      | 0        | PASS |
| 69  | Less than mass 198                 | 31.73     | 461504   | PASS |
| 70  | Less than 2% of mass 69            | 0.53      | 2426     | PASS |
| 127 | 40 - 60% of mass 198               | 41.21     | 599488   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 6.96      | 101232   | PASS |
| 275 | 10 - 30% of mass 198               | 25.79     | 375104   | PASS |
| 365 | 1 - 100% of mass 198               | 2.78      | 40384    | PASS |
| 441 | Present, but less than mass 443    | 76.51     | 221376   | PASS |
| 442 | 40 - 200% of mass 198              | 96.59     | 1404928  | PASS |
| 443 | 17 - 23% of mass 442               | 20.59     | 289344   | PASS |

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 3  
 Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d/resolut.m  
 Last Update : 17-MAR-2017 14:11



## Pentachlorophenol

=====  
 Exp. RT = 7.467  
 Found RT = 7.360

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 927382 | 100.00 |
| 264  | 589514 | 63.57  |
| 268  | 590031 | 63.62  |

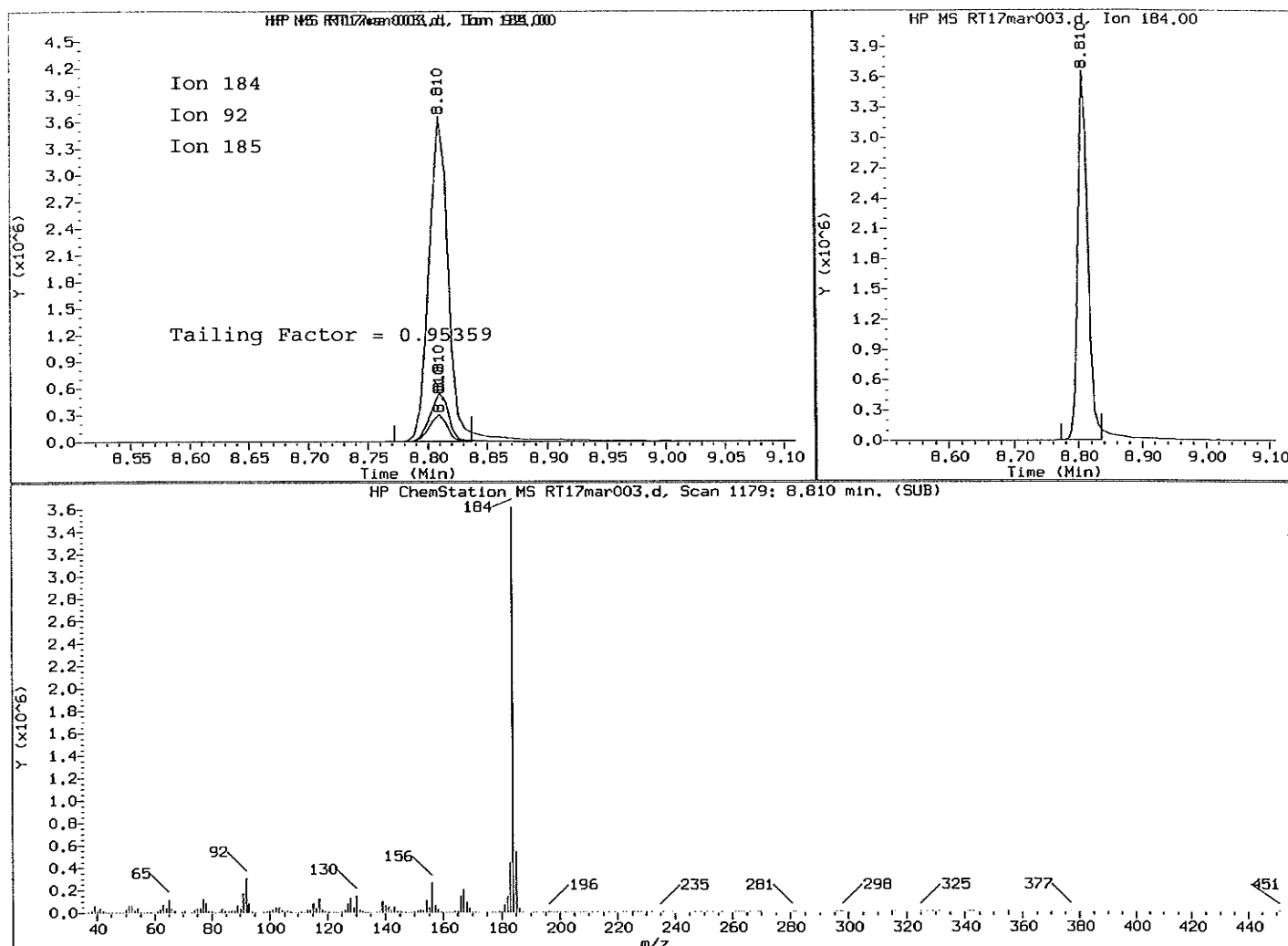
Peak baseline front width (sec) : 0.625  
 Peak baseline tail width (sec) : 1.129  
 Tail Factor = 1.129/ 0.625

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.806 Maximum Allowed = 3.0

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 3  
 Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d/resolut.m  
 Last Update : 17-MAR-2017 14:11



Benzidine

=====

Exp. RT = 8.911

Found RT = 8.810

| Mass | Area    | Ratio  |
|------|---------|--------|
| 184  | 4031008 | 100.00 |
| 92   | 324471  | 8.05   |
| 185  | 592363  | 14.70  |

Peak baseline front width (sec) : 0.948

Peak baseline tail width (sec) : 0.904

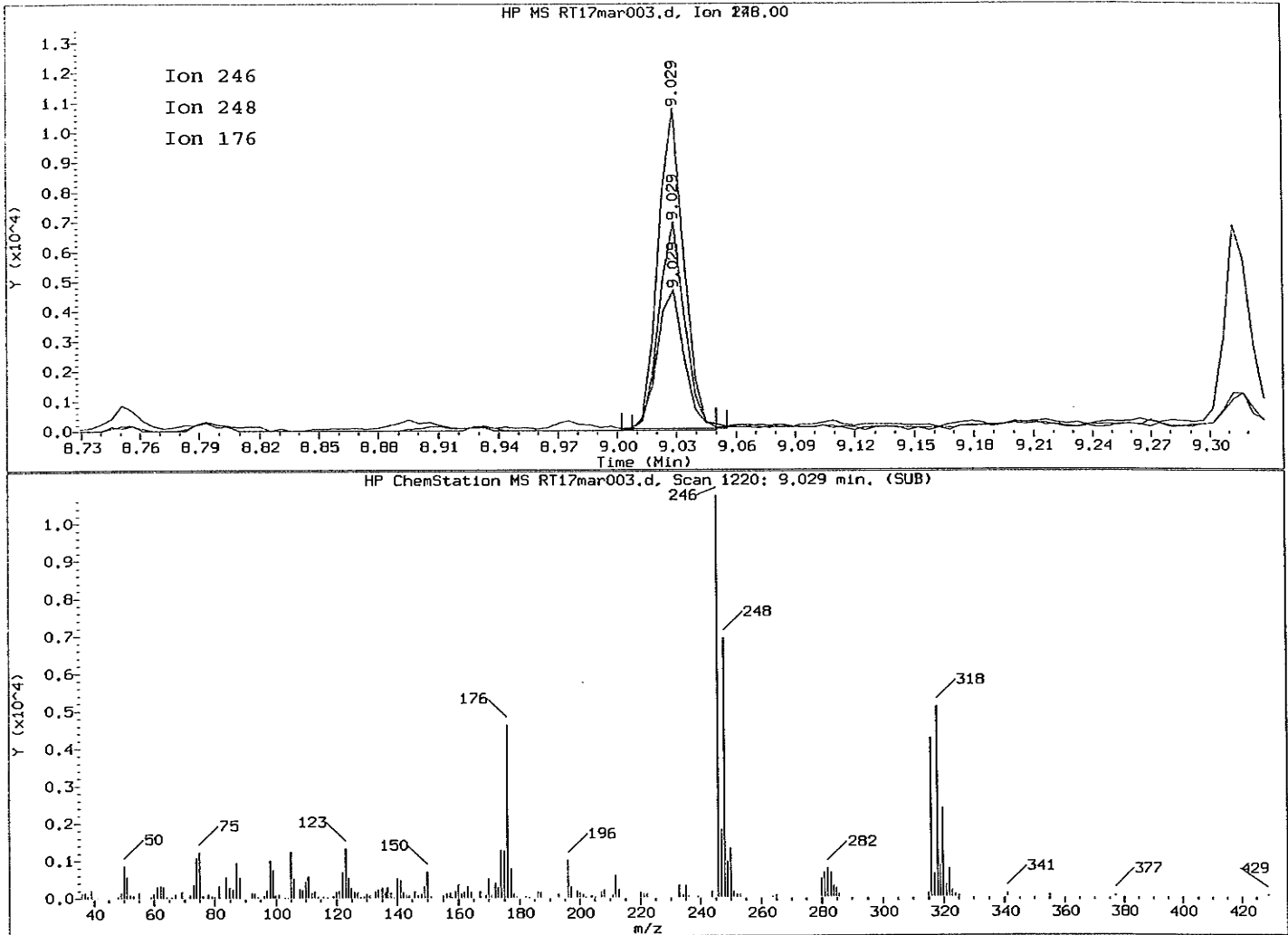
Tail Factor = 0.904/ 0.948

Tailing factor for Benzidine OK

Tail Factor = 0.954 Maximum Allowed = 3.0

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 3  
 Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d/resolut.m  
 Last Update : 17-MAR-2017 14:11



4,4'-DDE

=====

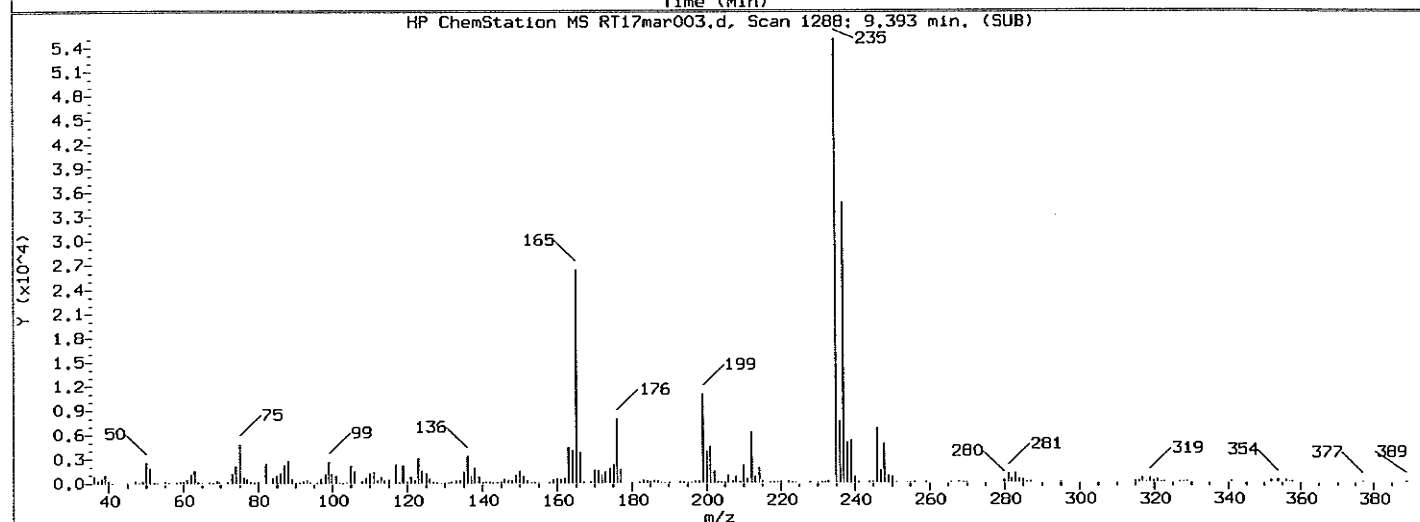
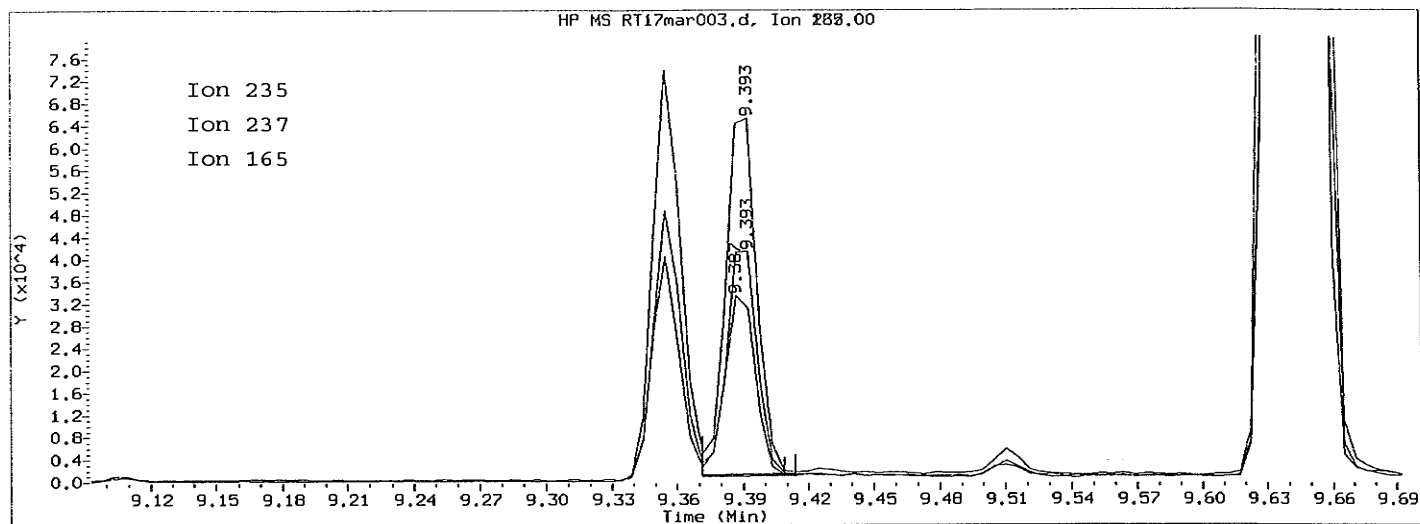
Exp. RT = 9.029

Found RT = 9.029

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 9749 | 100.00 |
| 248  | 6293 | 64.56  |
| 176  | 4419 | 45.33  |

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 3  
 Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1<sup>-</sup>  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d/resolut.m  
 Last Update : 17-MAR-2017 14:11



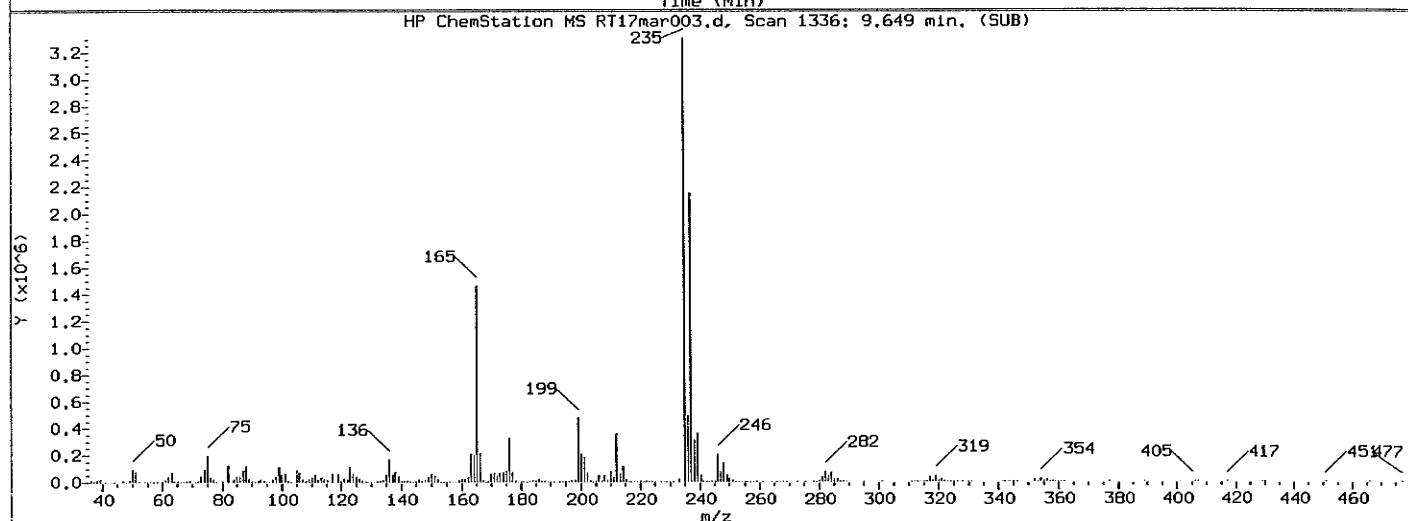
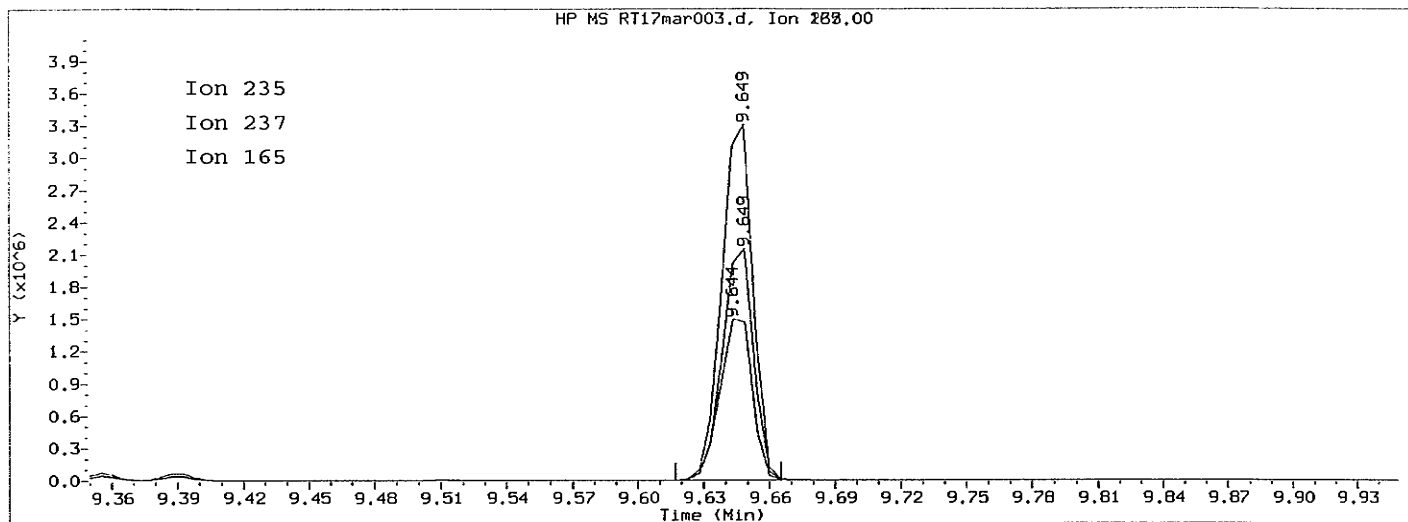
4,4'-DDD

=====  
 Exp. RT = 9.380  
 Found RT = 9.393

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 63769 | 100.00 |
| 237  | 40213 | 63.06  |
| 165  | 31134 | 48.82  |

Report Generated Time Fri Mar 17 14:12:35 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d  
 ALS Vial : 3  
 Acq on : 17-MAR-2017 13:52 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170317.b/17mar003.d/resolut.m  
 Last Update : 17-MAR-2017 14:11



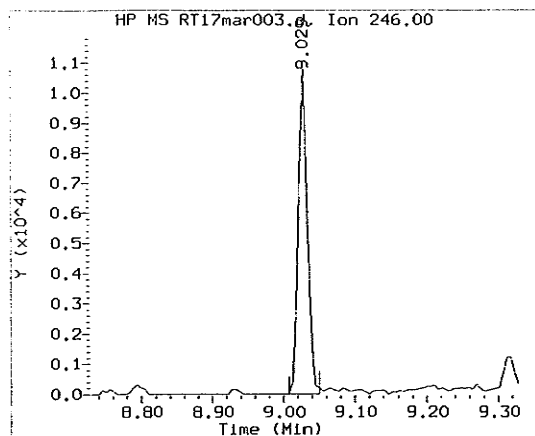
4,4'-DDT

=====

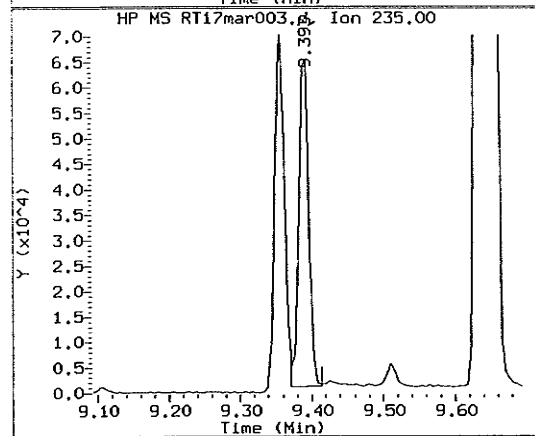
Exp. RT = 9.756

Found RT = 9.649

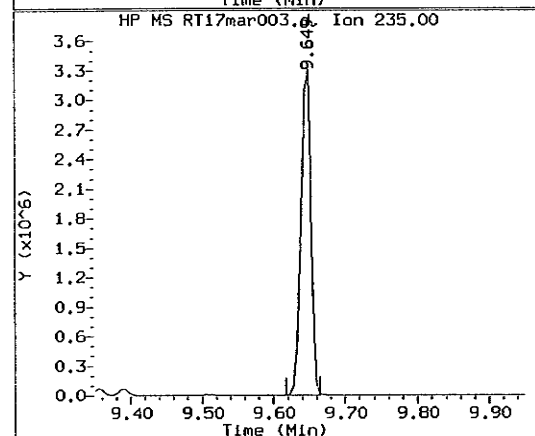
| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 3263005 | 100.00 |
| 237  | 2119510 | 64.96  |
| 165  | 1534214 | 47.02  |



Compound: 4,4'-DDE  
 Quant Mass: 246  
 RT: 9.029  
 Area: 9749



Compound: 4,4'-DDD  
 Quant Mass: 235  
 RT: 9.393  
 Area: 63769



Compound: 4,4'-DDT  
 Quant Mass: 235  
 RT: 9.649  
 Area: 3263005

#### DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

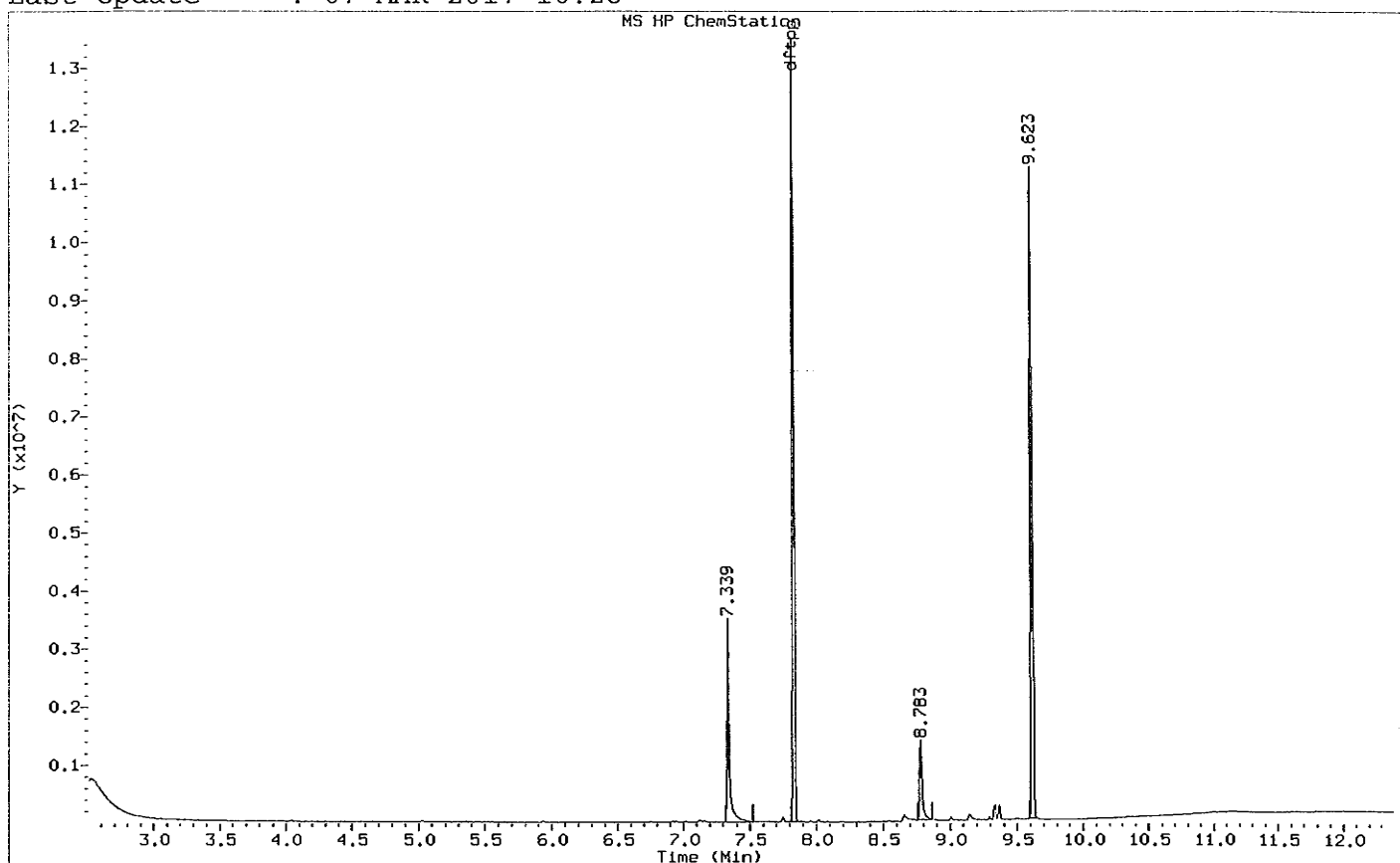
| Compound      | Response | %Breakdown | Max Allowed | Test |
|---------------|----------|------------|-------------|------|
| 4,4-DDT       | 3263005  |            |             | N/A  |
| 4,4-DDE       | 9749     | 0.30       | 20.0        | PASS |
| 4,4-DDD       | 63769    | 1.92       | 20.0        | PASS |
| 4,4-DDD + DDE | 73518    | 2.2        | 20.0        | PASS |

TUNE SAMPLE \*\*\*\*\*  
 \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST  
 \*\*\*\*\*

## DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
ALS Vial : 1  
Acq on : 20-MAR-2017 09:45 Operator : 907  
Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
Misc : Multiplier : 1  
Integrator Type : HP RTE  
Last Update : 07-MAR-2017 10:28

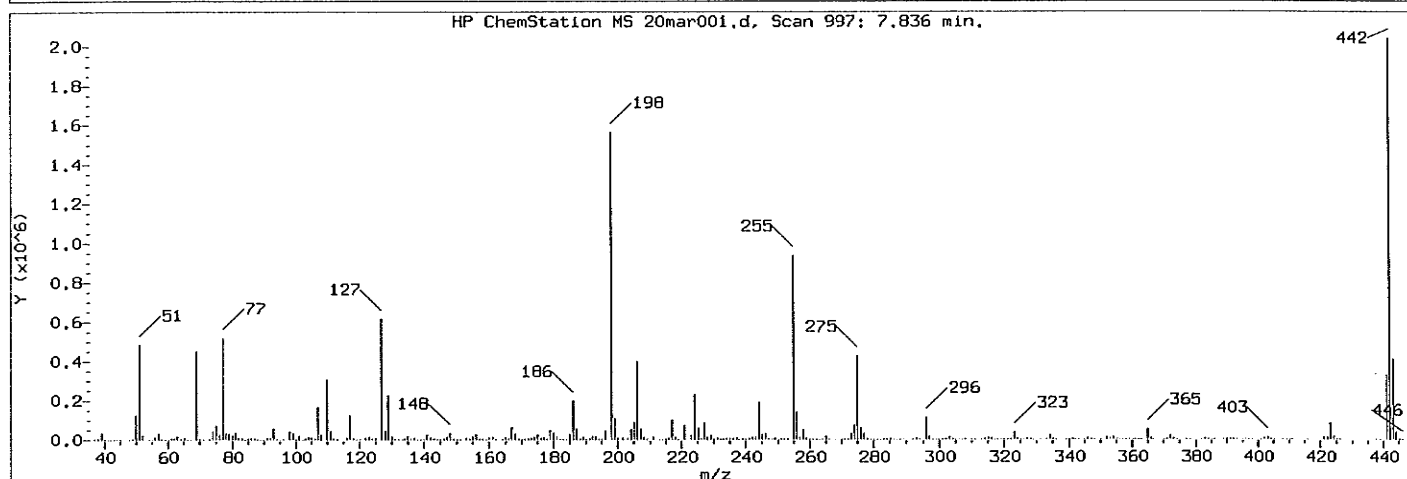
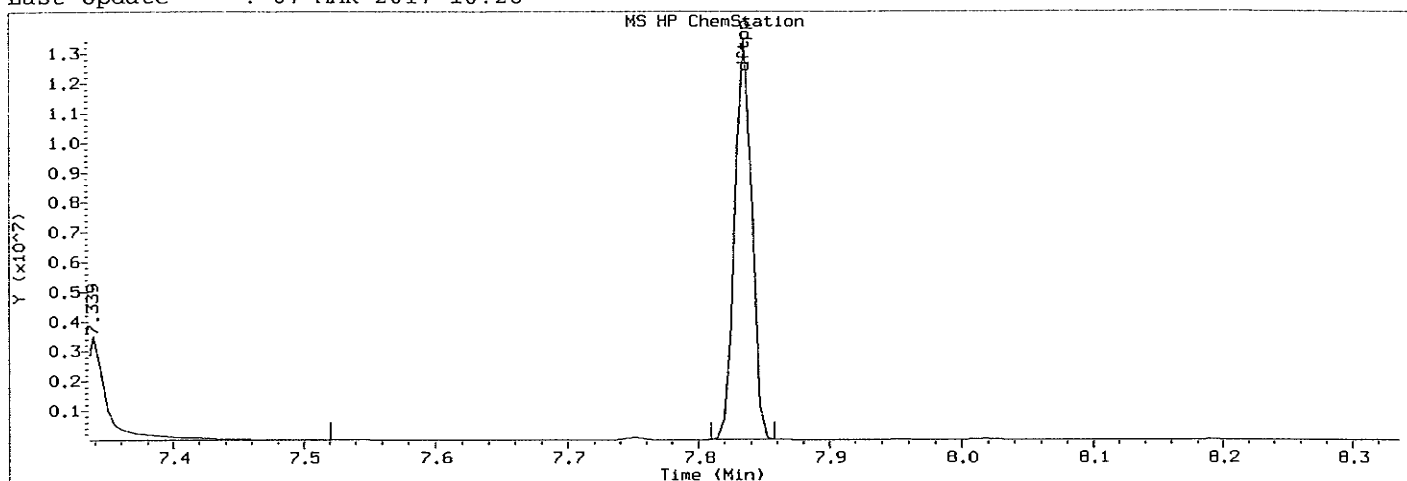


Tune \*\*\* PASSED \*\*\*  
Pentachlorophenol Tailing \*\*\* PASSED \*\*\*  
Benzidine Tailing \*\*\* PASSED \*\*\*  
DDT degradation \*\*\* PASSED \*\*\*

Tuning Sample, /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d , \*\*\* PASSED \*\*\*

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 1  
 Acq on : 20-MAR-2017 09:45  
 Sample : TUNE S101716A DFTPP  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/dftpp tune.m  
 Last Update : 07-MAR-2017 10:28  
 Operator : 907  
 Inst : GCMS\_EEE  
 Multiplier : 1



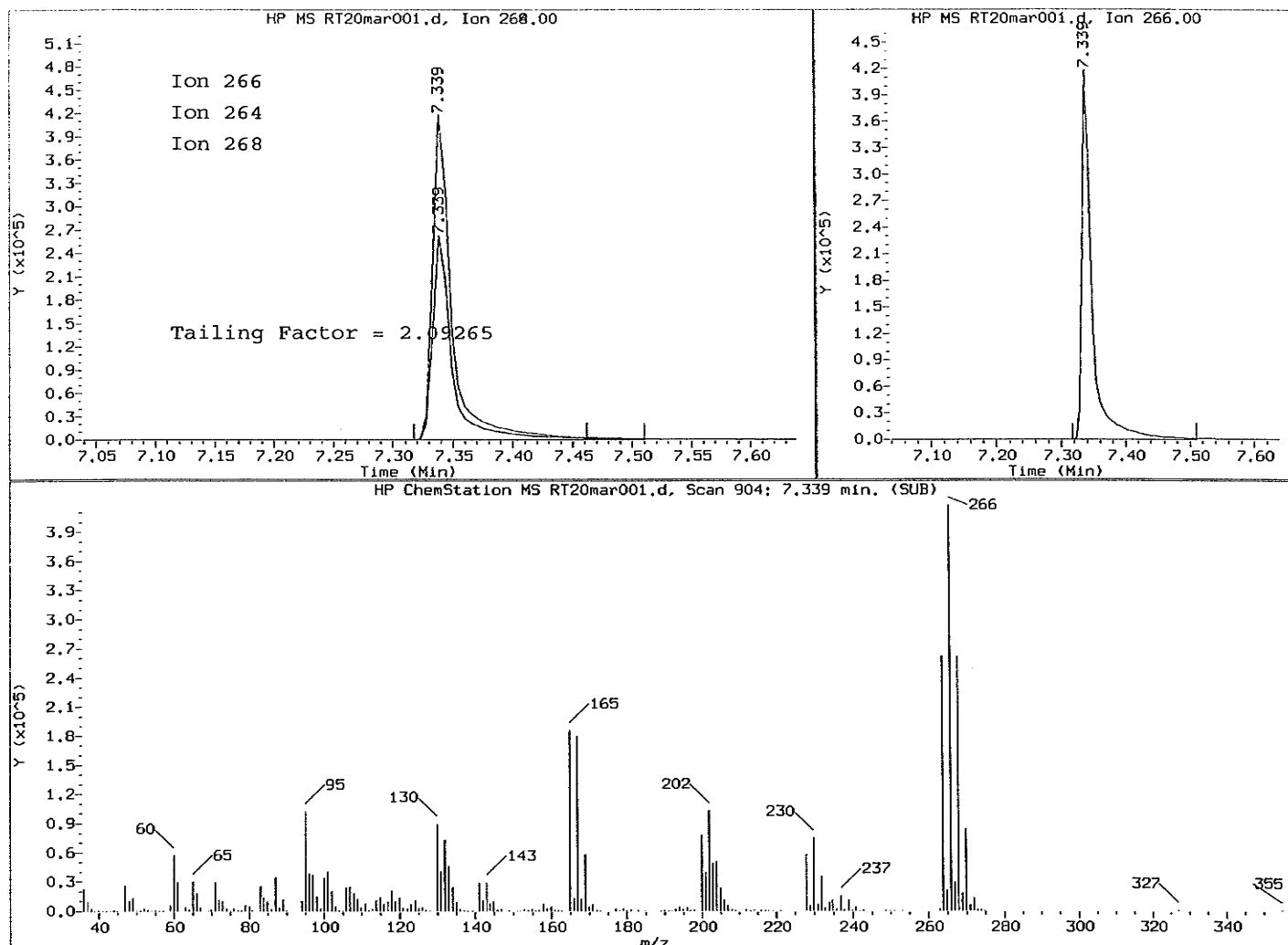
Spectrum: Avg. Scans 996-998 ( 7.84), Background Scan 991

## DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 1201664  | PASS |
| 51  | 30 - 60% of mass 198               | 38.59     | 463744   | PASS |
| 68  | Less than 2% of mass 69            | 1.75      | 7436     | PASS |
| 69  | Less than mass 198                 | 35.31     | 424256   | PASS |
| 70  | Less than 2% of mass 69            | 0.56      | 2381     | PASS |
| 127 | 40 - 60% of mass 198               | 44.07     | 529536   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 7.04      | 84648    | PASS |
| 275 | 10 - 30% of mass 198               | 23.98     | 288128   | PASS |
| 365 | 1 - 100% of mass 198               | 2.58      | 31048    | PASS |
| 441 | Present, but less than mass 443    | 75.83     | 144192   | PASS |
| 442 | 40 - 200% of mass 198              | 75.67     | 909248   | PASS |
| 443 | 17 - 23% of mass 442               | 20.91     | 190144   | PASS |

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 3  
 Acq on : 20-MAR-2017 09:45 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d/resolut.m  
 Last Update : 20-MAR-2017 10:04



## Pentachlorophenol

=====  
 Exp. RT = 7.467  
 Found RT = 7.339

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 470642 | 100.00 |
| 264  | 293718 | 62.41  |
| 268  | 299702 | 63.68  |

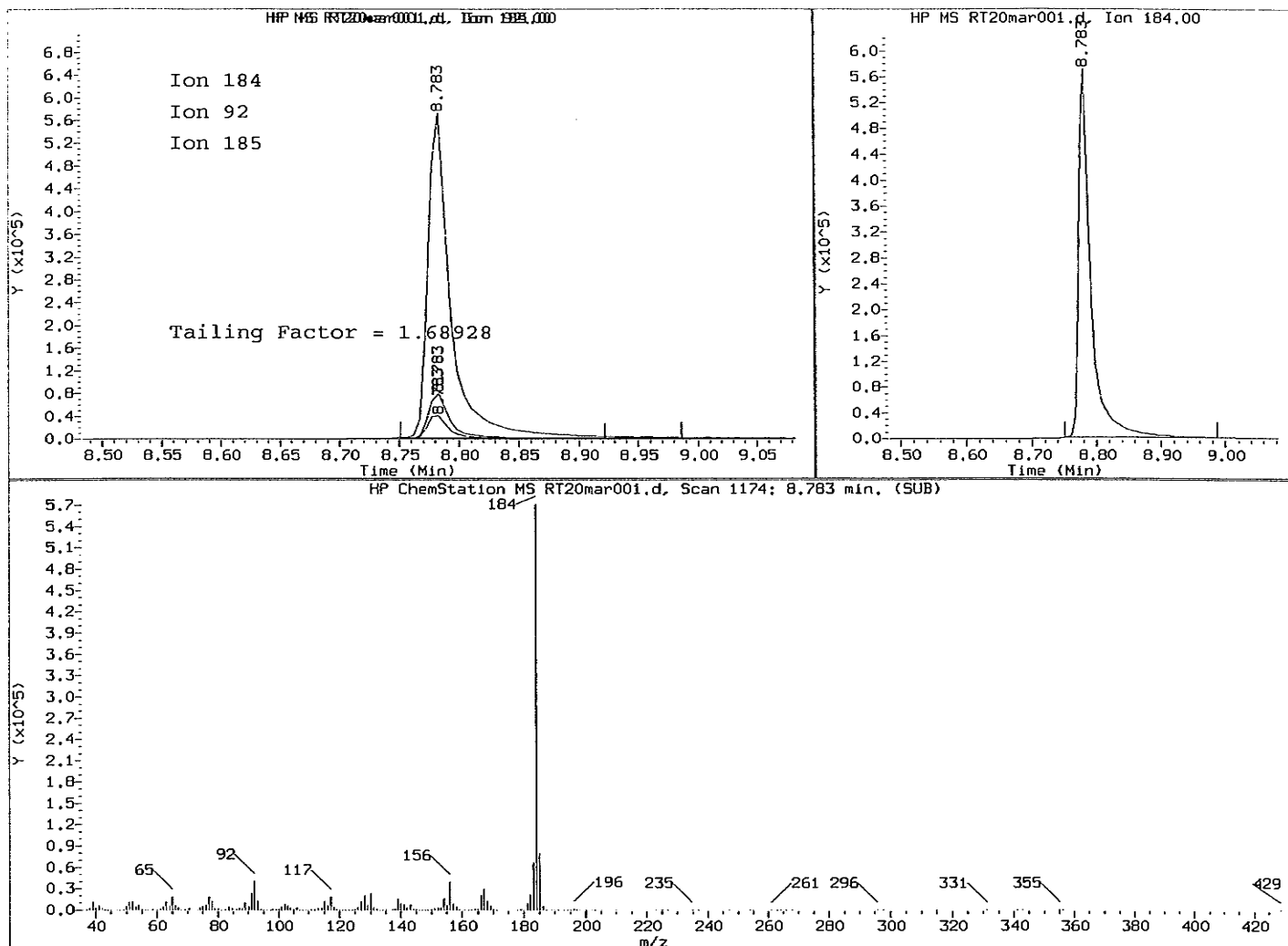
Peak baseline front width (sec) : 0.626  
 Peak baseline tail width (sec) : 1.310  
 Tail Factor = 1.310/ 0.626

Tailing factor for Pentachlorophenol OK

Tail Factor = 2.093 Maximum Allowed = 3.0

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 3  
 Acq on : 20-MAR-2017 09:45 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1<sup>-</sup>  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d/resolut.m  
 Last Update : 20-MAR-2017 10:04



Benzidine

=====  
 Exp. RT = 8.911  
 Found RT = 8.783

| Mass | Area   | Ratio  |
|------|--------|--------|
| 184  | 767317 | 100.00 |
| 92   | 56487  | 7.36   |
| 185  | 107531 | 14.01  |

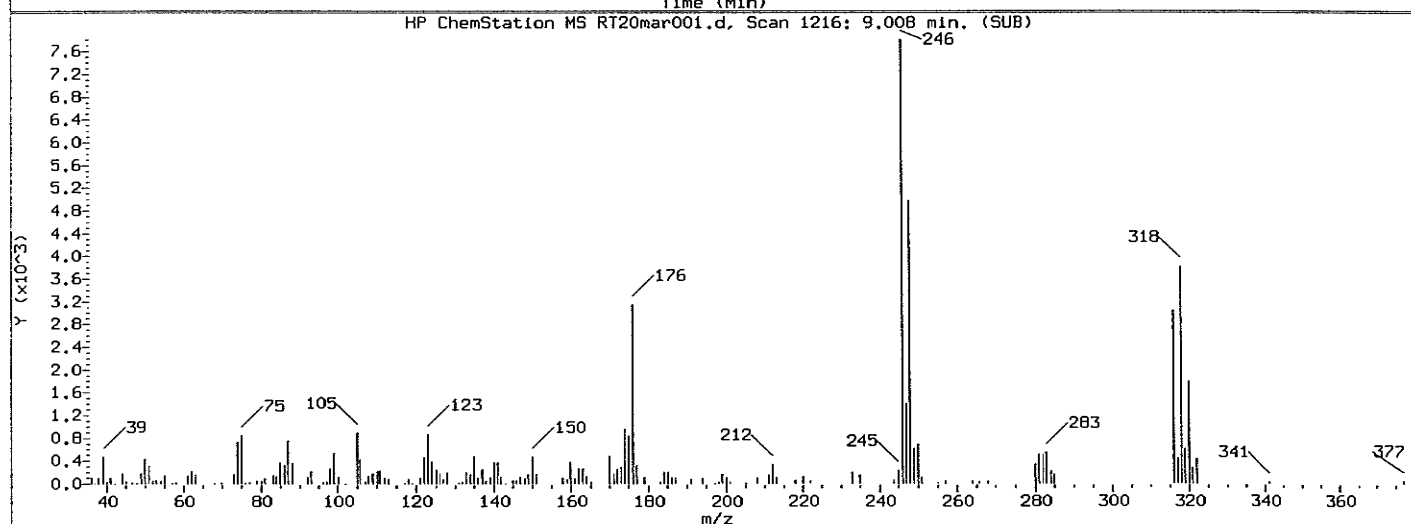
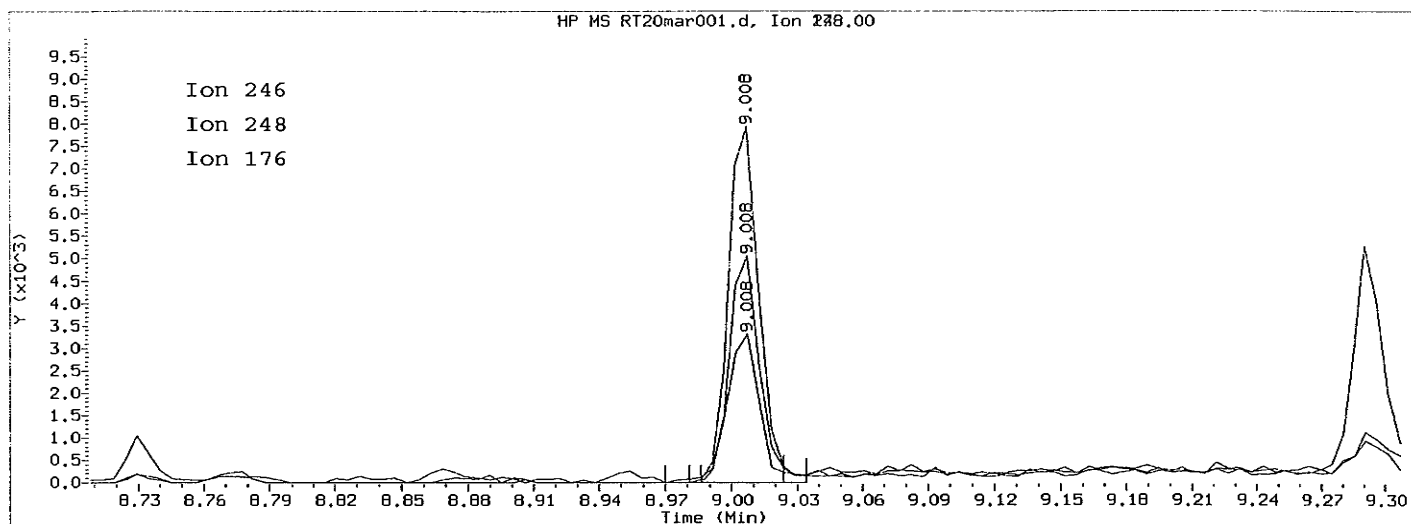
Peak baseline front width (sec) : 0.914  
 Peak baseline tail width (sec) : 1.544  
 Tail Factor = 1.544/ 0.914

Tailing factor for Benzidine OK

Tail Factor = 1.689 Maximum Allowed = 3.0

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 3  
 Acq on : 20-MAR-2017 09:45 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d/resolut.m  
 Last Update : 20-MAR-2017 10:04



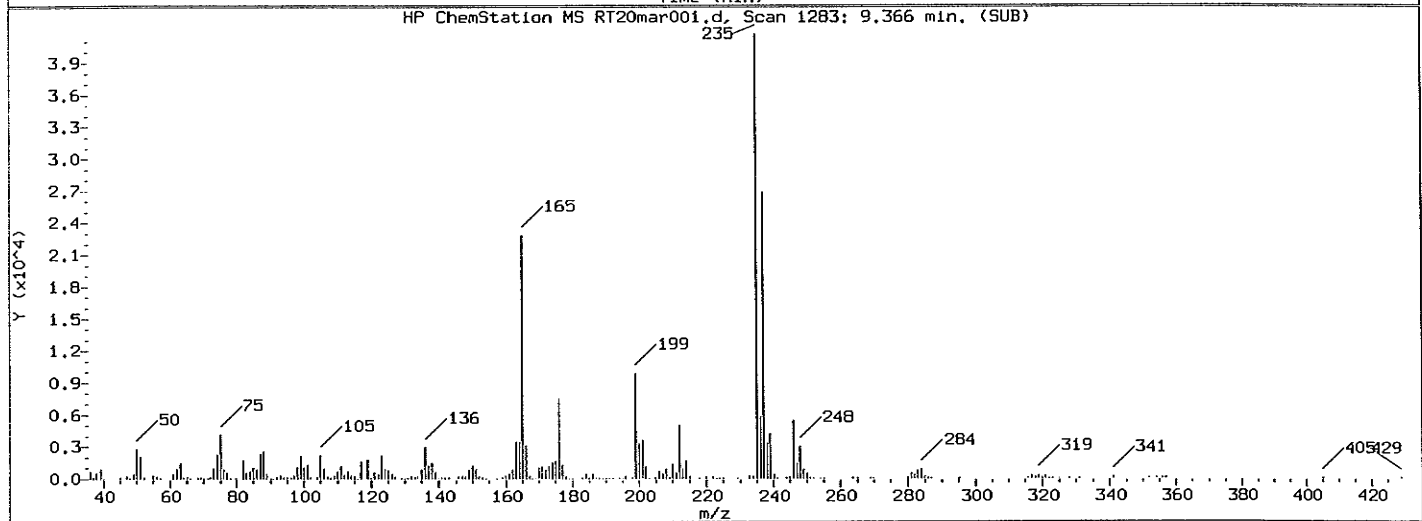
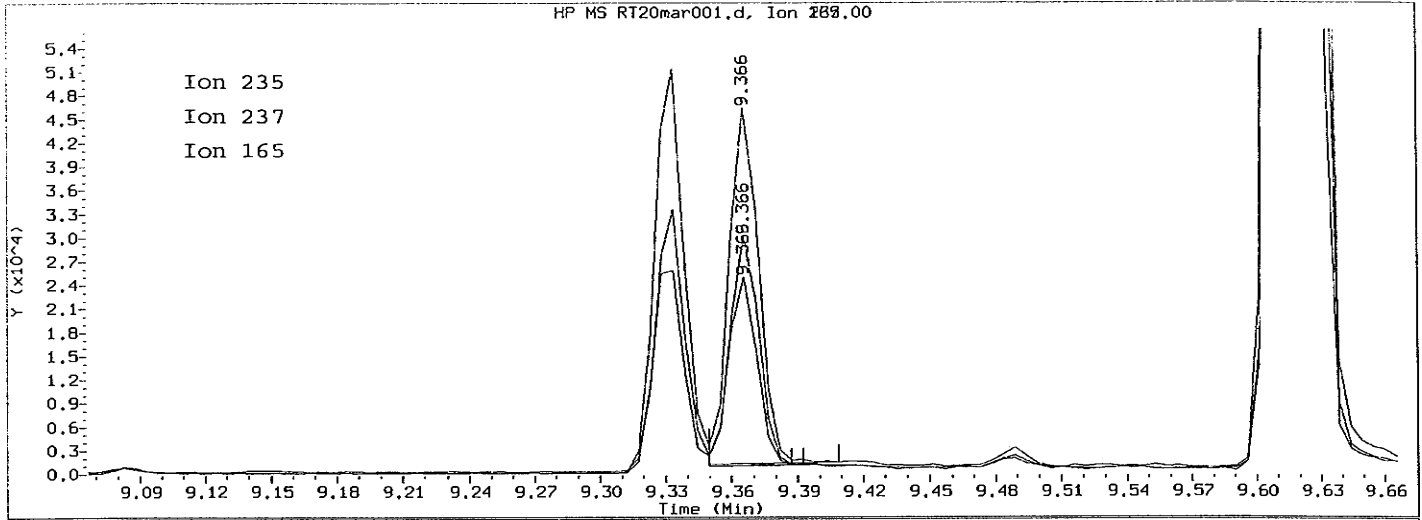
4,4'-DDE

=====  
 Exp. RT = 9.029  
 Found RT = 9.008

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 7743 | 100.00 |
| 248  | 4903 | 63.33  |
| 176  | 3387 | 43.75  |

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 3  
 Acq on : 20-MAR-2017 09:45 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d/resolut.m  
 Last Update : 20-MAR-2017 10:04



4,4'-DDD

=====

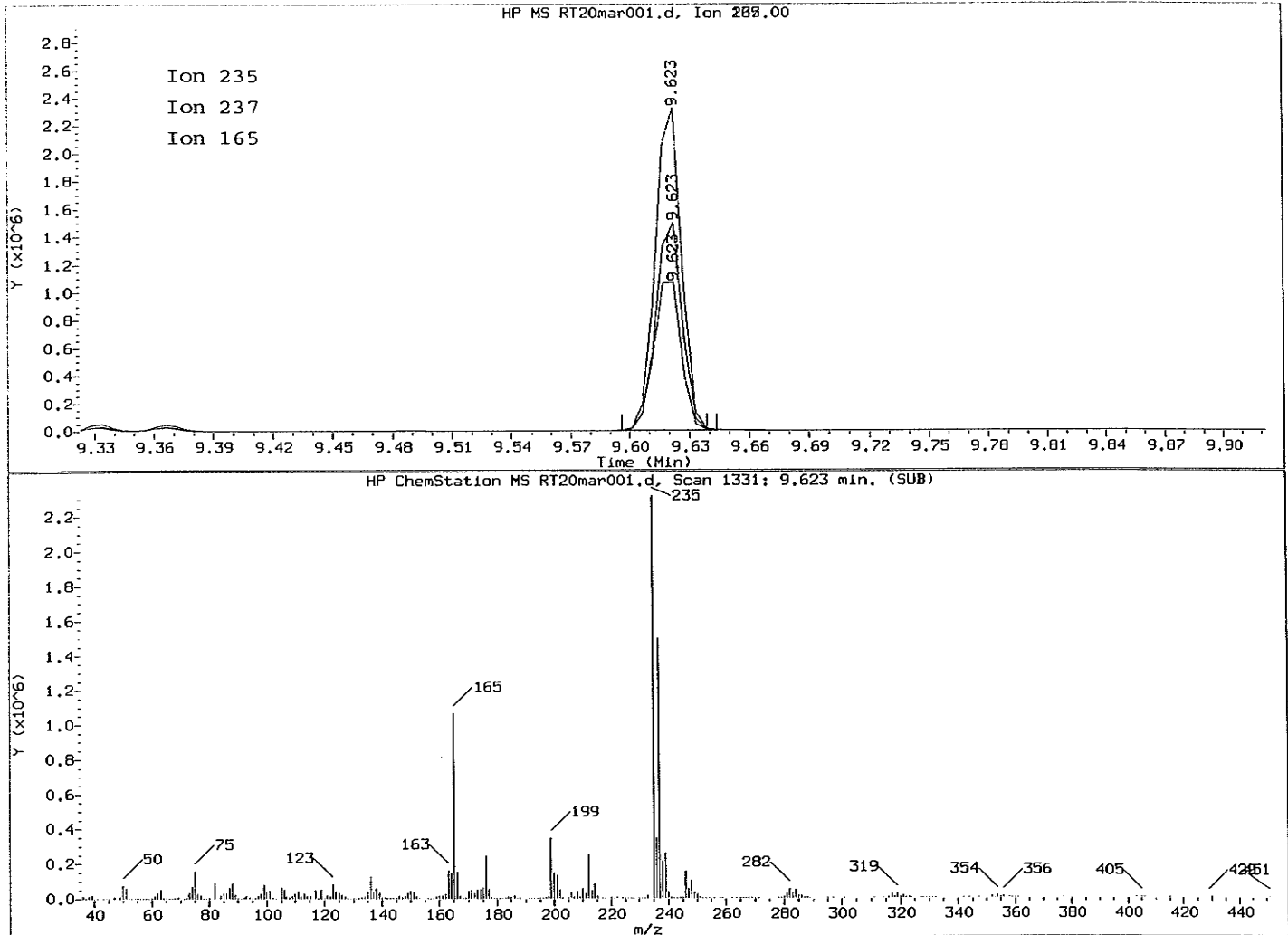
Exp. RT = 9.380

Found RT = 9.366

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 41798 | 100.00 |
| 237  | 26425 | 63.22  |
| 165  | 21471 | 51.37  |

Report Generated Time Mon Mar 20 10:05:20 2017

Data File : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d  
 ALS Vial : 3  
 Acq on : 20-MAR-2017 09:45 Operator : Tim Matthews  
 Sample : TUNE S101716A DFTPP Inst : GCMS\_EEE  
 Misc : Multiplier : 1<sup>-</sup>  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_EEE.i/170320.b/20mar001.d/resolut.m  
 Last Update : 20-MAR-2017 10:04



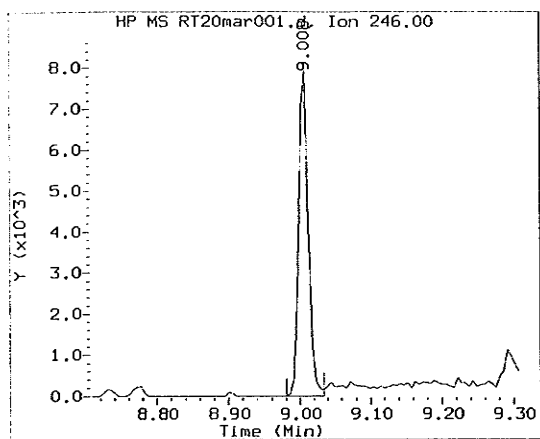
4,4'-DDT

=====

Exp. RT = 9.756

Found RT = 9.623

| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 2120735 | 100.00 |
| 237  | 1375359 | 64.85  |
| 165  | 1034207 | 48.77  |

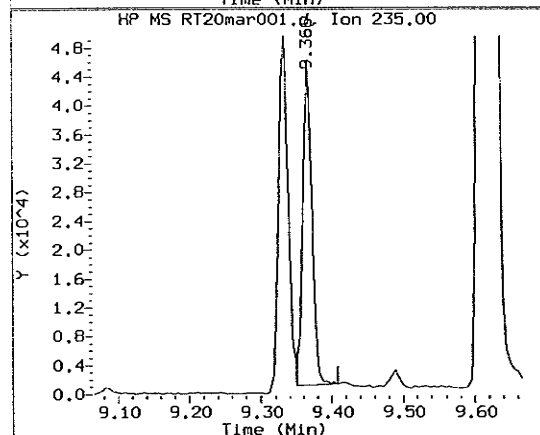


Compound: 4,4'-DDE

Quant Mass: 246

RT: 9.008

Area: 7743

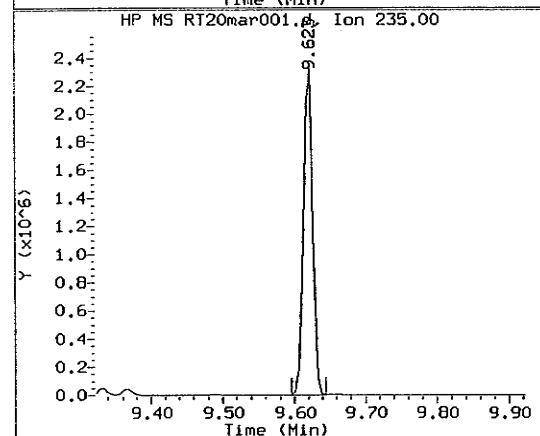


Compound: 4,4'-DDD

Quant Mass: 235

RT: 9.366

Area: 41798



Compound: 4,4'-DDT

Quant Mass: 235

RT: 9.623

Area: 2120735

## DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

| Compound      | Response | %Breakdown | Max Allowed | Test |
|---------------|----------|------------|-------------|------|
| 4,4-DDT       | 2120735  |            |             | N/A  |
| 4,4-DDE       | 7743     | 0.36       | 20.0        | PASS |
| 4,4-DDD       | 41798    | 1.93       | 20.0        | PASS |
| 4,4-DDD + DDE | 49541    | 2.3        | 20.0        | PASS |

\*\*\*\*\*  
 TUNE SAMPLE \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST  
 \*\*\*\*\*

# EPA METHOD 8270C PAHSIM

## Run Logs

# Injection Log

Directory: W:\GCMS\_EEE\GCMS\_EEE\_DATA\2017\170313

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| Line | Vial | FileName   | Multiplier | SampleName               | Misc Info     | Injected          |
|------|------|------------|------------|--------------------------|---------------|-------------------|
| 1    | 1    | 13mar001.d | 1.         | TUNE S101716A DFTPP      |               | 13 Mar 2017 09:34 |
| 2    | 1    | 13mar002.d | 1.         | TUNE S101716A DFTPP      |               | 13 Mar 2017 10:04 |
| 3    | 1    | 13mar003.d | 1.         | TUNE S101716A DFTPP      |               | 13 Mar 2017 11:49 |
| 4    | 2    | 13mar004.d | 1.         | CCV S010317F 1PPM        | 170313A001    | 13 Mar 2017 12:10 |
| 5    | 3    | 13mar005.d | 1.         | BLANK                    | S101716B 10UL | 13 Mar 2017 12:32 |
| 6    | 28   | 13mar006.d | 1.         | ICAL-1 S010317D 5PPM     | 170313I001    | 13 Mar 2017 12:52 |
| 7    | 29   | 13mar007.d | 1.         | ICAL-2 S010317E 2PPM     |               | 13 Mar 2017 13:13 |
| 8    | 30   | 13mar008.d | 1.         | ICAL-3 S010317F 1PPM     |               | 13 Mar 2017 13:33 |
| 9    | 31   | 13mar009.d | 1.         | ICAL-4 S010317G 0.5PPM   |               | 13 Mar 2017 13:53 |
| 10   | 32   | 13mar010.d | 1.         | ICAL-5 S010317H 0.1PPM   |               | 13 Mar 2017 14:13 |
| 11   | 33   | 13mar011.d | 1.         | ICV S010317I 1PPM        |               | 13 Mar 2017 14:34 |
| 12   | 1    | 13mar012.d | 1.         | TUNE S101716A DFTPP      |               | 13 Mar 2017 14:59 |
| 13   | 2    | 13mar013.d | 1.         | CCV S010317F 1PPM        | 170313A001    | 13 Mar 2017 15:19 |
| 14   | 24   | 13mar014.d | 1.         | 17-03-0323-3 10X         | S101716B 10UL | 13 Mar 2017 15:40 |
| 15   |      | 13mar015.d | 1.         | No MS or GC data present |               |                   |

leaking  
change new  
column  
dev > 30%

# Injection Log

Directory: W:\GCMS\_EEE\GCMS\_EEE\_DATA\2017\170317

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| Line | Vial | FileName   | Multiplier | SampleName                                 | Misc Info     | Injected          |
|------|------|------------|------------|--------------------------------------------|---------------|-------------------|
| 1    | 121  | 17mar001.d | 1.         | TUNE S101716A DFTPP- <i>Tailing &gt; 3</i> |               | 17 Mar 2017 13:01 |
| 2    | 122  | 17mar002.d | 1.         | CCV S010317F 1PPM                          | 170317A019    | 17 Mar 2017 13:22 |
| 3    | 121  | 17mar003.d | 1.         | TUNE S101716A DFTPP                        |               | 17 Mar 2017 13:52 |
| 4    | 122  | 17mar004.d | 1.         | CCV S010317F 1PPM                          | 170317A019    | 17 Mar 2017 14:13 |
| 5    | 123  | 17mar005.d | 1.         | MB 170317L005                              | S101716B 10UL | 17 Mar 2017 18:48 |
| 6    | 124  | 17mar006.d | 1.         | LCS 170317L005                             | S101716B 10UL | 17 Mar 2017 19:08 |
| 7    | 125  | 17mar007.d | 1.         | LCSD 170317L005                            | S101716B 10UL | 17 Mar 2017 19:29 |
| 8    | 128  | 17mar008.d | 1.         | MB 170317L004                              | S101716B 10UL | 17 Mar 2017 19:49 |
| 9    | 129  | 17mar009.d | 1.         | LCS 170317L004                             | S101716B 10UL | 17 Mar 2017 20:09 |
| 10   | 126  | 17mar010.d | 1.         | 17-03-1058-1                               | S101716B 10UL | 17 Mar 2017 20:29 |
| 11   | 127  | 17mar011.d | 1.         | 17-03-1220-7                               | S101716B 10UL | 17 Mar 2017 20:50 |
| 12   | 130  | 17mar012.d | 1.         | 17-03-1220-1                               | S101716B 10UL | 17 Mar 2017 21:10 |
| 13   | 131  | 17mar013.d | 1.         | 17-03-1220-2 <i>↑ I.S.</i>                 | S101716B 10UL | 17 Mar 2017 21:30 |
| 14   | 132  | 17mar014.d | 1.         | 17-03-1220-3 <i>— ↑ I.S.</i>               | S101716B 10UL | 17 Mar 2017 21:51 |
| 15   | 133  | 17mar015.d | 1.         | 17-03-1220-4                               | S101716B 10UL | 17 Mar 2017 22:11 |
| 16   | 134  | 17mar016.d | 1.         | 17-03-1220-5 <i>— ↑ I.S.</i>               | S101716B 10UL | 17 Mar 2017 22:31 |
| 17   | 135  | 17mar017.d | 1.         | 17-03-1220-2 MS                            | S101716B 10UL | 17 Mar 2017 22:51 |
| 18   | 136  | 17mar018.d | 1.         | 17-03-1220-2 MSD                           | S101716B 10UL | 17 Mar 2017 23:12 |

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# Injection Log

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| Line | Vial | FileName   | Multiplier | SampleName          | Misc Info     | Injected          |
|------|------|------------|------------|---------------------|---------------|-------------------|
| 1    | 1    | 20mar001.d | 1.         | TUNE S101716A DFTPP |               | 20 Mar 2017 09:45 |
| 2    | 2    | 20mar002.d | 1.         | CCV S010317F 1PPM   | 170320A011    | 20 Mar 2017 10:06 |
| 3    | 3    | 20mar003.d | 1.         | MB 170318 L04       | S101716B 10UL | 20 Mar 2017 10:26 |
| 4    | 4    | 20mar004.d | 1.         | LCS 170318 L04      | S101716B 10UL | 20 Mar 2017 10:46 |
| 5    | 5    | 20mar005.d | 1.         | 17-03-1394-1 MS     | S101716B 10UL | 20 Mar 2017 11:07 |
| 6    | 6    | 20mar006.d | 1.         | 17-03-1394-1 MSD    | S101716B 10UL | 20 Mar 2017 11:27 |
| 7    | 7    | 20mar007.d | 1.         | 17-03-1394-1        | S101716B 10UL | 20 Mar 2017 11:47 |
| 8    | 8    | 20mar008.d | 1.         | 17-03-1220-3 RB     | S101716B 10UL | 20 Mar 2017 12:07 |
| 9    | 9    | 20mar009.d | 1.         | 17-03-1220-5 RB     | S101716B 10UL | 20 Mar 2017 12:28 |
| 10   | 10   | 20mar010.d | 1.         | 17-03-1104-26       | S101716B 10UL | 20 Mar 2017 15:30 |
| 11   | 11   | 20mar011.d | 1.         | 17-03-1104-27       | S101716B 10UL | 20 Mar 2017 15:50 |
| 12   | 12   | 20mar012.d | 1.         | 17-03-1104-28       | S101716B 10UL | 20 Mar 2017 16:10 |
| 13   | 13   | 20mar013.d | 1.         | 17-03-1104-29       | S101716B 10UL | 20 Mar 2017 16:30 |
| 14   | 14   | 20mar014.d | 1.         | 17-03-1105-26       | S101716B 10UL | 20 Mar 2017 16:51 |
| 15   | 15   | 20mar015.d | 1.         | 17-03-1105-27       | S101716B 10UL | 20 Mar 2017 17:11 |
| 16   | 16   | 20mar016.d | 1.         | 17-03-1105-28       | S101716B 10UL | 20 Mar 2017 17:31 |
| 17   | 17   | 20mar017.d | 1.         | 17-03-1105-29       | S101716B 10UL | 20 Mar 2017 17:52 |

  
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# EPA METHOD 8270C PAHSIM

## Sample Preparation Logs

|                                                                                                                                                                                                                                                                       |  |                                                                                                                                          |            |                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------|
| Analysis Method (EPA Method): <input type="checkbox"/> 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 8082 <input type="checkbox"/> 8141 <input type="checkbox"/> 8310 <input type="checkbox"/> TO-13 <input type="checkbox"/> TO-4                       |  |                                                                                                                                          |            |                                                |
| ✓ 8270 ( <input type="checkbox"/> Soil <input type="checkbox"/> Soil SIM SUPER <input type="checkbox"/> PAH <input checked="" type="checkbox"/> SIM PAH <input type="checkbox"/> SIM Pest <input type="checkbox"/> SIM PCB cong. <input type="checkbox"/> SIM FL )    |  |                                                                                                                                          |            |                                                |
| Extraction Method (EPA Method): <input type="checkbox"/> 3510 <input type="checkbox"/> 3520 <input type="checkbox"/> 3540 <input type="checkbox"/> 3541 <input checked="" type="checkbox"/> 3545 <input type="checkbox"/> 3550 <input type="checkbox"/> 3580          |  |                                                                                                                                          |            |                                                |
| Analyst ID#: Measuring Sample- 1101 Start Extraction- 7/27/17 Blow Down- 7/27/17 Clean Up-                                                                                                                                                                            |  |                                                                                                                                          |            |                                                |
| Matrix: <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Aqueous <input type="checkbox"/> Oil <input type="checkbox"/> Wipe <input type="checkbox"/> Filter <input type="checkbox"/> Tissue <input type="checkbox"/> Air                             |  |                                                                                                                                          |            |                                                |
| Balance ID#: 70                                                                                                                                                                                                                                                       |  | Filter ID#: 507-17-17                                                                                                                    | ASE ID#: 9 | Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#: |
| Ext. Start Date/Time: 03/17/17 - 13:00                                                                                                                                                                                                                                |  | Ext. End Date/Time: 03/17/17 - 17:00                                                                                                     |            |                                                |
| Sand or Wipe ID#: 507-19-19                                                                                                                                                                                                                                           |  | Drying Agent: <input checked="" type="checkbox"/> Na <sub>2</sub> SO <sub>4</sub> <input checked="" type="checkbox"/> Diatomaceous Earth |            |                                                |
|                                                                                                                                                                                                                                                                       |  | Drying Agent(s) ID#: 507-44-12 / 507-22-03                                                                                               |            |                                                |
| Surrogate Std ID# & Volume Added (mL): 502 0117C - 0.5 ✓                                                                                                                                                                                                              |  |                                                                                                                                          |            |                                                |
| Spike Std ID# & Volume Added (mL): 5021017A - 0.5 ✓ Spike Added to: <input checked="" type="checkbox"/> LCS <input type="checkbox"/> LCSD <input checked="" type="checkbox"/> MS <input checked="" type="checkbox"/> MSD                                              |  |                                                                                                                                          |            |                                                |
| Extraction Solvent: <input type="checkbox"/> MeCl <sub>2</sub> <input type="checkbox"/> 1:1 Hexane-Acetone <input checked="" type="checkbox"/> 1:1 MeCl <sub>2</sub> -Acetone <input type="checkbox"/> 9:1 Hexane-Diethyl-ether <input type="checkbox"/> Acetonitrile |  |                                                                                                                                          |            |                                                |
| Extraction Solvent ID#: 507-55-01 / 507-44-02 Exchange Solvent ( <input type="checkbox"/> Hexane <input type="checkbox"/> Acetonitrile ) ID#:                                                                                                                         |  |                                                                                                                                          |            |                                                |
| Clean Up Start Date & Time:                                                                                                                                                                                                                                           |  | Clean Up End Date & Time:                                                                                                                |            |                                                |
| Clean Up: <input type="checkbox"/> 3620 Florisil <input type="checkbox"/> 3630 SGC <input type="checkbox"/> 3660 Sulfur <input type="checkbox"/> 3665 Acid <input type="checkbox"/> Other                                                                             |  |                                                                                                                                          |            | Cartridge ID#:                                 |
| Clean Up Reagent ID#:                                                                                                                                                                                                                                                 |  | Cartridge Conditioning Column Pre-Elution Reagent ID#:                                                                                   |            |                                                |
| MB/LCS/MS Batch #:<br>170317 1004                                                                                                                                                                                                                                     |  | Sample W (g) / V (mL)                                                                                                                    |            | Clean Up Performed                             |
| Cel ID#:                                                                                                                                                                                                                                                              |  | Initial                                                                                                                                  | Final      |                                                |
| MB                                                                                                                                                                                                                                                                    |  | 20.1                                                                                                                                     | 2          | <input type="checkbox"/>                       |
| LCS                                                                                                                                                                                                                                                                   |  | 20.0                                                                                                                                     | 2          | <input type="checkbox"/>                       |
| LCSD NA                                                                                                                                                                                                                                                               |  | /                                                                                                                                        | /          | <input type="checkbox"/>                       |
| MS 17-03-1220-2A                                                                                                                                                                                                                                                      |  | 20.0                                                                                                                                     | 2          | <input type="checkbox"/>                       |
| MSD - 1220-2A                                                                                                                                                                                                                                                         |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 17-03-1220 - 1 A                                                                                                                                                                                                                                                      |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 2 A                                                                                                                                                                                                                                                                 |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 3 A                                                                                                                                                                                                                                                                 |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 4 A                                                                                                                                                                                                                                                                 |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 5 A                                                                                                                                                                                                                                                                 |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| 17-03-1104 - 26 D                                                                                                                                                                                                                                                     |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 27 D                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 28 D                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 29 D                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 17-03-1105 - 26 D                                                                                                                                                                                                                                                     |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 27 D                                                                                                                                                                                                                                                                  |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| 28 D                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 29 D                                                                                                                                                                                                                                                                  |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| 17-03-1106 - 26 D                                                                                                                                                                                                                                                     |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 27 D                                                                                                                                                                                                                                                                |  | 20.0                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 28 D                                                                                                                                                                                                                                                                |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
| - 29 D                                                                                                                                                                                                                                                                |  | 20.1                                                                                                                                     |            | <input type="checkbox"/>                       |
|                                                                                                                                                                                                                                                                       |  |                                                                                                                                          |            | <input type="checkbox"/>                       |
|                                                                                                                                                                                                                                                                       |  |                                                                                                                                          |            | <input type="checkbox"/>                       |
|                                                                                                                                                                                                                                                                       |  |                                                                                                                                          |            | <input type="checkbox"/>                       |

Peer Reviewed by: 787

Peer Reviewed Date: 03/17/17

Revision Date: 10/20/16