



## Supplemental Report 1

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



**WORK ORDER NUMBER: 17-03-0590**

*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 04/26/2017 by:  
Stephen Nowak  
Project Manager

ResultLink ▶

Email your PM ▶

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 Work Order Number: 17-03-0590

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## Work Order Narrative

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 03/07/17. They were assigned to Work Order 17-03-0590.

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: 17-03-0590                     |
| 5261 West Imperial Highway     | Project Name: Burbank Airport / 9836002041 |
| Los Angeles, CA 90045-6231     | PO Number:                                 |
|                                | Date/Time Received: 03/07/17 17:50         |
|                                | Number of Containers: 30                   |
| Attn: Brian Martasin           |                                            |

| Sample Identification | Lab Number    | Collection Date and Time | Number of Containers | Matrix |
|-----------------------|---------------|--------------------------|----------------------|--------|
| D-DU1-S-SG-01-08S     | 17-03-0590-1  | 03/02/17 11:10           | 1                    | Solid  |
| D-DU1-S-SG-02-08S     | 17-03-0590-2  | 03/02/17 10:29           | 1                    | Solid  |
| D-DU1-S-SG-03-08S     | 17-03-0590-3  | 03/02/17 09:03           | 1                    | Solid  |
| D-DU1-S-SG-04-08S     | 17-03-0590-4  | 03/02/17 08:13           | 1                    | Solid  |
| D-DU1-S-SG-05-08S     | 17-03-0590-5  | 03/02/17 09:42           | 1                    | Solid  |
| D-DU1-S-SG-06-08S     | 17-03-0590-6  | 03/03/17 09:03           | 1                    | Solid  |
| D-DU1-S-SG-07-08S     | 17-03-0590-7  | 03/03/17 10:02           | 1                    | Solid  |
| D-DU1-S-SG-08-08S     | 17-03-0590-8  | 03/03/17 07:25           | 1                    | Solid  |
| D-DU1-S-SG-09-8S      | 17-03-0590-9  | 03/02/17 14:50           | 1                    | Solid  |
| D-DU1-S-02-8          | 17-03-0590-10 | 03/07/17 10:32           | 1                    | Solid  |
| D-DU1-S-03-8          | 17-03-0590-11 | 03/07/17 10:02           | 1                    | Solid  |
| D-DU1-S-04-8          | 17-03-0590-12 | 03/07/17 13:10           | 1                    | Solid  |
| D-DU1-S-05-8          | 17-03-0590-13 | 03/07/17 12:45           | 1                    | Solid  |
| D-DU1-S-06-8          | 17-03-0590-14 | 03/07/17 09:32           | 1                    | Solid  |
| D-DU1-S-07-8          | 17-03-0590-15 | 03/07/17 13:40           | 1                    | Solid  |
| D-DU1-S-08-8          | 17-03-0590-16 | 03/07/17 14:00           | 1                    | Solid  |
| D-DU1-S-09-8          | 17-03-0590-17 | 03/07/17 14:20           | 1                    | Solid  |
| D-DU1-S-10-8          | 17-03-0590-18 | 03/07/17 14:40           | 1                    | Solid  |
| D-DU1-S-11-8          | 17-03-0590-19 | 03/07/17 09:08           | 1                    | Solid  |
| D-DU1-S-01-8          | 17-03-0590-20 | 03/07/17 14:55           | 1                    | Solid  |
| COMPOSITE             | 17-03-0590-21 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM1-8          | 17-03-0590-22 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM2-8          | 17-03-0590-23 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM3-8          | 17-03-0590-24 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM1-8          | 17-03-0590-25 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM2-8          | 17-03-0590-26 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM3-8          | 17-03-0590-27 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM1-8          | 17-03-0590-28 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM2-8          | 17-03-0590-29 | 03/02/17 00:00           | 1                    | Solid  |
| D-DU1-ISM3-8          | 17-03-0590-30 | 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: 17-03-0590  
Project Name: Burbank Airport / 9836002041  
Received: 03/07/17

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> |
|------------------------------|---------------|-------------------|-----------|--------------|-----------------|-------------------|
| D-DU1-ISM1-8 (17-03-0590-25) |               |                   |           |              |                 |                   |
| Moisture                     | 4.7           |                   | 0.10      | %            | ASTM D-2216 (M) | N/A               |
| D-DU1-ISM2-8 (17-03-0590-26) |               |                   |           |              |                 |                   |
| Moisture                     | 4.5           |                   | 0.10      | %            | ASTM D-2216 (M) | N/A               |
| D-DU1-ISM3-8 (17-03-0590-27) |               |                   |           |              |                 |                   |
| Moisture                     | 4.5           |                   | 0.10      | %            | ASTM D-2216 (M) | N/A               |
| D-DU1-ISM1-8 (17-03-0590-28) |               |                   |           |              |                 |                   |
| Barium                       | 56.1          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Chromium                     | 3.70          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Cobalt                       | 3.98          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Copper                       | 4.97          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Lead                         | 1.23          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Nickel                       | 3.16          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Vanadium                     | 12.6          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Zinc                         | 25.9          |                   | 1.00      | mg/kg        | EPA 6010B       | EPA 3050B         |
| D-DU1-ISM2-8 (17-03-0590-29) |               |                   |           |              |                 |                   |
| Barium                       | 53.6          |                   | 0.498     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Chromium                     | 3.90          |                   | 0.249     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Cobalt                       | 4.09          |                   | 0.249     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Copper                       | 5.32          |                   | 0.498     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Lead                         | 1.36          |                   | 0.498     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Nickel                       | 3.36          |                   | 0.249     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Vanadium                     | 13.7          |                   | 0.249     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Zinc                         | 27.0          |                   | 0.995     | mg/kg        | EPA 6010B       | EPA 3050B         |
| D-DU1-ISM3-8 (17-03-0590-30) |               |                   |           |              |                 |                   |
| Barium                       | 54.4          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Chromium                     | 3.86          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Cobalt                       | 4.08          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Copper                       | 5.47          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Lead                         | 1.25          |                   | 0.500     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Nickel                       | 3.30          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Vanadium                     | 13.2          |                   | 0.250     | mg/kg        | EPA 6010B       | EPA 3050B         |
| Zinc                         | 26.7          |                   | 1.00      | 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: 03/07/17  
Work Order: 17-03-0590  
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       |
|----------------------|-------------------|---------------------|-----------|------------|---------------|--------------------|-------------------|
| D-DU1-ISM1-8         | 17-03-0590-25-A   | 03/02/17 00:00      | Solid     | N/A        | 03/09/17      | 03/09/17 21:00     | H0309MOIB1        |
| <u>Parameter</u>     |                   | <u>Result</u>       | <u>RL</u> |            | <u>DF</u>     |                    | <u>Qualifiers</u> |
| Moisture             |                   | 4.7                 | 0.10      |            | 1.00          |                    |                   |
| D-DU1-ISM2-8         | 17-03-0590-26-A   | 03/02/17 00:00      | Solid     | N/A        | 03/09/17      | 03/09/17 21:00     | H0309MOIB1        |
| <u>Parameter</u>     |                   | <u>Result</u>       | <u>RL</u> |            | <u>DF</u>     |                    | <u>Qualifiers</u> |
| Moisture             |                   | 4.5                 | 0.10      |            | 1.00          |                    |                   |
| D-DU1-ISM3-8         | 17-03-0590-27-A   | 03/02/17 00:00      | Solid     | N/A        | 03/09/17      | 03/09/17 21:00     | H0309MOIB1        |
| <u>Parameter</u>     |                   | <u>Result</u>       | <u>RL</u> |            | <u>DF</u>     |                    | <u>Qualifiers</u> |
| Moisture             |                   | 4.5                 | 0.10      |            | 1.00          |                    |                   |
| Method Blank         | 099-05-014-6734   | N/A                 | Solid     | N/A        | 03/09/17      | 03/09/17 21:00     | H0309MOIB1        |
| <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: 03/07/17  
Work Order: 17-03-0590  
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>D-DU1-ISM1-8</b>  | <b>17-03-0590-25-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 45</b> | <b>03/09/17</b> | <b>03/11/17 08:46</b> | <b>170309B12</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    | ND            | 5.1       | 1.00      |                   |
| TPH as Motor Oil | ND            | 5.1       | 1.00      |                   |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 92              | 61-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>D-DU1-ISM2-8</b> | <b>17-03-0590-26-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 45</b> | <b>03/09/17</b> | <b>03/11/17 09:08</b> | <b>170309B12</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    | ND            | 5.2       | 1.00      |                   |
| TPH as Motor Oil | ND            | 5.2       | 1.00      |                   |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 87              | 61-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>D-DU1-ISM3-8</b> | <b>17-03-0590-27-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 45</b> | <b>03/09/17</b> | <b>03/11/17 09:30</b> | <b>170309B12</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    | ND            | 5.2       | 1.00      |                   |
| TPH as Motor Oil | ND            | 5.2       | 1.00      |                   |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------|-----------------|-----------------------|-------------------|
| n-Octacosane     | 89              | 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: 03/07/17  
Work Order: 17-03-0590  
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>Method Blank</b>  | <b>099-14-353-6</b> | <b>N/A</b>          | <b>Solid</b> | <b>GC 45</b> | <b>03/09/17</b> | <b>03/11/17 07:21</b> | <b>170309B12</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     | 89              | 61-145                |                   |



## Analytical Report

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

Date Received: 03/07/17  
Work Order: 17-03-0590  
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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| D-DU1-ISM1-8         | 17-03-0590-28-A   | 03/02/17 00:00      | Solid  | ICP 7300   | 03/20/17      | 03/20/17 17:18     | 170320L03   |

| Parameter  | Result | RL    | DF   | Qualifiers |
|------------|--------|-------|------|------------|
| Antimony   | ND     | 0.750 | 1.00 |            |
| Arsenic    | ND     | 0.750 | 1.00 |            |
| Barium     | 56.1   | 0.500 | 1.00 |            |
| Beryllium  | ND     | 0.250 | 1.00 |            |
| Cadmium    | ND     | 0.500 | 1.00 |            |
| Chromium   | 3.70   | 0.250 | 1.00 |            |
| Cobalt     | 3.98   | 0.250 | 1.00 |            |
| Copper     | 4.97   | 0.500 | 1.00 |            |
| Lead       | 1.23   | 0.500 | 1.00 |            |
| Molybdenum | ND     | 0.250 | 1.00 |            |
| Nickel     | 3.16   | 0.250 | 1.00 |            |
| Selenium   | ND     | 0.750 | 1.00 |            |
| Silver     | ND     | 0.250 | 1.00 |            |
| Thallium   | ND     | 0.750 | 1.00 |            |
| Vanadium   | 12.6   | 0.250 | 1.00 |            |
| Zinc       | 25.9   | 1.00  | 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: 03/07/17  
 Work Order: 17-03-0590  
 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>D-DU1-ISM2-8</b>  | <b>17-03-0590-29-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/20/17</b> | <b>03/20/17 17:19</b> | <b>170320L03</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.746     | 0.995     |                   |
| Arsenic          | ND            | 0.746     | 0.995     |                   |
| Barium           | 53.6          | 0.498     | 0.995     |                   |
| Beryllium        | ND            | 0.249     | 0.995     |                   |
| Cadmium          | ND            | 0.498     | 0.995     |                   |
| Chromium         | 3.90          | 0.249     | 0.995     |                   |
| Cobalt           | 4.09          | 0.249     | 0.995     |                   |
| Copper           | 5.32          | 0.498     | 0.995     |                   |
| Lead             | 1.36          | 0.498     | 0.995     |                   |
| Molybdenum       | ND            | 0.249     | 0.995     |                   |
| Nickel           | 3.36          | 0.249     | 0.995     |                   |
| Selenium         | ND            | 0.746     | 0.995     |                   |
| Silver           | ND            | 0.249     | 0.995     |                   |
| Thallium         | ND            | 0.746     | 0.995     |                   |
| Vanadium         | 13.7          | 0.249     | 0.995     |                   |
| Zinc             | 27.0          | 0.995     | 0.995     |                   |

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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: 03/07/17  
 Work Order: 17-03-0590  
 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>D-DU1-ISM3-8</b>  | <b>17-03-0590-30-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>ICP 7300</b> | <b>03/20/17</b> | <b>03/20/17 17:20</b> | <b>170320L03</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.750     | 1.00      |                   |
| Arsenic          | ND            | 0.750     | 1.00      |                   |
| Barium           | 54.4          | 0.500     | 1.00      |                   |
| Beryllium        | ND            | 0.250     | 1.00      |                   |
| Cadmium          | ND            | 0.500     | 1.00      |                   |
| Chromium         | 3.86          | 0.250     | 1.00      |                   |
| Cobalt           | 4.08          | 0.250     | 1.00      |                   |
| Copper           | 5.47          | 0.500     | 1.00      |                   |
| Lead             | 1.25          | 0.500     | 1.00      |                   |
| Molybdenum       | ND            | 0.250     | 1.00      |                   |
| Nickel           | 3.30          | 0.250     | 1.00      |                   |
| Selenium         | ND            | 0.750     | 1.00      |                   |
| Silver           | ND            | 0.250     | 1.00      |                   |
| Thallium         | ND            | 0.750     | 1.00      |                   |
| Vanadium         | 13.2          | 0.250     | 1.00      |                   |
| Zinc             | 26.7          | 1.00      | 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: 03/07/17  
Work Order: 17-03-0590  
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>097-01-002-24459</b> | <b>N/A</b>          | <b>Solid</b> | <b>ICP 7300</b> | <b>03/20/17</b> | <b>03/20/17 17:04</b> | <b>170320L03</b> |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Antimony         | ND            | 0.721     | 0.962     |                   |
| Arsenic          | ND            | 0.721     | 0.962     |                   |
| Barium           | ND            | 0.481     | 0.962     |                   |
| Beryllium        | ND            | 0.240     | 0.962     |                   |
| Cadmium          | ND            | 0.481     | 0.962     |                   |
| Chromium         | ND            | 0.240     | 0.962     |                   |
| Cobalt           | ND            | 0.240     | 0.962     |                   |
| Copper           | ND            | 0.481     | 0.962     |                   |
| Lead             | ND            | 0.481     | 0.962     |                   |
| Molybdenum       | ND            | 0.240     | 0.962     |                   |
| Nickel           | ND            | 0.240     | 0.962     |                   |
| Selenium         | ND            | 0.721     | 0.962     |                   |
| Silver           | ND            | 0.240     | 0.962     |                   |
| Thallium         | ND            | 0.721     | 0.962     |                   |
| Vanadium         | ND            | 0.240     | 0.962     |                   |
| Zinc             | ND            | 0.962     | 0.962     |                   |

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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: 03/07/17  
 Work Order: 17-03-0590  
 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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| D-DU1-ISM1-8         | 17-03-0590-25-A   | 03/02/17 00:00      | Solid  | Mercury 08 | 03/15/17      | 03/15/17 13:00     | 170315L01   |

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            | 0.0905    | 1.00      |                   |

|              |                 |                |       |            |          |                |           |
|--------------|-----------------|----------------|-------|------------|----------|----------------|-----------|
| D-DU1-ISM2-8 | 17-03-0590-26-A | 03/02/17 00:00 | Solid | Mercury 08 | 03/15/17 | 03/15/17 13:03 | 170315L01 |
|--------------|-----------------|----------------|-------|------------|----------|----------------|-----------|

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            | 0.0858    | 1.00      |                   |

|              |                 |                |       |            |          |                |           |
|--------------|-----------------|----------------|-------|------------|----------|----------------|-----------|
| D-DU1-ISM3-8 | 17-03-0590-27-A | 03/02/17 00:00 | Solid | Mercury 08 | 03/15/17 | 03/15/17 13:05 | 170315L01 |
|--------------|-----------------|----------------|-------|------------|----------|----------------|-----------|

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            | 0.0873    | 1.00      |                   |

|              |                 |     |       |            |          |                |           |
|--------------|-----------------|-----|-------|------------|----------|----------------|-----------|
| Method Blank | 099-16-272-2871 | N/A | Solid | Mercury 08 | 03/15/17 | 03/15/17 12:25 | 170315L01 |
|--------------|-----------------|-----|-------|------------|----------|----------------|-----------|

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Mercury          | ND            | 0.0833    | 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: 03/07/17  
 Work Order: 17-03-0590  
 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>D-DU1-ISM1-8</b>  | <b>17-03-0590-28-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 66</b> | <b>03/13/17</b> | <b>03/16/17 06:11</b> | <b>170313L11</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           | 76              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 72              | 25-145                |                   |

|                     |                        |                       |              |              |                 |                       |                  |
|---------------------|------------------------|-----------------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>D-DU1-ISM2-8</b> | <b>17-03-0590-29-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 66</b> | <b>03/13/17</b> | <b>03/16/17 06:29</b> | <b>170313L11</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           | 77              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 71              | 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: 03/07/17  
 Work Order: 17-03-0590  
 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>D-DU1-ISM3-8</b>  | <b>17-03-0590-30-A</b> | <b>03/02/17 00:00</b> | <b>Solid</b> | <b>GC 66</b> | <b>03/13/17</b> | <b>03/16/17 06:47</b> | <b>170313L11</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           | 75              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 68              | 25-145                |                   |

|                     |                        |            |              |              |                 |                       |                  |
|---------------------|------------------------|------------|--------------|--------------|-----------------|-----------------------|------------------|
| <b>Method Blank</b> | <b>099-12-535-4095</b> | <b>N/A</b> | <b>Solid</b> | <b>GC 66</b> | <b>03/13/17</b> | <b>03/16/17 02:37</b> | <b>170313L11</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           | 75              | 24-168                |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 69              | 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: 03/07/17  
 Work Order: 17-03-0590  
 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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| D-DU1-ISM1-8         | 17-03-0590-25-A   | 03/02/17 00:00      | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 22:05     | 170310L04   |

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> |
|---------------------------|---------------|-----------|-----------|-------------------|
| 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  | 91              | 17-137                |                   |
| p-Terphenyl-d14  | 93              | 4-160                 |                   |

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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: 03/07/17  
 Work Order: 17-03-0590  
 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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| D-DU1-ISM2-8         | 17-03-0590-26-A   | 03/02/17 00:00      | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 22:24     | 170310L04   |

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> |
|---------------------------|---------------|-----------|-----------|-------------------|
| 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 | 81              | 13-127                |                   |
| Nitrobenzene-d5  | 93              | 17-137                |                   |
| p-Terphenyl-d14  | 99              | 4-160                 |                   |

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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: 03/07/17  
 Work Order: 17-03-0590  
 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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| D-DU1-ISM3-8         | 17-03-0590-27-A   | 03/02/17 00:00      | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 22:44     | 170310L04   |

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> |
|---------------------------|---------------|-----------|-----------|-------------------|
| 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  | 86              | 17-137                |                   |
| p-Terphenyl-d14  | 89              | 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: 03/07/17  
Work Order: 17-03-0590  
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 |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-14-035-380    | N/A                 | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 17:09     | 170310L04   |

| Parameter                 | Result | RL    | DF   | Qualifiers |
|---------------------------|--------|-------|------|------------|
| 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 |            |

| Surrogate        | Rec. (%) | Control Limits | Qualifiers |
|------------------|----------|----------------|------------|
| 2-Fluorobiphenyl | 55       | 13-127         |            |
| Nitrobenzene-d5  | 61       | 17-137         |            |
| p-Terphenyl-d14  | 74       | 4-160          |            |

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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: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| D-DU1-ISM1-8              | Sample                 | Solid  | GC 45      | 03/09/17      | 03/11/17 08:46 | 170309S12           |
| D-DU1-ISM1-8              | Matrix Spike           | Solid  | GC 45      | 03/09/17      | 03/11/17 08:03 | 170309S12           |
| D-DU1-ISM1-8              | Matrix Spike Duplicate | Solid  | GC 45      | 03/09/17      | 03/11/17 08:24 | 170309S12           |

| Parameter     | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|---------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| TPH as Diesel | ND           | 400.0       | 361.3    | 90       | 394.8     | 99        | 61-145   | 9   | 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: 03/07/17  
Work Order: 17-03-0590  
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 |          |     |        |            |
|---------------------------|------------------------|-------------|------------|---------------|----------------|---------------------|----------|-----|--------|------------|
| 17-03-1256-1              | Sample                 | Solid       | ICP 7300   | 03/20/17      | 03/20/17 17:31 | 170320S03           |          |     |        |            |
| 17-03-1256-1              | Matrix Spike           | Solid       | ICP 7300   | 03/20/17      | 03/20/17 17:34 | 170320S03           |          |     |        |            |
| 17-03-1256-1              | Matrix Spike Duplicate | Solid       | ICP 7300   | 03/20/17      | 03/20/17 17:35 | 170320S03           |          |     |        |            |
| Parameter                 | Sample Conc.           | Spike Added | MS Conc.   | MS %Rec.      | MSD Conc.      | MSD %Rec.           | %Rec. CL | RPD | RPD CL | Qualifiers |
| Antimony                  | 1.495                  | 25.00       | 10.50      | 36            | 10.27          | 35                  | 50-115   | 2   | 0-20   | 3          |
| Arsenic                   | 12.46                  | 25.00       | 37.09      | 99            | 38.78          | 105                 | 75-125   | 4   | 0-20   |            |
| Barium                    | 144.2                  | 25.00       | 162.2      | 4X            | 167.4          | 4X                  | 75-125   | 4X  | 0-20   | Q          |
| Beryllium                 | 0.5455                 | 25.00       | 26.00      | 102           | 25.12          | 98                  | 75-125   | 3   | 0-20   |            |
| Cadmium                   | 0.5976                 | 25.00       | 24.77      | 97            | 23.86          | 93                  | 75-125   | 4   | 0-20   |            |
| Chromium                  | 18.98                  | 25.00       | 44.00      | 100           | 43.04          | 96                  | 75-125   | 2   | 0-20   |            |
| Cobalt                    | 12.07                  | 25.00       | 36.01      | 96            | 35.15          | 92                  | 75-125   | 2   | 0-20   |            |
| Copper                    | 18.96                  | 25.00       | 44.55      | 102           | 44.63          | 103                 | 75-125   | 0   | 0-20   |            |
| Lead                      | 63.61                  | 25.00       | 96.60      | 132           | 91.57          | 112                 | 75-125   | 5   | 0-20   | 3          |
| Molybdenum                | ND                     | 25.00       | 22.89      | 92            | 21.84          | 87                  | 75-125   | 5   | 0-20   |            |
| Nickel                    | 13.86                  | 25.00       | 38.42      | 98            | 37.88          | 96                  | 75-125   | 1   | 0-20   |            |
| Selenium                  | ND                     | 25.00       | 26.06      | 104           | 24.85          | 99                  | 75-125   | 5   | 0-20   |            |
| Silver                    | ND                     | 12.50       | 12.15      | 97            | 11.97          | 96                  | 75-125   | 1   | 0-20   |            |
| Thallium                  | ND                     | 25.00       | 21.43      | 86            | 19.64          | 79                  | 75-125   | 9   | 0-20   |            |
| Vanadium                  | 45.25                  | 25.00       | 70.19      | 100           | 68.92          | 95                  | 75-125   | 2   | 0-20   |            |
| Zinc                      | 67.71                  | 25.00       | 100.0      | 129           | 104.1          | 146                 | 75-125   | 4   | 0-20   | 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: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-0982-1              | Sample                 | Solid  | Mercury 08 | 03/15/17      | 03/15/17 12:30 | 170315S01           |
| 17-03-0982-1              | Matrix Spike           | Solid  | Mercury 08 | 03/15/17      | 03/15/17 12:32 | 170315S01           |
| 17-03-0982-1              | Matrix Spike Duplicate | Solid  | Mercury 08 | 03/15/17      | 03/15/17 12:34 | 170315S01           |

| Parameter | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|-----------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Mercury   | ND           | 0.8350      | 0.8230   | 99       | 0.8283    | 99        | 71-137   | 1   | 0-14   |            |

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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: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-0642-30             | Sample                 | Solid  | GC 66      | 03/13/17      | 03/16/17 03:48 | 170313S11           |
| 17-03-0642-30             | Matrix Spike           | Solid  | GC 66      | 03/13/17      | 03/16/17 03:13 | 170313S11           |
| 17-03-0642-30             | Matrix Spike Duplicate | Solid  | GC 66      | 03/13/17      | 03/16/17 03:31 | 170313S11           |

| Parameter    | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|--------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Aroclor-1016 | ND           | 100.0       | 83.00    | 83       | 82.50     | 82        | 50-135   | 1   | 0-20   |            |
| Aroclor-1260 | ND           | 100.0       | 84.50    | 84       | 85.00     | 85        | 50-135   | 1   | 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: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|------------------------|--------|------------|---------------|----------------|---------------------|
| 17-03-0641-26             | Sample                 | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 19:46 | 170310S04           |
| 17-03-0641-26             | Matrix Spike           | Solid  | GC/MS AAA  | 03/10/17      | 03/14/17 12:30 | 170310S04           |
| 17-03-0641-26             | Matrix Spike Duplicate | Solid  | GC/MS AAA  | 03/10/17      | 03/13/17 18:08 | 170310S04           |

| Parameter                 | Sample Conc. | Spike Added | MS Conc. | MS %Rec. | MSD Conc. | MSD %Rec. | %Rec. CL | RPD | RPD CL | Qualifiers |
|---------------------------|--------------|-------------|----------|----------|-----------|-----------|----------|-----|--------|------------|
| Naphthalene               | ND           | 0.1000      | 0.09218  | 92       | 0.08516   | 85        | 20-150   | 8   | 0-33   |            |
| 2-Methylnaphthalene       | ND           | 0.1000      | 0.1045   | 104      | 0.09445   | 94        | 29-137   | 10  | 0-31   |            |
| 1-Methylnaphthalene       | ND           | 0.1000      | 0.09569  | 96       | 0.08605   | 86        | 34-136   | 11  | 0-29   |            |
| Acenaphthylene            | ND           | 0.1000      | 0.08040  | 80       | 0.07537   | 75        | 29-131   | 6   | 0-32   |            |
| Acenaphthene              | ND           | 0.1000      | 0.08276  | 83       | 0.07798   | 78        | 29-137   | 6   | 0-28   |            |
| Fluorene                  | ND           | 0.1000      | 0.08493  | 85       | 0.07855   | 79        | 36-132   | 8   | 0-27   |            |
| Phenanthrene              | ND           | 0.1000      | 0.09732  | 97       | 0.09182   | 92        | 20-144   | 6   | 0-27   |            |
| Anthracene                | ND           | 0.1000      | 0.1009   | 101      | 0.09138   | 91        | 26-134   | 10  | 0-27   |            |
| Fluoranthene              | ND           | 0.1000      | 0.09398  | 94       | 0.08904   | 89        | 20-151   | 5   | 0-26   |            |
| Pyrene                    | ND           | 0.1000      | 0.1040   | 104      | 0.09233   | 92        | 20-150   | 12  | 0-32   |            |
| Benzo (a) Anthracene      | ND           | 0.1000      | 0.09475  | 95       | 0.09013   | 90        | 24-150   | 5   | 0-24   |            |
| Chrysene                  | ND           | 0.1000      | 0.09979  | 100      | 0.08850   | 88        | 25-145   | 12  | 0-28   |            |
| Benzo (k) Fluoranthene    | ND           | 0.1000      | 0.1023   | 102      | 0.09310   | 93        | 28-148   | 9   | 0-26   |            |
| Benzo (b) Fluoranthene    | ND           | 0.1000      | 0.08982  | 90       | 0.08694   | 87        | 21-153   | 3   | 0-26   |            |
| Benzo (a) Pyrene          | ND           | 0.1000      | 0.09441  | 94       | 0.08980   | 90        | 29-149   | 5   | 0-22   |            |
| Indeno (1,2,3-c,d) Pyrene | ND           | 0.1000      | 0.08802  | 88       | 0.08785   | 88        | 20-154   | 0   | 0-25   |            |
| Dibenz (a,h) Anthracene   | ND           | 0.1000      | 0.08938  | 89       | 0.08940   | 89        | 20-132   | 0   | 0-26   |            |
| Benzo (g,h,i) Perylene    | ND           | 0.1000      | 0.08732  | 87       | 0.09140   | 91        | 20-148   | 5   | 0-27   |            |

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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: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|------------------|--------|------------|----------------|----------------|------------------------|
| 17-03-0589-25             | Sample           | Solid  | N/A        | 03/09/17 00:00 | 03/09/17 21:00 | H0309MOID1             |
| 17-03-0589-25             | Sample Duplicate | Solid  | N/A        | 03/09/17 00:00 | 03/09/17 21:00 | H0309MOID1             |

| <u>Parameter</u> | <u>Sample Conc.</u> | <u>DUP Conc.</u> | <u>RPD</u> | <u>RPD CL</u> | <u>Qualifiers</u> |
|------------------|---------------------|------------------|------------|---------------|-------------------|
| Moisture         | 5.800               | 6.100            | 5          | 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: 03/07/17  
Work Order: 17-03-0590  
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>099-14-353-6</b>       | <b>LCS</b> | <b>Solid</b> | <b>GC 45</b> | <b>03/09/17</b> | <b>03/11/17 07:42</b> | <b>170309B12</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              | 407.8                  | 102              | 61-145          |                   |

## Quality Control - LCS

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

Date Received: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|-------------|-----------------|------------|---------------|----------------|------------------|
| 097-01-002-24459          | LCS         | Solid           | ICP 7300   | 03/20/17      | 03/20/17 17:05 | 170320L03        |
| Parameter                 | Spike Added | Conc. Recovered | LCS %Rec.  | %Rec. CL      | ME CL          | Qualifiers       |
| Antimony                  | 25.00       | 22.57           | 90         | 80-120        | 73-127         |                  |
| Arsenic                   | 25.00       | 23.17           | 93         | 80-120        | 73-127         |                  |
| Barium                    | 25.00       | 24.25           | 97         | 80-120        | 73-127         |                  |
| Beryllium                 | 25.00       | 22.48           | 90         | 80-120        | 73-127         |                  |
| Cadmium                   | 25.00       | 23.32           | 93         | 80-120        | 73-127         |                  |
| Chromium                  | 25.00       | 23.43           | 94         | 80-120        | 73-127         |                  |
| Cobalt                    | 25.00       | 24.27           | 97         | 80-120        | 73-127         |                  |
| Copper                    | 25.00       | 23.20           | 93         | 80-120        | 73-127         |                  |
| Lead                      | 25.00       | 23.38           | 94         | 80-120        | 73-127         |                  |
| Molybdenum                | 25.00       | 22.93           | 92         | 80-120        | 73-127         |                  |
| Nickel                    | 25.00       | 24.49           | 98         | 80-120        | 73-127         |                  |
| Selenium                  | 25.00       | 22.90           | 92         | 80-120        | 73-127         |                  |
| Silver                    | 12.50       | 11.07           | 89         | 80-120        | 73-127         |                  |
| Thallium                  | 25.00       | 23.95           | 96         | 80-120        | 73-127         |                  |
| Vanadium                  | 25.00       | 22.22           | 89         | 80-120        | 73-127         |                  |
| Zinc                      | 25.00       | 23.79           | 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: 03/07/17  
 Work Order: 17-03-0590  
 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>099-16-272-2871</b>    | <b>LCS</b> | <b>Solid</b> | <b>Mercury 08</b> | <b>03/15/17</b> | <b>03/15/17 12:28</b> | <b>170315L01</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             | 0.8273                 | 99               | 85-121          |                   |

## Quality Control - LCS

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

Date Received: 03/07/17  
Work Order: 17-03-0590  
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>099-12-535-4095</b>    | <b>LCS</b> | <b>Solid</b>       | <b>GC 66</b>           | <b>03/13/17</b>  | <b>03/16/17 02:55</b> | <b>170313L11</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              | 84.00                  | 84               | 50-135                |                   |
| Aroclor-1260              |            | 100.0              | 85.00                  | 85               | 50-135                |                   |

## Quality Control - LCS

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

Date Received: 03/07/17  
Work Order: 17-03-0590  
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 |
|---------------------------|-------------|-----------------|------------|---------------|----------------|------------------|
| 099-14-035-380            | LCS         | Solid           | GC/MS AAA  | 03/10/17      | 03/13/17 17:28 | 170310L04        |
| Parameter                 | Spike Added | Conc. Recovered | LCS %Rec.  | %Rec. CL      | ME CL          | Qualifiers       |
| Naphthalene               | 0.1000      | 0.06679         | 67         | 51-129        | 38-142         |                  |
| 2-Methylnaphthalene       | 0.1000      | 0.07206         | 72         | 50-127        | 37-140         |                  |
| 1-Methylnaphthalene       | 0.1000      | 0.06639         | 66         | 54-132        | 41-145         |                  |
| Acenaphthylene            | 0.1000      | 0.05763         | 58         | 50-123        | 38-135         |                  |
| Acenaphthene              | 0.1000      | 0.05903         | 59         | 53-125        | 41-137         |                  |
| Fluorene                  | 0.1000      | 0.06071         | 61         | 55-127        | 43-139         |                  |
| Phenanthrene              | 0.1000      | 0.07239         | 72         | 50-122        | 38-134         |                  |
| Anthracene                | 0.1000      | 0.07105         | 71         | 50-132        | 36-146         |                  |
| Fluoranthene              | 0.1000      | 0.07754         | 78         | 55-127        | 43-139         |                  |
| Pyrene                    | 0.1000      | 0.07831         | 78         | 50-134        | 36-148         |                  |
| Benzo (a) Anthracene      | 0.1000      | 0.08311         | 83         | 50-133        | 36-147         |                  |
| Chrysene                  | 0.1000      | 0.08263         | 83         | 51-129        | 38-142         |                  |
| Benzo (k) Fluoranthene    | 0.1000      | 0.08987         | 90         | 49-150        | 32-167         |                  |
| Benzo (b) Fluoranthene    | 0.1000      | 0.08263         | 83         | 50-142        | 35-157         |                  |
| Benzo (a) Pyrene          | 0.1000      | 0.08523         | 85         | 50-134        | 36-148         |                  |
| Indeno (1,2,3-c,d) Pyrene | 0.1000      | 0.08255         | 83         | 50-148        | 34-164         |                  |
| Dibenz (a,h) Anthracene   | 0.1000      | 0.08511         | 85         | 50-133        | 36-147         |                  |
| Benzo (g,h,i) Perylene    | 0.1000      | 0.08546         | 85         | 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**

Work Order: 17-03-0590

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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               | 1009              | N/A               | 1                          |
| EPA 6010B          | EPA 3050B         | 935               | ICP 7300          | 1                          |
| EPA 7471A          | EPA 7471A Total   | 868               | Mercury 08        | 1                          |
| EPA 8015B (M)      | EPA 3550B         | 972               | GC 45             | 1                          |
| EPA 8082           | EPA 3545          | 669               | GC 66             | 1                          |
| EPA 8270C SIM PAHs | EPA 3545          | 907               | GC/MS AAA         | 1                          |

## Glossary of Terms and Qualifiers

Work Order: 17-03-0590

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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  $\leq 15$  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.

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.





**EFI Global**  
5261 West Imperial Highway, Los Angeles CA 90045  
Tel: (310) 854-6300 Fax: (310) 854-0199 [www.AndersenEnviro.com](http://www.AndersenEnviro.com)

# Chain-oD-Custody Record

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[illegible]

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| LAB_SDG    | LAB_SAMPLE_NUMBER | FIELD_SAMPLE      | SAMPLING_DATE | SAMPLING_TIME | MATRIX | DEPTH | PROJECT_ID                   |
|------------|-------------------|-------------------|---------------|---------------|--------|-------|------------------------------|
| 17-03-0219 | 17-03-0219-2      | D-DU1-S-SG-01-08S | 20170302      | 11:10:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0219 | 17-03-0219-5      | D-DU1-S-SG-02-08S | 20170302      | 10:29:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0219 | 17-03-0219-8      | D-DU1-S-SG-03-08S | 20170302      | 09:03:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0219 | 17-03-0219-11     | D-DU1-S-SG-04-08S | 20170302      | 08:13:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0219 | 17-03-0219-14     | D-DU1-S-SG-05-08S | 20170302      | 09:42:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0335 | 17-03-0335-2      | D-DU1-S-SG-06-08S | 20170303      | 09:03:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0335 | 17-03-0335-6      | D-DU1-S-SG-07-08S | 20170303      | 10:02:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0335 | 17-03-0335-10     | D-DU1-S-SG-08-08S | 20170303      | 07:25:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0335 | 17-03-0335-14     | D-DU1-S-SG-09-8S  | 20170302      | 14:50:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-2      | D-DU1-S-02-8      | 20170307      | 10:32:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-5      | D-DU1-S-03-8      | 20170307      | 10:02:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-8      | D-DU1-S-04-8      | 20170307      | 13:10:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-11     | D-DU1-S-05-8      | 20170307      | 12:45:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-14     | D-DU1-S-06-8      | 20170307      | 09:32:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-17     | D-DU1-S-07-8      | 20170307      | 13:40:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-21     | D-DU1-S-08-8      | 20170307      | 14:00:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-24     | D-DU1-S-09-8      | 20170307      | 14:20:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-28     | D-DU1-S-10-8      | 20170307      | 14:40:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-31     | D-DU1-S-11-8      | 20170307      | 09:08:00      | Soil   | 8     | Burbank Airport / 9836002041 |
| 17-03-0531 | 17-03-0531-34     | D-DU1-S-01-8      | 20170307      | 14:55:00      | Soil   | 8     | Burbank Airport / 9836002041 |

D-DU1-ISM 1-8  
D-DU1-ISM 2-8  
D-DU1-ISM 3-8



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# Chain-of-Custody Record

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| Analytical Laboratory: |                            | Job # 9836002041                                   |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
|------------------------|----------------------------|----------------------------------------------------|------------------------|---------------------------|----------------------|-------------------------------------------------------|-----------------------|----------------------------------|-------------------------------|-----------|--------|---------------------|--------------------|--------------------|---------------|------------------|----------|----------|--------|
| Project Name:          |                            | Calscience                                         |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Project Address:       |                            | Burbank Airport                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Project Manager:       |                            | 2627 N. Hollywood Way, Burbank                     |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Sampled by:            |                            | B. Martasin                                        |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Phone/Email:           |                            | G. Baader                                          |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Phone/Email:           |                            | 310-854-8300, 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               | Time               |               |                  |          |          |        |
| 1                      | D-DUI-S-SG-01-035          | 1                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 3/2/17              | 11:05              |                    |               |                  |          |          |        |
| 2                      | -085                       | 2                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 11:10               |                    |                    |               |                  |          |          |        |
| 3                      | -155                       | 3                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 11:13               |                    |                    |               |                  |          |          |        |
| 4                      | D-DUI-S-SG-02-035          | 4                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 10:24               |                    |                    |               |                  |          |          |        |
| 5                      | -085                       | 5                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 10:29               |                    |                    |               |                  |          |          |        |
| 6                      | -155                       | 6                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 10:35               |                    |                    |               |                  |          |          |        |
| 7                      | D-DUI-S-SG-03-035          | 7                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 8:58                |                    |                    |               |                  |          |          |        |
| 8                      | -085                       | 8                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 9:03                |                    |                    |               |                  |          |          |        |
| 9                      | -155                       | 9                                                  | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 9:05                |                    |                    |               |                  |          |          |        |
| 10                     | D-DUI-S-SG-04-035          | 10                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 8:09                |                    |                    |               |                  |          |          |        |
| 11                     | -085                       | 11                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 8:13                |                    |                    |               |                  |          |          |        |
| 12                     | -155                       | 12                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 8:26                |                    |                    |               |                  |          |          |        |
| 13                     | D-DUI-S-SG-05-035          | 13                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 9:35                |                    |                    |               |                  |          |          |        |
| 14                     | -085                       | 14                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 9:42                |                    |                    |               |                  |          |          |        |
| 15                     | -155                       | 15                                                 | X                      | X                         | X                    | X                                                     | X                     | X                                | X                             | X         | X      | 9:49                |                    |                    |               |                  |          |          |        |
| 16                     |                            |                                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| 17                     |                            |                                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| 18                     |                            |                                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| 19                     |                            |                                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| 20                     |                            |                                                    |                        |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Method                 |                            | Container                                          |                        | Turnaround Time           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Method                 | Container                  | Method                                             | Container              |                           |                      |                                                       |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| 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                                               |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Robert Cheung          | 3/2/17                     | 1545                                               | Jeff Baader            | 3/2/17                    | 1545                 | Sample condition (circle): Intact                     |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |
| Robert Cheung          | 3/2/17                     | 1734                                               | Jeff Baader            | 3/2/17                    | 1734                 | Hold until all D-DUI are received for 1st composition |                       |                                  |                               |           |        |                     |                    |                    |               |                  |          |          |        |

# 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:**

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 ☐ VOA<sub>h</sub> ☐ VOA<sub>na2</sub> ☐ 100PJ ☐ 100PJ<sub>na2</sub> ☐ 125AGB ☐ 125AGB<sub>h</sub> ☐ 125AGB<sub>p</sub> ☐ 125PB

☐ 125PB<sub>znna</sub> ☐ 250AGB ☐ 250CGB ☐ 250CGB<sub>s</sub> ☐ 250PB ☐ 250PB<sub>n</sub> ☐ 500AGB ☐ 500AGJ ☐ 500AGJ<sub>s</sub>
☐ 500PB ☐ 1AGB ☐ 1AGB<sub>na2</sub> ☐ 1AGB<sub>s</sub> ☐ 1PB ☐ 1PB<sub>na</sub> ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

**Solid:** ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☒ Sleeve (8) ☐ 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, znna = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 836



**Analytical Laboratory:** **Calcsience** 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

| Number | Sample ID         | Lab ID | Type |          | Matrix |      |       |       | Preservative |      |        |     | Sampling Information |       |
|--------|-------------------|--------|------|----------|--------|------|-------|-------|--------------|------|--------|-----|----------------------|-------|
|        |                   |        | Grab | Discrete | Water  | Soil | Vapor | Other | Cold (4° C)  | HNO3 | NaHSO4 | HCl | Date                 | Time  |
| 1      | D-DU1-S-SG-06-035 |        | X    |          | X      |      |       |       | X            |      |        |     | 3/3/17               | 8:57  |
| 2      | -085              |        |      |          |        |      |       |       |              |      |        |     | "                    | 9:03  |
| 3      | -155              |        |      |          |        |      |       |       |              |      |        |     | "                    | 9:08  |
| 4      | -255              |        |      |          |        |      |       |       |              |      |        |     | "                    | 9:15  |
| 5      | D-DU1-S-SG-07-035 |        |      |          |        |      |       |       |              |      |        |     | "                    | 10:00 |
| 6      | -085              |        |      |          |        |      |       |       |              |      |        |     | "                    | 10:02 |
| 7      | -155              |        |      |          |        |      |       |       |              |      |        |     | "                    | 10:18 |
| 8      | -255              |        |      |          |        |      |       |       |              |      |        |     | "                    | 10:55 |
| 9      | D-DU1-S-SG-08-035 |        |      |          |        |      |       |       |              |      |        |     | "                    | 7:20  |
| 10     | -085              |        |      |          |        |      |       |       |              |      |        |     | "                    | 7:25  |
| 11     | -155              |        |      |          |        |      |       |       |              |      |        |     | "                    | 7:42  |
| 12     | -255              |        |      |          |        |      |       |       |              |      |        |     | "                    | 7:55  |
| 13     | D-DU1-S-SG-09-3S  |        | X    |          | X      | X    | X     |       | X            |      |        |     | 3/2/17               | 14:30 |
| 14     | D-DU1-S-SG-09-8S  |        | X    |          | X      | X    | X     |       | X            |      |        |     | 3/2/17               | 14:50 |
| 15     | D-DU1-S-SG-09-15S |        | X    |          | X      | X    | X     |       | X            |      |        |     | 3/2/17               | 14:58 |
| 16     | D-DU1-S-SG-09-25S |        | X    |          | X      | X    | X     |       | X            |      |        |     | 3/2/17               | 16:10 |
|        |                   |        |      |          |        |      |       |       |              |      |        |     |                      |       |
|        |                   |        |      |          |        |      |       |       |              |      |        |     |                      |       |
|        |                   |        |      |          |        |      |       |       |              |      |        |     |                      |       |
|        |                   |        |      |          |        |      |       |       |              |      |        |     |                      |       |
|        |                   |        |      |          |        |      |       |       |              |      |        |     |                      |       |

**Redquisitioned by:** *[Signature]* **Date:** 3/3/17

**Received by:** *[Signature]* **Date:** 3/3/17

**Time:** 3:30 PM

| Method                           | Container              |                            |                                |                        | Turnaround 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 |
| OCPS, EPA Method 8081A           | X                      | X                          | X                              | X                      | X                         | X                    |
| PAHs, EPA Method 8270C SIM       | X                      | X                          | X                              | X                      | X                         | X                    |
| Metals, EPA Method 6010B/7471A   | X                      | X                          | X                              | X                      | X                         | X                    |
| Lead, EPA Method 6010B           | X                      | X                          | X                              | X                      | X                         | X                    |
| Arsenic, EPA Method 6010B        | X                      | X                          | X                              | X                      | X                         | X                    |
| STLC Lead EPA Method             | X                      | X                          | X                              | X                      | X                         | X                    |
| TCLP Lead EPA Method             | X                      | X                          | X                              | X                      | X                         | X                    |
| PCBs, EPA Method 8082            | X                      | X                          | X                              | X                      | X                         | X                    |
| TPH full chain, EPA Method 8015M | X                      | X                          | X                              | X                      | X                         | X                    |
| TPH, TPHmo, EPA Method 8015M     | X                      | X                          | X                              | X                      | X                         | X                    |
| Composite                        | X                      | X                          | X                              | X                      | X                         | X                    |
| Hold                             | X                      | X                          | X                              | X                      | X                         | X                    |
| 4 or 8-ounce Glass               | X                      | X                          | X                              | X                      | X                         | X                    |
| 250-ml Poly Bottle               | X                      | X                          | X                              | X                      | X                         | X                    |
| EZ Draw (EPA 5035)               | X                      | X                          | X                              | X                      | X                         | X                    |
| Acetate Liner                    | X                      | X                          | X                              | X                      | X                         | X                    |
| 1-l Amber Bottle                 | X                      | X                          | X                              | X                      | X                         | X                    |
| 24 hours                         | X                      | X                          | X                              | X                      | X                         | X                    |
| 48 hours                         | X                      | X                          | X                              | X                      | X                         | X                    |
| Normal                           | X                      | X                          | X                              | X                      | X                         | X                    |

**Remarks:** 3 and 8" samples  
Sample condition (circle): Chilled Intact

**Hold until:** 3/3/17

**Received by:** *[Signature]* **Date:** 3/3/17

**Time:** 3:30 PM

Hold remaining portions of 15-foot samples (after extraction) pending results of the shallower ISM samples

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Then take sample from each liner in center unless otherwise indicated in liner

| 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 |     | Date   | Time  |
|                        |                  |                                                    | Grab | Discrete         | Water  | Soil | Vapor | Other | Cold (4° C)  | HNO3 | NaHSO4               | HCl |        |       |
| 1                      | D-DUI-556-06-035 | 1                                                  | X    |                  | X      |      |       |       |              |      |                      |     | 3/3/17 | 8:57  |
| 2                      | -085             | 2                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 9:03  |
| 3                      | -155             | 3                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 9:08  |
| 4                      | -255             | 4                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 9:15  |
| 5                      | D-DUI-556-07-035 | 5                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 10:00 |
| 6                      | -085             | 6                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 10:02 |
| 7                      | -155             | 7                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 10:18 |
| 8                      | -255             | 8                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 10:55 |
| 9                      | D-DUI-556-08-035 | 9                                                  |      |                  |        |      |       |       |              |      |                      |     | "      | 7:20  |
| 10                     | -085             | 10                                                 |      |                  |        |      |       |       |              |      |                      |     | "      | 7:25  |
| 11                     | -155             | 11                                                 |      |                  |        |      |       |       |              |      |                      |     | "      | 7:42  |
| 12                     | -255             | 12                                                 |      |                  |        |      |       |       |              |      |                      |     | "      | 7:55  |

| Method                |                            | Container                      |                                  | Turnaround Time               |
|-----------------------|----------------------------|--------------------------------|----------------------------------|-------------------------------|
| OCs, EPA Method 8081A | PAHs, EPA Method 8270C SIM | Metals, EPA Method 6010B/7471A | Lead, 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           | 48 hours                       | Normal                           |                               |

| Refined by | Date   | Time  | Received by | Date   | Time  | Remarks                                                   |
|------------|--------|-------|-------------|--------|-------|-----------------------------------------------------------|
|            | 3/3/17 | 10:00 |             | 3/3/17 | 16:00 | Sample condition (circle): Chilled Intact                 |
|            | 3/3/17 | 18:05 |             | 3/3/17 | 18:45 | Hold until 000 D-DUI samples received for 25h composites. |

They take sample from each circle in center unless otherwise indicated on liner



# SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFi/ANDERSEN

DATE: 03 / 03 / 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 courier

Ambient 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: 1110

**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

☐ 125PBznn ☐ 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: 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, znn = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 1017

## SAMPLE ANOMALY REPORT

DATE: 03 / 03 / 2017

### SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☒ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags\*)
  - ☐ Leaking (transferred into client's Tedlar™ bags\*)

\* Transferred at client's request.

### MISCELLANEOUS: (Describe)

### HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

| ECI Sample ID | ECI Container ID | Total Number** | ECI Sample ID | ECI Container ID | Total Number** |
|---------------|------------------|----------------|---------------|------------------|----------------|
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |

Comments: \_\_\_\_\_

\*\* Record the total number of containers (i.e., vials or bottles) for the affected sample.

### Comments

Received sleeve not listed on CoC  
 (-13) D-DU-5-SG-09-35  
 03/02/2017 - 14:30  
 (-14) D-DU-5-SG-09-85  
 03/02/2017 - 14:50  
 (-15) D-DU-5-SG-09-155  
 03/02/2017 - 14:58  
 (-16) D-DU-5-SG-09-255  
 03/02/2017 - 16:10

### Comments

(Containers with bubble for other analysis)

| ECI Sample ID | ECI Container ID | Total Number** | Requested Analysis |
|---------------|------------------|----------------|--------------------|
|               |                  |                |                    |
|               |                  |                |                    |
|               |                  |                |                    |
|               |                  |                |                    |

Reported by: 1110

Reviewed by: 1017





| 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 | HCl | NaHSO4 | HNO3 | Cold (4° C) | Other | Vapor | Soil | Water | Discrete | Grab | Date | Time   |       |
| 21                     | D-DU1-S-08-8 | 21                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:00 |
| 22                     | -15          | 22                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:03 |
| 23                     | D-DU1-S-09-3 | 23                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:13 |
| 24                     | -8           | 24                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:20 |
| 25                     | -15          | 25                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:25 |
| 26                     | D-DU1-S-10-3 | 26                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:38 |
| 27                     | -3           | 27                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:38 |
| 28                     | -8           | 28                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:40 |
| 29                     | -15          | 29                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:43 |
| 30                     | D-DU1-S-11-3 | 30                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 9:05  |
| 31                     | -8           | 31                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 9:08  |
| 32                     | -15          | 32                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 9:18  |
| 33                     | D-DU1-S-01-3 | 33                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:50 |
| 34                     | -8           | 34                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 14:55 |
| 35                     | -15          | 35                                                 | X    | X                |              |     |        |      | X           |       |       |      |       | X        |      |      | 3/2/17 | 15:05 |
| 36                     |              |                                                    |      |                  |              |     |        |      |             |       |       |      |       |          |      |      |        |       |

| Relinquished by | Date   | Time | Received by | Date   | Time  | Remarks                                   |
|-----------------|--------|------|-------------|--------|-------|-------------------------------------------|
| [Signature]     | 3/2/17 | 1600 | [Signature] | 3/2/17 | 1600  | Sample condition (circle): Chilled Intact |
| [Signature]     | 3/7/17 | 1750 | [Signature] | 3/7/17 | 17:50 | See page 1 for notes                      |

# 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:

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

☐ 125PBznn ☐ 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: 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, znn = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Reviewed by: 1091

# SAMPLE ANOMALY REPORT

DATE: 03/07/2017

## SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☒ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☒ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags\*)
  - ☐ Leaking (transferred into client's Tedlar™ bags\*)

\* Transferred at client's request.

## Comments

Collection time per label  
 (-8) time 13:15  
 (-9) time 13:10

## MISCELLANEOUS: (Describe)

## Comments

## HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

| ECI Sample ID | ECI Container ID | Total Number** | ECI Sample ID | ECI Container ID | Total Number** |
|---------------|------------------|----------------|---------------|------------------|----------------|
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |
|               |                  |                |               |                  |                |

(Containers with bubble for other analysis)

| ECI Sample ID | ECI Container ID | Total Number** | Requested Analysis |
|---------------|------------------|----------------|--------------------|
|               |                  |                |                    |
|               |                  |                |                    |
|               |                  |                |                    |
|               |                  |                |                    |

Comments: \_\_\_\_\_

Reported by: 110  
 Reviewed by: 619

\*\* Record the total number of containers (i.e., vials or bottles) for the affected sample.



## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-0590

### CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (20) solid samples on March 2, 3, and 7, 2017. A total of (20) containers were received in good condition and at temperatures of 1.8°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 |
|-------------------|---------------|---------------------|----------------------|
| D-DU1-S-SG-01-08S | 17-03-0590-1  | 03/02/17 11:10      | 03/07/17 17:50       |
| D-DU1-S-SG-02-08S | 17-03-0590-2  | 03/02/17 10:29      | 03/07/17 17:50       |
| D-DU1-S-SG-03-08S | 17-03-0590-3  | 03/02/17 09:03      | 03/07/17 17:50       |
| D-DU1-S-SG-04-08S | 17-03-0590-4  | 03/02/17 08:13      | 03/07/17 17:50       |
| D-DU1-S-SG-05-08S | 17-03-0590-5  | 03/02/17 09:42      | 03/07/17 17:50       |
| D-DU1-S-SG-06-08S | 17-03-0590-6  | 03/03/17 09:03      | 03/07/17 17:50       |
| D-DU1-S-SG-07-08S | 17-03-0590-7  | 03/03/17 10:02      | 03/07/17 17:50       |
| D-DU1-S-SG-08-08S | 17-03-0590-8  | 03/03/17 07:25      | 03/07/17 17:50       |
| D-DU1-S-SG-09-8S  | 17-03-0590-9  | 03/02/17 14:50      | 03/07/17 17:50       |
| D-DU1-S-02-8      | 17-03-0590-10 | 03/07/17 10:32      | 03/07/17 17:50       |
| D-DU1-S-03-8      | 17-03-0590-11 | 03/07/17 10:02      | 03/07/17 17:50       |
| D-DU1-S-04-8      | 17-03-0590-12 | 03/07/17 13:10      | 03/07/17 17:50       |
| D-DU1-S-05-8      | 17-03-0590-13 | 03/07/17 12:45      | 03/07/17 17:50       |
| D-DU1-S-06-8      | 17-03-0590-14 | 03/07/17 09:32      | 03/07/17 17:50       |
| D-DU1-S-07-8      | 17-03-0590-15 | 03/07/17 13:40      | 03/07/17 17:50       |
| D-DU1-S-08-8      | 17-03-0590-16 | 03/07/17 14:00      | 03/07/17 17:50       |
| D-DU1-S-09-8      | 17-03-0590-17 | 03/07/17 14:20      | 03/07/17 17:50       |
| D-DU1-S-10-8      | 17-03-0590-18 | 03/07/17 14:40      | 03/07/17 17:50       |
| D-DU1-S-11-8      | 17-03-0590-19 | 03/07/17 09:08      | 03/07/17 17:50       |
| D-DU1-S-01-8      | 17-03-0590-20 | 03/07/17 14:55      | 03/07/17 17:50       |
| COMPOSITE         | 17-03-0590-21 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM1-8      | 17-03-0590-22 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM2-8      | 17-03-0590-23 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM3-8      | 17-03-0590-24 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM1-8      | 17-03-0590-25 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM2-8      | 17-03-0590-26 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM3-8      | 17-03-0590-27 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM1-8      | 17-03-0590-28 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM2-8      | 17-03-0590-29 | 03/02/17 00:00      | 03/07/17 17:50       |
| D-DU1-ISM3-8      | 17-03-0590-30 | 03/02/17 00:00      | 03/07/17 17:50       |

## **Case Narrative**

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-0590

### **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 -25 through -27 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/09/17 in batch #s H0309MOIB1 / H0309MOID1.

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

All values were within acceptance criteria.

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

A sample from a different work order was used as the sample duplicate for quality control. The method blank was non-detect and the duplicate analysis was within acceptance criteria.

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-0590

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

Samples -28 through -30 were analyzed for Metals by EPA 6010B. The samples were prepared and analyzed on 03/20/17 in batch #s 170320L03 / 170320S03 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:

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 7471A Mercury (Solid):**

Samples -25 through -27 were analyzed for Mercury by EPA 7471A. The samples were prepared and analyzed on 03/15/17 in batch #s 170315L01 / 170315S01 on Mercury 08.

#### 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.

## Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-0590

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

Samples -25 through -27 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/09/17 and analyzed on 03/11/17 in batch #s 170309B12 / 170309S12 on GC 45.

#### Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 12/02/16 on GC 45. 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 -25 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 8082 PCB Aroclors (Solid):**

Samples -28 through -30 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/13/17 and analyzed on 03/16/17 in batch #s 170313L11 / 170313S11 on GC 66.

#### Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/22/17 on GC 66. 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.



## **Case Narrative**

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-0590

### **Sample and QC:**

A sample from a different work order 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 -25 through -27 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/10/17 and analyzed on 03/13/17 in batch #s 170310L04 / 170310S04 on GC/MS AAA.

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

The initial calibration was performed on 03/13/17 on GC/MS AAA. 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:**

A sample from a different work order was used for the MS/MSD. The method blank was non-detect; the LCS, MS/MSD, all surrogate and internal standard recoveries were within acceptance criteria.

# ASTM D-2216 (M)

## Moisture Content

### (Solid)

## RAW DATA

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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-09 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,009  
**D/T ANALYZED:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED:** 2017-03-10 15:18

**# 25**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM1-8

|                             |            |                                       |                  |
|-----------------------------|------------|---------------------------------------|------------------|
| <b><u>LCS/MB BATCH:</u></b> | H0309MOIB1 | <b><u>SAMPLE VOLUME / WEIGHT:</u></b> | DEFAULT: 1.00 g  |
| <b><u>MS/MSD BATCH:</u></b> | H0309MOID1 | <b><u>FINAL VOLUME / WEIGHT:</u></b>  | DEFAULT: 1.00 ml |
| <b><u>UNITS:</u></b>        | %          | <b><u>ADJUSTMENT RATIO TO PF:</u></b> | 1.00             |

**COMMENT:**

| <b><u>COMPOUND</u></b> | <b><u>ON COL CONC</u></b> | <b><u>DF</u></b> | <b><u>CONC</u></b> | <b><u>RL</u></b> | <b><u>QUAL</u></b> |
|------------------------|---------------------------|------------------|--------------------|------------------|--------------------|
| Moisture               | 4.70                      | 1.00             | 4.70               | 0.10             |                    |

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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-09 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,009  
**D/T ANALYZED:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED:** 2017-03-10 15:18

**# 26**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM2-8

|                             |            |                                       |                  |
|-----------------------------|------------|---------------------------------------|------------------|
| <b><u>LCS/MB BATCH:</u></b> | H0309MOIB1 | <b><u>SAMPLE VOLUME / WEIGHT:</u></b> | DEFAULT: 1.00 g  |
| <b><u>MS/MSD BATCH:</u></b> | H0309MOID1 | <b><u>FINAL VOLUME / WEIGHT:</u></b>  | DEFAULT: 1.00 ml |
| <b><u>UNITS:</u></b>        | %          | <b><u>ADJUSTMENT RATIO TO PF:</u></b> | 1.00             |

**COMMENT:**

| <b><u>COMPOUND</u></b> | <b><u>ON COL CONC</u></b> | <b><u>DF</u></b> | <b><u>CONC</u></b> | <b><u>RL</u></b> | <b><u>QUAL</u></b> |
|------------------------|---------------------------|------------------|--------------------|------------------|--------------------|
| Moisture               | 4.50                      | 1.00             | 4.50               | 0.10             |                    |

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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-09 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,009  
**D/T ANALYZED:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED:** 2017-03-10 15:18

**# 27**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

|                             |            |                                       |                  |
|-----------------------------|------------|---------------------------------------|------------------|
| <b><u>LCS/MB BATCH:</u></b> | H0309MOIB1 | <b><u>SAMPLE VOLUME / WEIGHT:</u></b> | DEFAULT: 1.00 g  |
| <b><u>MS/MSD BATCH:</u></b> | H0309MOID1 | <b><u>FINAL VOLUME / WEIGHT:</u></b>  | DEFAULT: 1.00 ml |
| <b><u>UNITS:</u></b>        | %          | <b><u>ADJUSTMENT RATIO TO PF:</u></b> | 1.00             |

**COMMENT:**

| <b><u>COMPOUND</u></b> | <b><u>ON COL CONC</u></b> | <b><u>DF</u></b> | <b><u>CONC</u></b> | <b><u>RL</u></b> | <b><u>QUAL</u></b> |
|------------------------|---------------------------|------------------|--------------------|------------------|--------------------|
| Moisture               | 4.50                      | 1.00             | 4.50               | 0.10             |                    |

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# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: ASTM D-2216 (M)

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**MB SAMPLE ID:** 099-05-014-6734  
**MB BATCH ID:** H0309MOIB1  
**INSTRUMENT:** N/A  
**EXTRACTION:** N/A  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 1,009  
**D/T ANALYZED:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED:** 2017-03-10 15:18  
**MATRIX:** Soil

**DATA FILE:** NONE

### **CLIENT WORK ORDER: 17-03-0590**

| <b><u>S#</u></b> | <b><u>RUN TYPE</u></b> | <b><u>CLIENT SAMPLE ID</u></b> | <b><u>D/T ANALYZED</u></b> | <b><u>DATA FILE</u></b> |
|------------------|------------------------|--------------------------------|----------------------------|-------------------------|
| 25               | D-DU1-ISM1-8           |                                | 2017-03-09 21:00           | NONE                    |
| 26               | D-DU1-ISM2-8           |                                | 2017-03-09 21:00           | NONE                    |
| 27               | D-DU1-ISM3-8           |                                | 2017-03-09 21:00           | NONE                    |

  
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**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:** 2017-03-09 00:00  
**DATA FILE:** NONE

**ANALYZED BY:** 1,009  
**D/T ANALYZED:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED:** 2017-03-10 15:18

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

**LCS/MB BATCH:** H0309MOIB1      **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:** 17-03-0589-25  
**DUP BATCH:** H0309MOID1  
**INSTRUMENTS:**  
  **SAMPLE:** N/A  
  **DUP SAMPLE:** N/A

**EXTRACTION:** N/A  
**D/T EXTRACTED:**  
  **SAMPLE:** 2017-03-09 00:00  
  **DUP SAMPLE:** 2017-03-09 00:00

**ANALYZED BY:** 1,009  
**D/T ANALYZED**  
  **SAMPLE:** 2017-03-09 21:00  
  **DUP SAMPLE:** 2017-03-09 21:00  
**REVIEWED BY:** 1,009  
**D/T REVIEWED** 2017-03-10 15:18

| <u>COMPOUND</u> | <u>SAMPLE CONC</u> | <u>DUP CONC</u> | <u>% RPD</u> | <u>CONTROL LIMIT</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------------|-----------------|--------------|----------------------|---------------|-------------------|
| Moisture        | 5.800              | 6.100           | 5            | 0-10                 | PASS          |                   |

Data Files:

| <u>TYPE</u> | <u>DATA FILE</u> | <u>DATA FILE PATH</u> |
|-------------|------------------|-----------------------|
| SDP         | NONE             |                       |

# Moisture Content Raw Data Logbook

| METHOD        |  | MATRIX                                                                      |  | DATE                |  | ANALYST(S) |  | BATCH NUMBER        |  |
|---------------|--|-----------------------------------------------------------------------------|--|---------------------|--|------------|--|---------------------|--|
| ASTM D2216(M) |  | <input checked="" type="checkbox"/> Solid<br><input type="checkbox"/> Other |  | Preparation: 3/9/17 |  | 1050 11009 |  | MB: H0309M01B, ↓ D1 |  |
|               |  | Analysis: ↓                                                                 |  |                     |  |            |  | Sample Duplicate: ↓ |  |

| CEL ID # | MASS (g) |          |          | % MOISTURE | RL (%) | COMMENTS | ALUMINUM DISH SUPPLY ID |
|----------|----------|----------|----------|------------|--------|----------|-------------------------|
|          | DISH     | DRY DISH | MOISTURE |            |        |          |                         |
| MB       | 1.86     | 1.86     | 0.00     | 0.00       | 0.10   |          | G007-66.15              |

| CEL ID #                | % MOISTURE | RPD | CONTROL LIMIT | OVEN ID                        | THERMOMETER ID / CF (°C) |           | OVEN TEMP (°C) | BATCH PREP TIME (hh:mm) |
|-------------------------|------------|-----|---------------|--------------------------------|--------------------------|-----------|----------------|-------------------------|
|                         |            |     |               |                                | ✓ TSS IO7A               | CF: -2-2  |                |                         |
| Sample 17-03-0589-25A ↓ | 5.8        | 5   | 0 - 10        | ✓ IO 07                        |                          | CF: 1009  | Start: 103     | Start: 1300             |
| Duplicate               | 6.1        |     |               | <input type="checkbox"/> IO 08 |                          | CF: 34417 | End: 103       | End: 2100               |

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

| CEL ID #                 | MASS (g) |                             |                      |           | DISH + SAMPLE (oven-dried) | MOISTURE | % MOISTURE |    | BALANCE ID # | RL (%) | QUAL | COMMENTS |
|--------------------------|----------|-----------------------------|----------------------|-----------|----------------------------|----------|------------|----|--------------|--------|------|----------|
|                          | DISH     | DISH + SAMPLE (as-received) | SAMPLE (as-received) | WET-BASED |                            |          | DRY-BASED  |    |              |        |      |          |
| Duplicate 17-03-0589-25A | 1.86     | 12.81                       | 10.95                | 12.14     | 0.67                       | 6.1      |            | 63 | 0.10         |        |      |          |
| ↓ -26A                   | 1.85     | 12.77                       | 10.92                | 12.14     | 0.63                       | 5.8      |            |    |              |        |      |          |
| ↓ -27A                   | 1.88     | 12.57                       | 10.69                | 11.95     | 0.62                       | 5.8      |            |    |              |        |      |          |
| 17-03-0590-25A           | 1.85     | 12.78                       | 10.93                | 12.21     | 0.57                       | 5.2      |            |    |              |        |      |          |
| ↓ -26A                   | 1.85     | 12.83                       | 10.98                | 12.31     | 0.52                       | 4.7      |            |    |              |        |      |          |
| ↓ -27A                   | 1.86     | 12.74                       | 10.88                | 12.25     | 0.49                       | 4.5      |            |    |              |        |      |          |
| 17-03-0591-25A           | 1.86     | 12.02                       | 10.16                | 11.56     | 0.46                       | 4.5      |            |    |              |        |      |          |
| ↓ -26A                   | 1.85     | 12.95                       | 11.10                | 12.48     | 0.47                       | 4.2      |            |    |              |        |      |          |
| ↓ -27A                   | 1.86     | 12.90                       | 11.04                | 12.42     | 0.48                       | 4.3      |            |    |              |        |      |          |
|                          | 1.88     | 12.69                       | 10.81                | 12.23     | 0.46                       | 4.3      |            |    |              |        |      |          |

**BATCH TIME**  
 Time 2414: 2100  
 Initials: 1050/1009

## Drying / Weighing Cycle Raw Data Logbook

**Analyte:** ☒ Moisture Content, ☐ Solids Content, ☐ Total Dissolved Solids (TDS), ☐ Total Suspended Solids (TSS), ☐ Volatile Solids (VS), ☐ Volatile Suspended Solids (VSS), ☐ Lipid Content, ☐ Mobility Extraction (TCLP/SPLP/STLC), ☐ Other (Specified) \_\_\_\_\_

[illegible]

# BALANCE CALIBRATION CHECK LOG

Eurofins Calscience

Date performed: 3/9/17 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                     | 1.00           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 100.01         | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 500.03         | 498.00 - 502.00      | <input checked="" type="radio"/> N |                                                               |
| 62 | 0.002                 | 0.0025         | 0.00180 - 0.00220    | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 1                     | 99.9964        | 0.99900 - 1.00100    | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 1.0001         | 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                   | 100.00         | 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                   | 99.97          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 499.85         | 498.00 - 502.00      | <input checked="" type="radio"/> N |                                                               |
| 11 | 1                     | 1.00           | 0.98 - 1.02          | <input checked="" type="radio"/> N | IO Lab                                                        |
|    | 100                   | 100.01         | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
| 66 | 0.002                 | 0.0020         | 0.00180 - 0.00220    | <input checked="" type="radio"/> N | Metals                                                        |
|    | 1                     | 99.993         | 0.99900 - 1.00100    | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.0011       | 99.90000 - 100.10000 | <input checked="" type="radio"/> N |                                                               |
| 53 | 0.1                   | 0.10           | 0.09 - 0.11          | <input checked="" type="radio"/> N | Extractions                                                   |
|    | 1                     | 1.00           | 0.98 - 1.02          | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.99          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |
|    | 500                   | 499.95         | 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                   | 499.18         | 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                 | 0.0020         | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | Extractions                                                   |
|    | 1                     | 99.995         | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.9964        | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 71 | 0.002                 | 0.0019         | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | BOD Room                                                      |
|    | 1                     | 99.994         | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 99.9965        | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 63 | 0.1                   | 0.10           | 0.09 - 0.11          | <input checked="" type="radio"/> N | BOD Room                                                      |
|    | 100                   | 100.01         | 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                 | 0.0019         | 0.0018 - 0.0022      | <input checked="" type="radio"/> N | Oil & Grease Room                                             |
|    | 1                     | 99.993         | 0.9990 - 1.0010      | <input checked="" type="radio"/> N |                                                               |
|    | 100                   | 100.0010       | 99.9000 - 100.1000   | <input checked="" type="radio"/> N |                                                               |
| 30 | 1                     | 99             | 0.98 - 1.02          | <input checked="" type="radio"/> N | Oil & Grease Room                                             |
|    | 100                   | 99.97          | 98.00 - 102.00       | <input checked="" type="radio"/> N |                                                               |

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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: 099-14-354-18-5901  
ICAL BATCH ID: 1612021007  
INSTRUMENT: GC 45

ANALYZED BY: 972  
ICAL D/T ANALYZED: 2016-12-02 19:43  
REVIEWED BY: 27  
D/T REVIEWED: 2017-02-16 16:05

| 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> | R or R <sup>2</sup> CL | STATUS |
|---------------|------------|--------------|--------|--------|--------|--------|--------|---|---|---|---|---------|---------|---------|---------|---------------------|------------------------|--------|
| TPH as Diesel | C          | Avg RF       | 69.187 | 81.182 | 81.639 | 84.113 | 83.988 |   |   |   |   | 80.02   | 0.00    | 8       | 0-20    |                     |                        | PASS   |
|               |            |              |        |        |        |        |        |   |   |   |   | 2       |         |         |         |                     |                        |        |

### Data Files:

| Level # | D/T Analyzed     | Data File                                                  |
|---------|------------------|------------------------------------------------------------|
| 1       | 2016-12-02 19:43 | T:\GC_45\GC_45_data\20161202\16120207.d\Report.txt16120207 |
| 2       | 2016-12-02 20:05 | T:\GC_45\GC_45_data\20161202\16120208.d\Report.txt16120208 |
| 3       | 2016-12-02 20:27 | T:\GC_45\GC_45_data\20161202\16120209.d\Report.txt16120209 |
| 4       | 2016-12-02 20:48 | T:\GC_45\GC_45_data\20161202\16120210.d\Report.txt16120210 |
| 5       | 2016-12-02 21:09 | T:\GC_45\GC_45_data\20161202\16120211.d\Report.txt16120211 |

# INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-354-18-5901

INITIAL BATCH: 1612021007

INSTRUMENT: GC 45

ANALYZED BY: 972

D/T ANALYZED:

INITIAL: 2016-12-02 19:43

ICV: 2016-12-02 21:31

REVIEWED BY: 27

D/T REVIEWED: 2017-02-16 16:05

DATA FILE: T:\GC\_45\data\2016\161202\16120212.d\Report.bt16120212

| COMPOUND NAME | COMP CALIB |          | MIN RF | AVG RF | ICV RF | AMOUNT | ICV CONC | ICV %D | ICV %D CL | STATUS |
|---------------|------------|----------|--------|--------|--------|--------|----------|--------|-----------|--------|
|               | TYPE       | MODEL    |        |        |        |        |          |        |           |        |
| TPH as Diesel | C          | Avg Resp | 0.00   | 80.022 | 82.011 |        |          | -2     | 0-30      | PASS   |

MIN RF: Method Specified Minimum Response Factor



Report Date : 05-Dec-2016 12:22

Page 1

## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03  
 End Cal Date : 03-DEC-2016 01:29  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Cal Date : 05-Dec-2016 12:21 uj3k  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem1/SVOA/GC\_45.i/161202.b/16120219.d  
 Level 2: /chem1/SVOA/GC\_45.i/161202.b/16120220.d  
 Level 3: /chem1/SVOA/GC\_45.i/161202.b/16120221.d  
 Level 4: /chem1/SVOA/GC\_45.i/161202.b/16120222.d  
 Level 5: /chem1/SVOA/GC\_45.i/161202.b/16120223.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   | 86545   | 105289  | 90515   | 85391   | 87961    | 91140 | 9     |
| S 5 TPH as JP5 rf     | 69215   | 101437  | 91291   | 87968   | 106079   | 91198 | 16    |
| S 8 TPH Gas/Diesel rf | 37970   | 53614   | 55393   | 55706   | 53469    | 51230 | 15    |
| S 15 TPH as Diesel rf | 69187   | 81182   | 81639   | 84113   | 83988    | 80022 | 8     |

Report Date : 05-Dec-2016 12:22

Page 2

## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03  
 End Cal Date : 03-DEC-2016 01:29  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Cal Date : 05-Dec-2016 12:21 uj3k  
 Curve Type : Average

|                               | 5.000   | 200.000 | 400.000 | 800.000 | 1600.000 |       |       |
|-------------------------------|---------|---------|---------|---------|----------|-------|-------|
| Compound                      | Level 1 | Level 2 | Level 3 | Level 4 | Level 5  | RRP   | % RSD |
| S 27 Diesel Range Organics rf | 66446   | 76346   | 76541   | 77565   | 77319    | 74844 | 6     |
| S 32 Oil Range Organics rf    | 61212   | 79825   | 76603   | 79618   | 78958    | 75243 | 11    |
| S 36 TPH as Motor Oil rf      | 61342   | 80625   | 77575   | 80771   | 80149    | 76092 | 11    |

Report Date : 05-Dec-2016 12:22

Page 3

## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03  
 End Cal Date : 03-DEC-2016 01:29  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Cal Date : 05-Dec-2016 12:21 uj3k  
 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 53 Crude Oil rf     | 46307   | 41013   | 42600   | 48242   | 48611    | 45355 | 8     |
| S 65 Hydraulic Oil rf | 70102   | 84275   | 85720   | 85748   | 86559    | 82481 | 8     |

Report Date : 05-Dec-2016 12:22

Page 8

## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03  
 End Cal Date : 03-DEC-2016 01:29  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Cal Date : 05-Dec-2016 12:21 uj3k  
 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 206 NWTPH_Diesel rf       | 54683   | 80240   | 89681   | 88534   | 88358    | 80299 | 18    |
| S 207 NWTPH_Diesel range rf | 54683   | 80240   | 89681   | 88534   | 88358    | 80299 | 18    |
| S 209 NWTPH_Motor Oil rf    | 81215   | 73070   | 86473   | 80435   | 85496    | 81338 | 7     |
| =====                       | =====   | =====   | =====   | =====   | =====    | ===== | ===== |
| \$ 93 n-Octacosane          | 86757   | 86415   | 85727   | 86538   | 85868    | 86261 | 1     |
| \$ 94 C28 n-Octacosane      | 92246   | 92350   | 96946   | 93190   | 93357    | 93618 | 2     |
| =====                       | =====   | =====   | =====   | =====   | =====    | ===== | ===== |

Data File: /chem1/SVOA/GC\_45.i/161202.b/16120212.d  
 Report Date: 12/05/2016 10:26

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_45.i      Injection Date and Time: 02-DEC-2016 21:31  
 Sample Name: ICV D400 C28 50 L102516G      Initial Calibration Date(s): 18-OCT-2016 03-DEC-2016  
 Sublist used: ICAL\_D-DRO.sub      Initial Calibration Time(s): 12:03 01:29  
 Method used: /chem1/SVOA/GC\_45.i/161202.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 |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| TPH as Diesel         | 80021.702             | 82010.680  | 0.00        | -2             | 15              | Averaged   |
| Diesel Range Organics | 74843.538             | 78906.825  | 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          | 86260.794             | 87158.300  | 0.00        | -1             | 20              | Averaged   |

page 1

Data File: /chem1/SVOA/GC\_45.i/161202.b/16120207.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120207.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 19:43  
 Operator : 682  
 Smp Info : ICAL D5 C28 0.625 L102516B  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k  
 Cal Date : 03-DEC-2016 00:02  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16120219.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 15 TPH as Diesel         | 0.666-8.944 |        |        | 345934   | 5.00000           | 4.323 (a)        |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 332229   | 5.00000           | 4.438 (a)        |
| \$ 93 n-Octacosane         | 8.730       | 8.730  | 0.000  | 54223    | 0.62500           | 0.628            |

## QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

Page 1

Data File: /chem1/SV00A/GC\_45.i/161202.b/16120207.d

Date : 02-DEC-2016 19:43

Client ID:

Sample Info: ICAL D5 C28 0.625 L102516B

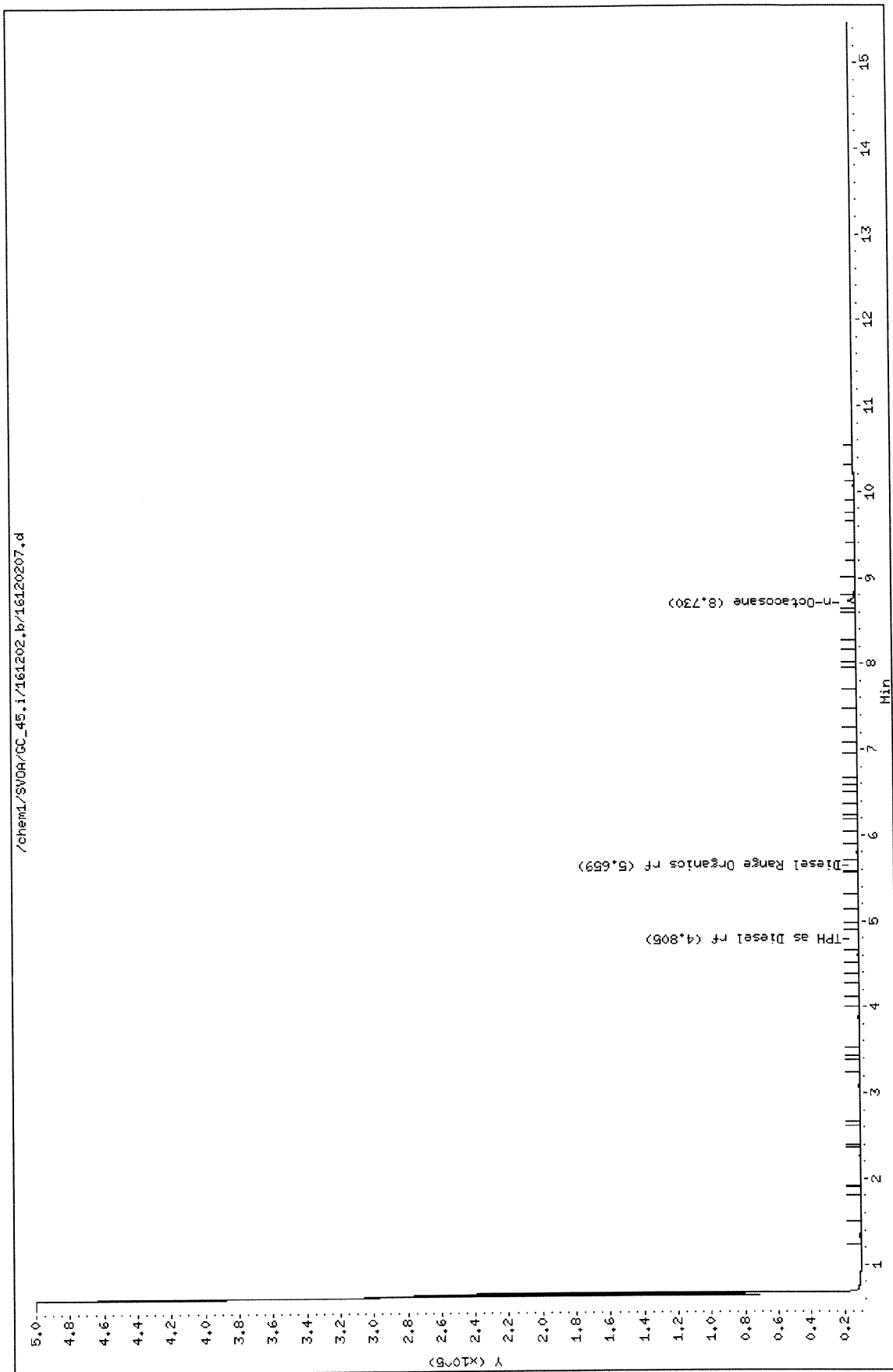
Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:

/chem1/SV00A/GC\_45.i/161202.b/16120207.d



[Return to Contents](#)

Data File: /chem1/SVOA/GC\_45.i/161202.b/16120208.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120208.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 20:05  
 Operator : 682  
 Smp Info : ICAL D200 C28 25 L102516C  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k  
 Cal Date : 03-DEC-2016 00:23  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16120220.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 15 TPH as Diesel         | 0.666-8.944 |        |        | 16236450 | 200.000           | 202.900          |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 15269183 | 200.000           | 204.014          |
| \$ 93 n-Octacosane         | 8.713       | 8.713  | 0.000  | 2160363  | 25.0000           | 25.044           |



Page 1

Data File: /chem1/SVDA/GC\_45.i/161202.b/16120208.d

Date : 02-DEC-2016 20:05

Client ID:

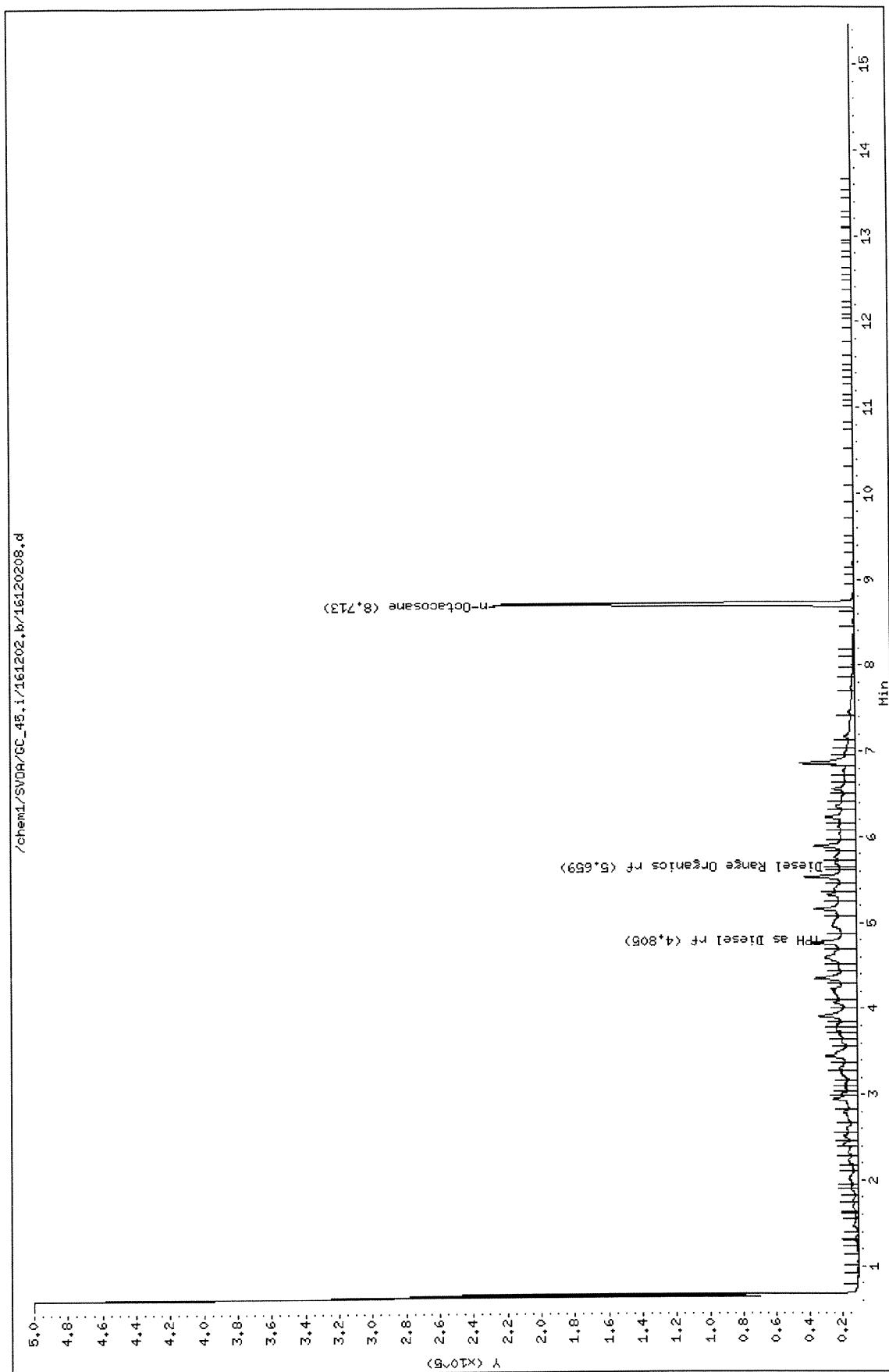
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC\_45.i/161202.b/16120209.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120209.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 20:27  
 Operator : 682  
 Smp Info : ICAL D400 C28 50 L102516D  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k  
 Cal Date : 03-DEC-2016 00:46  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16120221.d  
 Calibration Sample, Level: 3  
 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 15 TPH as Diesel         | 0.666-8.944 |        |        | 32655500 | 400.000           | 408.083          |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 30616597 | 400.000           | 409.074          |
| \$ 93 n-Octacosane         | 8.717       | 8.717  | 0.000  | 4286357  | 50.0000           | 49.690           |

Page 1

Data File: /chem1/SV09/GC\_45.i/161202.b/16120209.d

Date : 02-DEC-2016 20:27

Client ID:

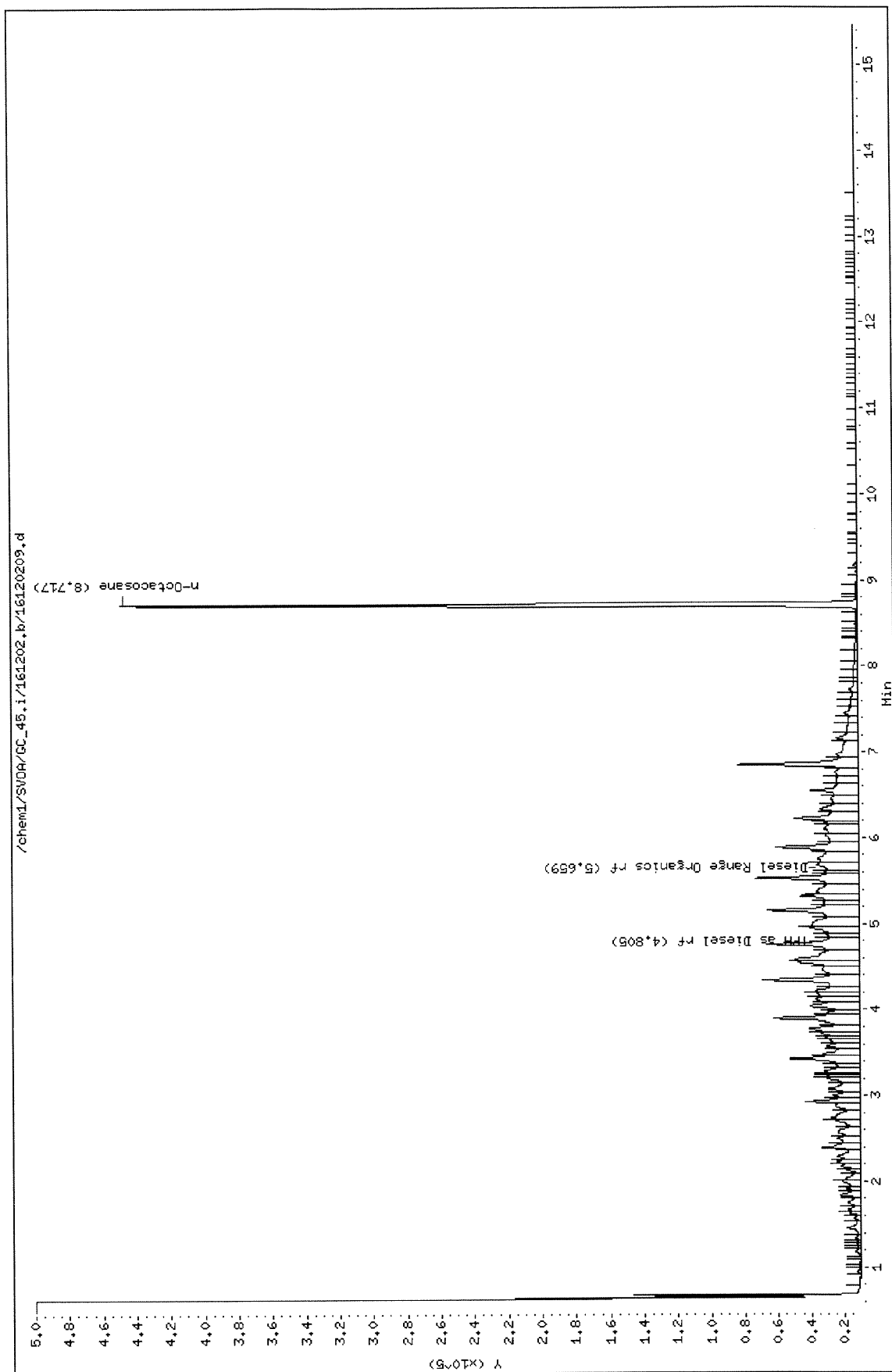
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:

[Return to Contents](#)

Data File: /chem1/SVOA/GC\_45.i/161202.b/16120210.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120210.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 20:48  
 Operator : 682 Inst ID: GC\_45.i  
 Smp Info : ICAL D800 C28 100 L102516E  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD  
 Cal Date : 03-DEC-2016 01:08 Cal File: 16120222.d  
 Als bottle: 10 Calibration Sample, Level: 4  
 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 15 TPH as Diesel         | 0.666-8.944 |        |        | 67290511 | 800.000           | 840.903          |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 62052115 | 800.000           | 829.091          |
| \$ 93 n-Octacosane         | 8.724       | 8.724  | 0.000  | 8653751  | 100.000           | 100.320          |

Page 1

Data File: /chem1/SVDA/GC\_45.i/161202.b/16120210.d

Date : 02-DEC-2016 20:48

Client ID:

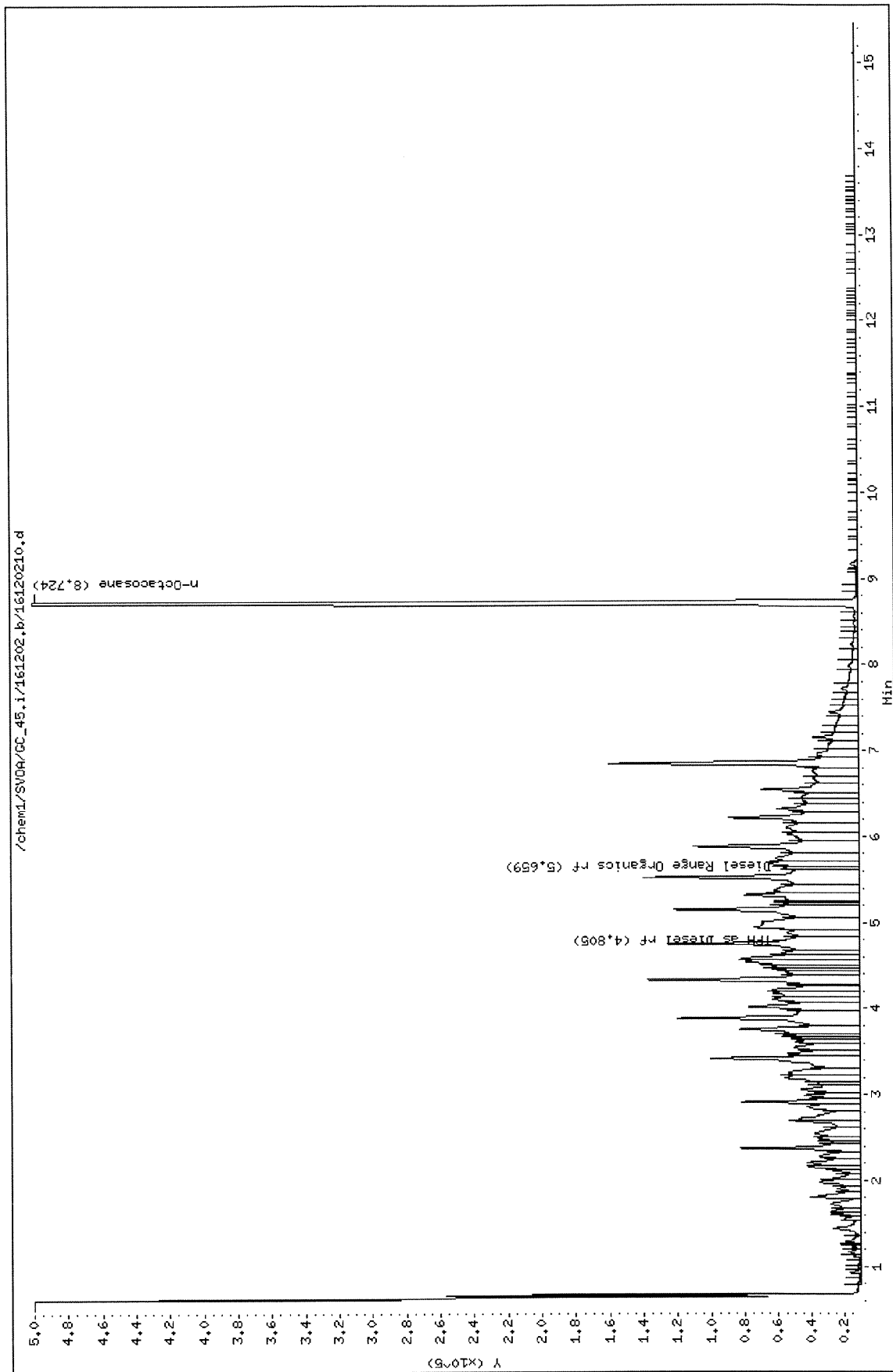
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_45.i/161202.b/16120211.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120211.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 21:09  
 Operator : 682  
 Smp Info : ICAL D1600 C28 200 L102516F  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k  
 Cal Date : 03-DEC-2016 01:29  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16120223.d  
 Calibration Sample, Level: 5  
 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 15 TPH as Diesel         | 0.666-8.944 |        |        | 134380116 | 1600.00           | 1679.295 (A)     |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 123710939 | 1600.00           | 1652.927 (A)     |
| \$ 93 n-Octacosane         | 8.737       | 8.737  | 0.000  | 17173600  | 200.000           | 199.089          |

## QC Flag Legend

A - Target compound detected but, quantitated amount  
 exceeded maximum amount.

Page 1

Data File: /chem1/SVDA/GC\_45.i/161202.b/16120211.d

Date : 02-DEC-2016 21:09

Client ID:

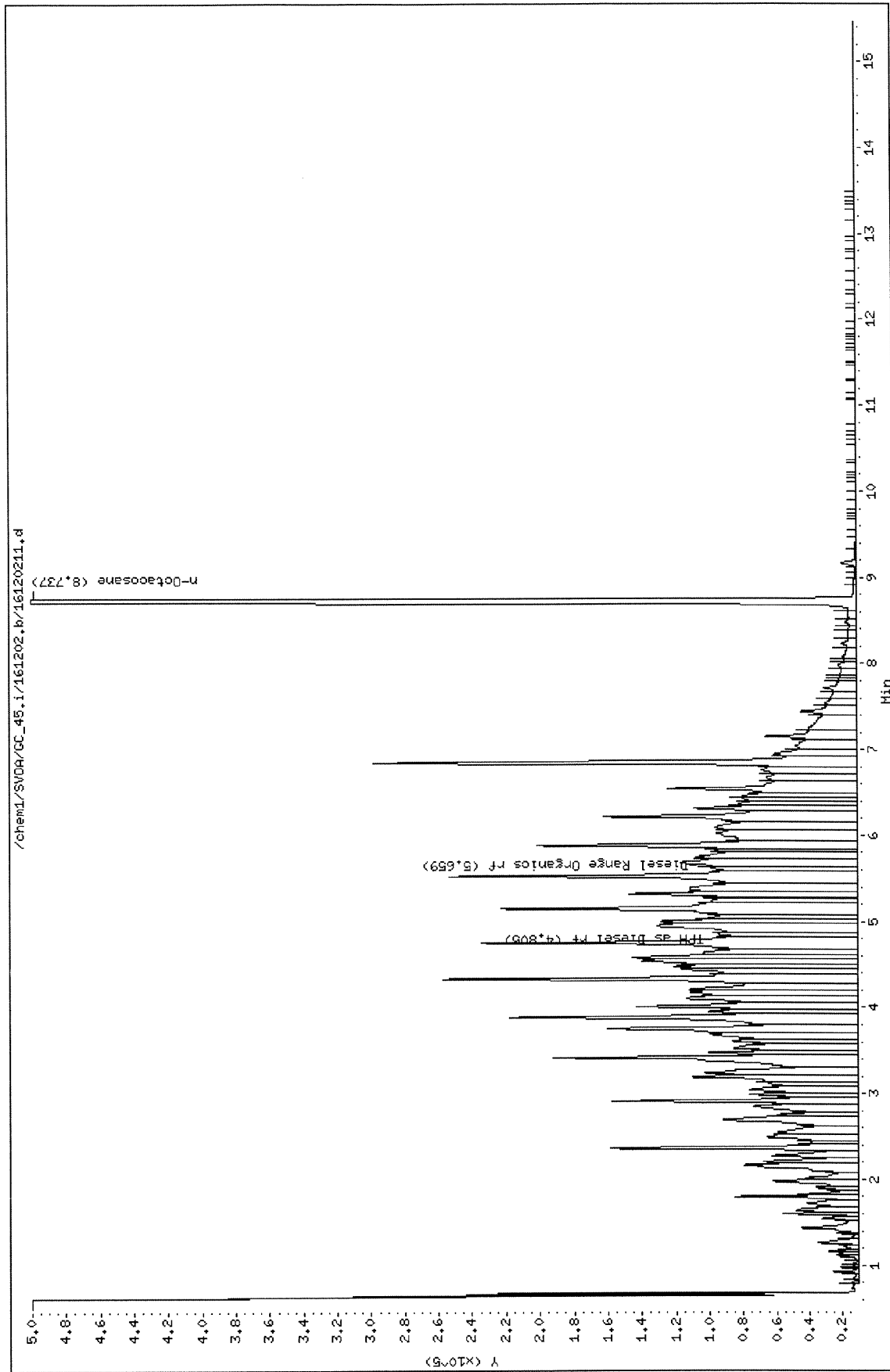
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_45.i/161202.b/16120212.d  
 Report Date: 05-Dec-2016 10:25

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/161202.b/16120212.d  
 Lab Smp Id:  
 Inj Date : 02-DEC-2016 21:31  
 Operator : 682  
 Smp Info : ICV D400 C28 50 L102516G  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/161202.b/8015d.m  
 Meth Date : 05-Dec-2016 10:25 uj3k  
 Cal Date : 03-DEC-2016 01:29  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16120223.d  
 Continuing Calibration Sample  
 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 15 TPH as Diesel         | 0.666-8.944 |        |        | 32804272 | 400.000           | 409.942          |
| S 27 Diesel Range Organics | 2.374-8.944 |        |        | 31562730 | 400.000           | 421.716          |
| \$ 93 n-Octacosane         | 8.717       | 8.717  | 0.000  | 4357915  | 50.0000           | 50.520           |



Page 1

Data File: /chem1/SVDA/GC\_45.i/161202.b/16120212.d

Date : 02-DEC-2016 21:31

Client ID:

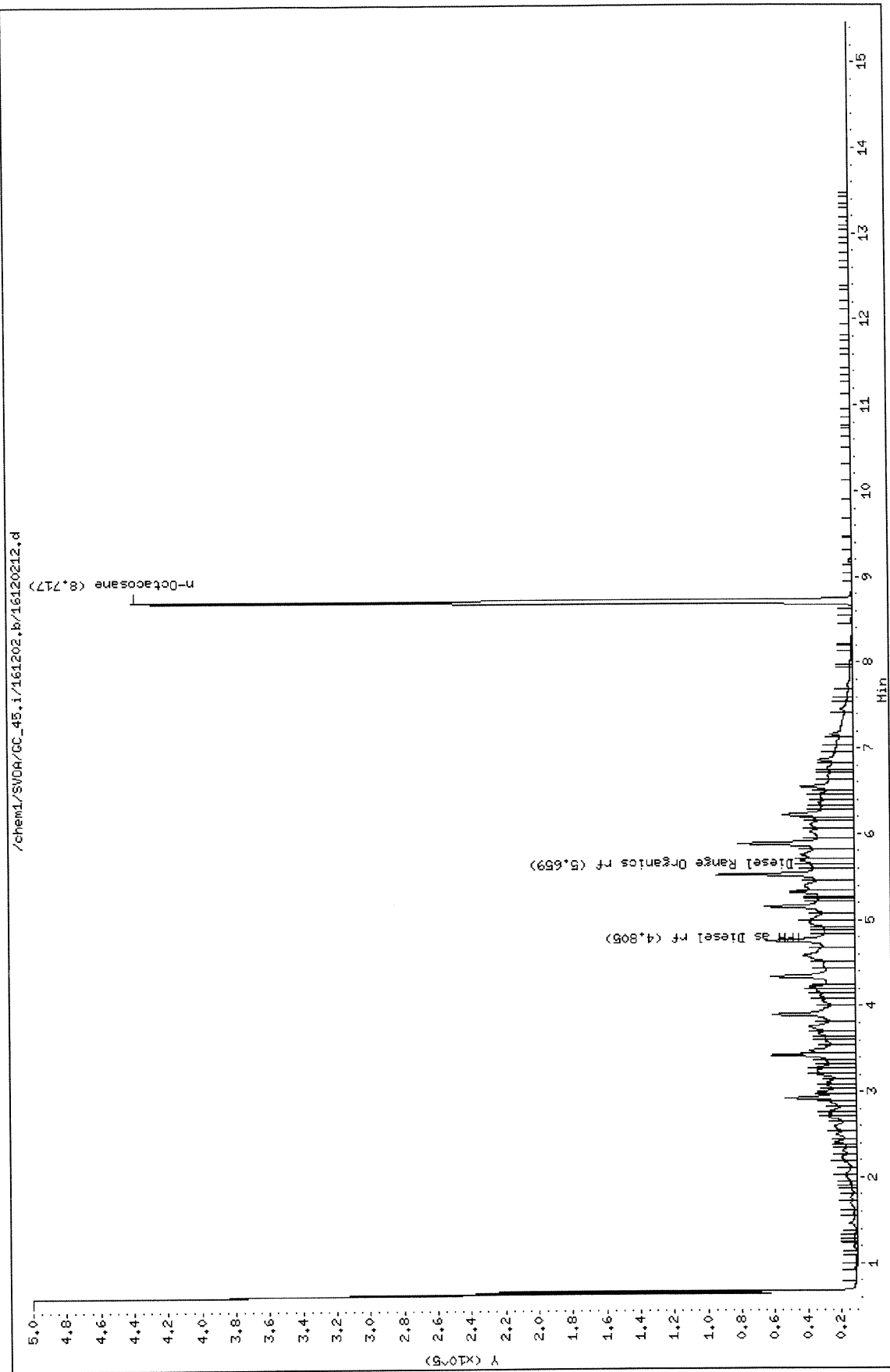
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



=====

External Standard Report

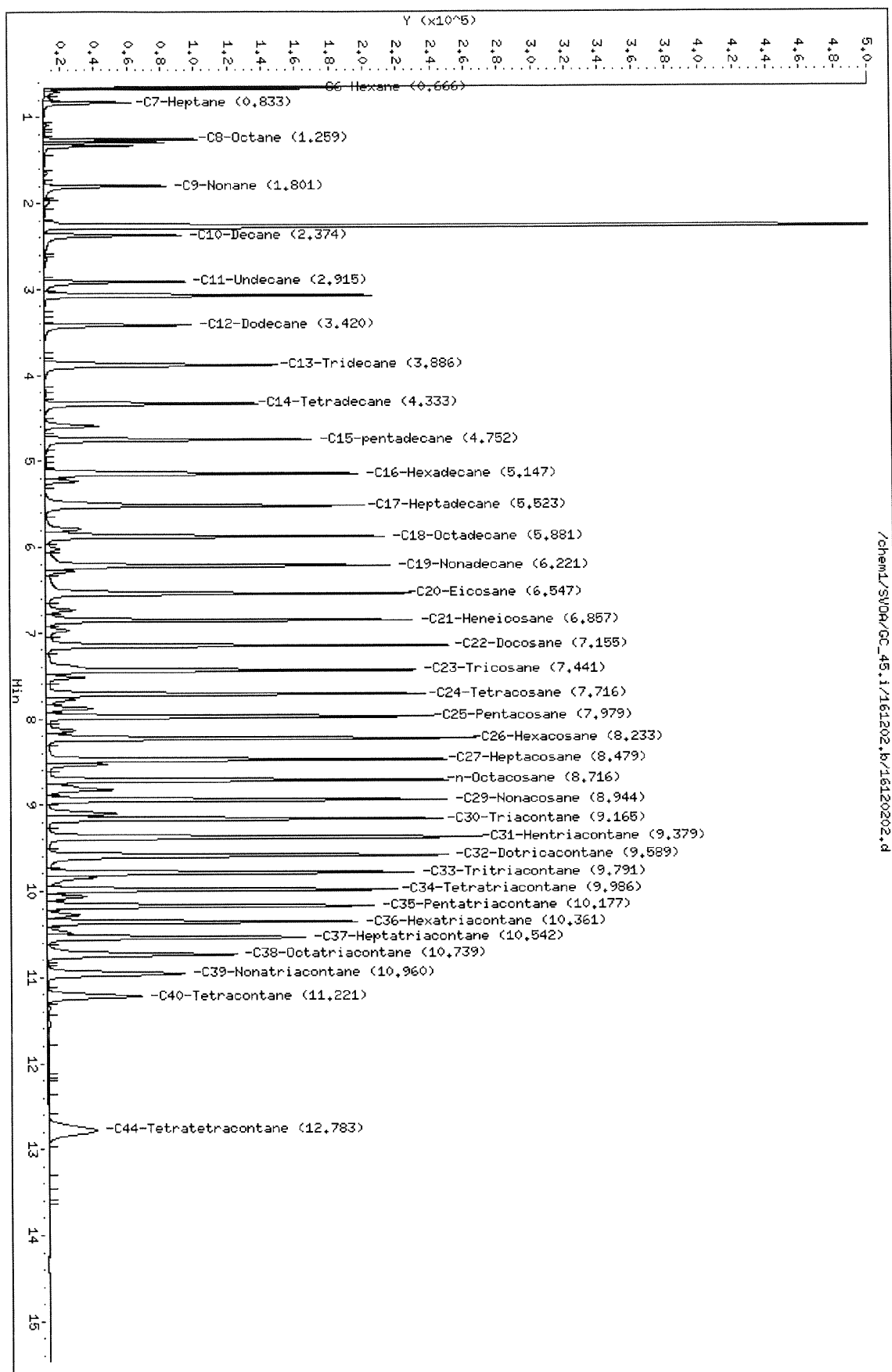
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Data File Name : /chem1/SVOA/GC\_45/161202/16120202.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 2  
 Instrument : GC 45 Injection Number : 2  
 Sample Name : C6-C44 L110816A Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 02 DEC 16 18:40  
 Report Created on: 05-DEC-16 10:26 Method Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/161202.b/16120202.d

| RT Range | Exp RT | DLT RT | Response   | ppm  | Compound              |
|----------|--------|--------|------------|------|-----------------------|
| 0.666    | 8.731  | 8.065  | 180018.00  | 0.00 | C6-Hexane             |
| 0.833    | 8.731  | 7.898  | 363999.00  | 0.00 | C7-Heptane            |
| 1.259    | 8.731  | 7.472  | 516823.00  | 0.00 | C8-Octane             |
| 1.801    | 8.731  | 6.930  | 648211.00  | 0.00 | C9-Nonane             |
| 2.374    | 8.731  | 6.357  | 819875.00  | 0.00 | C10-Decane            |
| 2.915    | 8.731  | 5.816  | 821043.00  | 0.00 | C11-Undecane          |
| 3.420    | 8.731  | 5.311  | 868861.00  | 0.00 | C12-Dodecane          |
| 3.886    | 8.731  | 4.845  | 1699945.00 | 0.00 | C13-Tridecane         |
| 4.333    | 8.731  | 4.398  | 1198646.00 | 0.00 | C14-Tetradecane       |
| 4.752    | 8.731  | 3.979  | 1628623.00 | 0.00 | C15-pentadecane       |
| 5.147    | 8.731  | 3.584  | 1935413.00 | 0.00 | C16-Hexadecane        |
| 5.523    | 8.731  | 3.208  | 2181667.00 | 0.00 | C17-Heptadecane       |
| 5.881    | 8.731  | 2.850  | 2092837.00 | 0.00 | C18-Octadecane        |
| 6.221    | 8.731  | 2.510  | 2246859.00 | 0.00 | C19-Nonadecane        |
| 6.547    | 8.731  | 2.184  | 2479179.00 | 0.00 | C20-Eicosane          |
| 6.857    | 8.731  | 1.874  | 2195758.00 | 0.00 | C21-Heneicosane       |
| 7.155    | 8.731  | 1.576  | 2470063.00 | 0.00 | C22-Docosane          |
| 7.441    | 8.731  | 1.290  | 2524633.00 | 0.00 | C23-Tricosane         |
| 7.716    | 8.731  | 1.015  | 2327237.00 | 0.00 | C24-Tetracosane       |
| 7.979    | 8.731  | 0.752  | 2307901.00 | 0.00 | C25-Pentacosane       |
| 8.233    | 8.731  | 0.498  | 2726070.00 | 0.00 | C26-Hexacosane        |
| 8.479    | 8.731  | 0.252  | 2592723.00 | 0.00 | C27-Heptacosane       |
| 8.716    | 8.731  | 0.015  | 2414138.00 | 1.63 | n-Octacosane          |
| 8.944    | 8.731  | -0.213 | 2391574.00 | 0.00 | C29-Nonacosane        |
| 9.165    | 8.731  | -0.434 | 2426307.00 | 0.00 | C30-Triacontane       |
| 9.379    | 8.731  | -0.648 | 2983404.00 | 0.00 | C31-Hentriacontane    |
| 9.589    | 8.731  | -0.858 | 2945350.00 | 0.00 | C32-Dotriciacontane   |
| 9.791    | 8.731  | -1.060 | 2432008.00 | 0.00 | C33-Tritriacontane    |
| 9.986    | 8.731  | -1.255 | 2277735.00 | 0.00 | C34-Tetratriacontane  |
| 10.177   | 8.731  | -1.446 | 2179871.00 | 0.00 | C35-Pentatriacontane  |
| 10.361   | 8.731  | -1.630 | 2070018.00 | 0.00 | C36-Hexatriacontane   |
| 10.542   | 8.731  | -1.811 | 1782436.00 | 0.00 | C37-Heptatriacontane  |
| 10.739   | 8.731  | -2.008 | 1683811.00 | 0.00 | C38-Octatriacontane   |
| 10.960   | 8.731  | -2.229 | 1322621.00 | 0.00 | C39-Nonatriacontane   |
| 11.221   | 8.731  | -2.490 | 1024950.00 | 0.00 | C40-Tetracontane      |
| 12.783   | 8.731  | -4.052 | 1055033.00 | 0.00 | C44-Tetratetracontane |

End of File



Data File: /chem1/SVDA/CC\_45.i/161202.b/16120202.d  
Date: 02-DEC-2016 18:40  
Client ID:  
Sample Info: C6-C44 L110816A  
Column Phase:

Instrument: GC\_45.i  
Operator: 682  
Column diameter: 2.00

# EPA 8015B (M)

## Diesel + Motor Oil

### SAMPLE DATA

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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 45  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-11 08:46  
**REVIEWED BY:**  
**D/T REVIEWED:** *~*

**DATA FILE:** T:\GC\_45\GC\_45\_data\2017\170310\17031055.d\Report.txt17031055

**# 25**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM1-8

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170309B12 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 10.00 g / ACTUAL: 10.20 g  |
| <b>MS/MSD BATCH:</b> 170309S12 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 ml |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 0.98                                |

**COMMENT:**

| <u>COMPOUND</u>  | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|------------------|--------------------|-----------|-------------|-----------|-------------|
| TPH as Diesel    | 1.10               | 1.00      | ND          | 4.9       |             |
| TPH as Motor Oil | 1.24               | 1.00      | ND          | 4.9       |             |

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

Data File Name : /chem1/SVOA/GC\_45/170310/17031055.d  
Page Number :  
Operator : 682 Vial Number : Vial 55  
Instrument : GC 45 Injection Number : 55  
Sample Name : 17-03-0590-25 Sequence Line : 0  
Instrument Method: 8015d.m  
Acquired on : 11 MAR 17 08:46  
Report Created on: 14-MAR-17 09:53 Compound Sublist : all  
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031055.d

| RT Range     | Exp RT | DLT RT | Response   | ppm   | Compound         |
|--------------|--------|--------|------------|-------|------------------|
| 8.625        | 8.629  | 0.005  | 3959179.00 | 45.90 | n-Octacosane     |
| 2.296- 8.852 |        |        | 87994.17   | 1.10  | TPH as Diesel    |
| 5.445-12.452 |        |        | 98912.46   | 1.24  | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV0A/GC\_45.i/170310.b/17031055.d

Date : 11-MAR-2017 08:46

Client ID:

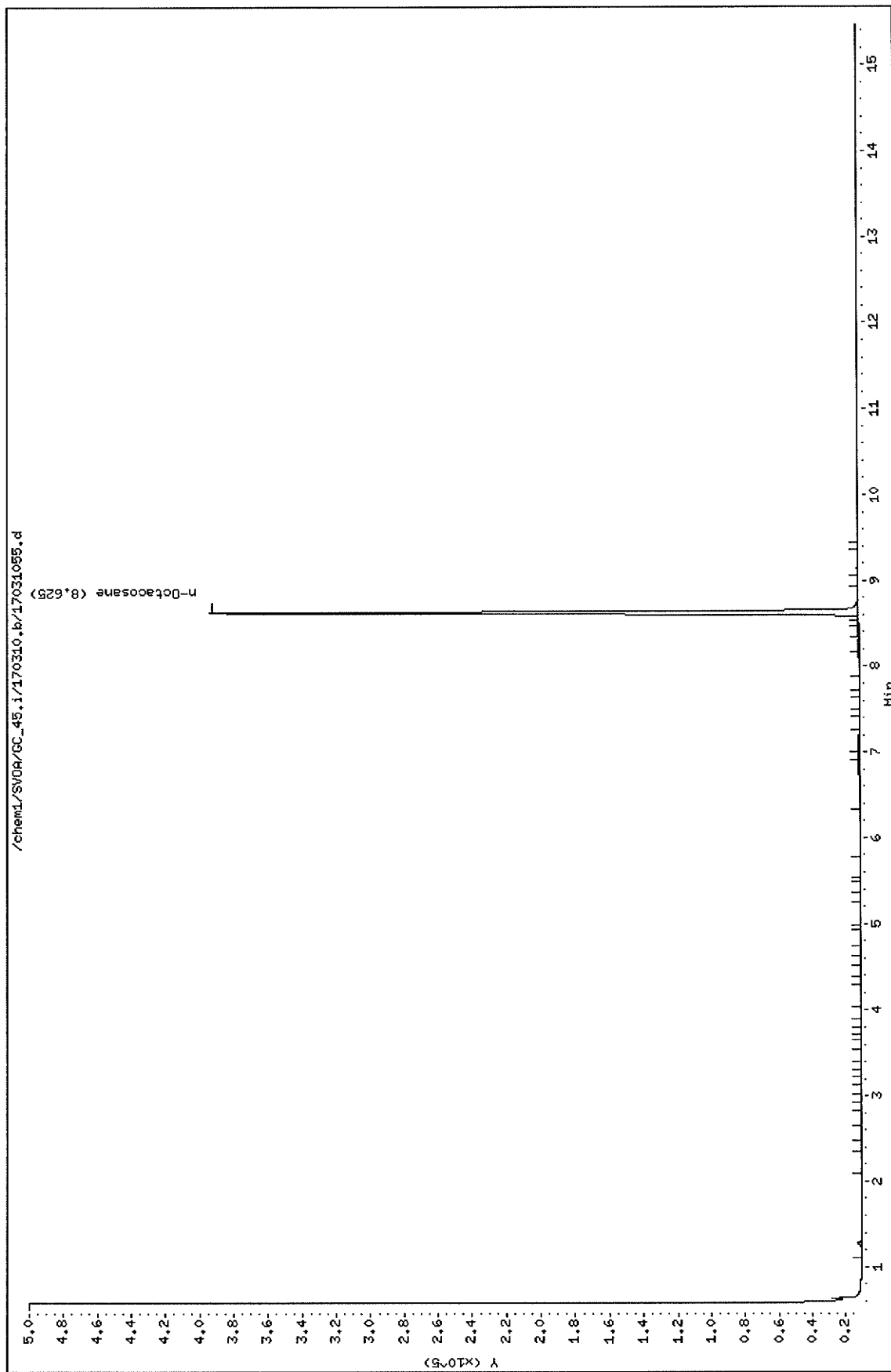
Sample Info: 17-03-0590-25

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 45  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-11 09:08  
**REVIEWED BY:**  
**D/T REVIEWED:** ✓

**DATA FILE:** T:\GC\_45\GC\_45\_data\2017\170310\17031056.d\Report.txt17031056

**# 26**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM2-8

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170309B12 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 10.00 g / ACTUAL: 10.00 g  |
| <b>MS/MSD BATCH:</b> 170309S12 | <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    | 0.370              | 1.00      | ND          | 5.0       |             |
| TPH as Motor Oil | 0.460              | 1.00      | ND          | 5.0       |             |

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031056.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 56  
 Instrument : GC 45 Injection Number : 56  
 Sample Name : 17-03-0590-26 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 11 MAR 17 09:08  
 Report Created on: 14-MAR-17 09:54 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031056.d

| RT Range     | Exp RT | DLT RT | Response   | ppm   | Compound         |
|--------------|--------|--------|------------|-------|------------------|
| 8.625        | 8.629  | 0.004  | 3747720.00 | 43.45 | n-Octacosane     |
| 2.296- 8.852 |        |        | 29412.38   | 0.37  | TPH as Diesel    |
| 5.445-12.452 |        |        | 36786.99   | 0.46  | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SVDA/GC\_45.i/170310.b/17031056.d

Date : 11-MAR-2017 09:08

Client ID:

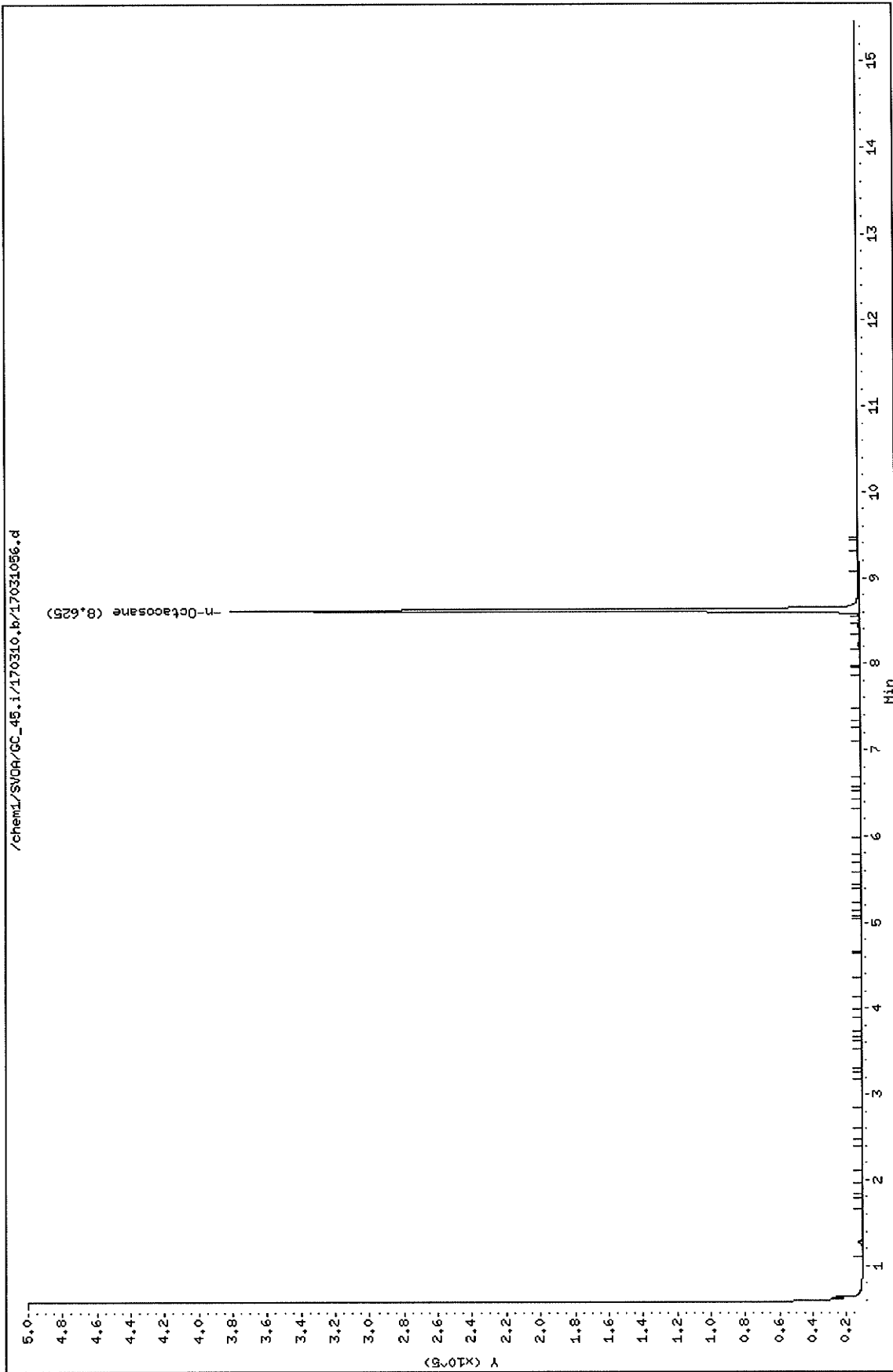
Sample Info: 17-03-0590-26

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 45  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-11 09:30  
**REVIEWED BY:**  
**D/T REVIEWED:** *m*

**DATA FILE:** T:\GC\_45\GC\_45\_data\2017\170310\17031057.d\Report.txt17031057

**# 27**

**CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

**LCS/MB BATCH:** 170309B12  
**MS/MSD BATCH:** 170309S12  
**UNITS:** mg/kg

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

DEFAULT: 10.00 g / ACTUAL: 10.00 g  
DEFAULT: 10.00 ml / ACTUAL: 10.00 ml  
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    | 0.440              | 1.00      | ND          | 5.0       |             |
| TPH as Motor Oil | 0.520              | 1.00      | ND          | 5.0       |             |

=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031057.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 57  
 Instrument : GC 45 Injection Number : 57  
 Sample Name : 17-03-0590-27 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 11 MAR 17 09:30  
 Report Created on: 14-MAR-17 09:54 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031057.d

| RT Range     | Exp RT | DLT RT | Response   | ppm   | Compound         |
|--------------|--------|--------|------------|-------|------------------|
| 8.626        | 8.629  | 0.003  | 3836999.00 | 44.48 | n-Octacosane     |
| 2.296- 8.852 |        |        | 35413.00   | 0.44  | TPH as Diesel    |
| 5.445-12.452 |        |        | 41569.41   | 0.52  | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SVDA/GC\_45.i/170310.b/17031057.d

Date : 11-MAR-2017 09:30

Client ID:

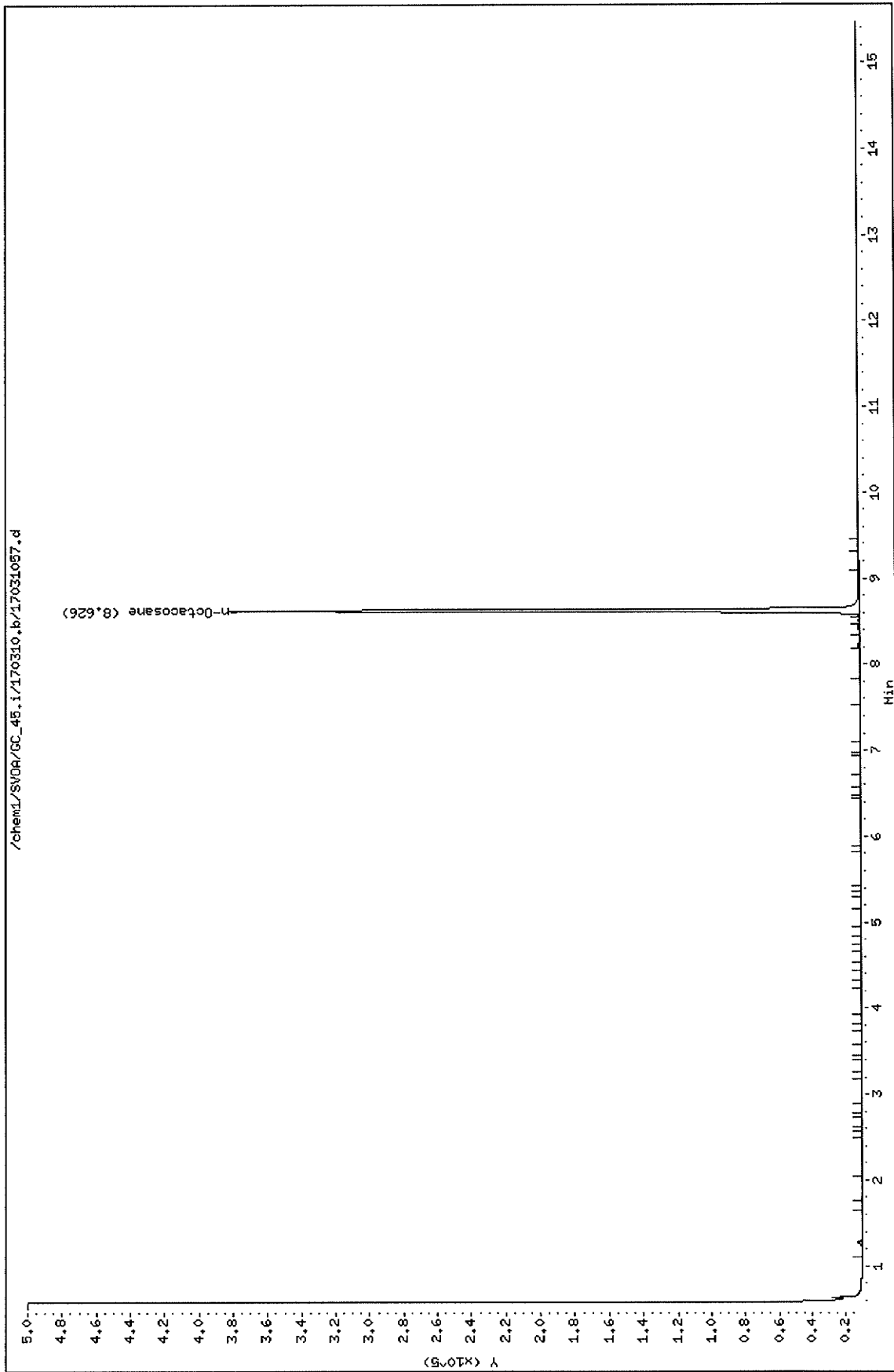
Sample Info: 17-03-0590-27

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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:** 099-14-353-6  
**MB BATCH ID:** 170309B12  
**INSTRUMENT:** GC 45  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-11 07:21  
**REVIEWED BY:**  
**D/T REVIEWED:**   
**MATRIX:** Soil

**DATA FILE:** T:\GC\_45\GC\_45\_data\2017\170310\17031051.d\Report.txt17031051

**CLIENT WORK ORDER: 17-03-0590**

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-----------|-----------------|-------------------------|---------------------|---------------------------------------------------------------|
| 25        | D-DU1-ISM1-8    |                         | 2017-03-11 08:46    | T:\GC_45\GC_45_data\2017\170310\17031055.d\Report.txt17031055 |
| 26        | D-DU1-ISM2-8    |                         | 2017-03-11 09:08    | T:\GC_45\GC_45_data\2017\170310\17031056.d\Report.txt17031056 |
| 27        | D-DU1-ISM3-8    |                         | 2017-03-11 09:30    | T:\GC_45\GC_45_data\2017\170310\17031057.d\Report.txt17031057 |

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

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**WORK ORDER:** 099-14-353  
**INSTRUMENT:** GC 45  
**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:** 2017-03-11 07:21  
**REVIEWED BY:**  
**D/T REVIEWED:** 

**DATA FILE:** T:\GC\_45\GC\_45\_data\2017\170310\17031051.d\Report.txt17031051

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

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170309B12 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 10.00 g / ACTUAL: 10.00 g  |
| <b>MS/MSD BATCH:</b>           | <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    | 0.150              | 1.00      | ND          | 5.0       |             |
| TPH as Motor Oil | 0.330              | 1.00      | ND          | 5.0       |             |

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

LCS SAMPLE ID: 099-14-353-6  
LCS/MB BATCH ID: 170309B12  
INSTRUMENT: GC 45

EXTRACTION: EPA 3550B  
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 972  
D/T ANALYZED: 2017-03-11 07:42  
REVIEWED BY:  
D/T REVIEWED: 

DATA FILE: T:\GC\_45\data\2017\170310\17031052.d\Report.txt17031052

| <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             | 407.8           | 102              | 61-145                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 8015B (M)

**SPIKED SAMPLE ID:** 17-03-0590-25  
**MS/MSD BATCH:** 170309S12  
**INSTRUMENTS:**  
**SAMPLE:** GC 45  
**MS:** GC 45  
**MSD:** GC 45

**EXTRACTION:** EPA 3550B  
**D/T EXTRACTED:**  
**SAMPLE:** 2017-03-09 00:00  
**MS:** 2017-03-09 00:00  
**MSD:** 2017-03-09 00:00

**ANALYZED BY:** 972  
**D/T ANALYZED:**  
**SAMPLE:** 2017-03-11 08:46  
**MS:** 2017-03-11 08:03  
**MSD:** 2017-03-11 08:24  
**REVIEWED BY:** M  
**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 | ND     | 400.0   | 400.0 | 361.3   | 90       | 394.8    | 99        | 61-145   | 9   | 0-25   | PASS   |            |

**Data Files:**

| TYPE | DATA FILE | DATA FILE PATH                                       |
|------|-----------|------------------------------------------------------|
| MS   | 17031053  | T:\GC_45\GC_45_data\2017170310\17031053.d\Report.txt |
| MSD  | 17031054  | T:\GC_45\GC_45_data\2017170310\17031054.d\Report.txt |

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

WORK ORDER: 17-03-0590

BATCH ID:

LCS/MB: 170309B12

MS: 170309S12

EXTRACTION: EPA 3550B

REVIEWED BY: 41

D/T REVIEWED:

**# 25      CLIENT SAMPLE NUMBER : D-DU1-ISM1-8**

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031055.d\Report.txt17031055

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 08:46

COMMENT:

| COMPOUND     | % REC | % REC CL | STATUS | QUALIFIERS |
|--------------|-------|----------|--------|------------|
| n-Octacosane | 92    | 61-145   | PASS   |            |

**# 26      CLIENT SAMPLE NUMBER : D-DU1-ISM2-8**

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031056.d\Report.txt17031056

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 09:08

COMMENT:

| COMPOUND     | % REC | % REC CL | STATUS | QUALIFIERS |
|--------------|-------|----------|--------|------------|
| n-Octacosane | 87    | 61-145   | PASS   |            |

**# 27      CLIENT SAMPLE NUMBER : D-DU1-ISM3-8**

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031057.d\Report.txt17031057

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 09:30

COMMENT:

| COMPOUND     | % REC | % REC CL | STATUS | QUALIFIERS |
|--------------|-------|----------|--------|------------|
| n-Octacosane | 89    | 61-145   | PASS   |            |

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

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031051.d\Report.txt17031051

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 07:21

COMMENT:

| COMPOUND     | % REC | % REC CL | STATUS | QUALIFIERS |
|--------------|-------|----------|--------|------------|
| n-Octacosane | 89    | 61-145   | PASS   |            |

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

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WORK ORDER: 17-03-0590

BATCH ID:

LCS/MB: 170309B12

MS:

EXTRACTION: EPA 3550B

REVIEWED BY:

D/T REVIEWED:

21

# LCS      CLIENT SAMPLE NUMBER: Lab Control Sample

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031052.d\Report.txt17031052

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 07:42

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 96           | 61-145          | PASS          |                   |

# MS      CLIENT SAMPLE NUMBER: Matrix Spike

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031053.d\Report.txt17031053

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 08:03

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 92           | 61-145          | PASS          |                   |

# MSD      CLIENT SAMPLE NUMBER: Matrix Spike Duplicate

INSTRUMENT: GC 45

D/T EXTRACTED: 2017-03-09 00:00

DATA FILE: T:\GC\_45\GC\_45\_data\2017\170310\17031054.d\Report.txt17031054

ANALYZED BY: 972

D/T ANALYZED 2017-03-11 08:24

COMMENT:

| <u>COMPOUND</u> | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|-----------------|--------------|-----------------|---------------|-------------------|
| n-Octacosane    | 90           | 61-145          | PASS          |                   |

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=====

External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031051.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 51  
 Instrument : GC 45 Injection Number : 51  
 Sample Name : MB 17030912 Sequence Line : 0  
 Instrument Method: 8015d.m

Acquired on : 11 MAR 17 07:21  
 Report Created on: 14-MAR-17 09:53 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031051.d

| RT Range     | Exp RT | DLT RT | Response   | ppm   | Compound         |
|--------------|--------|--------|------------|-------|------------------|
| 8.625        | 8.629  | 0.004  | 3843920.00 | 44.56 | n-Octacosane     |
| 2.296- 8.852 |        |        | 12272.88   | 0.15  | TPH as Diesel    |
| 5.445-12.452 |        |        | 26618.44   | 0.33  | TPH as Motor Oil |

End of File

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Data File: /chem1/SV00A/GC\_45.i/170310.b/17031051.d

Date : 11-MAR-2017 07:21

Client ID:

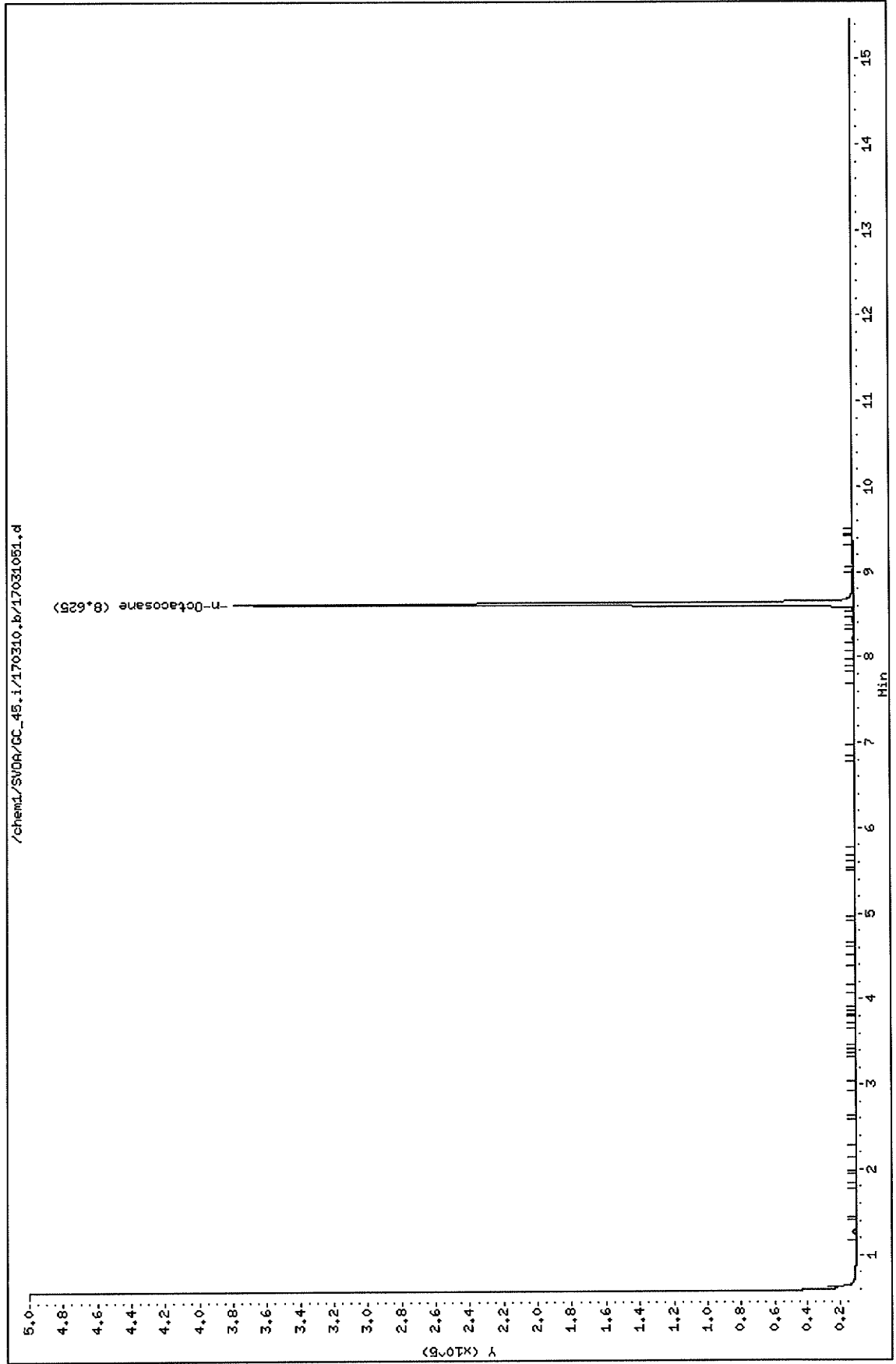
Sample Info: MB 17030912

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:

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## =====

## External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031052.d  
Page Number :  
Operator : 682 Vial Number : Vial 52  
Instrument : GC 45 Injection Number : 52  
Sample Name : LCS 17030912 Sequence Line : 0  
Instrument Method: 8015d.m  
Acquired on : 11 MAR 17 07:42  
Report Created on: 14-MAR-17 09:53 Compound Sublist : all  
Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031052.d

| RT Range     | Exp RT | DLT RT | Response    | ppm    | Compound              |
|--------------|--------|--------|-------------|--------|-----------------------|
| 8.625        | 8.629  | 0.004  | 4131391.00  | 47.89  | n-Octacosane          |
| 0.626- 8.852 |        |        | 32633027.47 | 407.80 | TPH as Diesel         |
| 2.296- 8.852 |        |        | 31498318.94 | 420.86 | Diesel Range Organics |

End of File

Page 1

Data File: /chem1/SV00A/GC\_45.i/170310.b/17031052.d

Date : 11-MAR-2017 07:42

Client ID:

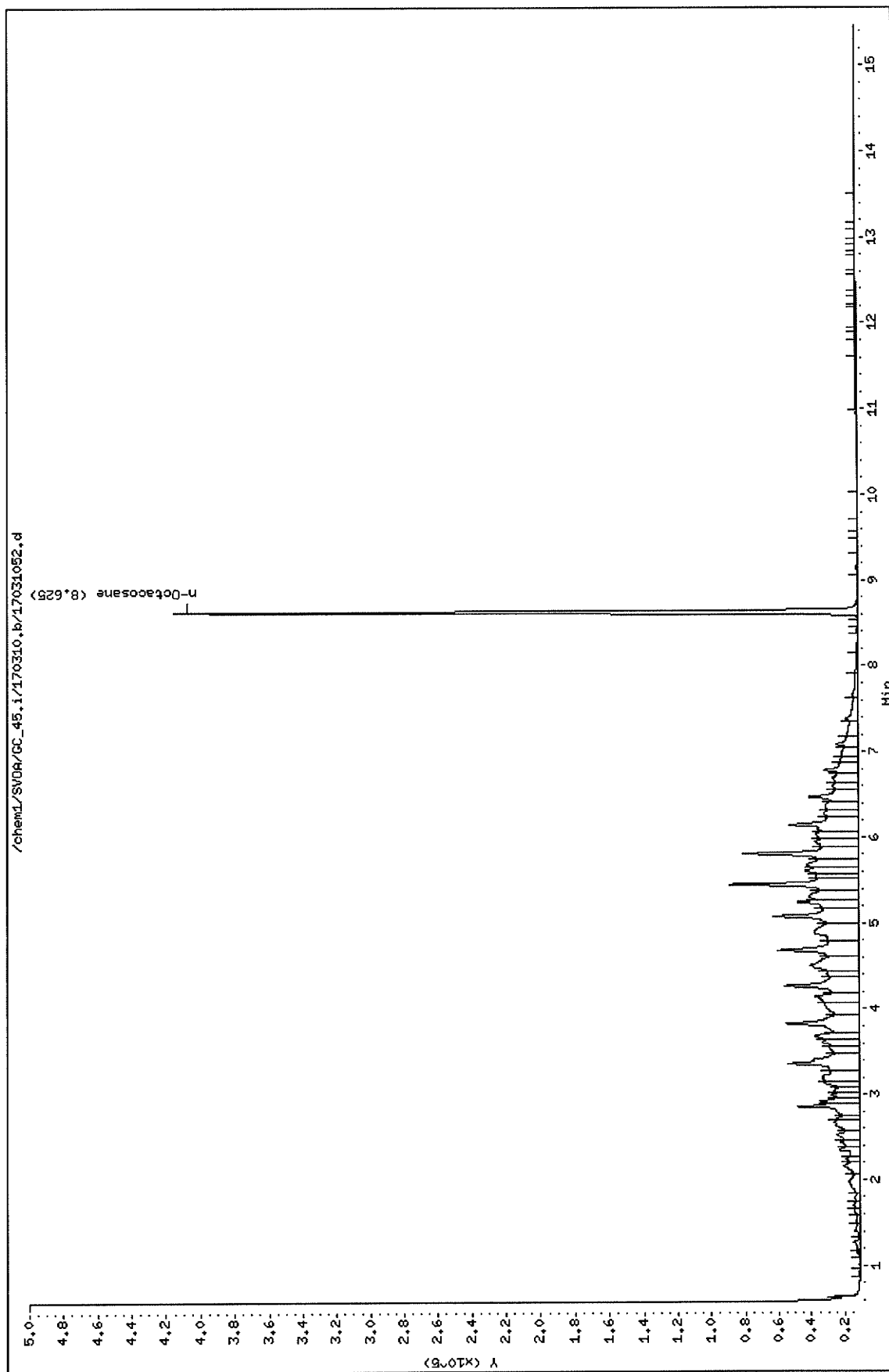
Sample Info: LCS 17030912

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:





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External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031053.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 53  
 Instrument : GC 45 Injection Number : 53  
 Sample Name : MS 17-03-0590-25 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 11 MAR 17 08:03  
 Report Created on: 14-MAR-17 09:53 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031053.d

| RT Range     | Exp RT | DLT RT | Response    | ppm    | Compound         |
|--------------|--------|--------|-------------|--------|------------------|
| 8.624        | 8.629  | 0.005  | 3955186.00  | 45.85  | n-Octacosane     |
| 2.296- 8.852 |        |        | 29491051.67 | 368.54 | TPH as Diesel    |
| 5.445-12.452 |        |        | 11745370.60 | 146.78 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV00A/GC\_45.i/170310.b/17031053.d

Date : 11-MAR-2017 08:03

Client ID:

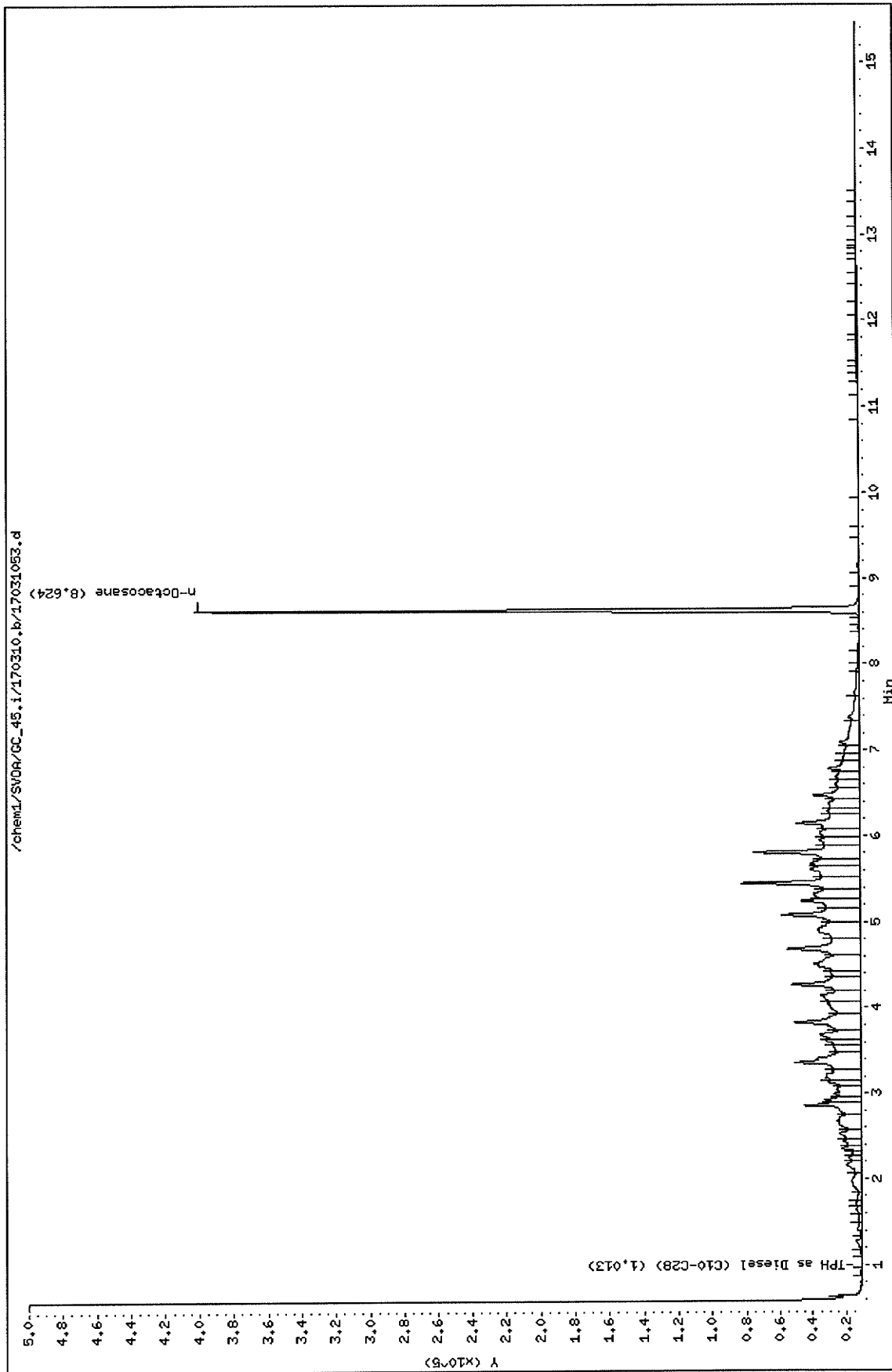
Sample Info: MS 17-03-0590-25

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

=====

Data File Name : /chem1/SVOA/GC\_45/170310/17031054.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 54  
 Instrument : GC 45 Injection Number : 54  
 Sample Name : MSD 17-03-0590-25 Sequence Line : 0  
 Instrument Method: 8015d.m  
 Acquired on : 11 MAR 17 08:24  
 Report Created on: 14-MAR-17 09:53 Compound Sublist : all  
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/17031054.d

| RT Range     | Exp RT | DLT RT | Response    | ppm    | Compound         |
|--------------|--------|--------|-------------|--------|------------------|
| 8.625        | 8.629  | 0.004  | 3899987.00  | 45.21  | n-Octacosane     |
| 2.296- 8.852 |        |        | 31911017.62 | 398.78 | TPH as Diesel    |
| 5.445-12.452 |        |        | 12723702.59 | 159.00 | TPH as Motor Oil |

End of File

Page 1

Data File: /chem1/SV00A/GC\_45.i/170310.b/17031054.d

Date : 11-MAR-2017 08:24

Client ID:

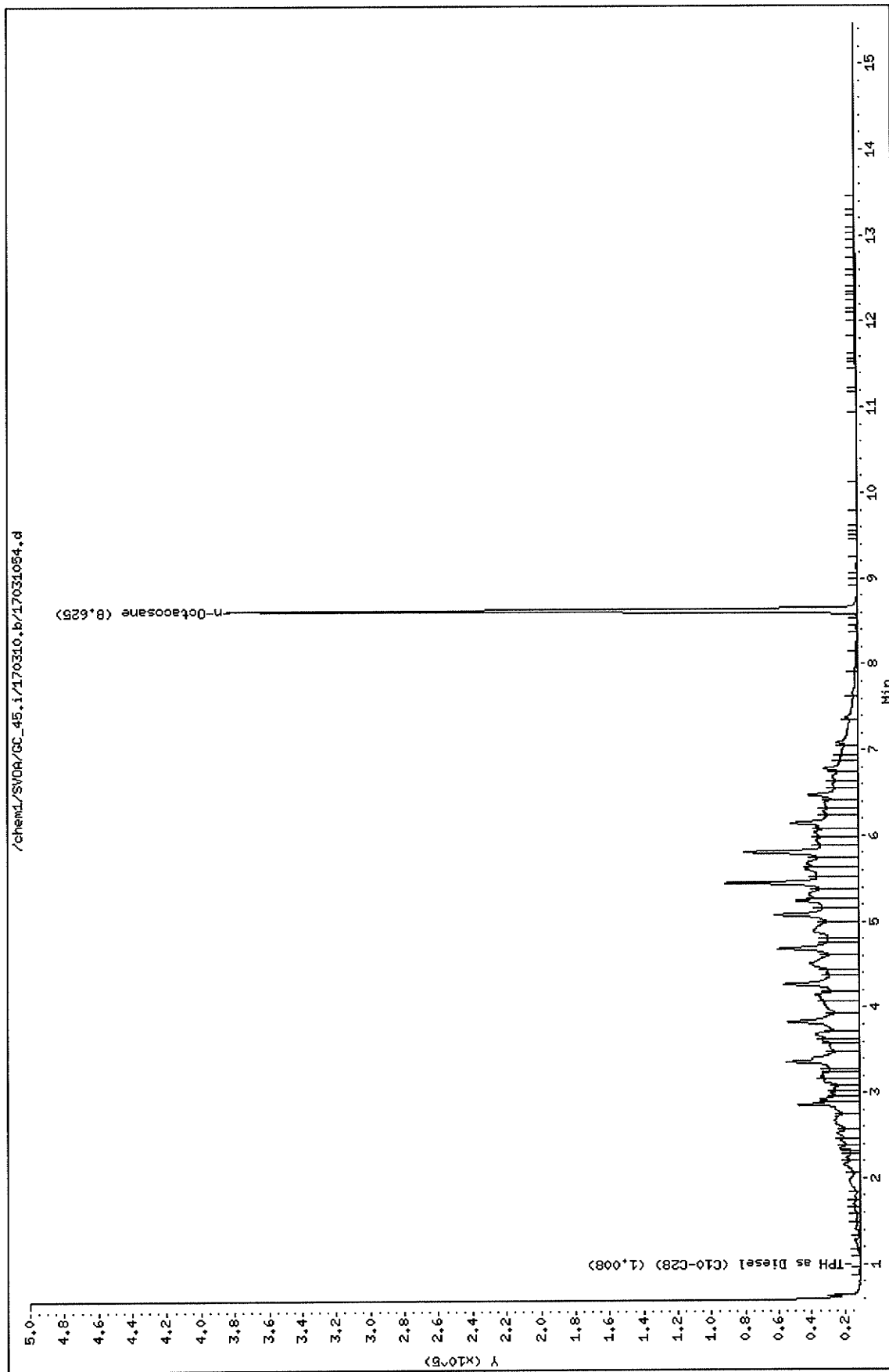
Sample Info: MSD 17-03-0590-25

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



# EPA 8015B (M) Diesel + Motor Oil

## CONTINUING CALIBRATION

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

**BATCH ID:** 170310A055  
**INSTRUMENT:** GC 45

**ANALYZED BY:** 972

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

**REVIEWED BY:** 27  
**D/T REVIEWED:** 2017-03-14 12:25

| <u>CEL</u><br><u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-------------------------------|-------------------------|---------------------|---------------------------------------------------------------|
| 30                            | Daily Calibration       | 2017-03-11 06:39    | T:\GC_45\GC_45_data\2017\170310\17031049.d\Report.txt17031049 |

**WORK ORDER:** 17-03-0590  
**MATRIX:** Soil

**REVIEWED BY:** 27  
**D/T REVIEWED:** 2017-03-14 12:27

| <u>CEL</u><br><u>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                              |
|-------------------------------|-------------------------|---------------------|---------------------------------------------------------------|
| 25                            | D-DU1-ISM1-8            | 2017-03-11 08:46    | T:\GC_45\GC_45_data\2017\170310\17031055.d\Report.txt17031055 |
| 25                            | D-DU1-ISM1-8            | 2017-03-11 08:03    | T:\GC_45\GC_45_data\2017\170310\17031053.d\Report.txt17031053 |
| 25                            | D-DU1-ISM1-8            | 2017-03-11 08:24    | T:\GC_45\GC_45_data\2017\170310\17031054.d\Report.txt17031054 |
| 26                            | D-DU1-ISM2-8            | 2017-03-11 09:08    | T:\GC_45\GC_45_data\2017\170310\17031056.d\Report.txt17031056 |
| 27                            | D-DU1-ISM3-8            | 2017-03-11 09:30    | T:\GC_45\GC_45_data\2017\170310\17031057.d\Report.txt17031057 |

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

CCV WORK ORDER: 099-14-354-30-5901

BATCH ID:

1612021007

170310A055

GC 45

INITIAL:

CCV:

INSTRUMENT:

DATA FILE:

T:\GC\_45\data\2017\170310\17031049.d\Report.txt17031049

ANALYZED BY: 972

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2016-12-02 19:43

2017-03-11 06:39

21

| 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   | 80.022 | 78.850 |        |          | 1      | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_45.i/170310.b/17031049.d  
 Report Date: 03/14/2017 09:52

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_45.i      Injection Date and Time: 11-MAR-2017 06:39  
 Sample Name: CCV D400 C28 50 L102516D      Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017  
 Sublist used: CCV\_D-DRO.sub      Initial Calibration Time(s): 12:03 13:58  
 Method used: /chem1/SVOA/GC\_45.i/170310.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 |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| TPH as Diesel         | 80021.702             | 78850.060  | 0.00        | 1              | 15              | Averaged   |
| Diesel Range Organics | 74843.538             | 74015.530  | 0.00        | 1              | 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          | 86260.794             | 78231.280  | 0.00        | 9              | 20              | Averaged   |

page 1



Data File: /chem1/SVOA/GC\_45.i/170310.b/17031049.d  
 Report Date: 13-Mar-2017 17:08

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/170310.b/17031049.d

Lab Smp Id:

Inj Date : 11-MAR-2017 06:39

Operator : 682

Inst ID: GC\_45.i

Smp Info : CCV D400 C28 50 L102516D

Misc Info :

Comment :

Method : /chem1/SVOA/GC\_45.i/170310.b/8015d.m

Meth Date : 13-Mar-2017 17:08 umd6

Quant Type: ESTD

Cal Date : 28-DEC-2016 19:01

Cal File: 16122828.d

Als bottle: 49

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 15 TPH as Diesel         | 0.626-8.852 |        |        | 31540024 | 400.000           | 394.143          |
| S 27 Diesel Range Organics | 2.296-8.852 |        |        | 29606212 | 400.000           | 395.574          |
| \$ 93 n-Octacosane         | 8.624       | 8.624  | 0.000  | 3911564  | 50.0000           | 45.345           |

Page 1

Data File: /chem1/SV00A/GC\_45.i/170310.b/17031049.d

Date : 11-MAR-2017 06:39

Client ID:

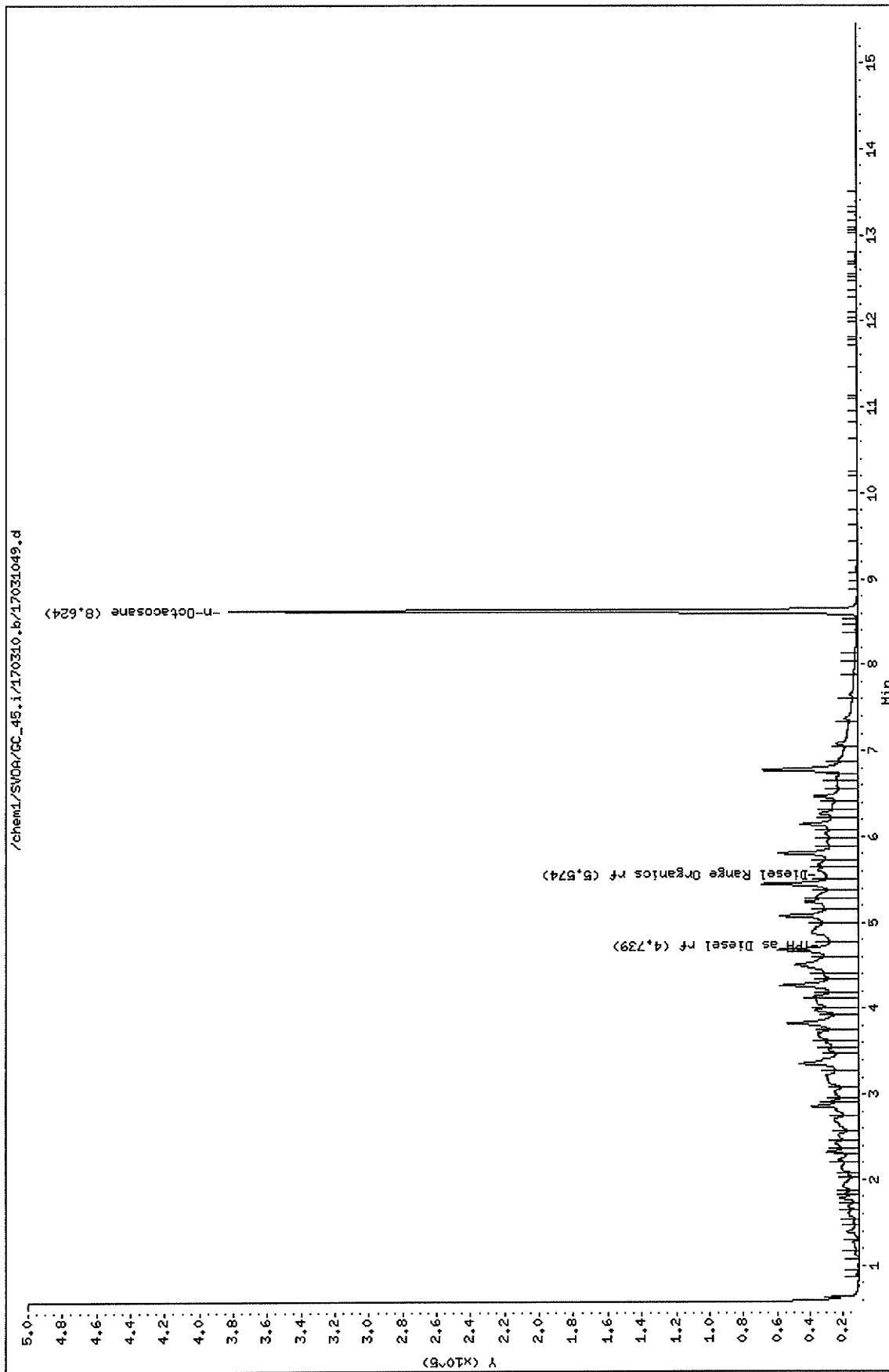
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_45.i/170310.b/17031065.d  
 Report Date: 03/14/2017 09:56

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_45.i                      Injection Date and Time: 11-MAR-2017 12:23  
 Sample Name: CCV D400 C28 50 L102516D                      Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017  
 Sublist used: CCV\_D-DRO.sub                      Initial Calibration Time(s): 12:03 13:58  
 Method used: /chem1/SVOA/GC\_45.i/170310.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 |
|-----------------------|-----------------------|------------|-------------|----------------|-----------------|------------|
| TPH as Diesel         | 80021.702             | 81069.435  | 0.00        | -1             | 15              | Averaged   |
| Diesel Range Organics | 74843.538             | 76136.095  | 0.00        | -2             | 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          | 86260.794             | 76866.300  | 0.00        | 11             | 20              | Averaged   |

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Data File: /chem1/SVOA/GC\_45.i/170310.b/17031065.d  
 Report Date: 13-Mar-2017 17:44

Page 1

## Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC\_45.i/170310.b/17031065.d  
 Lab Smp Id:  
 Inj Date : 11-MAR-2017 12:23  
 Operator : 682  
 Smp Info : CCV D400 C28 50 L102516D  
 Misc Info :  
 Comment :  
 Method : /chem1/SVOA/GC\_45.i/170310.b/8015d.m  
 Meth Date : 13-Mar-2017 17:44 umd6  
 Cal Date : 28-DEC-2016 19:01  
 Als bottle: 65  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_45.i  
 Quant Type: ESTD  
 Cal File: 16122828.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 15 TPH as Diesel         | 0.626 | 8.852  |        | 32427774 | 400.000           | 405.237          |
| S 27 Diesel Range Organics | 2.296 | 8.852  |        | 30454438 | 400.000           | 406.908          |
| S 93 n-Octacosane          | 8.626 | 8.626  | 0.000  | 3843315  | 50.0000           | 44.554           |

Page 1

Data File: /chem1/SV00A/GC\_45.i/170310.b/17031065.d

Date : 11-MAR-2017 12:23

Client ID:

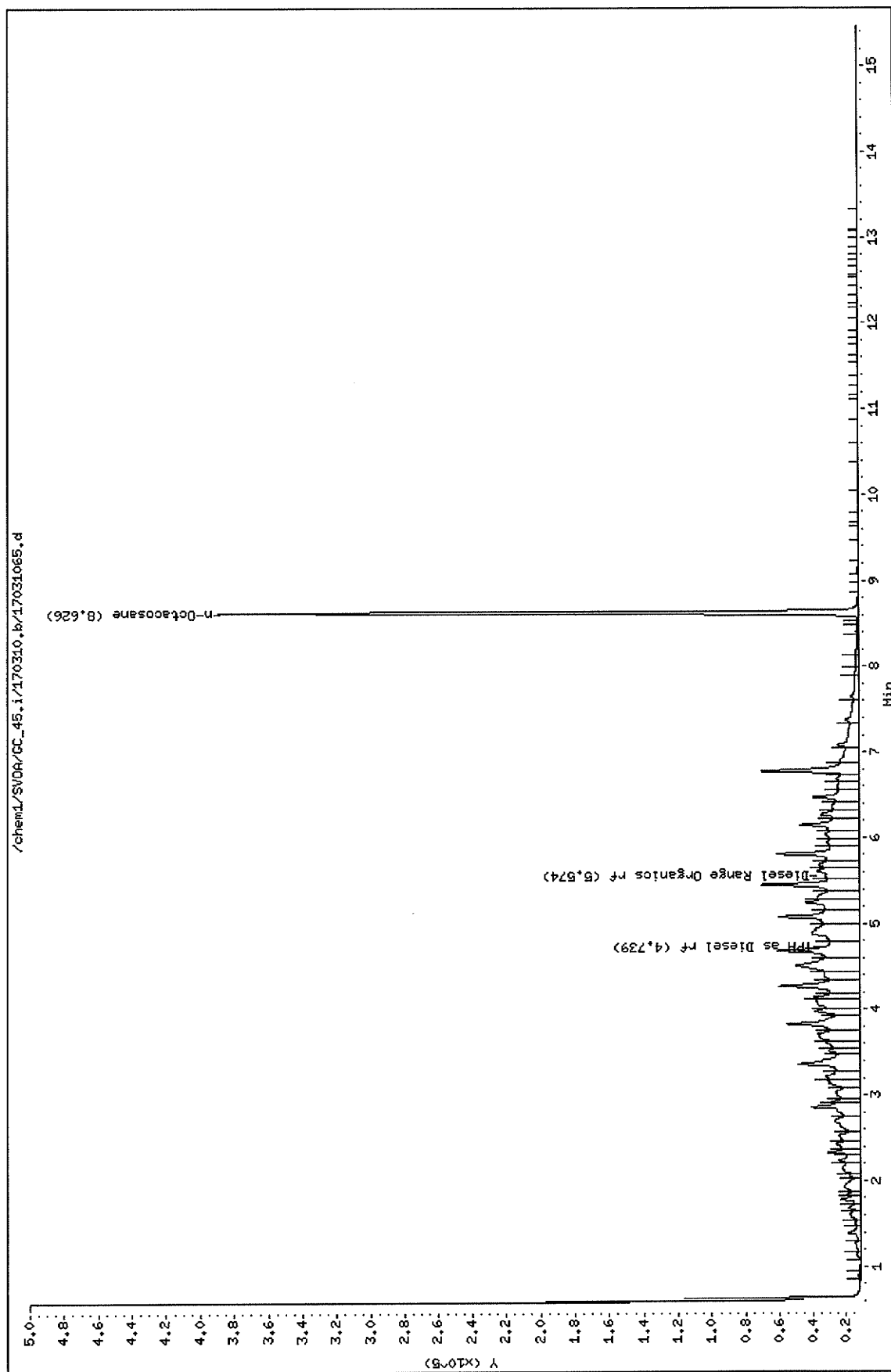
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report

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Data File Name : /chem1/SVOA/GC\_45/170310/1703100201.d  
 Page Number :  
 Operator : 682 Vial Number : Vial 2  
 Instrument : GC 45 Injection Number : 2  
 Sample Name : C6-C44 L110816A Sequence Line : 0  
 Instrument Method: 8015d.m

Acquired on : 11 MAR 17 01:42  
 Report Created on: 13-MAR-17 13:03  
 Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC\_45.i/170310.b/1703100201.d

| RT Range | Exp RT | DLT RT | Response   | ppm   | Compound              |
|----------|--------|--------|------------|-------|-----------------------|
| 0.626    | 8.629  | 8.003  | 115198.00  | 0.00  | C6-Hexane             |
| 0.780    | 8.629  | 7.849  | 292223.00  | 0.00  | C7-Heptane            |
| 1.192    | 8.629  | 7.438  | 826805.00  | 0.00  | C8-Octane             |
| 1.725    | 8.629  | 6.905  | 1232265.00 | 0.00  | C9-Nonane             |
| 2.296    | 8.629  | 6.333  | 1446020.00 | 0.00  | C10-Decane            |
| 2.839    | 8.629  | 5.791  | 1434692.00 | 0.00  | C11-Undecane          |
| 3.344    | 8.629  | 5.285  | 1496907.00 | 0.00  | C12-Dodecane          |
| 3.815    | 8.629  | 4.814  | 1686682.00 | 0.00  | C13-Tridecane         |
| 4.257    | 8.629  | 4.372  | 1487669.00 | 0.00  | C14-Tetradecane       |
| 4.675    | 8.629  | 3.954  | 1501700.00 | 0.00  | C15-pentadecane       |
| 5.071    | 8.629  | 3.558  | 1529463.00 | 0.00  | C16-Hexadecane        |
| 5.445    | 8.629  | 3.184  | 1520845.00 | 0.00  | C17-Heptadecane       |
| 5.801    | 8.629  | 2.828  | 1517495.00 | 0.00  | C18-Octadecane        |
| 6.139    | 8.629  | 2.490  | 1574049.00 | 0.00  | C19-Nonadecane        |
| 6.463    | 8.629  | 2.166  | 1545204.00 | 0.00  | C20-Eicosane          |
| 6.772    | 8.629  | 1.857  | 1548726.00 | 0.00  | C21-Heneicosane       |
| 7.069    | 8.629  | 1.560  | 1599436.00 | 0.00  | C22-Docosane          |
| 7.354    | 8.629  | 1.275  | 1578284.00 | 0.00  | C23-Tricosane         |
| 7.627    | 8.629  | 1.002  | 1586443.00 | 0.00  | C24-Tetracosane       |
| 7.889    | 8.629  | 0.741  | 1562453.00 | 0.00  | C25-Pentacosane       |
| 8.144    | 8.629  | 0.486  | 1641506.00 | 0.00  | C26-Hexacosane        |
| 8.387    | 8.629  | 0.242  | 1574125.00 | 0.00  | C27-Heptacosane       |
| 8.623    | 8.629  | 0.006  | 1560327.00 | 18.09 | n-Octacosane          |
| 8.852    | 8.629  | -0.222 | 1520565.00 | 0.00  | C29-Nonacosane        |
| 9.073    | 8.629  | -0.443 | 1476656.00 | 0.00  | C30-Triacontane       |
| 9.287    | 8.629  | -0.657 | 1433083.00 | 0.00  | C31-Hentriacontane    |
| 9.494    | 8.629  | -0.865 | 1361754.00 | 0.00  | C32-Dotriacontane     |
| 9.694    | 8.629  | -1.065 | 1239227.00 | 0.00  | C33-Tritriacontane    |
| 9.890    | 8.629  | -1.260 | 1043908.00 | 0.00  | C34-Tetratriacontane  |
| 10.080   | 8.629  | -1.451 | 828653.00  | 0.00  | C35-Pentatriacontane  |
| 10.263   | 8.629  | -1.634 | 665937.00  | 0.00  | C36-Hexatriacontane   |
| 10.443   | 8.629  | -1.814 | 463601.00  | 0.00  | C37-Heptatriacontane  |
| 10.626   | 8.629  | -1.996 | 337214.00  | 0.00  | C38-Octatriacontane   |
| 10.829   | 8.629  | -2.200 | 218428.00  | 0.00  | C39-Nonatriacontane   |
| 11.067   | 8.629  | -2.437 | 146851.00  | 0.00  | C40-Tetracontane      |
| 12.452   | 8.629  | -3.822 | 206503.00  | 0.00  | C44-Tetratetracontane |

End of File

Page 1

Data File: /chem1/SV0A/GC\_45.i/170310.b/1703100201.d

Date : 11-Mar-2017 01:42

Client ID:

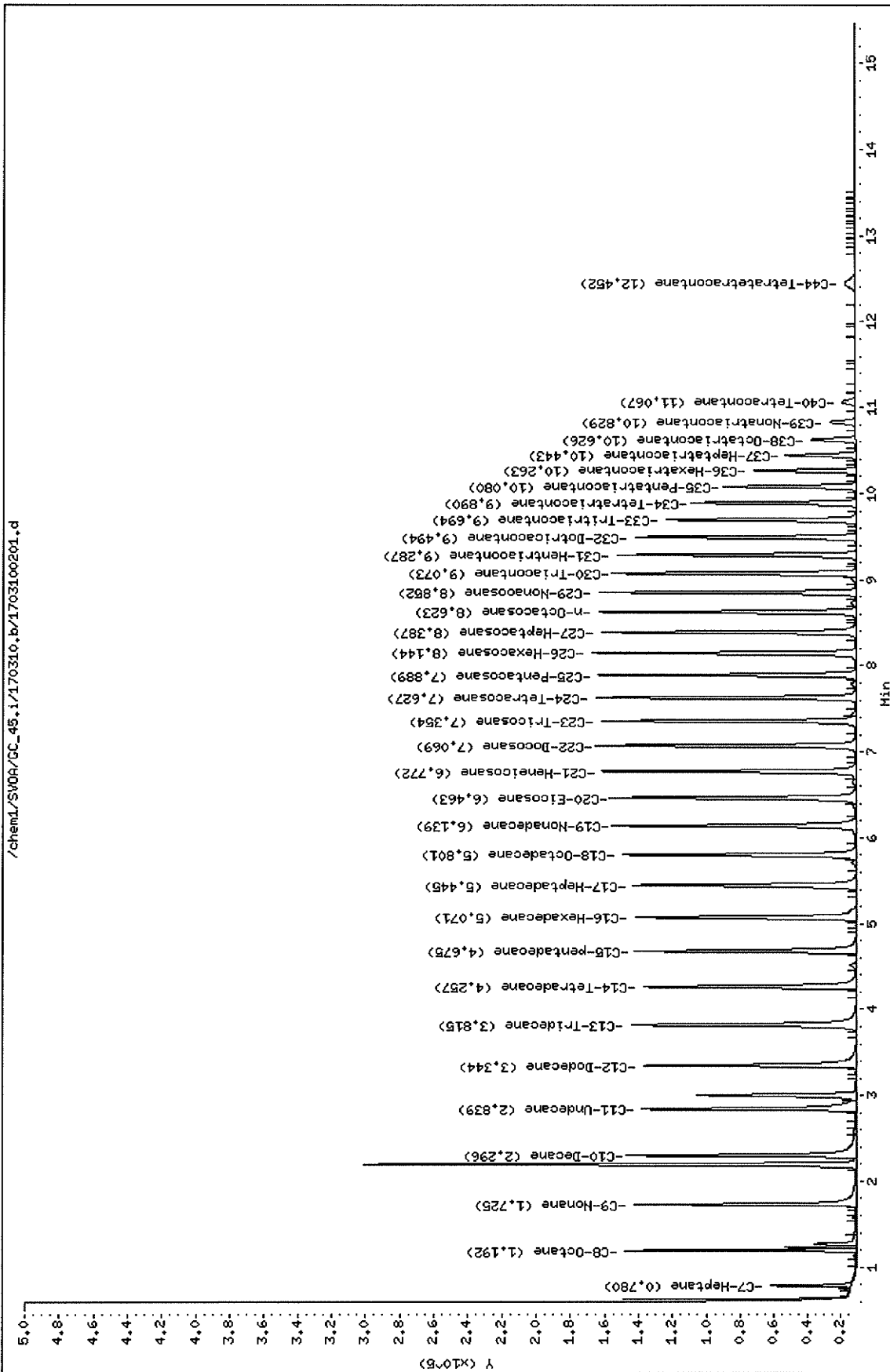
Sample Info: C6-C44 L110816A

Instrument: GC\_45.i

Operator: 682

Column diameter: 2.00

Column phase:



Return to Contents

# EPA 8015B (M)

## Diesel + Motor Oil

### RUN LOGS



| Line | Vial | File       | Name                        | Method | Acquired            |
|------|------|------------|-----------------------------|--------|---------------------|
| 1    | 1    | 16120201   | BLANK                       | 8015D  | 02-Dec-16, 17:34:02 |
| 2    | 1    | 1612020102 | BLANK                       | 8015D  | 02-Dec-16, 17:55:52 |
| 3    | 1    | 1612020103 | BLANK                       | 8015D  | 02-Dec-16, 18:17:52 |
| 4    | 2    | 16120202   | C6-C44 L110816A             | 8015D  | 02-Dec-16, 18:40:02 |
| 5    | 5    | 16120205   | CCV D400 C28 50 L102516D    | 8015D  | 02-Dec-16, 19:00:47 |
| 6    | 6    | 16120206   | CCV MO400 L090716D          | 8015D  | 02-Dec-16, 19:21:33 |
| 7    | 7    | 16120207   | ICAL D5 C28 0.625 L102516B  | 8015D  | 02-Dec-16, 19:43:29 |
| 8    | 8    | 16120208   | ICAL D200 C28 25 L102516C   | 8015D  | 02-Dec-16, 20:05:44 |
| 9    | 9    | 16120209   | ICAL D400 C28 50 L102516D   | 8015D  | 02-Dec-16, 20:27:44 |
| 10   | 10   | 16120210   | ICAL D800 C28 100 L102516E  | 8015D  | 02-Dec-16, 20:48:51 |
| 11   | 11   | 16120211   | ICAL D1600 C28 200 L102516F | 8015D  | 02-Dec-16, 21:09:46 |
| 12   | 12   | 16120212   | ICV D400 C28 50 L102516G    | 8015D  | 02-Dec-16, 21:31:10 |
| 13   | 13   | 16120213   | ICAL CO200 L111516C         | 8015D  | 02-Dec-16, 21:52:20 |
| 14   | 14   | 16120214   | ICAL CO400 L111516D         | 8015D  | 02-Dec-16, 22:14:41 |
| 15   | 15   | 16120215   | ICAL CO20 L111516B          | 8015D  | 02-Dec-16, 22:36:25 |
| 16   | 16   | 16120216   | ICAL CO600 L111516E         | 8015D  | 02-Dec-16, 22:58:04 |
| 17   | 17   | 16120217   | ICAL CO800 L111516F         | 8015D  | 02-Dec-16, 23:19:13 |
| 18   | 18   | 16120218   | ICV CO400 L111516G          | 8015D  | 02-Dec-16, 23:40:58 |
| 19   | 19   | 16120219   | ICAL GD5 L091416A           | 8015D  | 03-Dec-16, 00:02:10 |
| 20   | 20   | 16120220   | ICAL GD200 L091416B         | 8015D  | 03-Dec-16, 00:23:54 |
| 21   | 21   | 16120221   | ICAL GD400 L091416C         | 8015D  | 03-Dec-16, 00:46:08 |
| 22   | 22   | 16120222   | ICAL GD800 L091416D         | 8015D  | 03-Dec-16, 01:08:26 |
| 23   | 23   | 16120223   | ICAL GD1600 L091416E        | 8015D  | 03-Dec-16, 01:29:41 |
| 24   | 24   | 16120224   | ICV GD400 L091416F          | 8015D  | 03-Dec-16, 01:50:38 |
| 25   | 2    | 16120225   | C6-C44 L110816A             | 8015D  | 03-Dec-16, 02:11:22 |
| 26   | 26   | 16120226   | CCV D400 C28 50 L102516D    | 8015D  | 03-Dec-16, 02:32:10 |
| 27   | 27   | 16120227   | CCV GD400 L091416C          | 8015D  | 03-Dec-16, 02:53:05 |
| 28   | 28   | 16120228   | MB 16120213                 | 8015D  | 03-Dec-16, 03:13:44 |
| 29   | 29   | 16120229   | GD LCS 16120213             | 8015D  | 03-Dec-16, 03:34:30 |
| 30   | 30   | 16120230   | GDMS 16-12-0003-17          | 8015D  | 03-Dec-16, 03:55:45 |
| 31   | 31   | 16120231   | GDMSD 16-12-0003-17         | 8015D  | 03-Dec-16, 04:17:45 |
| 32   | 32   | 16120232   | 16-12-0003-13               | 8015D  | 03-Dec-16, 04:39:44 |
| 33   | 33   | 16120233   | 16-12-0003-17               | 8015D  | 03-Dec-16, 05:02:19 |
| 34   | 34   | 16120234   | 16-12-0003-21               | 8015D  | 03-Dec-16, 05:24:56 |
| 35   | 35   | 16120235   | CCV D400 C28 50 L102516D    | 8015D  | 03-Dec-16, 05:47:26 |
| 36   | 36   | 16120236   | CCV GD400 L091416C          | 8015D  | 03-Dec-16, 06:09:53 |
| 37   | 37   | 16120237   | MB 16120104                 | 8015D  | 03-Dec-16, 06:31:28 |
| 38   | 38   | 16120238   | LCS 16120104                | 8015D  | 03-Dec-16, 06:54:20 |
| 39   | 39   | 16120239   | LCSD 16120104               | 8015D  | 03-Dec-16, 07:16:51 |
| 40   | 40   | 16120240   | 16-11-2665-1                | 8015D  | 03-Dec-16, 07:39:49 |
| 41   | 41   | 16120241   | 16-11-2665-2                | 8015D  | 03-Dec-16, 08:02:28 |
| 42   | 42   | 16120242   | 16-11-2665-3                | 8015D  | 03-Dec-16, 08:23:23 |
| 43   | 43   | 16120243   | 16-11-2665-4                | 8015D  | 03-Dec-16, 08:44:14 |
| 44   | 44   | 16120244   | 16-11-2665-5                | 8015D  | 03-Dec-16, 09:05:55 |
| 45   | 45   | 16120245   | 16-11-2665-6                | 8015D  | 03-Dec-16, 09:28:11 |
| 46   | 46   | 16120246   | 16-11-2665-7                | 8015D  | 03-Dec-16, 09:49:18 |
| 47   | 47   | 16120247   | 16-11-2665-8                | 8015D  | 03-Dec-16, 10:10:09 |
| 48   | 48   | 16120248   | 16-11-2665-9                | 8015D  | 03-Dec-16, 10:32:03 |
| 49   | 49   | 16120249   | 16-11-2606-1                | 8015D  | 03-Dec-16, 10:54:08 |
| 50   | 50   | 16120250   | CCV D400 C28 50 L102516D    | 8015D  | 03-Dec-16, 11:16:34 |
| 51   | 51   | 16120251   | 16-11-2607-1                | 8015D  | 03-Dec-16, 11:38:13 |
| 52   | 52   | 16120252   | 16-11-2608-1                | 8015D  | 03-Dec-16, 11:59:20 |
| 53   | 2    | 16120253   | C6-C44 L110816A             | 8015D  | 03-Dec-16, 12:21:29 |
| 54   | 54   | 16120254   | CCV D400 C28 50 L102516D    | 8015D  | 03-Dec-16, 12:43:37 |
| 55   | 55   | 16120255   | MB 16113008                 | 8015D  | 03-Dec-16, 13:04:44 |
| 56   | 56   | 16120256   | LCS 16113008                | 8015D  | 03-Dec-16, 13:25:48 |
| 57   | 57   | 16120257   | LCSD 16113008               | 8015D  | 03-Dec-16, 13:48:06 |
| 58   | 58   | 16120258   | 16-11-2371-1                | 8015D  | 03-Dec-16, 14:10:26 |
| 59   | 59   | 16120259   | 16-11-2371-2                | 8015D  | 03-Dec-16, 14:33:03 |

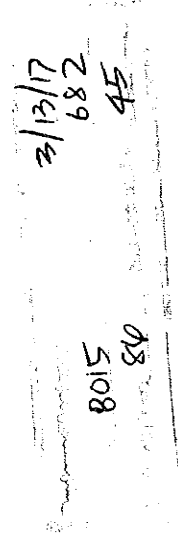
Sequence: C:\CHEM32\1\SEQUENCE\170310.S

Table: Front DataPath: W:\GC\_45\2017\170310\

| Line | Vial | File       | Name                           | Method | Acquired            |
|------|------|------------|--------------------------------|--------|---------------------|
| 1    | 1    | 17031001   | BLANK                          | 8015D  | 10-Mar-17, 13:03:15 |
| 2    | 2    | 17031002   | C6-C44 L110816A                | 8015D  | 10-Mar-17, 13:24:10 |
| 3    | 3    | 17031003   | CCV D400 C28 50 L102516D A051  | 8015D  | 10-Mar-17, 13:45:04 |
| 4    | 4    | 17031004   | CCV GD400 L091416C             | 8015D  | 10-Mar-17, 14:05:59 |
| 5    | 5    | 17031005   | MB 17030809                    | 8015D  | 10-Mar-17, 14:37:15 |
| 6    | 6    | 17031006   | GDLCS 17030809                 | 8015D  | 10-Mar-17, 14:58:44 |
| 7    | 7    | 17031007   | GDMS 17-03-0414-14             | 8015D  | 10-Mar-17, 15:20:10 |
| 8    | 8    | 17031008   | GDMSD 17-03-0414-14            | 8015D  | 10-Mar-17, 15:41:07 |
| 9    | 9    | 17031009   | 17-03-0414-2                   | 8015D  | 10-Mar-17, 16:03:08 |
| 10   | 10   | 17031010   | 17-03-0414-4 5X                | 8015D  | 10-Mar-17, 16:24:29 |
| 11   | 11   | 17031011   | 17-03-0414-8                   | 8015D  | 10-Mar-17, 16:45:25 |
| 12   | 12   | 17031012   | 17-03-0414-12                  | 8015D  | 10-Mar-17, 17:06:58 |
| 13   | 13   | 17031013   | 17-03-0414-14                  | 8015D  | 10-Mar-17, 17:28:47 |
| 14   | 14   | 17031014   | 17-03-0414-18                  | 8015D  | 10-Mar-17, 17:49:47 |
| 15   | 15   | 17031015   | CCV D400 C28 50 L102516D A052  | 8015D  | 10-Mar-17, 18:10:43 |
| 16   | 16   | 17031016   | CCV GD400 L091416C             | 8015D  | 10-Mar-17, 18:32:55 |
| 17   | 17   | 17031017   | MB 17030209                    | 8015D  | 10-Mar-17, 18:54:15 |
| 18   | 18   | 17031018   | LCS 17030209                   | 8015D  | 10-Mar-17, 19:15:09 |
| 19   | 19   | 17031019   | LCSD 17030209                  | 8015D  | 10-Mar-17, 19:36:44 |
| 20   | 20   | 17031020   | 17-03-0018-1                   | 8015D  | 10-Mar-17, 19:58:35 |
| 21   | 21   | 17031021   | 17-03-0018-2                   | 8015D  | 10-Mar-17, 20:19:39 |
| 22   | 22   | 17031022   | 17-03-0018-3 @ 15              | 8015D  | 10-Mar-17, 20:40:40 |
| 23   | 23   | 17031023   | 17-03-0018-4                   | 8015D  | 10-Mar-17, 21:02:53 |
| 24   | 24   | 17031024   | 17-03-0018-5                   | 8015D  | 10-Mar-17, 21:24:01 |
| 25   | 25   | 17031025   | 17-03-0018-6                   | 8015D  | 10-Mar-17, 21:44:59 |
| 26   | 26   | 17031026   | 17-03-0018-7                   | 8015D  | 10-Mar-17, 22:06:20 |
| 27   | 27   | 17031027   | 17-03-0018-8 @ wrong vial      | 8015D  | 10-Mar-17, 22:28:25 |
| 28   | 28   | 17031028   | 17-03-0018-9                   | 8015D  | 10-Mar-17, 22:49:30 |
| 29   | 29   | 17031029   | 17-03-0018-10                  | 8015D  | 10-Mar-17, 23:10:53 |
| 30   | 30   | 17031030   | CCV D400 C28 50 L102516D A053  | 8015D  | 10-Mar-17, 23:32:12 |
| 31   | 31   | 17031031   | 17-03-0018-11                  | 8015D  | 10-Mar-17, 23:54:08 |
| 32   | 32   | 17031032   | 17-03-0018-12                  | 8015D  | 11-Mar-17, 00:16:17 |
| 33   | 33   | 17031033   | 17-03-0018-13                  | 8015D  | 11-Mar-17, 00:38:36 |
| 34   | 34   | 17031034   | 17-03-0018-14                  | 8015D  | 11-Mar-17, 00:59:45 |
| 35   | 35   | 17031035   | TEST BLANK                     | 8015D  | 11-Mar-17, 01:20:40 |
| 36   | 2    | 1703100201 | C6-C44 L110816A                | 8015D  | 11-Mar-17, 01:42:00 |
| 37   | 36   | 17031036   | CCV D400 C28 50 L102516D A054  | 8015D  | 11-Mar-17, 02:03:56 |
| 38   | 37   | 17031037   | CCV MO400 L030317D             | 8015D  | 11-Mar-17, 02:24:57 |
| 39   | 38   | 17031038   | MB 17030909/10 @ contamination | 8015D  | 11-Mar-17, 02:45:53 |
| 40   | 39   | 17031039   | LCS 17030909/10                | 8015D  | 11-Mar-17, 03:07:25 |
| 41   | 40   | 17031040   | LCSD 17030909/10               | 8015D  | 11-Mar-17, 03:29:27 |
| 42   | 41   | 17031041   | 17-03-0630-2                   | 8015D  | 11-Mar-17, 03:50:59 |
| 43   | 42   | 17031042   | 17-03-0630-3                   | 8015D  | 11-Mar-17, 04:11:58 |
| 44   | 43   | 17031043   | 17-03-0583-1                   | 8015D  | 11-Mar-17, 04:32:59 |
| 45   | 44   | 17031044   | 17-03-0583-2                   | 8015D  | 11-Mar-17, 04:54:02 |
| 46   | 45   | 17031045   | 17-03-0583-3                   | 8015D  | 11-Mar-17, 05:15:12 |
| 47   | 46   | 17031046   | 17-03-0583-4                   | 8015D  | 11-Mar-17, 05:36:14 |
| 48   | 47   | 17031047   | 17-03-0638-1                   | 8015D  | 11-Mar-17, 05:57:13 |
| 49   | 48   | 17031048   | 17-03-0738-1                   | 8015D  | 11-Mar-17, 06:18:08 |
| 50   | 49   | 17031049   | CCV D400 C28 50 L102516D A055  | 8015D  | 11-Mar-17, 06:39:08 |
| 51   | 50   | 17031050   | CCV MO400 L030317D             | 8015D  | 11-Mar-17, 07:00:28 |
| 52   | 51   | 17031051   | MB 17030912                    | 8015D  | 11-Mar-17, 07:21:44 |
| 53   | 52   | 17031052   | LCS 17030912                   | 8015D  | 11-Mar-17, 07:42:49 |
| 54   | 53   | 17031053   | MS 17-03-0590-25               | 8015D  | 11-Mar-17, 08:03:45 |
| 55   | 54   | 17031054   | MSD 17-03-0590-25              | 8015D  | 11-Mar-17, 08:24:50 |
| 56   | 55   | 17031055   | 17-03-0590-25                  | 8015D  | 11-Mar-17, 08:46:08 |
| 57   | 56   | 17031056   | 17-03-0590-26                  | 8015D  | 11-Mar-17, 09:08:01 |
| 58   | 57   | 17031057   | 17-03-0590-27                  | 8015D  | 11-Mar-17, 09:30:19 |
| 59   | 58   | 17031058   | 17-03-0641-26                  | 8015D  | 11-Mar-17, 09:52:21 |
| 60   | 59   | 17031059   | 17-03-0641-27                  | 8015D  | 11-Mar-17, 10:13:42 |

Reassigned/Assign to Logbook Entry: 3/13/17  
 Analyst: 8015  
 Instrument ID: 45  
 Logbook Page: 85

|    |    |          |                               |       |                     |
|----|----|----------|-------------------------------|-------|---------------------|
| 61 | 60 | 17031060 | 17-03-0641-28                 | 8015D | 11-Mar-17, 10:35:00 |
| 62 | 61 | 17031061 | 17-03-0641-29                 | 8015D | 11-Mar-17, 10:56:04 |
| 63 | 62 | 17031062 | 17-03-0642-26                 | 8015D | 11-Mar-17, 11:17:26 |
| 64 | 63 | 17031063 | 17-03-0642-27                 | 8015D | 11-Mar-17, 11:38:58 |
| 65 | 64 | 17031064 | 17-03-0642-28                 | 8015D | 11-Mar-17, 12:01:15 |
| 66 | 65 | 17031065 | CCV D400 C28 50 L102516D A056 | 8015D | 11-Mar-17, 12:23:33 |
| 67 | 66 | 17031066 | 17-03-0642-29                 | 8015D | 11-Mar-17, 12:44:48 |
| 68 | 67 | 17031067 | 17-03-0643-26                 | 8015D | 11-Mar-17, 13:05:59 |
| 69 | 68 | 17031068 | 17-03-0643-27                 | 8015D | 11-Mar-17, 13:27:20 |
| 70 | 69 | 17031069 | 17-03-0643-28                 | 8015D | 11-Mar-17, 13:49:28 |
| 71 | 70 | 17031070 | 17-03-0643-29                 | 8015D | 11-Mar-17, 14:11:50 |
| 72 | 71 | 17031071 | CCV D400 C28 50 L102516D      | 8015D | 11-Mar-17, 14:33:28 |



# EPA 8015B (M)

## Diesel + Motor Oil

### PREPARATION LOGS

Revision Date: 10/24/16

# EPA 6010B ICP Metals (Solid)

## RAW DATA

# EPA 6010B ICP Metals (Solid)

## Initial Calibration

ICV/ICB  
CCV/CCB  
ICSA/B

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte Name | Initial Calibration Verification |          |    |         |         |
|--------------|----------------------------------|----------|----|---------|---------|
|              | True                             | ICV-1    |    | Control | Comment |
|              |                                  | Observed | %D | Limit   |         |
| Silver       | 0.500000                         | 0.507193 | -1 | +/-10   |         |
| Arsenic      | 5.000000                         | 4.769165 | 5  | +/-10   |         |
| Barium       | 1.000000                         | 0.999533 | 0  | +/-10   |         |
| Beryllium    | 0.500000                         | 0.487585 | 2  | +/-10   |         |
| Cadmium      | 1.500000                         | 1.546304 | -3 | +/-10   |         |
| Cobalt       | 1.000000                         | 1.065456 | -7 | +/-10   |         |
| Chromium     | 0.400000                         | 0.408967 | -2 | +/-10   |         |
| Copper       | 1.000000                         | 1.025621 | -3 | +/-10   |         |
| Molybdenum   | 2.500000                         | 2.383715 | 5  | +/-10   |         |
| Nickel       | 0.400000                         | 0.418948 | -5 | +/-10   |         |
| Lead         | 5.000000                         | 5.205077 | -4 | +/-10   |         |
| Antimony     | 2.000000                         | 1.901992 | 5  | +/-10   |         |
| Selenium     | 2.000000                         | 1.906362 | 5  | +/-10   |         |
| Thallium     | 2.000000                         | 1.924998 | 4  | +/-10   |         |
| Vanadium     | 1.000000                         | 1.015628 | -2 | +/-10   |         |
| Zinc         | 1.500000                         | 1.566558 | -4 | +/-10   |         |

Report Time: 3/21/2017 9:16:16 AM

ICV-1 File: ICV-M072816C

Analysis Time: 3/20/2017 10:11:01 AM

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

01/22/2014 Revision



Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Initial Calibration Blank |           |          |         |
|---------------------------|-----------|----------|---------|
| Analyte                   | ICB-1     | RL       | Comment |
| Silver                    | 0.000798  | 0.005000 |         |
| Arsenic                   | -0.003019 | 0.010000 |         |
| Barium                    | 0.000088  | 0.010000 |         |
| Beryllium                 | 0.000092  | 0.010000 |         |
| Cadmium                   | 0.000101  | 0.010000 |         |
| Cobalt                    | 0.000280  | 0.010000 |         |
| Chromium                  | 0.000640  | 0.010000 |         |
| Copper                    | -0.000199 | 0.010000 |         |
| Molybdenum                | 0.002407  | 0.010000 |         |
| Nickel                    | -0.000098 | 0.010000 |         |
| Lead                      | -0.001893 | 0.010000 |         |
| Antimony                  | 0.000573  | 0.015000 |         |
| Selenium                  | 0.001457  | 0.015000 |         |
| Thallium                  | 0.011152  | 0.015000 |         |
| Vanadium                  | -0.000357 | 0.010000 |         |
| Zinc                      | -0.001724 | 0.010000 |         |

Report Time: 3/21/2017 9:16:16 AM

ICB-1 File: ICB-R12091601

Analysis Time: 3/20/2017 10:11:58 AM

01/22/2014 Revision



Work Order No: 17-03-0590

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     | -0.000369          | 0.005000      | 0.300000 | 0.311146 | -4 | +/-20         |         |
| Arsenic    | 0.005414           | 0.010000      | 1.000000 | 0.990938 | 1  | +/-20         |         |
| Barium     | 0.002865           | 0.010000      | 0.300000 | 0.299460 | 0  | +/-20         |         |
| Beryllium  | -0.000122          | 0.010000      | 0.100000 | 0.101754 | -2 | +/-20         |         |
| Cadmium    | 0.001829           | 0.010000      | 0.300000 | 0.303771 | -1 | +/-20         |         |
| Cobalt     | 0.001128           | 0.010000      | 0.300000 | 0.309671 | -3 | +/-20         |         |
| Chromium   | -0.000546          | 0.010000      | 0.300000 | 0.306295 | -2 | +/-20         |         |
| Copper     | 0.002198           | 0.010000      | 0.300000 | 0.315768 | -5 | +/-20         |         |
| Molybdenum | 0.000461           | 0.010000      | 0.300000 | 0.291059 | 3  | +/-20         |         |
| Nickel     | 0.000180           | 0.010000      | 0.300000 | 0.311197 | -4 | +/-20         |         |
| Lead       | -0.007802          | 0.010000      | 1.000000 | 1.005781 | -1 | +/-20         |         |
| Antimony   | -0.011962          | 0.015000      | 1.000000 | 0.940184 | 6  | +/-20         |         |
| Selenium   | -0.004081          | 0.015000      | 0.500000 | 0.495416 | 1  | +/-20         |         |
| Thallium   | -0.001133          | 0.015000      | 1.000000 | 0.986393 | 1  | +/-20         |         |
| Vanadium   | 0.001677           | 0.010000      | 0.300000 | 0.303227 | -1 | +/-20         |         |
| Zinc       | 0.003566           | 0.010000      | 0.300000 | 0.310764 | -4 | +/-20         |         |

Report Time: 3/21/2017 9:16:16 AM

ICS-A-1 File: ICS\_A - M110116B      Analysis Time: 3/20/2017 10:14:33 AM  
ICS-AB-1 File: ICS\_AB - M110116A      Analysis Time: 3/20/2017 10:15:24 AM

01/22/2014 Revision

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte Name | Initial Calibration Verification |          |    |               |         |
|--------------|----------------------------------|----------|----|---------------|---------|
|              | True                             | ICV-2    |    | Control Limit | Comment |
|              |                                  | Observed | %D |               |         |
| Silver       | 0.500000                         | 0.502252 | 0  | +/-10         |         |
| Arsenic      | 5.000000                         | 4.995696 | 0  | +/-10         |         |
| Barium       | 1.000000                         | 1.031920 | -3 | +/-10         |         |
| Beryllium    | 0.500000                         | 0.518831 | -4 | +/-10         |         |
| Cadmium      | 1.500000                         | 1.507281 | 0  | +/-10         |         |
| Cobalt       | 1.000000                         | 1.037660 | -4 | +/-10         |         |
| Chromium     | 0.400000                         | 0.401154 | 0  | +/-10         |         |
| Copper       | 1.000000                         | 1.012308 | -1 | +/-10         |         |
| Molybdenum   | 2.500000                         | 2.479921 | 1  | +/-10         |         |
| Nickel       | 0.400000                         | 0.409503 | -2 | +/-10         |         |
| Lead         | 5.000000                         | 5.118256 | -2 | +/-10         |         |
| Antimony     | 2.000000                         | 1.982458 | 1  | +/-10         |         |
| Selenium     | 2.000000                         | 1.999486 | 0  | +/-10         |         |
| Thallium     | 2.000000                         | 2.007820 | 0  | +/-10         |         |
| Vanadium     | 1.000000                         | 0.995452 | 0  | +/-10         |         |
| Zinc         | 1.500000                         | 1.531690 | -2 | +/-10         |         |

Report Time: 3/21/2017 9:16:16 AM

ICV-2 File: ICV-M072816C

Analysis Time: 3/20/2017 2:25:33 PM

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

01/22/2014 Revision

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Initial Calibration Blank |          |         |
|------------|---------------------------|----------|---------|
|            | ICB-2                     | RL       | Comment |
| Silver     | 0.000596                  | 0.005000 |         |
| Arsenic    | 0.001085                  | 0.010000 |         |
| Barium     | -0.000031                 | 0.010000 |         |
| Beryllium  | 0.000054                  | 0.010000 |         |
| Cadmium    | 0.000289                  | 0.010000 |         |
| Cobalt     | 0.000168                  | 0.010000 |         |
| Chromium   | 0.001398                  | 0.010000 |         |
| Copper     | -0.000667                 | 0.010000 |         |
| Molybdenum | -0.000468                 | 0.010000 |         |
| Nickel     | -0.000854                 | 0.010000 |         |
| Lead       | 0.002883                  | 0.010000 |         |
| Antimony   | 0.009094                  | 0.015000 |         |
| Selenium   | 0.004188                  | 0.015000 |         |
| Thallium   | -0.002828                 | 0.015000 |         |
| Vanadium   | 0.000074                  | 0.010000 |         |
| Zinc       | 0.001645                  | 0.010000 |         |

Report Time: 3/21/2017 9:16:16 AM

ICB-2 File: ICB-R12091601

Analysis Time: 3/20/2017 2:26:30 PM

01/22/2014 Revision

Work Order No: 17-03-0590

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                            | 0.361932 | 3  | 0.365834 | 2  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.773792 | -1 | 3.826395 | -2 | +/-10         |         |
| Barium     | 7.500000                            | 7.730295 | -3 | 7.791315 | -4 | +/-10         |         |
| Beryllium  | 0.562500                            | 0.577659 | -3 | 0.580584 | -3 | +/-10         |         |
| Cadmium    | 0.750000                            | 0.759659 | -1 | 0.764762 | -2 | +/-10         |         |
| Cobalt     | 1.875000                            | 1.911624 | -2 | 1.923164 | -3 | +/-10         |         |
| Chromium   | 0.600000                            | 0.596956 | 1  | 0.602950 | 0  | +/-10         |         |
| Copper     | 0.937500                            | 0.913673 | 3  | 0.922725 | 2  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.595268 | 1  | 0.604187 | -1 | +/-10         |         |
| Nickel     | 0.600000                            | 0.599758 | 0  | 0.604752 | -1 | +/-10         |         |
| Lead       | 3.750000                            | 3.847749 | -3 | 3.871509 | -3 | +/-10         |         |
| Antimony   | 4.500000                            | 4.470056 | 1  | 4.524202 | -1 | +/-10         |         |
| Selenium   | 1.500000                            | 1.524924 | -2 | 1.542518 | -3 | +/-10         |         |
| Thallium   | 1.500000                            | 1.520978 | -1 | 1.540376 | -3 | +/-10         |         |
| Vanadium   | 1.875000                            | 1.849408 | 1  | 1.861369 | 1  | +/-10         |         |
| Zinc       | 2.500000                            | 2.577827 | -3 | 2.573945 | -3 | +/-10         |         |

Report Time: 3/21/2017 9:16:16 AM

CCV-1 File: CCV= STD3x0.5

Analysis Time: 3/20/2017 4:51:58 PM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/20/2017 5:11:39 PM

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

01/22/2014 Revision

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |           |          |           |
|------------------------------|-----------|-----------|----------|-----------|
| Analyte                      | CCB-1     | CCB-2     | RL       | Qualifier |
| Silver                       | 0.000766  | 0.001222  | 0.005000 |           |
| Arsenic                      | -0.001891 | 0.005521  | 0.010000 |           |
| Barium                       | 0.001737  | 0.002318  | 0.010000 |           |
| Beryllium                    | 0.000118  | 0.000184  | 0.010000 |           |
| Cadmium                      | 0.000014  | 0.000134  | 0.010000 |           |
| Cobalt                       | 0.000912  | 0.000761  | 0.010000 |           |
| Chromium                     | 0.000921  | -0.000445 | 0.010000 |           |
| Copper                       | -0.001663 | -0.001972 | 0.010000 |           |
| Molybdenum                   | 0.000477  | 0.000851  | 0.010000 |           |
| Nickel                       | 0.000208  | 0.000165  | 0.010000 |           |
| Lead                         | 0.001475  | -0.000480 | 0.010000 |           |
| Antimony                     | 0.007448  | 0.008346  | 0.015000 |           |
| Selenium                     | 0.010424  | 0.006791  | 0.015000 |           |
| Thallium                     | -0.000544 | -0.006504 | 0.015000 |           |
| Vanadium                     | -0.000674 | -0.000167 | 0.010000 |           |
| Zinc                         | -0.002649 | -0.002759 | 0.010000 |           |

Report Time: 3/21/2017 9:16:16 AM

CCB-1 File: CCB-R12091601

Analysis Time: 3/20/2017 4:52:51 PM

CCB-2 File: CCB-R12091601

Analysis Time: 3/20/2017 5:12:31 PM

01/22/2014 Revision

Work Order No: 17-03-0590

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                            | 0.364199 | 3  | 0.362112 | 3  | +/-10         |         |
| Arsenic    | 3.750000                            | 3.809620 | -2 | 3.841077 | -2 | +/-10         |         |
| Barium     | 7.500000                            | 7.744009 | -3 | 7.727838 | -3 | +/-10         |         |
| Beryllium  | 0.562500                            | 0.576495 | -2 | 0.576946 | -3 | +/-10         |         |
| Cadmium    | 0.750000                            | 0.755971 | -1 | 0.756172 | -1 | +/-10         |         |
| Cobalt     | 1.875000                            | 1.901307 | -1 | 1.900603 | -1 | +/-10         |         |
| Chromium   | 0.600000                            | 0.597547 | 0  | 0.595962 | 1  | +/-10         |         |
| Copper     | 0.937500                            | 0.917568 | 2  | 0.918214 | 2  | +/-10         |         |
| Molybdenum | 0.600000                            | 0.607123 | -1 | 0.610490 | -2 | +/-10         |         |
| Nickel     | 0.600000                            | 0.608385 | -1 | 0.612748 | -2 | +/-10         |         |
| Lead       | 3.750000                            | 3.816266 | -2 | 3.813598 | -2 | +/-10         |         |
| Antimony   | 4.500000                            | 4.528657 | -1 | 4.563130 | -1 | +/-10         |         |
| Selenium   | 1.500000                            | 1.522839 | -2 | 1.548501 | -3 | +/-10         |         |
| Thallium   | 1.500000                            | 1.524778 | -2 | 1.546261 | -3 | +/-10         |         |
| Vanadium   | 1.875000                            | 1.856578 | 1  | 1.844643 | 2  | +/-10         |         |
| Zinc       | 2.500000                            | 2.540282 | -2 | 2.534839 | -1 | +/-10         |         |

Report Time: 3/21/2017 9:16:16 AM

CCV-3 File: CCV= STD3x0.5

Analysis Time: 3/20/2017 5:22:23 PM

CCV-4 File: CCV= STD3x0.5

Analysis Time: 3/20/2017 5:32:37 PM

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

01/22/2014 Revision

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |           |          |           |
|------------------------------|-----------|-----------|----------|-----------|
| Analyte                      | CCB-3     | CCB-4     | RL       | Qualifier |
| Silver                       | 0.001069  | 0.001095  | 0.005000 |           |
| Arsenic                      | -0.006128 | -0.008417 | 0.010000 |           |
| Barium                       | 0.001612  | 0.002091  | 0.010000 |           |
| Beryllium                    | 0.000119  | 0.000143  | 0.010000 |           |
| Cadmium                      | 0.000142  | 0.000039  | 0.010000 |           |
| Cobalt                       | 0.000422  | 0.000701  | 0.010000 |           |
| Chromium                     | 0.000068  | 0.000001  | 0.010000 |           |
| Copper                       | -0.001626 | -0.002521 | 0.010000 |           |
| Molybdenum                   | 0.001053  | -0.000038 | 0.010000 |           |
| Nickel                       | -0.000006 | 0.000049  | 0.010000 |           |
| Lead                         | 0.001154  | 0.003105  | 0.010000 |           |
| Antimony                     | 0.006573  | 0.007478  | 0.015000 |           |
| Selenium                     | 0.000445  | 0.000293  | 0.015000 |           |
| Thallium                     | -0.005152 | -0.007250 | 0.015000 |           |
| Vanadium                     | -0.000503 | -0.000012 | 0.010000 |           |
| Zinc                         | -0.002675 | -0.002241 | 0.010000 |           |

Report Time: 3/21/2017 9:16:16 AM

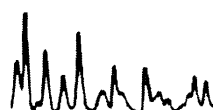
CCB-3 File: CCB-R12091601

Analysis Time: 3/20/2017 5:23:15 PM

CCB-4 File: CCB-R12091601

Analysis Time: 3/20/2017 5:33:30 PM

01/22/2014 Revision





Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Analyte    | Continuing Calibration Verification |          |    |          |    |               |         |
|------------|-------------------------------------|----------|----|----------|----|---------------|---------|
|            | True                                | CCV-5    |    |          |    | Control Limit | Comment |
|            |                                     | Observed | %D | Observed | %D |               |         |
| Silver     | 0.375000                            | 0.366451 | 2  |          |    | +/-10         |         |
| Arsenic    | 3.750000                            | 3.859270 | -3 |          |    | +/-10         |         |
| Barium     | 7.500000                            | 7.777706 | -4 |          |    | +/-10         |         |
| Beryllium  | 0.562500                            | 0.582568 | -4 |          |    | +/-10         |         |
| Cadmium    | 0.750000                            | 0.764717 | -2 |          |    | +/-10         |         |
| Cobalt     | 1.875000                            | 1.914689 | -2 |          |    | +/-10         |         |
| Chromium   | 0.600000                            | 0.600526 | 0  |          |    | +/-10         |         |
| Copper     | 0.937500                            | 0.924253 | 1  |          |    | +/-10         |         |
| Molybdenum | 0.600000                            | 0.613108 | -2 |          |    | +/-10         |         |
| Nickel     | 0.600000                            | 0.616365 | -3 |          |    | +/-10         |         |
| Lead       | 3.750000                            | 3.855622 | -3 |          |    | +/-10         |         |
| Antimony   | 4.500000                            | 4.587906 | -2 |          |    | +/-10         |         |
| Selenium   | 1.500000                            | 1.555711 | -4 |          |    | +/-10         |         |
| Thallium   | 1.500000                            | 1.546741 | -3 |          |    | +/-10         |         |
| Vanadium   | 1.875000                            | 1.865159 | 1  |          |    | +/-10         |         |
| Zinc       | 2.500000                            | 2.561951 | -2 |          |    | +/-10         |         |

Report Time: 3/21/2017 9:16:16 AM

CCV-5 File: CCV= STD3x0.5

Analysis Time: 3/20/2017 5:42:43 PM

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

01/22/2014 Revision

Work Order No: 17-03-0590

Instrument ID: ICP 7300

Concentration Unit: mg/L

| Continuing Calibration Blank |           |  |          |           |
|------------------------------|-----------|--|----------|-----------|
| Analyte                      | CCB-5     |  | RL       | Qualifier |
| Silver                       | 0.000583  |  | 0.005000 |           |
| Arsenic                      | -0.002723 |  | 0.010000 |           |
| Barium                       | 0.001789  |  | 0.010000 |           |
| Beryllium                    | 0.000118  |  | 0.010000 |           |
| Cadmium                      | -0.000077 |  | 0.010000 |           |
| Cobalt                       | 0.000665  |  | 0.010000 |           |
| Chromium                     | -0.000149 |  | 0.010000 |           |
| Copper                       | -0.001513 |  | 0.010000 |           |
| Molybdenum                   | 0.000812  |  | 0.010000 |           |
| Nickel                       | -0.000040 |  | 0.010000 |           |
| Lead                         | 0.001970  |  | 0.010000 |           |
| Antimony                     | 0.006870  |  | 0.015000 |           |
| Selenium                     | 0.005414  |  | 0.015000 |           |
| Thallium                     | -0.006366 |  | 0.015000 |           |
| Vanadium                     | -0.000417 |  | 0.010000 |           |
| Zinc                         | -0.002378 |  | 0.010000 |           |

Report Time: 3/21/2017 9:16:16 AM

CCB-5 File: CCB-R12091601

Analysis Time: 3/20/2017 5:43:36 PM

01/22/2014 Revision

=====  
Analysis Begun

Start Time: 3/20/2017 10:08:48 AM  
Logged In Analyst: Oscar Gomez 935  
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/20/2017 9:11:12 AM  
Technique: ICP Continuous  
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\  
17032001.sif

Batch ID:

Results Data Set: 170320C1

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: 3/20/2017 10:08:59 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

=====  
Mean Data: Cal blankR12091601\_935

| Analyte      | Mean Corrected<br>Intensity | Std.Dev. | RSD     | Conc.  | Calib<br>Units |
|--------------|-----------------------------|----------|---------|--------|----------------|
| Tb 384       | 77967.7                     | 643.24   | 0.83%   | 100.00 | %              |
| Tb 350       | 126426.2                    | 1641.44  | 1.30%   | 100.0  | %              |
| Ag 328.068*† | -1016.5                     | 26.40    | 2.60%   | [0.00] | mg/L           |
| Al 308.215*† | -2553.8                     | 32.92    | 1.29%   | [0.00] | mg/L           |
| As 188.979†  | 4.0                         | 8.10     | 201.72% | [0.00] | mg/L           |
| As 193.696*† | 1.9                         | 4.27     | 220.13% | [0.00] | mg/L           |
| B 249.677*†  | 370.9                       | 10.49    | 2.83%   | [0.00] | mg/L           |
| Ba 233.527*† | -305.9                      | 17.70    | 5.79%   | [0.00] | mg/L           |
| Be 313.042*† | -914.9                      | 39.48    | 4.32%   | [0.00] | mg/L           |
| Ca 317.933*† | 47.3                        | 11.67    | 24.65%  | [0.00] | mg/L           |
| Cd 226.502*† | 45.3                        | 14.32    | 31.63%  | [0.00] | mg/L           |
| Cd 228.802†  | 23.1                        | 2.85     | 12.37%  | [0.00] | mg/L           |
| Co 228.616*† | -93.0                       | 7.92     | 8.51%   | [0.00] | mg/L           |
| Cr 267.716*† | 418.7                       | 87.35    | 20.86%  | [0.00] | mg/L           |
| Cu 324.752*† | 3379.1                      | 141.21   | 4.18%   | [0.00] | mg/L           |
| Fe 273.955*† | -384.6                      | 6.59     | 1.71%   | [0.00] | mg/L           |
| K 766.490*†  | 993.7                       | 298.97   | 30.09%  | [0.00] | mg/L           |
| Mg 279.077*† | -7739.1                     | 91.89    | 1.19%   | [0.00] | mg/L           |
| Mn 257.610*† | -307.2                      | 4.08     | 1.33%   | [0.00] | mg/L           |
| Mo 202.031*† | -48.1                       | 5.85     | 12.16%  | [0.00] | mg/L           |
| Na 589.592*† | 504.1                       | 132.49   | 26.28%  | [0.00] | mg/L           |
| Ni 231.604*† | -69.4                       | 4.30     | 6.19%   | [0.00] | mg/L           |
| P 213.617*†  | -145.7                      | 27.05    | 18.57%  | [0.00] | mg/L           |
| P 214.914†   | -33.8                       | 9.05     | 26.73%  | [0.00] | mg/L           |
| Pb 220.353*† | 15.6                        | 5.93     | 38.13%  | [0.00] | mg/L           |
| Sb 206.836†  | 24.6                        | 2.66     | 10.82%  | [0.00] | mg/L           |
| Sb 217.582*† | 1.7                         | 3.48     | 202.87% | [0.00] | mg/L           |
| Se 196.026*† | 4.2                         | 6.09     | 146.66% | [0.00] | mg/L           |
| Si 251.611*† | 1355.9                      | 63.01    | 4.65%   | [0.00] | mg/L           |
| Sn 189.927*† | -96.0                       | 7.67     | 7.99%   | [0.00] | mg/L           |
| Sn 242.170†  | -402.6                      | 20.68    | 5.14%   | [0.00] | mg/L           |
| Sr 407.771*† | 153.8                       | 20.02    | 13.01%  | [0.00] | mg/L           |
| Ti 334.940†  | 28816.2                     | 95.81    | 0.33%   | [0.00] | mg/L           |
| Ti 336.121*† | -1266.7                     | 30.32    | 2.39%   | [0.00] | mg/L           |
| Tl 190.801*† | -6.5                        | 6.38     | 97.78%  | [0.00] | mg/L           |
| V 292.402*†  | 166.1                       | 37.21    | 22.40%  | [0.00] | mg/L           |
| Zn 206.200*† | 1031.2                      | 11.70    | 1.13%   | [0.00] | mg/L           |
| Zn 213.857*† | 2098.8                      | 20.60    | 0.98%   | [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: 3/20/2017 10:10:05 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: STD3-M111116A\_935\_ICP7300

| Analyte      | Mean Corrected<br>Intensity | Std.Dev. | RSD   | Conc. Units  |
|--------------|-----------------------------|----------|-------|--------------|
| Tb 384       | 66726.0                     | 225.47   | 0.34% | 85.58 %      |
| Tb 350       | 111418.3                    | 1323.73  | 1.19% | 88.13 %      |
| Ag 328.068*† | 136531.0                    | 235.87   | 0.17% | [0.75] mg/L  |
| Al 308.215*† | 458632.6                    | 603.82   | 0.13% | [27.0] mg/L  |
| As 188.979†  | 15798.6                     | 376.51   | 2.38% | [7.50] mg/L  |
| As 193.696*† | 10991.9                     | 246.41   | 2.24% | [7.50] mg/L  |
| B 249.677*†  | 345596.0                    | 5027.35  | 1.45% | [7.50] mg/L  |
| Ba 233.527*† | 2258715.7                   | 42790.12 | 1.89% | [15.0] mg/L  |
| Be 313.042*† | 4209385.1                   | 71883.33 | 1.71% | [1.125] mg/L |
| Ca 317.933*† | 117176.5                    | 2373.27  | 2.03% | [60.0] mg/L  |
| Cd 226.502*† | 110246.7                    | 110.93   | 0.10% | [1.50] mg/L  |
| Cd 228.802†  | 56324.2                     | 151.09   | 0.27% | [1.50] mg/L  |
| Co 228.616*† | 100604.9                    | 662.77   | 0.66% | [3.75] mg/L  |
| Cr 267.716*† | 130599.7                    | 224.24   | 0.17% | [1.20] mg/L  |
| Cu 324.752*† | 452629.6                    | 66.62    | 0.01% | [1.875] mg/L |
| Fe 273.955*† | 170018.1                    | 670.48   | 0.39% | [7.50] mg/L  |
| K 766.490*†  | 158982.4                    | 2584.41  | 1.63% | [54.0] mg/L  |
| Mg 279.077*† | 273567.8                    | 379.26   | 0.14% | [15.0] mg/L  |
| Mn 257.610*† | 962216.3                    | 18873.82 | 1.96% | [1.50] mg/L  |
| Mo 202.031*† | 11175.5                     | 249.52   | 2.23% | [1.20] mg/L  |
| Na 589.592*† | 307201.5                    | 5891.74  | 1.92% | [72.0] mg/L  |
| Ni 231.604*† | 27831.3                     | 177.08   | 0.64% | [1.20] mg/L  |
| P 213.617*†  | 23648.2                     | 492.77   | 2.08% | [12.0] mg/L  |
| P 214.914†   | 15020.6                     | 359.02   | 2.39% | [12.0] mg/L  |
| Pb 220.353*† | 56907.7                     | 234.52   | 0.41% | [7.50] mg/L  |
| Sb 206.836†  | 17078.1                     | 263.48   | 1.54% | [9.0] mg/L   |
| Sb 217.582*† | 16933.6                     | 301.01   | 1.78% | [9.0] mg/L   |
| Se 196.026*† | 6615.9                      | 155.71   | 2.35% | [3.0] mg/L   |
| Si 251.611*† | 448317.1                    | 2607.94  | 0.58% | [12.0] mg/L  |
| Sn 189.927*† | 36348.4                     | 749.75   | 2.06% | [6.0] mg/L   |
| Sn 242.170†  | 10542.3                     | 214.87   | 2.04% | [6.0] mg/L   |
| Sr 407.771*† | 194174.9                    | 3390.68  | 1.75% | [0.60] mg/L  |
| Ti 334.940†  | 997927.8                    | 18985.56 | 1.90% | [1.20] mg/L  |
| Ti 336.121*† | 685948.9                    | 260.32   | 0.04% | [1.20] mg/L  |
| Tl 190.801*† | 5529.9                      | 112.35   | 2.03% | [3.0] mg/L   |
| V 292.402*†  | 488145.8                    | 1498.42  | 0.31% | [3.75] mg/L  |
| Zn 206.200*† | 194478.2                    | 28.50    | 0.01% | [5.0] mg/L   |
| Zn 213.857*† | 337401.8                    | 116.45   | 0.03% | [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: 3/20/2017 10:11:01 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                                                    | 71694.7                  | 91.95 %     | 1.117           |                    |          | 1.21% |
| Tb 350                                                    | 119142.0                 | 94.24 %     | 0.812           |                    |          | 0.86% |
| Ag 328.068*†                                              | 92330.1                  | 0.5072 mg/L | 0.00486         | 0.5072 mg/L        | 0.00486  | 0.96% |
| QC value within limits for Ag 328.068* Recovery = 101.44% |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 71364.1                  | 4.201 mg/L  | 0.0612          | 4.201 mg/L         | 0.0612   | 1.46% |
| QC value within limits for Al 308.215* Recovery = 105.03% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 10046.9                  | 4.770 mg/L  | 0.0291          | 4.770 mg/L         | 0.0291   | 0.61% |
| QC value within limits for As 188.979 Recovery = 95.39%   |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 6989.6                   | 4.769 mg/L  | 0.0597          | 4.769 mg/L         | 0.0597   | 1.25% |
| QC value within limits for As 193.696* Recovery = 95.38%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 121374.4                 | 2.634 mg/L  | 0.0101          | 2.634 mg/L         | 0.0101   | 0.38% |
| QC value within limits for B 249.677* Recovery = 105.36%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 150510.7                 | 0.9995 mg/L | 0.01152         | 0.9995 mg/L        | 0.01152  | 1.15% |
| QC value within limits for Ba 233.527* Recovery = 99.95%  |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 1824385.9                | 0.4876 mg/L | 0.02117         | 0.4876 mg/L        | 0.02117  | 4.34% |
| QC value within limits for Be 313.042* Recovery = 97.52%  |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 38879.8                  | 19.91 mg/L  | 0.083           | 19.91 mg/L         | 0.083    | 0.42% |
| QC value within limits for Ca 317.933* Recovery = 99.54%  |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 113650.0                 | 1.546 mg/L  | 0.0197          | 1.546 mg/L         | 0.0197   | 1.27% |
| QC value within limits for Cd 226.502* Recovery = 103.09% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 56915.0                  | 1.516 mg/L  | 0.0123          | 1.516 mg/L         | 0.0123   | 0.81% |
| Co 228.616*†                                              | 28584.0                  | 1.065 mg/L  | 0.0180          | 1.065 mg/L         | 0.0180   | 1.69% |
| QC value within limits for Co 228.616* Recovery = 106.55% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 44509.1                  | 0.4090 mg/L | 0.00529         | 0.4090 mg/L        | 0.00529  | 1.29% |
| QC value within limits for Cr 267.716* Recovery = 102.24% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 247587.3                 | 1.026 mg/L  | 0.0110          | 1.026 mg/L         | 0.0110   | 1.07% |
| QC value within limits for Cu 324.752* Recovery = 102.56% |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 2333139.8                | 102.9 mg/L  | 3.48            | 102.9 mg/L         | 3.48     | 3.38% |
| QC value within limits for Fe 273.955* Recovery = 102.92% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 23248.5                  | 7.897 mg/L  | 0.0106          | 7.897 mg/L         | 0.0106   | 0.13% |
| QC value within limits for K 766.490* Recovery = 98.71%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 187407.2                 | 10.28 mg/L  | 0.095           | 10.28 mg/L         | 0.095    | 0.92% |
| QC value within limits for Mg 279.077* Recovery = 102.76% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 636313.5                 | 0.9919 mg/L | 0.01213         | 0.9919 mg/L        | 0.01213  | 1.22% |
| QC value within limits for Mn 257.610* Recovery = 99.19%  |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 22199.3                  | 2.384 mg/L  | 0.0145          | 2.384 mg/L         | 0.0145   | 0.61% |
| QC value within limits for Mo 202.031* Recovery = 95.35%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 236704.6                 | 55.48 mg/L  | 0.055           | 55.48 mg/L         | 0.055    | 0.10% |
| QC value within limits for Na 589.592* Recovery = 102.74% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 9716.6                   | 0.4189 mg/L | 0.00466         | 0.4189 mg/L        | 0.00466  | 1.11% |
| QC value within limits for Ni 231.604* Recovery = 104.74% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 9234.9                   | 4.686 mg/L  | 0.0585          | 4.686 mg/L         | 0.0585   | 1.25% |
| QC value within limits for P 213.617* Recovery = 93.72%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 6081.1                   | 4.858 mg/L  | 0.0462          | 4.858 mg/L         | 0.0462   | 0.95% |
| Pb 220.353*†                                              | 39494.5                  | 5.205 mg/L  | 0.0685          | 5.205 mg/L         | 0.0685   | 1.32% |
| QC value within limits for Pb 220.353* Recovery = 104.10% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 3589.9                   | 1.892 mg/L  | 0.0031          | 1.892 mg/L         | 0.0031   | 0.17% |
| QC value within limits for Sb 206.836 Recovery = 94.59%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 3578.6                   | 1.902 mg/L  | 0.0138          | 1.902 mg/L         | 0.0138   | 0.72% |
| QC value within limits for Sb 217.582* Recovery = 95.10%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 4204.1                   | 1.906 mg/L  | 0.0195          | 1.906 mg/L         | 0.0195   | 1.02% |
| QC value within limits for Se 196.026* Recovery = 95.32%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 367951.5                 | 9.849 mg/L  | 0.1082          | 9.849 mg/L         | 0.1082   | 1.10% |
| QC value within limits for Si 251.611* Recovery = 98.49%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 14780.4                  | 2.440 mg/L  | 0.0245          | 2.440 mg/L         | 0.0245   | 1.00% |
| QC value within limits for Sn 189.927* Recovery = 97.59%  |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 4797.9                   | 2.731 mg/L  | 0.0161          | 2.731 mg/L         | 0.0161   | 0.59% |
| Sr 407.771*†                                              | 65506.5                  | 0.2024 mg/L | 0.00053         | 0.2024 mg/L        | 0.00053  | 0.26% |
| QC value within limits for Sr 407.771* Recovery = 101.21% |                          |             |                 |                    |          |       |

|                                                           |           |            |        |            |        |       |
|-----------------------------------------------------------|-----------|------------|--------|------------|--------|-------|
| Tl 334.940†                                               | 3930517.6 | 4.726 mg/L | 0.1379 | 4.726 mg/L | 0.1379 | 2.92% |
| Tl 336.121*†                                              | 2791950.5 | 4.884 mg/L | 0.1408 | 4.884 mg/L | 0.1408 | 2.88% |
| QC value within limits for Tl 336.121* Recovery = 97.68%  |           |            |        |            |        |       |
| Tl 190.801*†                                              | 3548.3    | 1.925 mg/L | 0.0051 | 1.925 mg/L | 0.0051 | 0.26% |
| QC value within limits for Tl 190.801* Recovery = 96.25%  |           |            |        |            |        |       |
| V 292.402*†                                               | 132426.3  | 1.016 mg/L | 0.0107 | 1.016 mg/L | 0.0107 | 1.05% |
| QC value within limits for V 292.402* Recovery = 101.56%  |           |            |        |            |        |       |
| Zn 206.200*†                                              | 60932.3   | 1.567 mg/L | 0.0145 | 1.567 mg/L | 0.0145 | 0.93% |
| QC value within limits for Zn 206.200* Recovery = 104.44% |           |            |        |            |        |       |
| Zn 213.857*†                                              | 105856.5  | 1.560 mg/L | 0.0186 | 1.560 mg/L | 0.0186 | 1.19% |
| QC value within limits for Zn 213.857* Recovery = 104.01% |           |            |        |            |        |       |

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: 3/20/2017 10:11:58 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

| Analyte                                                                        | Mean Corrected Intensity | Calib. Conc. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD     |
|--------------------------------------------------------------------------------|--------------------------|--------------------|----------|--------------------|----------|---------|
| Tb 384                                                                         | 80115.6                  | 102.8 %            | 0.31     |                    |          | 0.31%   |
| Tb 350                                                                         | 130585.0                 | 103.3 %            | 1.36     |                    |          | 1.32%   |
| Ag 328.068*†                                                                   | 145.3                    | 0.0008 mg/L        | 0.00042  | 0.0008 mg/L        | 0.00042  | 52.95%  |
| Al 308.215*†                                                                   | 161.7                    | 0.0095 mg/L        | 0.00147  | 0.0095 mg/L        | 0.00147  | 15.45%  |
| As 188.979†                                                                    | 12.2                     | 0.0058 mg/L        | 0.00271  | 0.0058 mg/L        | 0.00271  | 46.93%  |
| As 193.696*†                                                                   | -4.4                     | -0.0030 mg/L       | 0.00566  | -0.0030 mg/L       | 0.00566  | 187.62% |
| QC value within limits for As 193.696* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| B 249.677*†                                                                    | 2799.8                   | 0.0608 mg/L        | 0.00282  | 0.0608 mg/L        | 0.00282  | 4.65%   |
| QC value greater than the upper limit for B 249.677* Recovery = Not calculated |                          |                    |          |                    |          |         |
| Ba 233.527*†                                                                   | 13.2                     | 0.0001 mg/L        | 0.00004  | 0.0001 mg/L        | 0.00004  | 50.46%  |
| Be 313.042*†                                                                   | 342.7                    | 0.0001 mg/L        | 0.00001  | 0.0001 mg/L        | 0.00001  | 10.89%  |
| Ca 317.933*†                                                                   | 4.4                      | 0.0023 mg/L        | 0.00152  | 0.0023 mg/L        | 0.00152  | 66.93%  |
| Cd 226.502*†                                                                   | 7.5                      | 0.0001 mg/L        | 0.00013  | 0.0001 mg/L        | 0.00013  | 129.73% |
| Cd 228.802†                                                                    | 11.0                     | 0.0003 mg/L        | 0.00023  | 0.0003 mg/L        | 0.00023  | 80.14%  |
| Co 228.616*†                                                                   | 7.5                      | 0.0003 mg/L        | 0.00045  | 0.0003 mg/L        | 0.00045  | 159.39% |
| Cr 267.716*†                                                                   | 69.7                     | 0.0006 mg/L        | 0.00065  | 0.0006 mg/L        | 0.00065  | 101.02% |
| Cu 324.752*†                                                                   | -48.1                    | -0.0002 mg/L       | 0.00067  | -0.0002 mg/L       | 0.00067  | 337.42% |
| Fe 273.955*†                                                                   | 676.5                    | 0.0298 mg/L        | 0.00398  | 0.0298 mg/L        | 0.00398  | 13.35%  |
| K 766.490*†                                                                    | 111.8                    | 0.0380 mg/L        | 0.08314  | 0.0380 mg/L        | 0.08314  | 218.90% |
| Mg 279.077*†                                                                   | -67.5                    | -0.0037 mg/L       | 0.01784  | -0.0037 mg/L       | 0.01784  | 482.13% |
| Mn 257.610*†                                                                   | 118.6                    | 0.0002 mg/L        | 0.00001  | 0.0002 mg/L        | 0.00001  | 4.23%   |
| Mo 202.031*†                                                                   | 22.4                     | 0.0024 mg/L        | 0.00014  | 0.0024 mg/L        | 0.00014  | 5.96%   |
| Na 589.592*†                                                                   | -7.8                     | -0.0018 mg/L       | 0.00202  | -0.0018 mg/L       | 0.00202  | 110.25% |
| Ni 231.604*†                                                                   | -2.3                     | -0.0001 mg/L       | 0.00059  | -0.0001 mg/L       | 0.00059  | 602.83% |
| P 213.617*†                                                                    | 14.6                     | 0.0074 mg/L        | 0.00102  | 0.0074 mg/L        | 0.00102  | 13.77%  |
| P 214.914†                                                                     | -8.2                     | -0.0065 mg/L       | 0.00731  | -0.0065 mg/L       | 0.00731  | 111.87% |
| Pb 220.353*†                                                                   | -14.4                    | -0.0019 mg/L       | 0.00243  | -0.0019 mg/L       | 0.00243  | 128.42% |
| QC value within limits for Pb 220.353* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| Sb 206.836†                                                                    | 8.1                      | 0.0043 mg/L        | 0.00255  | 0.0043 mg/L        | 0.00255  | 59.44%  |
| Sb 217.582*†                                                                   | 1.1                      | 0.0006 mg/L        | 0.00097  | 0.0006 mg/L        | 0.00097  | 169.49% |
| QC value within limits for Sb 217.582* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| Se 196.026*†                                                                   | 3.2                      | 0.0015 mg/L        | 0.00473  | 0.0015 mg/L        | 0.00473  | 324.48% |
| QC value within limits for Se 196.026* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| Si 251.611*†                                                                   | 245.5                    | 0.0066 mg/L        | 0.00075  | 0.0066 mg/L        | 0.00075  | 11.34%  |
| QC value within limits for Si 251.611* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| Sn 189.927*†                                                                   | 55.0                     | 0.0091 mg/L        | 0.00053  | 0.0091 mg/L        | 0.00053  | 5.87%   |
| Sn 242.170†                                                                    | 21.1                     | 0.0120 mg/L        | 0.00310  | 0.0120 mg/L        | 0.00310  | 25.78%  |
| Sr 407.771*†                                                                   | 16.9                     | 0.0001 mg/L        | 0.00001  | 0.0001 mg/L        | 0.00001  | 18.09%  |
| Ti 334.940†                                                                    | 2048.1                   | 0.0025 mg/L        | 0.00069  | 0.0025 mg/L        | 0.00069  | 28.08%  |
| Ti 336.121*†                                                                   | 1701.1                   | 0.0030 mg/L        | 0.00015  | 0.0030 mg/L        | 0.00015  | 5.19%   |
| Tl 190.801*†                                                                   | 20.6                     | 0.0112 mg/L        | 0.00263  | 0.0112 mg/L        | 0.00263  | 23.62%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated               |                          |                    |          |                    |          |         |
| V 292.402*†                                                                    | -46.4                    | -0.0004 mg/L       | 0.00003  | -0.0004 mg/L       | 0.00003  | 8.40%   |
| Zn 206.200*†                                                                   | -67.1                    | -0.0017 mg/L       | 0.00006  | -0.0017 mg/L       | 0.00006  | 3.73%   |
| Zn 213.857*†                                                                   | -133.0                   | -0.0020 mg/L       | 0.00018  | -0.0020 mg/L       | 0.00018  | 9.33%   |
| QC Failed. Retry.                                                              |                          |                    |          |                    |          |         |

Sequence No.: 5

Sample ID: ICB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 1

Date Collected: 3/20/2017 10:12:43 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

| Analyte | Mean Corrected Intensity | Calib. Conc. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD |
|---------|--------------------------|--------------------|----------|--------------------|----------|-----|
|---------|--------------------------|--------------------|----------|--------------------|----------|-----|

Sequence No.: 7

Sample ID: ICS\_A - M110116B

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 8

Date Collected: 3/20/2017 10:14:33 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS\_A - M110116B

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 68368.3                     | 87.69 %               | 0.685    |                       |          | 0.78%   |
| Tb 350       | 112746.9                    | 89.18 %               | 0.968    |                       |          | 1.09%   |
| Ag 328.068*† | -67.2                       | -0.0004 mg/L          | 0.00212  | -0.0004 mg/L          | 0.00212  | 573.85% |
| Al 308.215*† | 420773.5                    | 24.77 mg/L            | 0.177    | 24.77 mg/L            | 0.177    | 0.71%   |
| As 188.979†  | 10.9                        | 0.0052 mg/L           | 0.00234  | 0.0052 mg/L           | 0.00234  | 45.35%  |
| As 193.696*† | 7.9                         | 0.0054 mg/L           | 0.00212  | 0.0054 mg/L           | 0.00212  | 39.15%  |
| B 249.677*†  | 342.4                       | 0.0074 mg/L           | 0.00119  | 0.0074 mg/L           | 0.00119  | 15.95%  |
| Ba 233.527*† | 431.4                       | 0.0029 mg/L           | 0.00007  | 0.0029 mg/L           | 0.00007  | 2.48%   |
| Be 313.042*† | -457.2                      | -0.0001 mg/L          | 0.00002  | -0.0001 mg/L          | 0.00002  | 16.07%  |
| Ca 317.933*† | 232067.2                    | 118.8 mg/L            | 2.38     | 118.8 mg/L            | 2.38     | 2.00%   |
| Cd 226.502*† | 134.4                       | 0.0018 mg/L           | 0.00015  | 0.0018 mg/L           | 0.00015  | 8.43%   |
| Cd 228.802†  | -16.0                       | -0.0004 mg/L          | 0.00014  | -0.0004 mg/L          | 0.00014  | 32.58%  |
| Co 228.616*† | 30.3                        | 0.0011 mg/L           | 0.00023  | 0.0011 mg/L           | 0.00023  | 20.53%  |
| Cr 267.716*† | -59.5                       | -0.0005 mg/L          | 0.00026  | -0.0005 mg/L          | 0.00026  | 46.87%  |
| Cu 324.752*† | 530.5                       | 0.0022 mg/L           | 0.00062  | 0.0022 mg/L           | 0.00062  | 28.02%  |
| Fe 273.955*† | 2187654.1                   | 96.50 mg/L            | 1.610    | 96.50 mg/L            | 1.610    | 1.67%   |
| K 766.490*†  | -27.2                       | -0.0093 mg/L          | 0.05293  | -0.0093 mg/L          | 0.05293  | 571.93% |
| Mg 279.077*† | 1099261.9                   | 60.27 mg/L            | 1.283    | 60.27 mg/L            | 1.283    | 2.13%   |
| Mn 257.610*† | 71.4                        | 0.0001 mg/L           | 0.00017  | 0.0001 mg/L           | 0.00017  | 150.89% |
| Mo 202.031*† | 4.3                         | 0.0005 mg/L           | 0.00060  | 0.0005 mg/L           | 0.00060  | 130.70% |
| Na 589.592*† | 90659.6                     | 21.25 mg/L            | 0.262    | 21.25 mg/L            | 0.262    | 1.23%   |
| Ni 231.604*† | 4.2                         | 0.0002 mg/L           | 0.00050  | 0.0002 mg/L           | 0.00050  | 280.63% |
| P 213.617*†  | -291.2                      | -0.1477 mg/L          | 0.01804  | -0.1477 mg/L          | 0.01804  | 12.21%  |
| P 214.914†   | 42.2                        | 0.0337 mg/L           | 0.01493  | 0.0337 mg/L           | 0.01493  | 44.26%  |
| Pb 220.353*† | -59.2                       | -0.0078 mg/L          | 0.00062  | -0.0078 mg/L          | 0.00062  | 7.96%   |
| Sb 206.836†  | 4.4                         | 0.0023 mg/L           | 0.00782  | 0.0023 mg/L           | 0.00782  | 340.77% |
| Sb 217.582*† | -22.5                       | -0.0120 mg/L          | 0.00550  | -0.0120 mg/L          | 0.00550  | 46.00%  |
| Se 196.026*† | -9.0                        | -0.0041 mg/L          | 0.00120  | -0.0041 mg/L          | 0.00120  | 29.30%  |
| Si 251.611*† | 138.5                       | 0.0037 mg/L           | 0.00324  | 0.0037 mg/L           | 0.00324  | 87.37%  |
| Sn 189.927*† | 13.1                        | 0.0022 mg/L           | 0.00038  | 0.0022 mg/L           | 0.00038  | 17.74%  |
| Sn 242.170†  | 489.1                       | 0.2784 mg/L           | 0.00682  | 0.2784 mg/L           | 0.00682  | 2.45%   |
| Sr 407.771*† | 1073.5                      | 0.0033 mg/L           | 0.00028  | 0.0033 mg/L           | 0.00028  | 8.52%   |
| Ti 334.940†  | -1389.9                     | -0.0017 mg/L          | 0.00026  | -0.0017 mg/L          | 0.00026  | 15.48%  |
| Ti 336.121*† | -471.7                      | -0.0008 mg/L          | 0.00000  | -0.0008 mg/L          | 0.00000  | 0.33%   |
| Tl 190.801*† | -2.1                        | -0.0011 mg/L          | 0.00669  | -0.0011 mg/L          | 0.00669  | 590.60% |
| V 292.402*†  | 424.4                       | 0.0017 mg/L           | 0.00016  | 0.0017 mg/L           | 0.00016  | 9.34%   |
| Zn 206.200*† | 138.7                       | 0.0036 mg/L           | 0.00035  | 0.0036 mg/L           | 0.00035  | 9.91%   |
| Zn 213.857*† | 775.1                       | 0.0035 mg/L           | 0.00059  | 0.0035 mg/L           | 0.00059  | 16.94%  |



Sequence No.: 8

Sample ID: ICS\_AB - M110116A

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 9

Date Collected: 3/20/2017 10:15:24 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS\_AB - M110116A

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD    |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|--------|
| Tb 384       | 68304.9                     | 87.61 %               | 1.658    |                       |          | 1.89%  |
| Tb 350       | 115473.2                    | 91.34 %               | 1.435    |                       |          | 1.57%  |
| Ag 328.068*† | 56641.5                     | 0.3111 mg/L           | 0.00158  | 0.3111 mg/L           | 0.00158  | 0.51%  |
| Al 308.215*† | 417171.1                    | 24.56 mg/L            | 0.159    | 24.56 mg/L            | 0.159    | 0.65%  |
| As 188.979†  | 2093.3                      | 0.9937 mg/L           | 0.00940  | 0.9937 mg/L           | 0.00940  | 0.95%  |
| As 193.696*† | 1452.3                      | 0.9909 mg/L           | 0.00151  | 0.9909 mg/L           | 0.00151  | 0.15%  |
| B 249.677*†  | 22806.1                     | 0.4949 mg/L           | 0.00853  | 0.4949 mg/L           | 0.00853  | 1.72%  |
| Ba 233.527*† | 45093.1                     | 0.2995 mg/L           | 0.00157  | 0.2995 mg/L           | 0.00157  | 0.52%  |
| Be 313.042*† | 380732.3                    | 0.1018 mg/L           | 0.00055  | 0.1018 mg/L           | 0.00055  | 0.54%  |
| Ca 317.933*† | 231034.7                    | 118.3 mg/L            | 0.56     | 118.3 mg/L            | 0.56     | 0.47%  |
| Cd 226.502*† | 22326.5                     | 0.3038 mg/L           | 0.00135  | 0.3038 mg/L           | 0.00135  | 0.45%  |
| Cd 228.802†  | 11273.5                     | 0.3002 mg/L           | 0.00144  | 0.3002 mg/L           | 0.00144  | 0.48%  |
| Co 228.616*† | 8307.8                      | 0.3097 mg/L           | 0.00164  | 0.3097 mg/L           | 0.00164  | 0.53%  |
| Cr 267.716*† | 33335.0                     | 0.3063 mg/L           | 0.00089  | 0.3063 mg/L           | 0.00089  | 0.29%  |
| Cu 324.752*† | 76227.1                     | 0.3158 mg/L           | 0.00209  | 0.3158 mg/L           | 0.00209  | 0.66%  |
| Fe 273.955*† | 2184227.4                   | 96.35 mg/L            | 0.661    | 96.35 mg/L            | 0.661    | 0.69%  |
| K 766.490*†  | 62456.5                     | 21.21 mg/L            | 0.063    | 21.21 mg/L            | 0.063    | 0.30%  |
| Mg 279.077*† | 1091358.7                   | 59.84 mg/L            | 0.417    | 59.84 mg/L            | 0.417    | 0.70%  |
| Mn 257.610*† | 126907.7                    | 0.1978 mg/L           | 0.00147  | 0.1978 mg/L           | 0.00147  | 0.74%  |
| Mo 202.031*† | 2710.6                      | 0.2911 mg/L           | 0.00234  | 0.2911 mg/L           | 0.00234  | 0.80%  |
| Na 589.592*† | 88550.7                     | 20.75 mg/L            | 0.082    | 20.75 mg/L            | 0.082    | 0.40%  |
| Ni 231.604*† | 7217.5                      | 0.3112 mg/L           | 0.00112  | 0.3112 mg/L           | 0.00112  | 0.36%  |
| P 213.617*†  | -215.1                      | -0.1092 mg/L          | 0.01403  | -0.1092 mg/L          | 0.01403  | 12.85% |
| P 214.914†   | 38.0                        | 0.0303 mg/L           | 0.00339  | 0.0303 mg/L           | 0.00339  | 11.17% |
| Pb 220.353*† | 7631.6                      | 1.006 mg/L            | 0.0030   | 1.006 mg/L            | 0.0030   | 0.30%  |
| Sb 206.836†  | 1802.0                      | 0.9496 mg/L           | 0.00320  | 0.9496 mg/L           | 0.00320  | 0.34%  |
| Sb 217.582*† | 1769.0                      | 0.9402 mg/L           | 0.00763  | 0.9402 mg/L           | 0.00763  | 0.81%  |
| Se 196.026*† | 1092.5                      | 0.4954 mg/L           | 0.00601  | 0.4954 mg/L           | 0.00601  | 1.21%  |
| Si 251.611*† | 7744.4                      | 0.2073 mg/L           | 0.00124  | 0.2073 mg/L           | 0.00124  | 0.60%  |
| Sn 189.927*† | -27.7                       | -0.0046 mg/L          | 0.00028  | -0.0046 mg/L          | 0.00028  | 6.08%  |
| Sn 242.170†  | 453.8                       | 0.2583 mg/L           | 0.00068  | 0.2583 mg/L           | 0.00068  | 0.26%  |
| Sr 407.771*† | 782.3                       | 0.0024 mg/L           | 0.00019  | 0.0024 mg/L           | 0.00019  | 7.97%  |
| Ti 334.940†  | 810442.5                    | 0.9746 mg/L           | 0.00638  | 0.9746 mg/L           | 0.00638  | 0.65%  |
| Ti 336.121*† | 574598.3                    | 1.005 mg/L            | 0.0052   | 1.005 mg/L            | 0.0052   | 0.51%  |
| Tl 190.801*† | 1818.2                      | 0.9864 mg/L           | 0.00511  | 0.9864 mg/L           | 0.00511  | 0.52%  |
| V 292.402*†  | 39677.4                     | 0.3032 mg/L           | 0.00271  | 0.3032 mg/L           | 0.00271  | 0.89%  |
| Zn 206.200*† | 12087.4                     | 0.3108 mg/L           | 0.00119  | 0.3108 mg/L           | 0.00119  | 0.38%  |
| Zn 213.857*† | 21396.5                     | 0.3091 mg/L           | 0.00185  | 0.3091 mg/L           | 0.00185  | 0.60%  |

=====  
Analysis Begun

Start Time: 3/20/2017 2:23:20 PM  
Logged In Analyst: Oscar Gomez 935  
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/20/2017 2:17:47 PM  
Technique: ICP Continuous  
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\  
17032001.sif

Batch ID:  
Results Data Set: 170320C1  
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: 3/20/2017 2:23:32 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

=====  
Mean Data: Cal blankR12091601\_935

| Analyte      | Mean Corrected<br>Intensity | Std.Dev. | RSD     | Conc.  | Calib<br>Units |
|--------------|-----------------------------|----------|---------|--------|----------------|
| Tb 384       | 75248.3                     | 394.53   | 0.52%   | 100.0  | %              |
| Tb 350       | 123048.1                    | 456.45   | 0.37%   | 100.0  | %              |
| Ag 328.068*† | -1166.5                     | 251.99   | 21.60%  | [0.00] | mg/L           |
| Al 308.215*† | -2497.6                     | 48.31    | 1.93%   | [0.00] | mg/L           |
| As 188.979†  | 1.2                         | 6.23     | 541.56% | [0.00] | mg/L           |
| As 193.696*† | 7.9                         | 0.12     | 1.46%   | [0.00] | mg/L           |
| B 249.677*†  | 545.6                       | 83.40    | 15.29%  | [0.00] | mg/L           |
| Ba 233.527*† | 73.7                        | 1.43     | 1.94%   | [0.00] | mg/L           |
| Be 313.042*† | -409.2                      | 50.36    | 12.31%  | [0.00] | mg/L           |
| Ca 317.933*† | 66.1                        | 8.52     | 12.87%  | [0.00] | mg/L           |
| Cd 226.502*† | 41.3                        | 0.93     | 2.26%   | [0.00] | mg/L           |
| Cd 228.802†  | 12.2                        | 0.52     | 4.28%   | [0.00] | mg/L           |
| Co 228.616*† | -68.9                       | 6.05     | 8.78%   | [0.00] | mg/L           |
| Cr 267.716*† | 415.8                       | 37.35    | 8.98%   | [0.00] | mg/L           |
| Cu 324.752*† | 2496.7                      | 139.01   | 5.57%   | [0.00] | mg/L           |
| Fe 273.955*† | -320.8                      | 3.25     | 1.01%   | [0.00] | mg/L           |
| K 766.490*†  | 1297.4                      | 173.92   | 13.41%  | [0.00] | mg/L           |
| Mg 279.077*† | -7761.6                     | 152.85   | 1.97%   | [0.00] | mg/L           |
| Mn 257.610*† | -96.2                       | 48.55    | 50.47%  | [0.00] | mg/L           |
| Mo 202.031*† | -46.4                       | 8.44     | 18.18%  | [0.00] | mg/L           |
| Na 589.592*† | 966.9                       | 41.48    | 4.29%   | [0.00] | mg/L           |
| Ni 231.604*† | -52.8                       | 11.19    | 21.21%  | [0.00] | mg/L           |
| P 213.617*†  | -143.3                      | 4.40     | 3.07%   | [0.00] | mg/L           |
| P 214.914†   | -44.5                       | 4.58     | 10.30%  | [0.00] | mg/L           |
| Pb 220.353*† | -26.9                       | 13.28    | 49.44%  | [0.00] | mg/L           |
| Sb 206.836†  | 23.6                        | 0.30     | 1.27%   | [0.00] | mg/L           |
| Sb 217.582*† | -14.9                       | 8.82     | 59.23%  | [0.00] | mg/L           |
| Se 196.026*† | -1.1                        | 9.12     | 841.95% | [0.00] | mg/L           |
| Si 251.611*† | 1786.7                      | 79.26    | 4.44%   | [0.00] | mg/L           |
| Sn 189.927*† | -75.0                       | 30.99    | 41.33%  | [0.00] | mg/L           |
| Sn 242.170†  | -404.5                      | 23.06    | 5.70%   | [0.00] | mg/L           |
| Sr 407.771*† | 199.8                       | 4.11     | 2.06%   | [0.00] | mg/L           |
| Ti 334.940†  | 28179.5                     | 270.86   | 0.96%   | [0.00] | mg/L           |
| Ti 336.121*† | -847.1                      | 35.64    | 4.21%   | [0.00] | mg/L           |
| Tl 190.801*† | 5.5                         | 3.96     | 72.50%  | [0.00] | mg/L           |
| V 292.402*†  | 346.8                       | 156.37   | 45.09%  | [0.00] | mg/L           |
| Zn 206.200*† | 142.6                       | 0.98     | 0.69%   | [0.00] | mg/L           |
| Zn 213.857*† | 620.6                       | 21.07    | 3.40%   | [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: 3/20/2017 2:24:37 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: STD3-M111116A\_935\_ICP7300

| Mean Corrected |           |          |       |         | Calib |
|----------------|-----------|----------|-------|---------|-------|
| Analyte        | Intensity | Std.Dev. | RSD   | Conc.   | Units |
| Tb 384         | 66887.9   | 1220.83  | 1.83% | 88.89   | %     |
| Tb 350         | 112508.2  | 1780.16  | 1.58% | 91.43   | %     |
| Ag 328.068*†   | 134112.6  | 297.18   | 0.22% | [0.75]  | mg/L  |
| Al 308.215*†   | 444297.2  | 436.68   | 0.10% | [27.0]  | mg/L  |
| As 188.979†    | 14249.1   | 214.64   | 1.51% | [7.50]  | mg/L  |
| As 193.696*†   | 9921.0    | 177.50   | 1.79% | [7.50]  | mg/L  |
| B 249.677*†    | 344710.1  | 205.90   | 0.06% | [7.50]  | mg/L  |
| Ba 233.527*†   | 2088263.1 | 67434.02 | 3.23% | [15.0]  | mg/L  |
| Be 313.042*†   | 3861912.9 | 88910.07 | 2.30% | [1.125] | mg/L  |
| Ca 317.933*†   | 106198.2  | 765.23   | 0.72% | [60.0]  | mg/L  |
| Cd 226.502*†   | 108601.4  | 774.80   | 0.71% | [1.50]  | mg/L  |
| Cd 228.802†    | 55575.1   | 69.10    | 0.12% | [1.50]  | mg/L  |
| Co 228.616*†   | 99258.0   | 296.63   | 0.30% | [3.75]  | mg/L  |
| Cr 267.716*†   | 128245.0  | 68.28    | 0.05% | [1.20]  | mg/L  |
| Cu 324.752*†   | 440931.8  | 1921.97  | 0.44% | [1.875] | mg/L  |
| Fe 273.955*†   | 165462.1  | 170.00   | 0.10% | [7.50]  | mg/L  |
| K 766.490*†    | 146659.2  | 1635.80  | 1.12% | [54.0]  | mg/L  |
| Mg 279.077*†   | 266496.3  | 1397.61  | 0.52% | [15.0]  | mg/L  |
| Mn 257.610*†   | 885407.7  | 29749.49 | 3.36% | [1.50]  | mg/L  |
| Mo 202.031*†   | 10310.5   | 132.96   | 1.29% | [1.20]  | mg/L  |
| Na 589.592*†   | 288922.8  | 2814.96  | 0.97% | [72.0]  | mg/L  |
| Ni 231.604*†   | 26696.7   | 157.74   | 0.59% | [1.20]  | mg/L  |
| P 213.617*†    | 20660.9   | 219.21   | 1.06% | [12.0]  | mg/L  |
| P 214.914†     | 13657.5   | 204.45   | 1.50% | [12.0]  | mg/L  |
| Pb 220.353*†   | 55556.8   | 190.86   | 0.34% | [7.50]  | mg/L  |
| Sb 206.836†    | 15586.8   | 250.53   | 1.61% | [9.0]   | mg/L  |
| Sb 217.582*†   | 15545.0   | 232.24   | 1.49% | [9.0]   | mg/L  |
| Se 196.026*†   | 6029.1    | 97.71    | 1.62% | [3.0]   | mg/L  |
| Si 251.611*†   | 428066.1  | 1449.92  | 0.34% | [12.0]  | mg/L  |
| Sn 189.927*†   | 32910.2   | 493.98   | 1.50% | [6.0]   | mg/L  |
| Sn 242.170†    | 9720.3    | 134.60   | 1.38% | [6.0]   | mg/L  |
| Sr 407.771*†   | 177983.9  | 1212.13  | 0.68% | [0.60]  | mg/L  |
| Ti 334.940†    | 916747.9  | 29262.33 | 3.19% | [1.20]  | mg/L  |
| Ti 336.121*†   | 663691.0  | 512.04   | 0.08% | [1.20]  | mg/L  |
| Tl 190.801*†   | 5110.2    | 91.85    | 1.80% | [3.0]   | mg/L  |
| V 292.402*†    | 481689.0  | 788.38   | 0.16% | [3.75]  | mg/L  |
| Zn 206.200*†   | 188103.1  | 933.37   | 0.50% | [5.0]   | mg/L  |
| Zn 213.857*†   | 334438.2  | 690.30   | 0.21% | [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: 3/20/2017 2:25:33 PM

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                                                    | 69271.7                  | 92.06 %     | 1.272           |                    |          | 1.38% |
| Tb 350                                                    | 115879.4                 | 94.17 %     | 0.601           |                    |          | 0.64% |
| Ag 328.068*†                                              | 89811.0                  | 0.5023 mg/L | 0.00263         | 0.5023 mg/L        | 0.00263  | 0.52% |
| QC value within limits for Ag 328.068* Recovery = 100.45% |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 68804.9                  | 4.181 mg/L  | 0.0145          | 4.181 mg/L         | 0.0145   | 0.35% |
| QC value within limits for Al 308.215* Recovery = 104.53% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 9545.6                   | 5.024 mg/L  | 0.1530          | 5.024 mg/L         | 0.1530   | 3.04% |
| QC value within limits for As 188.979 Recovery = 100.49%  |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 6608.3                   | 4.996 mg/L  | 0.1480          | 4.996 mg/L         | 0.1480   | 2.96% |
| QC value within limits for As 193.696* Recovery = 99.91%  |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 116415.6                 | 2.533 mg/L  | 0.0409          | 2.533 mg/L         | 0.0409   | 1.61% |
| QC value within limits for B 249.677* Recovery = 101.32%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 143661.3                 | 1.032 mg/L  | 0.0054          | 1.032 mg/L         | 0.0054   | 0.52% |
| QC value within limits for Ba 233.527* Recovery = 103.19% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 1781048.4                | 0.5188 mg/L | 0.00149         | 0.5188 mg/L        | 0.00149  | 0.29% |
| QC value within limits for Be 313.042* Recovery = 103.77% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 35568.2                  | 20.10 mg/L  | 0.326           | 20.10 mg/L         | 0.326    | 1.62% |
| QC value within limits for Ca 317.933* Recovery = 100.48% |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 109128.5                 | 1.507 mg/L  | 0.0093          | 1.507 mg/L         | 0.0093   | 0.62% |
| QC value within limits for Cd 226.502* Recovery = 100.49% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 55504.5                  | 1.498 mg/L  | 0.0120          | 1.498 mg/L         | 0.0120   | 0.80% |
| Co 228.616*†                                              | 27465.6                  | 1.038 mg/L  | 0.0027          | 1.038 mg/L         | 0.0027   | 0.26% |
| QC value within limits for Co 228.616* Recovery = 103.77% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 42871.7                  | 0.4012 mg/L | 0.00179         | 0.4012 mg/L        | 0.00179  | 0.45% |
| QC value within limits for Cr 267.716* Recovery = 100.29% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 238058.1                 | 1.012 mg/L  | 0.0065          | 1.012 mg/L         | 0.0065   | 0.64% |
| QC value within limits for Cu 324.752* Recovery = 101.23% |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 2305641.8                | 104.5 mg/L  | 0.89            | 104.5 mg/L         | 0.89     | 0.85% |
| QC value within limits for Fe 273.955* Recovery = 104.51% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 22188.4                  | 8.170 mg/L  | 0.0195          | 8.170 mg/L         | 0.0195   | 0.24% |
| QC value within limits for K 766.490* Recovery = 102.12%  |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 179221.4                 | 10.09 mg/L  | 0.026           | 10.09 mg/L         | 0.026    | 0.26% |
| QC value within limits for Mg 279.077* Recovery = 100.88% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 608962.4                 | 1.032 mg/L  | 0.0037          | 1.032 mg/L         | 0.0037   | 0.36% |
| QC value within limits for Mn 257.610* Recovery = 103.17% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 21307.6                  | 2.480 mg/L  | 0.0585          | 2.480 mg/L         | 0.0585   | 2.36% |
| QC value within limits for Mo 202.031* Recovery = 99.20%  |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 227216.2                 | 56.62 mg/L  | 0.791           | 56.62 mg/L         | 0.791    | 1.40% |
| QC value within limits for Na 589.592* Recovery = 104.86% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 9110.3                   | 0.4095 mg/L | 0.01050         | 0.4095 mg/L        | 0.01050  | 2.56% |
| QC value within limits for Ni 231.604* Recovery = 102.38% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 8469.8                   | 4.919 mg/L  | 0.1399          | 4.919 mg/L         | 0.1399   | 2.84% |
| QC value within limits for P 213.617* Recovery = 98.39%   |                          |             |                 |                    |          |       |
| P 214.914†                                                | 5788.8                   | 5.086 mg/L  | 0.1703          | 5.086 mg/L         | 0.1703   | 3.35% |
| Pb 220.353*†                                              | 37913.9                  | 5.118 mg/L  | 0.0286          | 5.118 mg/L         | 0.0286   | 0.56% |
| QC value within limits for Pb 220.353* Recovery = 102.37% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 3413.2                   | 1.971 mg/L  | 0.0504          | 1.971 mg/L         | 0.0504   | 2.56% |
| QC value within limits for Sb 206.836 Recovery = 98.54%   |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 3424.1                   | 1.982 mg/L  | 0.0409          | 1.982 mg/L         | 0.0409   | 2.07% |
| QC value within limits for Sb 217.582* Recovery = 99.12%  |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 4018.3                   | 1.999 mg/L  | 0.0695          | 1.999 mg/L         | 0.0695   | 3.47% |
| QC value within limits for Se 196.026* Recovery = 99.97%  |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 348398.4                 | 9.767 mg/L  | 0.0550          | 9.767 mg/L         | 0.0550   | 0.56% |
| QC value within limits for Si 251.611* Recovery = 97.67%  |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 14062.2                  | 2.564 mg/L  | 0.0662          | 2.564 mg/L         | 0.0662   | 2.58% |
| QC value within limits for Sn 189.927* Recovery = 102.55% |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 4579.4                   | 2.827 mg/L  | 0.0700          | 2.827 mg/L         | 0.0700   | 2.48% |
| Sr 407.771*†                                              | 61300.2                  | 0.2066 mg/L | 0.00246         | 0.2066 mg/L        | 0.00246  | 1.19% |
| QC value within limits for Sr 407.771* Recovery = 103.32% |                          |             |                 |                    |          |       |

|                                                           |           |             |         |             |         |       |
|-----------------------------------------------------------|-----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 3846958.5 | 5.036 mg/L  | 0.0330  | 5.036 mg/L  | 0.0330  | 0.66% |
| Ti 336.121*†                                              | 2749498.7 | 4.971 mg/L  | 0.0307  | 4.971 mg/L  | 0.0307  | 0.62% |
| QC value within limits for Ti 336.121* Recovery = 99.43%  |           |             |         |             |         |       |
| Tl 190.801*†                                              | 3420.1    | 2.008 mg/L  | 0.0517  | 2.008 mg/L  | 0.0517  | 2.57% |
| QC value within limits for Tl 190.801* Recovery = 100.39% |           |             |         |             |         |       |
| V 292.402*†                                               | 128086.4  | 0.9955 mg/L | 0.00831 | 0.9955 mg/L | 0.00831 | 0.83% |
| QC value within limits for V 292.402* Recovery = 99.55%   |           |             |         |             |         |       |
| Zn 206.200*†                                              | 57623.1   | 1.532 mg/L  | 0.0129  | 1.532 mg/L  | 0.0129  | 0.84% |
| QC value within limits for Zn 206.200* Recovery = 102.11% |           |             |         |             |         |       |
| Zn 213.857*†                                              | 102303.8  | 1.521 mg/L  | 0.0045  | 1.521 mg/L  | 0.0045  | 0.30% |
| QC value within limits for Zn 213.857* Recovery = 101.39% |           |             |         |             |         |       |

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: 3/20/2017 2:26:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

| Analyte                                                                        | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------------------------------------------------------------------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384                                                                         | 76388.5                     | 101.5 %               | 2.40     |                       |          | 2.37%   |
| Tb 350                                                                         | 126175.4                    | 102.5 %               | 2.90     |                       |          | 2.83%   |
| Ag 328.068*†                                                                   | 106.6                       | 0.0006 mg/L           | 0.00074  | 0.0006 mg/L           | 0.00074  | 123.88% |
| Al 308.215*†                                                                   | -33.1                       | -0.0020 mg/L          | 0.00289  | -0.0020 mg/L          | 0.00289  | 143.96% |
| As 188.979†                                                                    | 3.9                         | 0.0021 mg/L           | 0.00381  | 0.0021 mg/L           | 0.00381  | 185.23% |
| As 193.696*†                                                                   | 1.4                         | 0.0011 mg/L           | 0.00001  | 0.0011 mg/L           | 0.00001  | 1.17%   |
| QC value within limits for As 193.696* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| B 249.677*†                                                                    | 2153.9                      | 0.0469 mg/L           | 0.00177  | 0.0469 mg/L           | 0.00177  | 3.77%   |
| QC value greater than the upper limit for B 249.677* Recovery = Not calculated |                             |                       |          |                       |          |         |
| Ba 233.527*†                                                                   | -4.3                        | -0.0000 mg/L          | 0.00004  | -0.0000 mg/L          | 0.00004  | 117.05% |
| Be 313.042*†                                                                   | 184.1                       | 0.0001 mg/L           | 0.00003  | 0.0001 mg/L           | 0.00003  | 53.18%  |
| Ca 317.933*†                                                                   | -10.9                       | -0.0061 mg/L          | 0.00085  | -0.0061 mg/L          | 0.00085  | 13.89%  |
| Cd 226.502*†                                                                   | 20.9                        | 0.0003 mg/L           | 0.00000  | 0.0003 mg/L           | 0.00000  | 0.53%   |
| Cd 228.802†                                                                    | 14.9                        | 0.0004 mg/L           | 0.00014  | 0.0004 mg/L           | 0.00014  | 35.05%  |
| Co 228.616*†                                                                   | 4.4                         | 0.0002 mg/L           | 0.00018  | 0.0002 mg/L           | 0.00018  | 108.98% |
| Cr 267.716*†                                                                   | 149.4                       | 0.0014 mg/L           | 0.00004  | 0.0014 mg/L           | 0.00004  | 2.83%   |
| Cu 324.752*†                                                                   | -156.9                      | -0.0007 mg/L          | 0.00001  | -0.0007 mg/L          | 0.00001  | 2.02%   |
| Fe 273.955*†                                                                   | 13.5                        | 0.0006 mg/L           | 0.00012  | 0.0006 mg/L           | 0.00012  | 18.83%  |
| K 766.490*†                                                                    | -183.9                      | -0.0677 mg/L          | 0.03017  | -0.0677 mg/L          | 0.03017  | 44.55%  |
| Mg 279.077*†                                                                   | 91.6                        | 0.0052 mg/L           | 0.00624  | 0.0052 mg/L           | 0.00624  | 121.00% |
| Mn 257.610*†                                                                   | 43.9                        | 0.0001 mg/L           | 0.00002  | 0.0001 mg/L           | 0.00002  | 29.07%  |
| Mo 202.031*†                                                                   | -4.0                        | -0.0005 mg/L          | 0.00010  | -0.0005 mg/L          | 0.00010  | 22.00%  |
| Na 589.592*†                                                                   | -106.1                      | -0.0264 mg/L          | 0.00097  | -0.0264 mg/L          | 0.00097  | 3.67%   |
| Ni 231.604*†                                                                   | -19.0                       | -0.0009 mg/L          | 0.00062  | -0.0009 mg/L          | 0.00062  | 72.07%  |
| P 213.617*†                                                                    | -19.7                       | -0.0115 mg/L          | 0.01468  | -0.0115 mg/L          | 0.01468  | 128.13% |
| P 214.914†                                                                     | 17.5                        | 0.0154 mg/L           | 0.00473  | 0.0154 mg/L           | 0.00473  | 30.67%  |
| Pb 220.353*†                                                                   | 21.4                        | 0.0029 mg/L           | 0.00247  | 0.0029 mg/L           | 0.00247  | 85.58%  |
| QC value within limits for Pb 220.353* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| Sb 206.836†                                                                    | 2.1                         | 0.0012 mg/L           | 0.01080  | 0.0012 mg/L           | 0.01080  | 894.86% |
| Sb 217.582*†                                                                   | 15.7                        | 0.0091 mg/L           | 0.00341  | 0.0091 mg/L           | 0.00341  | 37.49%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| Se 196.026*†                                                                   | 8.4                         | 0.0042 mg/L           | 0.00470  | 0.0042 mg/L           | 0.00470  | 112.32% |
| QC value within limits for Se 196.026* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| Si 251.611*†                                                                   | 190.6                       | 0.0053 mg/L           | 0.00183  | 0.0053 mg/L           | 0.00183  | 34.19%  |
| QC value within limits for Si 251.611* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| Sn 189.927*†                                                                   | 16.4                        | 0.0030 mg/L           | 0.00151  | 0.0030 mg/L           | 0.00151  | 50.29%  |
| Sn 242.170†                                                                    | 0.8                         | 0.0005 mg/L           | 0.01818  | 0.0005 mg/L           | 0.01818  | >999.9% |
| Sr 407.771*†                                                                   | -12.8                       | -0.0000 mg/L          | 0.00000  | -0.0000 mg/L          | 0.00000  | 2.38%   |
| Ti 334.940†                                                                    | 403.7                       | 0.0005 mg/L           | 0.00015  | 0.0005 mg/L           | 0.00015  | 27.64%  |
| Ti 336.121*†                                                                   | 156.7                       | 0.0003 mg/L           | 0.00028  | 0.0003 mg/L           | 0.00028  | 99.10%  |
| Tl 190.801*†                                                                   | -4.8                        | -0.0028 mg/L          | 0.00443  | -0.0028 mg/L          | 0.00443  | 156.81% |
| QC value within limits for Tl 190.801* Recovery = Not calculated               |                             |                       |          |                       |          |         |
| V 292.402*†                                                                    | 9.5                         | 0.0001 mg/L           | 0.00002  | 0.0001 mg/L           | 0.00002  | 26.18%  |
| Zn 206.200*†                                                                   | 61.9                        | 0.0016 mg/L           | 0.00019  | 0.0016 mg/L           | 0.00019  | 11.74%  |
| Zn 213.857*†                                                                   | 63.1                        | 0.0009 mg/L           | 0.00001  | 0.0009 mg/L           | 0.00001  | 1.46%   |

QC Failed. Retry.

Sequence No.: 5

Sample ID: ICB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 1

Date Collected: 3/20/2017 2:27:16 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICB-R12091601

| Analyte | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD |
|---------|-----------------------------|-----------------------|----------|-----------------------|----------|-----|
|---------|-----------------------------|-----------------------|----------|-----------------------|----------|-----|



Sequence No.: 20

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 3

Date Collected: 3/20/2017 4:51:58 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc.  | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|--------|--------------|----------|--------------------|----------|-------|
| Tb 384                                                    | 76259.4                  | 101.3  | %            | 3.49     |                    |          | 3.45% |
| Tb 350                                                    | 129618.1                 | 105.3  | %            | 3.67     |                    |          | 3.48% |
| Ag 328.068*†                                              | 64719.5                  | 0.3619 | mg/L         | 0.00229  | 0.3619 mg/L        | 0.00229  | 0.63% |
| QC value within limits for Ag 328.068* Recovery = 96.52%  |                          |        |              |          |                    |          |       |
| Al 308.215*†                                              | 220012.8                 | 13.37  | mg/L         | 0.051    | 13.37 mg/L         | 0.051    | 0.38% |
| QC value within limits for Al 308.215* Recovery = 99.04%  |                          |        |              |          |                    |          |       |
| As 188.979†                                               | 7227.9                   | 3.804  | mg/L         | 0.1001   | 3.804 mg/L         | 0.1001   | 2.63% |
| QC value within limits for As 188.979 Recovery = 101.45%  |                          |        |              |          |                    |          |       |
| As 193.696*†                                              | 4992.0                   | 3.774  | mg/L         | 0.0980   | 3.774 mg/L         | 0.0980   | 2.60% |
| QC value within limits for As 193.696* Recovery = 100.63% |                          |        |              |          |                    |          |       |
| B 249.677*†                                               | 173958.9                 | 3.785  | mg/L         | 0.0273   | 3.785 mg/L         | 0.0273   | 0.72% |
| QC value within limits for B 249.677* Recovery = 100.93%  |                          |        |              |          |                    |          |       |
| Ba 233.527*†                                              | 1076192.7                | 7.730  | mg/L         | 0.0053   | 7.730 mg/L         | 0.0053   | 0.07% |
| QC value within limits for Ba 233.527* Recovery = 103.07% |                          |        |              |          |                    |          |       |
| Be 313.042*†                                              | 1982995.5                | 0.5777 | mg/L         | 0.00696  | 0.5777 mg/L        | 0.00696  | 1.20% |
| QC value within limits for Be 313.042* Recovery = 102.69% |                          |        |              |          |                    |          |       |
| Ca 317.933*†                                              | 56112.4                  | 31.70  | mg/L         | 1.564    | 31.70 mg/L         | 1.564    | 4.93% |
| QC value within limits for Ca 317.933* Recovery = 105.67% |                          |        |              |          |                    |          |       |
| Cd 226.502*†                                              | 55000.0                  | 0.7597 | mg/L         | 0.00606  | 0.7597 mg/L        | 0.00606  | 0.80% |
| QC value within limits for Cd 226.502* Recovery = 101.29% |                          |        |              |          |                    |          |       |
| Cd 228.802†                                               | 27833.5                  | 0.7512 | mg/L         | 0.00173  | 0.7512 mg/L        | 0.00173  | 0.23% |
| Co 228.616*†                                              | 50598.4                  | 1.912  | mg/L         | 0.0086   | 1.912 mg/L         | 0.0086   | 0.45% |
| QC value within limits for Co 228.616* Recovery = 101.95% |                          |        |              |          |                    |          |       |
| Cr 267.716*†                                              | 63797.2                  | 0.5970 | mg/L         | 0.00200  | 0.5970 mg/L        | 0.00200  | 0.34% |
| QC value within limits for Cr 267.716* Recovery = 99.49%  |                          |        |              |          |                    |          |       |
| Cu 324.752*†                                              | 214862.6                 | 0.9137 | mg/L         | 0.00099  | 0.9137 mg/L        | 0.00099  | 0.11% |
| QC value within limits for Cu 324.752* Recovery = 97.46%  |                          |        |              |          |                    |          |       |
| Fe 273.955*†                                              | 83835.5                  | 3.800  | mg/L         | 0.0242   | 3.800 mg/L         | 0.0242   | 0.64% |
| QC value within limits for Fe 273.955* Recovery = 101.33% |                          |        |              |          |                    |          |       |
| K 766.490*†                                               | 73938.1                  | 27.22  | mg/L         | 1.476    | 27.22 mg/L         | 1.476    | 5.42% |
| QC value within limits for K 766.490* Recovery = 100.83%  |                          |        |              |          |                    |          |       |
| Mg 279.077*†                                              | 137734.2                 | 7.753  | mg/L         | 0.0576   | 7.753 mg/L         | 0.0576   | 0.74% |
| QC value within limits for Mg 279.077* Recovery = 103.37% |                          |        |              |          |                    |          |       |
| Mn 257.610*†                                              | 455615.8                 | 0.7719 | mg/L         | 0.00342  | 0.7719 mg/L        | 0.00342  | 0.44% |
| QC value within limits for Mn 257.610* Recovery = 102.92% |                          |        |              |          |                    |          |       |
| Mo 202.031*†                                              | 5114.6                   | 0.5953 | mg/L         | 0.02011  | 0.5953 mg/L        | 0.02011  | 3.38% |
| QC value within limits for Mo 202.031* Recovery = 99.21%  |                          |        |              |          |                    |          |       |
| Na 589.592*†                                              | 149823.7                 | 37.34  | mg/L         | 1.852    | 37.34 mg/L         | 1.852    | 4.96% |
| QC value within limits for Na 589.592* Recovery = 103.71% |                          |        |              |          |                    |          |       |
| Ni 231.604*†                                              | 13342.9                  | 0.5998 | mg/L         | 0.01858  | 0.5998 mg/L        | 0.01858  | 3.10% |
| QC value within limits for Ni 231.604* Recovery = 99.96%  |                          |        |              |          |                    |          |       |
| P 213.617*†                                               | 10478.1                  | 6.086  | mg/L         | 0.1529   | 6.086 mg/L         | 0.1529   | 2.51% |
| QC value within limits for P 213.617* Recovery = 101.43%  |                          |        |              |          |                    |          |       |
| P 214.914†                                                | 6931.6                   | 6.090  | mg/L         | 0.1551   | 6.090 mg/L         | 0.1551   | 2.55% |
| Pb 220.353*†                                              | 28502.5                  | 3.848  | mg/L         | 0.0472   | 3.848 mg/L         | 0.0472   | 1.23% |
| QC value within limits for Pb 220.353* Recovery = 102.61% |                          |        |              |          |                    |          |       |
| Sb 206.836†                                               | 7786.9                   | 4.496  | mg/L         | 0.1423   | 4.496 mg/L         | 0.1423   | 3.17% |
| QC value within limits for Sb 206.836 Recovery = 99.92%   |                          |        |              |          |                    |          |       |
| Sb 217.582*†                                              | 7720.8                   | 4.470  | mg/L         | 0.1535   | 4.470 mg/L         | 0.1535   | 3.43% |
| QC value within limits for Sb 217.582* Recovery = 99.33%  |                          |        |              |          |                    |          |       |
| Se 196.026*†                                              | 3064.6                   | 1.525  | mg/L         | 0.0304   | 1.525 mg/L         | 0.0304   | 1.99% |
| QC value within limits for Se 196.026* Recovery = 101.66% |                          |        |              |          |                    |          |       |
| Si 251.611*†                                              | 216296.4                 | 6.063  | mg/L         | 0.0252   | 6.063 mg/L         | 0.0252   | 0.42% |
| QC value within limits for Si 251.611* Recovery = 101.06% |                          |        |              |          |                    |          |       |
| Sn 189.927*†                                              | 16844.1                  | 3.071  | mg/L         | 0.0922   | 3.071 mg/L         | 0.0922   | 3.00% |
| QC value within limits for Sn 189.927* Recovery = 102.36% |                          |        |              |          |                    |          |       |
| Sn 242.170†                                               | 4869.7                   | 3.006  | mg/L         | 0.0586   | 3.006 mg/L         | 0.0586   | 1.95% |
| Sr 407.771*†                                              | 92174.2                  | 0.3107 | mg/L         | 0.01490  | 0.3107 mg/L        | 0.01490  | 4.79% |
| QC value within limits for Sr 407.771* Recovery = 103.58% |                          |        |              |          |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 463930.5 | 0.6073 mg/L | 0.00029 | 0.6073 mg/L | 0.00029 | 0.05% |
| Ti 336.121*†                                              | 329570.0 | 0.5959 mg/L | 0.00086 | 0.5959 mg/L | 0.00086 | 0.14% |
| QC value within limits for Ti 336.121* Recovery = 99.31%  |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2590.8   | 1.521 mg/L  | 0.0412  | 1.521 mg/L  | 0.0412  | 2.71% |
| QC value within limits for Tl 190.801* Recovery = 101.40% |          |             |         |             |         |       |
| V 292.402*†                                               | 237565.2 | 1.849 mg/L  | 0.0094  | 1.849 mg/L  | 0.0094  | 0.51% |
| QC value within limits for V 292.402* Recovery = 98.64%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 96979.5  | 2.578 mg/L  | 0.0356  | 2.578 mg/L  | 0.0356  | 1.38% |
| QC value within limits for Zn 206.200* Recovery = 103.11% |          |             |         |             |         |       |
| Zn 213.857*†                                              | 167849.7 | 2.509 mg/L  | 0.0228  | 2.509 mg/L  | 0.0228  | 0.91% |
| QC value within limits for Zn 213.857* Recovery = 100.36% |          |             |         |             |         |       |

All analyte(s) passed QC.



Sequence No.: 21

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/20/2017 4:52:51 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                                                           | 83719.6                  | 111.3   | %            | 0.16     |                    |          | 0.15%   |
| Tb 350                                                           | 138446.1                 | 112.5   | %            | 0.70     |                    |          | 0.62%   |
| Ag 328.068*†                                                     | 136.9                    | 0.0008  | mg/L         | 0.00028  | 0.0008 mg/L        | 0.00028  | 36.82%  |
| QC value within limits for Ag 328.068* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Al 308.215*†                                                     | 85.2                     | 0.0052  | mg/L         | 0.00673  | 0.0052 mg/L        | 0.00673  | 129.96% |
| As 188.979†                                                      | 6.0                      | 0.0032  | mg/L         | 0.00094  | 0.0032 mg/L        | 0.00094  | 29.63%  |
| As 193.696*†                                                     | -2.5                     | -0.0019 | mg/L         | 0.00296  | -0.0019 mg/L       | 0.00296  | 156.39% |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| B 249.677*†                                                      | 1411.7                   | 0.0307  | mg/L         | 0.00285  | 0.0307 mg/L        | 0.00285  | 9.27%   |
| Ba 233.527*†                                                     | 241.9                    | 0.0017  | mg/L         | 0.00001  | 0.0017 mg/L        | 0.00001  | 0.51%   |
| Be 313.042*†                                                     | 405.6                    | 0.0001  | mg/L         | 0.00002  | 0.0001 mg/L        | 0.00002  | 16.42%  |
| Ca 317.933*†                                                     | 14.2                     | 0.0080  | mg/L         | 0.00110  | 0.0080 mg/L        | 0.00110  | 13.71%  |
| Cd 226.502*†                                                     | 1.0                      | 0.0000  | mg/L         | 0.00028  | 0.0000 mg/L        | 0.00028  | >999.9% |
| Cd 228.802†                                                      | 10.0                     | 0.0003  | mg/L         | 0.00008  | 0.0003 mg/L        | 0.00008  | 29.46%  |
| Co 228.616*†                                                     | 24.1                     | 0.0009  | mg/L         | 0.00018  | 0.0009 mg/L        | 0.00018  | 19.53%  |
| Cr 267.716*†                                                     | 98.4                     | 0.0009  | mg/L         | 0.00021  | 0.0009 mg/L        | 0.00021  | 22.61%  |
| Cu 324.752*†                                                     | -391.0                   | -0.0017 | mg/L         | 0.00060  | -0.0017 mg/L       | 0.00060  | 35.86%  |
| Fe 273.955*†                                                     | 7.7                      | 0.0003  | mg/L         | 0.00059  | 0.0003 mg/L        | 0.00059  | 168.69% |
| K 766.490*†                                                      | -186.8                   | -0.0688 | mg/L         | 0.05218  | -0.0688 mg/L       | 0.05218  | 75.85%  |
| Mg 279.077*†                                                     | 436.0                    | 0.0245  | mg/L         | 0.00384  | 0.0245 mg/L        | 0.00384  | 15.64%  |
| Mn 257.610*†                                                     | 106.6                    | 0.0002  | mg/L         | 0.00008  | 0.0002 mg/L        | 0.00008  | 42.23%  |
| Mo 202.031*†                                                     | 4.1                      | 0.0005  | mg/L         | 0.00048  | 0.0005 mg/L        | 0.00048  | 100.13% |
| Na 589.592*†                                                     | 549.1                    | 0.1368  | mg/L         | 0.03380  | 0.1368 mg/L        | 0.03380  | 24.70%  |
| Ni 231.604*†                                                     | 4.6                      | 0.0002  | mg/L         | 0.00050  | 0.0002 mg/L        | 0.00050  | 238.37% |
| P 213.617*†                                                      | 25.6                     | 0.0149  | mg/L         | 0.00622  | 0.0149 mg/L        | 0.00622  | 41.81%  |
| P 214.914†                                                       | 9.4                      | 0.0083  | mg/L         | 0.00217  | 0.0083 mg/L        | 0.00217  | 26.20%  |
| Pb 220.353*†                                                     | 10.9                     | 0.0015  | mg/L         | 0.00163  | 0.0015 mg/L        | 0.00163  | 110.39% |
| Sb 206.836†                                                      | 8.1                      | 0.0047  | mg/L         | 0.00451  | 0.0047 mg/L        | 0.00451  | 96.47%  |
| Sb 217.582*†                                                     | 12.9                     | 0.0074  | mg/L         | 0.00151  | 0.0074 mg/L        | 0.00151  | 20.28%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Se 196.026*†                                                     | 20.9                     | 0.0104  | mg/L         | 0.00392  | 0.0104 mg/L        | 0.00392  | 37.60%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Si 251.611*†                                                     | -375.8                   | -0.0105 | mg/L         | 0.00230  | -0.0105 mg/L       | 0.00230  | 21.79%  |
| Sn 189.927*†                                                     | 13.2                     | 0.0024  | mg/L         | 0.00236  | 0.0024 mg/L        | 0.00236  | 97.61%  |
| Sn 242.170†                                                      | 34.7                     | 0.0214  | mg/L         | 0.00242  | 0.0214 mg/L        | 0.00242  | 11.28%  |
| Sr 407.771*†                                                     | 21.1                     | 0.0001  | mg/L         | 0.00007  | 0.0001 mg/L        | 0.00007  | 92.65%  |
| Ti 334.940†                                                      | 622.5                    | 0.0008  | mg/L         | 0.00013  | 0.0008 mg/L        | 0.00013  | 15.38%  |
| Ti 336.121*†                                                     | 248.7                    | 0.0004  | mg/L         | 0.00049  | 0.0004 mg/L        | 0.00049  | 108.91% |
| Tl 190.801*†                                                     | -0.9                     | -0.0005 | mg/L         | 0.00566  | -0.0005 mg/L       | 0.00566  | >999.9% |
| V 292.402*†                                                      | -86.5                    | -0.0007 | mg/L         | 0.00064  | -0.0007 mg/L       | 0.00064  | 95.61%  |
| Zn 206.200*†                                                     | -99.7                    | -0.0026 | mg/L         | 0.00025  | -0.0026 mg/L       | 0.00025  | 9.42%   |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                          |         |              |          |                    |          |         |
| Zn 213.857*†                                                     | -177.7                   | -0.0027 | mg/L         | 0.00025  | -0.0027 mg/L       | 0.00025  | 9.43%   |
| QC value within limits for Zn 213.857* 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: 3/20/2017 5:11:39 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                                                    | 74993.6                  | 99.66 %     | 1.914           |                    |          | 1.92% |
| Tb 350                                                    | 127755.1                 | 103.8 %     | 0.79            |                    |          | 0.76% |
| Ag 328.068*†                                              | 65417.2                  | 0.3658 mg/L | 0.00427         | 0.3658 mg/L        | 0.00427  | 1.17% |
| QC value within limits for Ag 328.068* Recovery = 97.56%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 222301.9                 | 13.51 mg/L  | 0.057           | 13.51 mg/L         | 0.057    | 0.42% |
| QC value within limits for Al 308.215* Recovery = 100.07% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 7309.3                   | 3.847 mg/L  | 0.0103          | 3.847 mg/L         | 0.0103   | 0.27% |
| QC value within limits for As 188.979 Recovery = 102.59%  |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5061.6                   | 3.826 mg/L  | 0.0018          | 3.826 mg/L         | 0.0018   | 0.05% |
| QC value within limits for As 193.696* Recovery = 102.04% |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 173944.0                 | 3.785 mg/L  | 0.1092          | 3.785 mg/L         | 0.1092   | 2.89% |
| QC value within limits for B 249.677* Recovery = 100.92%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1084687.8                | 7.791 mg/L  | 0.0525          | 7.791 mg/L         | 0.0525   | 0.67% |
| QC value within limits for Ba 233.527* Recovery = 103.88% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 1993036.4                | 0.5806 mg/L | 0.00978         | 0.5806 mg/L        | 0.00978  | 1.69% |
| QC value within limits for Be 313.042* Recovery = 103.21% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 57003.8                  | 32.21 mg/L  | 0.870           | 32.21 mg/L         | 0.870    | 2.70% |
| QC value within limits for Ca 317.933* Recovery = 107.35% |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 55369.5                  | 0.7648 mg/L | 0.01226         | 0.7648 mg/L        | 0.01226  | 1.60% |
| QC value within limits for Cd 226.502* Recovery = 101.97% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 27923.2                  | 0.7537 mg/L | 0.00472         | 0.7537 mg/L        | 0.00472  | 0.63% |
| Co 228.616*†                                              | 50903.8                  | 1.923 mg/L  | 0.0164          | 1.923 mg/L         | 0.0164   | 0.85% |
| QC value within limits for Co 228.616* Recovery = 102.57% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 64437.8                  | 0.6030 mg/L | 0.00657         | 0.6030 mg/L        | 0.00657  | 1.09% |
| QC value within limits for Cr 267.716* Recovery = 100.49% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 216991.2                 | 0.9227 mg/L | 0.00954         | 0.9227 mg/L        | 0.00954  | 1.03% |
| QC value within limits for Cu 324.752* Recovery = 98.42%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 84396.4                  | 3.825 mg/L  | 0.0181          | 3.825 mg/L         | 0.0181   | 0.47% |
| QC value within limits for Fe 273.955* Recovery = 102.01% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 75149.3                  | 27.67 mg/L  | 0.843           | 27.67 mg/L         | 0.843    | 3.05% |
| QC value within limits for K 766.490* Recovery = 102.48%  |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 138643.4                 | 7.804 mg/L  | 0.0836          | 7.804 mg/L         | 0.0836   | 1.07% |
| QC value within limits for Mg 279.077* Recovery = 104.05% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 459052.1                 | 0.7777 mg/L | 0.00539         | 0.7777 mg/L        | 0.00539  | 0.69% |
| QC value within limits for Mn 257.610* Recovery = 103.69% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5191.2                   | 0.6042 mg/L | 0.00083         | 0.6042 mg/L        | 0.00083  | 0.14% |
| QC value within limits for Mo 202.031* Recovery = 100.70% |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 151701.9                 | 37.80 mg/L  | 0.931           | 37.80 mg/L         | 0.931    | 2.46% |
| QC value within limits for Na 589.592* Recovery = 105.01% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 13454.0                  | 0.6048 mg/L | 0.00066         | 0.6048 mg/L        | 0.00066  | 0.11% |
| QC value within limits for Ni 231.604* Recovery = 100.79% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 10556.6                  | 6.131 mg/L  | 0.0288          | 6.131 mg/L         | 0.0288   | 0.47% |
| QC value within limits for P 213.617* Recovery = 102.19%  |                          |             |                 |                    |          |       |
| P 214.914†                                                | 6999.9                   | 6.150 mg/L  | 0.0048          | 6.150 mg/L         | 0.0048   | 0.08% |
| Pb 220.353*†                                              | 28678.5                  | 3.872 mg/L  | 0.0416          | 3.872 mg/L         | 0.0416   | 1.07% |
| QC value within limits for Pb 220.353* Recovery = 103.24% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 7892.3                   | 4.557 mg/L  | 0.0144          | 4.557 mg/L         | 0.0144   | 0.32% |
| QC value within limits for Sb 206.836 Recovery = 101.27%  |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 7814.3                   | 4.524 mg/L  | 0.0040          | 4.524 mg/L         | 0.0040   | 0.09% |
| QC value within limits for Sb 217.582* Recovery = 100.54% |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3100.0                   | 1.543 mg/L  | 0.0021          | 1.543 mg/L         | 0.0021   | 0.13% |
| QC value within limits for Se 196.026* Recovery = 102.83% |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 216677.8                 | 6.074 mg/L  | 0.0739          | 6.074 mg/L         | 0.0739   | 1.22% |
| QC value within limits for Si 251.611* Recovery = 101.24% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 17035.3                  | 3.106 mg/L  | 0.0042          | 3.106 mg/L         | 0.0042   | 0.13% |
| QC value within limits for Sn 189.927* Recovery = 103.53% |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 4907.0                   | 3.029 mg/L  | 0.0197          | 3.029 mg/L         | 0.0197   | 0.65% |
| Sr 407.771*†                                              | 93459.9                  | 0.3151 mg/L | 0.00712         | 0.3151 mg/L        | 0.00712  | 2.26% |
| QC value within limits for Sr 407.771* Recovery = 105.02% |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 467648.1 | 0.6121 mg/L | 0.00551 | 0.6121 mg/L | 0.00551 | 0.90% |
| Ti 336.121*†                                              | 333257.0 | 0.6026 mg/L | 0.00367 | 0.6026 mg/L | 0.00367 | 0.61% |
| QC value within limits for Ti 336.121* Recovery = 100.43% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2623.9   | 1.540 mg/L  | 0.0043  | 1.540 mg/L  | 0.0043  | 0.28% |
| QC value within limits for Tl 190.801* Recovery = 102.69% |          |             |         |             |         |       |
| V 292.402*†                                               | 239101.7 | 1.861 mg/L  | 0.0265  | 1.861 mg/L  | 0.0265  | 1.42% |
| QC value within limits for V 292.402* Recovery = 99.27%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 96833.4  | 2.574 mg/L  | 0.0331  | 2.574 mg/L  | 0.0331  | 1.29% |
| QC value within limits for Zn 206.200* Recovery = 102.96% |          |             |         |             |         |       |

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: 3/20/2017 5:12:31 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                                                           | 85123.2                  | 113.1       | %            | 0.80     |                    |          | 0.71%   |
| Tb 350                                                           | 140797.7                 | 114.4       | %            | 1.21     |                    |          | 1.06%   |
| Ag 328.068*†                                                     | 218.5                    | 0.0012      | mg/L         | 0.00076  | 0.0012 mg/L        | 0.00076  | 62.29%  |
| Al 308.215*†                                                     | 66.4                     | 0.0040      | mg/L         | 0.00320  | 0.0040 mg/L        | 0.00320  | 79.27%  |
| As 188.979†                                                      | 13.3                     | 0.0070      | mg/L         | 0.00037  | 0.0070 mg/L        | 0.00037  | 5.30%   |
| As 193.696*†                                                     | 7.3                      | 0.0055      | mg/L         | 0.00136  | 0.0055 mg/L        | 0.00136  | 24.71%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| B 249.677*†                                                      | 941.6                    | 0.0205      | mg/L         | 0.00294  | 0.0205 mg/L        | 0.00294  | 14.35%  |
| Ba 233.527*†                                                     | 322.7                    | 0.0023      | mg/L         | 0.00017  | 0.0023 mg/L        | 0.00017  | 7.19%   |
| Be 313.042*†                                                     | 630.5                    | 0.0002      | mg/L         | 0.00004  | 0.0002 mg/L        | 0.00004  | 21.60%  |
| Ca 317.933*†                                                     | 6.8                      | 0.0038      | mg/L         | 0.00238  | 0.0038 mg/L        | 0.00238  | 62.48%  |
| Cd 226.502*†                                                     | 9.7                      | 0.0001      | mg/L         | 0.00012  | 0.0001 mg/L        | 0.00012  | 89.88%  |
| Cd 228.802†                                                      | 14.7                     | 0.0004      | mg/L         | 0.00015  | 0.0004 mg/L        | 0.00015  | 38.77%  |
| Co 228.616*†                                                     | 20.1                     | 0.0008      | mg/L         | 0.00014  | 0.0008 mg/L        | 0.00014  | 17.79%  |
| Cr 267.716*†                                                     | -47.5                    | -0.0004     | mg/L         | 0.00080  | -0.0004 mg/L       | 0.00080  | 179.98% |
| Cu 324.752*†                                                     | -463.8                   | -0.0020     | mg/L         | 0.00006  | -0.0020 mg/L       | 0.00006  | 3.19%   |
| Fe 273.955*†                                                     | 11.4                     | 0.0005      | mg/L         | 0.00034  | 0.0005 mg/L        | 0.00034  | 65.49%  |
| K 766.490*†                                                      | -523.8                   | -0.1929     | mg/L         | 0.03368  | -0.1929 mg/L       | 0.03368  | 17.46%  |
| Mg 279.077*†                                                     | 494.6                    | 0.0278      | mg/L         | 0.00275  | 0.0278 mg/L        | 0.00275  | 9.87%   |
| Mn 257.610*†                                                     | 146.2                    | 0.0002      | mg/L         | 0.00000  | 0.0002 mg/L        | 0.00000  | 0.30%   |
| Mo 202.031*†                                                     | 7.3                      | 0.0009      | mg/L         | 0.00055  | 0.0009 mg/L        | 0.00055  | 65.16%  |
| Na 589.592*†                                                     | 172.5                    | 0.0430      | mg/L         | 0.01171  | 0.0430 mg/L        | 0.01171  | 27.25%  |
| Ni 231.604*†                                                     | 3.7                      | 0.0002      | mg/L         | 0.00078  | 0.0002 mg/L        | 0.00078  | 475.24% |
| P 213.617*†                                                      | 12.2                     | 0.0071      | mg/L         | 0.01465  | 0.0071 mg/L        | 0.01465  | 206.51% |
| P 214.914†                                                       | 15.1                     | 0.0133      | mg/L         | 0.01354  | 0.0133 mg/L        | 0.01354  | 102.05% |
| Pb 220.353*†                                                     | -3.6                     | -0.0005     | mg/L         | 0.00063  | -0.0005 mg/L       | 0.00063  | 131.08% |
| Sb 206.836†                                                      | 4.5                      | 0.0026      | mg/L         | 0.00151  | 0.0026 mg/L        | 0.00151  | 58.71%  |
| Sb 217.582*†                                                     | 14.4                     | 0.0083      | mg/L         | 0.00413  | 0.0083 mg/L        | 0.00413  | 49.53%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Se 196.026*†                                                     | 13.6                     | 0.0068      | mg/L         | 0.00146  | 0.0068 mg/L        | 0.00146  | 21.56%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| Si 251.611*†                                                     | -438.4                   | -0.0123     | mg/L         | 0.00115  | -0.0123 mg/L       | 0.00115  | 9.37%   |
| Sn 189.927*†                                                     | 29.2                     | 0.0053      | mg/L         | 0.00047  | 0.0053 mg/L        | 0.00047  | 8.76%   |
| Sn 242.170†                                                      | 8.3                      | 0.0052      | mg/L         | 0.02211  | 0.0052 mg/L        | 0.02211  | 429.13% |
| Sr 407.771*†                                                     | 31.2                     | 0.0001      | mg/L         | 0.00008  | 0.0001 mg/L        | 0.00008  | 74.64%  |
| Ti 334.940†                                                      | 456.1                    | 0.0006      | mg/L         | 0.00008  | 0.0006 mg/L        | 0.00008  | 13.97%  |
| Ti 336.121*†                                                     | -64.2                    | -0.0001     | mg/L         | 0.00073  | -0.0001 mg/L       | 0.00073  | 626.01% |
| Tl 190.801*†                                                     | -11.1                    | -0.0065     | mg/L         | 0.00061  | -0.0065 mg/L       | 0.00061  | 9.31%   |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |              |          |                    |          |         |
| V 292.402*†                                                      | -21.4                    | -0.0002     | mg/L         | 0.00020  | -0.0002 mg/L       | 0.00020  | 118.22% |
| Zn 206.200*†                                                     | -103.8                   | -0.0028     | mg/L         | 0.00022  | -0.0028 mg/L       | 0.00022  | 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: 3/20/2017 5:22:23 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                                                    | 75809.7                  | 100.7 %     | 1.33            |                    |          | 1.32% |
| Tb 350                                                    | 127574.7                 | 103.7 %     | 0.97            |                    |          | 0.94% |
| Ag 328.068*†                                              | 65124.9                  | 0.3642 mg/L | 0.00270         | 0.3642 mg/L        | 0.00270  | 0.74% |
| QC value within limits for Ag 328.068* Recovery = 97.12%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 221676.8                 | 13.47 mg/L  | 0.013           | 13.47 mg/L         | 0.013    | 0.09% |
| QC value within limits for Al 308.215* Recovery = 99.79%  |                          |             |                 |                    |          |       |
| As 188.979†                                               | 7279.8                   | 3.832 mg/L  | 0.0135          | 3.832 mg/L         | 0.0135   | 0.35% |
| QC value within limits for As 188.979 Recovery = 102.18%  |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5039.4                   | 3.810 mg/L  | 0.0421          | 3.810 mg/L         | 0.0421   | 1.10% |
| QC value within limits for As 193.696* Recovery = 101.59% |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 170821.8                 | 3.717 mg/L  | 0.0805          | 3.717 mg/L         | 0.0805   | 2.17% |
| QC value within limits for B 249.677* Recovery = 99.11%   |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1078101.9                | 7.744 mg/L  | 0.0435          | 7.744 mg/L         | 0.0435   | 0.56% |
| QC value within limits for Ba 233.527* Recovery = 103.25% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 1978997.7                | 0.5765 mg/L | 0.00688         | 0.5765 mg/L        | 0.00688  | 1.19% |
| QC value within limits for Be 313.042* Recovery = 102.49% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 53617.2                  | 30.29 mg/L  | 0.019           | 30.29 mg/L         | 0.019    | 0.06% |
| QC value within limits for Ca 317.933* Recovery = 100.98% |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 54733.0                  | 0.7560 mg/L | 0.00927         | 0.7560 mg/L        | 0.00927  | 1.23% |
| QC value within limits for Cd 226.502* Recovery = 100.80% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 27636.2                  | 0.7459 mg/L | 0.01024         | 0.7459 mg/L        | 0.01024  | 1.37% |
| Co 228.616*†                                              | 50325.3                  | 1.901 mg/L  | 0.0139          | 1.901 mg/L         | 0.0139   | 0.73% |
| QC value within limits for Co 228.616* Recovery = 101.40% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 63860.3                  | 0.5975 mg/L | 0.00564         | 0.5975 mg/L        | 0.00564  | 0.94% |
| QC value within limits for Cr 267.716* Recovery = 99.59%  |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 215778.6                 | 0.9176 mg/L | 0.00348         | 0.9176 mg/L        | 0.00348  | 0.38% |
| QC value within limits for Cu 324.752* Recovery = 97.87%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 83727.2                  | 3.795 mg/L  | 0.0413          | 3.795 mg/L         | 0.0413   | 1.09% |
| QC value within limits for Fe 273.955* Recovery = 101.20% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 71718.1                  | 26.41 mg/L  | 0.103           | 26.41 mg/L         | 0.103    | 0.39% |
| QC value within limits for K 766.490* Recovery = 97.80%   |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 136790.4                 | 7.699 mg/L  | 0.0710          | 7.699 mg/L         | 0.0710   | 0.92% |
| QC value within limits for Mg 279.077* Recovery = 102.66% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 456291.0                 | 0.7730 mg/L | 0.00538         | 0.7730 mg/L        | 0.00538  | 0.70% |
| QC value within limits for Mn 257.610* Recovery = 103.07% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5216.4                   | 0.6071 mg/L | 0.00672         | 0.6071 mg/L        | 0.00672  | 1.11% |
| QC value within limits for Mo 202.031* Recovery = 101.19% |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 144332.1                 | 35.97 mg/L  | 0.155           | 35.97 mg/L         | 0.155    | 0.43% |
| QC value within limits for Na 589.592* Recovery = 99.91%  |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 13534.9                  | 0.6084 mg/L | 0.00342         | 0.6084 mg/L        | 0.00342  | 0.56% |
| QC value within limits for Ni 231.604* Recovery = 101.40% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 10584.0                  | 6.147 mg/L  | 0.0030          | 6.147 mg/L         | 0.0030   | 0.05% |
| QC value within limits for P 213.617* Recovery = 102.45%  |                          |             |                 |                    |          |       |
| P 214.914†                                                | 6984.4                   | 6.137 mg/L  | 0.0724          | 6.137 mg/L         | 0.0724   | 1.18% |
| Pb 220.353*†                                              | 28269.3                  | 3.816 mg/L  | 0.0479          | 3.816 mg/L         | 0.0479   | 1.26% |
| QC value within limits for Pb 220.353* Recovery = 101.77% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 7858.7                   | 4.538 mg/L  | 0.0530          | 4.538 mg/L         | 0.0530   | 1.17% |
| QC value within limits for Sb 206.836 Recovery = 100.84%  |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 7822.0                   | 4.529 mg/L  | 0.0458          | 4.529 mg/L         | 0.0458   | 1.01% |
| QC value within limits for Sb 217.582* Recovery = 100.64% |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3060.4                   | 1.523 mg/L  | 0.0059          | 1.523 mg/L         | 0.0059   | 0.38% |
| QC value within limits for Se 196.026* Recovery = 101.52% |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 215775.3                 | 6.049 mg/L  | 0.0639          | 6.049 mg/L         | 0.0639   | 1.06% |
| QC value within limits for Si 251.611* Recovery = 100.81% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 16976.0                  | 3.095 mg/L  | 0.0217          | 3.095 mg/L         | 0.0217   | 0.70% |
| QC value within limits for Sn 189.927* Recovery = 103.17% |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 4938.0                   | 3.048 mg/L  | 0.0180          | 3.048 mg/L         | 0.0180   | 0.59% |
| Sr 407.771*†                                              | 89382.1                  | 0.3013 mg/L | 0.00117         | 0.3013 mg/L        | 0.00117  | 0.39% |
| QC value within limits for Sr 407.771* Recovery = 100.44% |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Tl 334.940†                                               | 470906.0 | 0.6164 mg/L | 0.00377 | 0.6164 mg/L | 0.00377 | 0.61% |
| Tl 336.121*†                                              | 334567.8 | 0.6049 mg/L | 0.00305 | 0.6049 mg/L | 0.00305 | 0.50% |
| QC value within limits for Tl 336.121* Recovery = 100.82% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2597.3   | 1.525 mg/L  | 0.0250  | 1.525 mg/L  | 0.0250  | 1.64% |
| QC value within limits for Tl 190.801* Recovery = 101.65% |          |             |         |             |         |       |
| V 292.402*†                                               | 238486.3 | 1.857 mg/L  | 0.0112  | 1.857 mg/L  | 0.0112  | 0.61% |
| QC value within limits for V 292.402* Recovery = 99.02%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 95567.0  | 2.540 mg/L  | 0.0361  | 2.540 mg/L  | 0.0361  | 1.42% |
| QC value within limits for Zn 206.200* Recovery = 101.61% |          |             |         |             |         |       |

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: 3/20/2017 5:23:15 PM

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>Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|-----------------------------|--------------|--------------------|-----------------------|----------|---------|
| Tb 384                                                           | 83124.2                     | 110.5 %      | 1.23               |                       |          | 1.11%   |
| Tb 350                                                           | 138736.3                    | 112.7 %      | 1.51               |                       |          | 1.34%   |
| Ag 328.068*†                                                     | 191.2                       | 0.0011 mg/L  | 0.00076            | 0.0011 mg/L           | 0.00076  | 71.40%  |
| Al 308.215*†                                                     | 135.9                       | 0.0083 mg/L  | 0.00150            | 0.0083 mg/L           | 0.00150  | 18.17%  |
| As 188.979†                                                      | -2.2                        | -0.0011 mg/L | 0.00043            | -0.0011 mg/L          | 0.00043  | 37.61%  |
| As 193.696*†                                                     | -8.1                        | -0.0061 mg/L | 0.00810            | -0.0061 mg/L          | 0.00810  | 132.14% |
| QC value within limits for As 193.696* Recovery = Not calculated |                             |              |                    |                       |          |         |
| B 249.677*†                                                      | 881.3                       | 0.0192 mg/L  | 0.00241            | 0.0192 mg/L           | 0.00241  | 12.56%  |
| Ba 233.527*†                                                     | 224.4                       | 0.0016 mg/L  | 0.00036            | 0.0016 mg/L           | 0.00036  | 22.11%  |
| Be 313.042*†                                                     | 408.9                       | 0.0001 mg/L  | 0.00000            | 0.0001 mg/L           | 0.00000  | 0.49%   |
| Ca 317.933*†                                                     | 5.9                         | 0.0033 mg/L  | 0.00055            | 0.0033 mg/L           | 0.00055  | 16.53%  |
| Cd 226.502*†                                                     | 10.2                        | 0.0001 mg/L  | 0.00029            | 0.0001 mg/L           | 0.00029  | 203.15% |
| Cd 228.802†                                                      | 1.4                         | 0.0000 mg/L  | 0.00033            | 0.0000 mg/L           | 0.00033  | 863.35% |
| Co 228.616*†                                                     | 11.2                        | 0.0004 mg/L  | 0.00039            | 0.0004 mg/L           | 0.00039  | 91.78%  |
| Cr 267.716*†                                                     | 7.2                         | 0.0001 mg/L  | 0.00044            | 0.0001 mg/L           | 0.00044  | 651.04% |
| Cu 324.752*†                                                     | -382.3                      | -0.0016 mg/L | 0.00061            | -0.0016 mg/L          | 0.00061  | 37.22%  |
| Fe 273.955*†                                                     | 81.0                        | 0.0037 mg/L  | 0.00386            | 0.0037 mg/L           | 0.00386  | 105.15% |
| K 766.490*†                                                      | -403.2                      | -0.1484 mg/L | 0.02183            | -0.1484 mg/L          | 0.02183  | 14.71%  |
| Mg 279.077*†                                                     | 565.1                       | 0.0318 mg/L  | 0.00406            | 0.0318 mg/L           | 0.00406  | 12.75%  |
| Mn 257.610*†                                                     | 100.4                       | 0.0002 mg/L  | 0.00007            | 0.0002 mg/L           | 0.00007  | 40.05%  |
| Mo 202.031*†                                                     | 9.0                         | 0.0011 mg/L  | 0.00051            | 0.0011 mg/L           | 0.00051  | 48.81%  |
| Na 589.592*†                                                     | 380.9                       | 0.0949 mg/L  | 0.00229            | 0.0949 mg/L           | 0.00229  | 2.41%   |
| Ni 231.604*†                                                     | -0.1                        | -0.0000 mg/L | 0.00071            | -0.0000 mg/L          | 0.00071  | >999.9% |
| P 213.617*†                                                      | 11.8                        | 0.0068 mg/L  | 0.00785            | 0.0068 mg/L           | 0.00785  | 114.90% |
| P 214.914†                                                       | 17.2                        | 0.0151 mg/L  | 0.00338            | 0.0151 mg/L           | 0.00338  | 22.38%  |
| Pb 220.353*†                                                     | 8.6                         | 0.0012 mg/L  | 0.00014            | 0.0012 mg/L           | 0.00014  | 12.34%  |
| Sb 206.836†                                                      | -2.3                        | -0.0013 mg/L | 0.00503            | -0.0013 mg/L          | 0.00503  | 383.00% |
| Sb 217.582*†                                                     | 11.4                        | 0.0066 mg/L  | 0.00161            | 0.0066 mg/L           | 0.00161  | 24.53%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                             |              |                    |                       |          |         |
| Se 196.026*†                                                     | 0.9                         | 0.0004 mg/L  | 0.00254            | 0.0004 mg/L           | 0.00254  | 570.16% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                             |              |                    |                       |          |         |
| Si 251.611*†                                                     | -377.5                      | -0.0106 mg/L | 0.00102            | -0.0106 mg/L          | 0.00102  | 9.66%   |
| Sn 189.927*†                                                     | 15.2                        | 0.0028 mg/L  | 0.00014            | 0.0028 mg/L           | 0.00014  | 5.18%   |
| Sn 242.170†                                                      | 53.2                        | 0.0328 mg/L  | 0.00599            | 0.0328 mg/L           | 0.00599  | 18.23%  |
| Sr 407.771*†                                                     | 22.5                        | 0.0001 mg/L  | 0.00004            | 0.0001 mg/L           | 0.00004  | 52.34%  |
| Ti 334.940†                                                      | 723.0                       | 0.0009 mg/L  | 0.00062            | 0.0009 mg/L           | 0.00062  | 65.90%  |
| Ti 336.121*†                                                     | 453.9                       | 0.0008 mg/L  | 0.00094            | 0.0008 mg/L           | 0.00094  | 115.07% |
| Tl 190.801*†                                                     | -8.8                        | -0.0052 mg/L | 0.00168            | -0.0052 mg/L          | 0.00168  | 32.53%  |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                             |              |                    |                       |          |         |
| V 292.402*†                                                      | -64.6                       | -0.0005 mg/L | 0.00062            | -0.0005 mg/L          | 0.00062  | 123.29% |
| Zn 206.200*†                                                     | -100.6                      | -0.0027 mg/L | 0.00017            | -0.0027 mg/L          | 0.00017  | 6.51%   |
| 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: 3/20/2017 5:32:37 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

| Analyte                                                   | Mean Corrected Intensity | Conc.  | Calib. Units | Std.Dev. | Sample Conc. Units | Std.Dev. | RSD   |
|-----------------------------------------------------------|--------------------------|--------|--------------|----------|--------------------|----------|-------|
| Tb 384                                                    | 76493.5                  | 101.7  | %            | 0.40     |                    |          | 0.40% |
| Tb 350                                                    | 129201.3                 | 105.0  | %            | 0.25     |                    |          | 0.24% |
| Ag 328.068*†                                              | 64751.7                  | 0.3621 | mg/L         | 0.00002  | 0.3621 mg/L        | 0.00002  | 0.01% |
| QC value within limits for Ag 328.068* Recovery = 96.56%  |                          |        |              |          |                    |          |       |
| Al 308.215*†                                              | 220710.7                 | 13.41  | mg/L         | 0.011    | 13.41 mg/L         | 0.011    | 0.08% |
| QC value within limits for Al 308.215* Recovery = 99.35%  |                          |        |              |          |                    |          |       |
| As 188.979†                                               | 7345.8                   | 3.866  | mg/L         | 0.0025   | 3.866 mg/L         | 0.0025   | 0.06% |
| QC value within limits for As 188.979 Recovery = 103.11%  |                          |        |              |          |                    |          |       |
| As 193.696*†                                              | 5081.0                   | 3.841  | mg/L         | 0.0082   | 3.841 mg/L         | 0.0082   | 0.21% |
| QC value within limits for As 193.696* Recovery = 102.43% |                          |        |              |          |                    |          |       |
| B 249.677*†                                               | 171392.4                 | 3.729  | mg/L         | 0.0223   | 3.729 mg/L         | 0.0223   | 0.60% |
| QC value within limits for B 249.677* Recovery = 99.44%   |                          |        |              |          |                    |          |       |
| Ba 233.527*†                                              | 1075850.6                | 7.728  | mg/L         | 0.0084   | 7.728 mg/L         | 0.0084   | 0.11% |
| QC value within limits for Ba 233.527* Recovery = 103.04% |                          |        |              |          |                    |          |       |
| Be 313.042*†                                              | 1980547.8                | 0.5769 | mg/L         | 0.00185  | 0.5769 mg/L        | 0.00185  | 0.32% |
| QC value within limits for Be 313.042* Recovery = 102.57% |                          |        |              |          |                    |          |       |
| Ca 317.933*†                                              | 55950.1                  | 31.61  | mg/L         | 0.151    | 31.61 mg/L         | 0.151    | 0.48% |
| QC value within limits for Ca 317.933* Recovery = 105.37% |                          |        |              |          |                    |          |       |
| Cd 226.502*†                                              | 54747.5                  | 0.7562 | mg/L         | 0.00059  | 0.7562 mg/L        | 0.00059  | 0.08% |
| QC value within limits for Cd 226.502* Recovery = 100.82% |                          |        |              |          |                    |          |       |
| Cd 228.802†                                               | 27534.8                  | 0.7432 | mg/L         | 0.00501  | 0.7432 mg/L        | 0.00501  | 0.67% |
| Co 228.616*†                                              | 50306.7                  | 1.901  | mg/L         | 0.0074   | 1.901 mg/L         | 0.0074   | 0.39% |
| QC value within limits for Co 228.616* Recovery = 101.37% |                          |        |              |          |                    |          |       |
| Cr 267.716*†                                              | 63691.0                  | 0.5960 | mg/L         | 0.00082  | 0.5960 mg/L        | 0.00082  | 0.14% |
| QC value within limits for Cr 267.716* Recovery = 99.33%  |                          |        |              |          |                    |          |       |
| Cu 324.752*†                                              | 215930.6                 | 0.9182 | mg/L         | 0.00245  | 0.9182 mg/L        | 0.00245  | 0.27% |
| QC value within limits for Cu 324.752* Recovery = 97.94%  |                          |        |              |          |                    |          |       |
| Fe 273.955*†                                              | 83902.5                  | 3.803  | mg/L         | 0.0006   | 3.803 mg/L         | 0.0006   | 0.02% |
| QC value within limits for Fe 273.955* Recovery = 101.42% |                          |        |              |          |                    |          |       |
| K 766.490*†                                               | 73165.1                  | 26.94  | mg/L         | 0.132    | 26.94 mg/L         | 0.132    | 0.49% |
| QC value within limits for K 766.490* Recovery = 99.78%   |                          |        |              |          |                    |          |       |
| Mg 279.077*†                                              | 136862.3                 | 7.703  | mg/L         | 0.0145   | 7.703 mg/L         | 0.0145   | 0.19% |
| QC value within limits for Mg 279.077* Recovery = 102.71% |                          |        |              |          |                    |          |       |
| Mn 257.610*†                                              | 455970.3                 | 0.7725 | mg/L         | 0.00146  | 0.7725 mg/L        | 0.00146  | 0.19% |
| QC value within limits for Mn 257.610* Recovery = 103.00% |                          |        |              |          |                    |          |       |
| Mo 202.031*†                                              | 5245.4                   | 0.6105 | mg/L         | 0.00232  | 0.6105 mg/L        | 0.00232  | 0.38% |
| QC value within limits for Mo 202.031* Recovery = 101.75% |                          |        |              |          |                    |          |       |
| Na 589.592*†                                              | 148111.2                 | 36.91  | mg/L         | 0.153    | 36.91 mg/L         | 0.153    | 0.42% |
| QC value within limits for Na 589.592* Recovery = 102.53% |                          |        |              |          |                    |          |       |
| Ni 231.604*†                                              | 13631.9                  | 0.6127 | mg/L         | 0.00007  | 0.6127 mg/L        | 0.00007  | 0.01% |
| QC value within limits for Ni 231.604* Recovery = 102.12% |                          |        |              |          |                    |          |       |
| P 213.617*†                                               | 10718.3                  | 6.225  | mg/L         | 0.0124   | 6.225 mg/L         | 0.0124   | 0.20% |
| QC value within limits for P 213.617* Recovery = 103.75%  |                          |        |              |          |                    |          |       |
| P 214.914†                                                | 7027.3                   | 6.174  | mg/L         | 0.0114   | 6.174 mg/L         | 0.0114   | 0.19% |
| Pb 220.353*†                                              | 28249.5                  | 3.814  | mg/L         | 0.0203   | 3.814 mg/L         | 0.0203   | 0.53% |
| QC value within limits for Pb 220.353* Recovery = 101.70% |                          |        |              |          |                    |          |       |
| Sb 206.836†                                               | 7942.1                   | 4.586  | mg/L         | 0.0030   | 4.586 mg/L         | 0.0030   | 0.07% |
| QC value within limits for Sb 206.836 Recovery = 101.91%  |                          |        |              |          |                    |          |       |
| Sb 217.582*†                                              | 7881.5                   | 4.563  | mg/L         | 0.0194   | 4.563 mg/L         | 0.0194   | 0.43% |
| QC value within limits for Sb 217.582* Recovery = 101.40% |                          |        |              |          |                    |          |       |
| Se 196.026*†                                              | 3112.0                   | 1.549  | mg/L         | 0.0022   | 1.549 mg/L         | 0.0022   | 0.14% |
| QC value within limits for Se 196.026* Recovery = 103.23% |                          |        |              |          |                    |          |       |
| Si 251.611*†                                              | 219612.3                 | 6.156  | mg/L         | 0.0259   | 6.156 mg/L         | 0.0259   | 0.42% |
| QC value within limits for Si 251.611* Recovery = 102.61% |                          |        |              |          |                    |          |       |
| Sn 189.927*†                                              | 17156.8                  | 3.128  | mg/L         | 0.0122   | 3.128 mg/L         | 0.0122   | 0.39% |
| QC value within limits for Sn 189.927* Recovery = 104.26% |                          |        |              |          |                    |          |       |
| Sn 242.170†                                               | 4949.9                   | 3.055  | mg/L         | 0.0152   | 3.055 mg/L         | 0.0152   | 0.50% |
| Sr 407.771*†                                              | 91534.5                  | 0.3086 | mg/L         | 0.00166  | 0.3086 mg/L        | 0.00166  | 0.54% |
| QC value within limits for Sr 407.771* Recovery = 102.86% |                          |        |              |          |                    |          |       |



|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 471412.9 | 0.6171 mg/L | 0.00031 | 0.6171 mg/L | 0.00031 | 0.05% |
| Ti 336.121*†                                              | 334852.9 | 0.6054 mg/L | 0.00037 | 0.6054 mg/L | 0.00037 | 0.06% |
| QC value within limits for Ti 336.121* Recovery = 100.91% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2633.9   | 1.546 mg/L  | 0.0039  | 1.546 mg/L  | 0.0039  | 0.26% |
| QC value within limits for Tl 190.801* Recovery = 103.08% |          |             |         |             |         |       |
| V 292.402*†                                               | 236953.2 | 1.845 mg/L  | 0.0008  | 1.845 mg/L  | 0.0008  | 0.04% |
| QC value within limits for V 292.402* Recovery = 98.38%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 95362.2  | 2.535 mg/L  | 0.0101  | 2.535 mg/L  | 0.0101  | 0.40% |
| QC value within limits for Zn 206.200* Recovery = 101.39% |          |             |         |             |         |       |

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: 3/20/2017 5:33:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

| Analyte                                                          | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|------------------------------------------------------------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384                                                           | 84379.6                     | 112.1 %               | 0.02     |                       |          | 0.02%   |
| Tb 350                                                           | 139898.8                    | 113.7 %               | 0.65     |                       |          | 0.57%   |
| Ag 328.068*†                                                     | 195.8                       | 0.0011 mg/L           | 0.00077  | 0.0011 mg/L           | 0.00077  | 70.78%  |
| Al 308.215*†                                                     | 165.9                       | 0.0101 mg/L           | 0.01667  | 0.0101 mg/L           | 0.01667  | 165.31% |
| As 188.979†                                                      | 9.2                         | 0.0049 mg/L           | 0.00288  | 0.0049 mg/L           | 0.00288  | 59.29%  |
| As 193.696*†                                                     | -11.1                       | -0.0084 mg/L          | 0.00124  | -0.0084 mg/L          | 0.00124  | 14.71%  |
| QC value within limits for As 193.696* Recovery = Not calculated |                             |                       |          |                       |          |         |
| B 249.677*†                                                      | 631.0                       | 0.0137 mg/L           | 0.00364  | 0.0137 mg/L           | 0.00364  | 26.55%  |
| Ba 233.527*†                                                     | 291.1                       | 0.0021 mg/L           | 0.00027  | 0.0021 mg/L           | 0.00027  | 13.00%  |
| Be 313.042*†                                                     | 491.8                       | 0.0001 mg/L           | 0.00004  | 0.0001 mg/L           | 0.00004  | 25.68%  |
| Ca 317.933*†                                                     | 11.0                        | 0.0062 mg/L           | 0.00302  | 0.0062 mg/L           | 0.00302  | 48.72%  |
| Cd 226.502*†                                                     | 2.8                         | 0.0000 mg/L           | 0.00010  | 0.0000 mg/L           | 0.00010  | 265.39% |
| Cd 228.802†                                                      | 16.0                        | 0.0004 mg/L           | 0.00020  | 0.0004 mg/L           | 0.00020  | 47.34%  |
| Co 228.616*†                                                     | 18.6                        | 0.0007 mg/L           | 0.00012  | 0.0007 mg/L           | 0.00012  | 17.35%  |
| Cr 267.716*†                                                     | 0.1                         | 0.0000 mg/L           | 0.00007  | 0.0000 mg/L           | 0.00007  | >999.9% |
| Cu 324.752*†                                                     | -592.9                      | -0.0025 mg/L          | 0.00008  | -0.0025 mg/L          | 0.00008  | 3.16%   |
| Fe 273.955*†                                                     | 685.5                       | 0.0311 mg/L           | 0.03241  | 0.0311 mg/L           | 0.03241  | 104.31% |
| K 766.490*†                                                      | -287.3                      | -0.1058 mg/L          | 0.05127  | -0.1058 mg/L          | 0.05127  | 48.47%  |
| Mg 279.077*†                                                     | 641.9                       | 0.0361 mg/L           | 0.00142  | 0.0361 mg/L           | 0.00142  | 3.93%   |
| Mn 257.610*†                                                     | 460.8                       | 0.0008 mg/L           | 0.00069  | 0.0008 mg/L           | 0.00069  | 87.98%  |
| Mo 202.031*†                                                     | -0.3                        | -0.0000 mg/L          | 0.00072  | -0.0000 mg/L          | 0.00072  | >999.9% |
| Na 589.592*†                                                     | 268.9                       | 0.0670 mg/L           | 0.00732  | 0.0670 mg/L           | 0.00732  | 10.93%  |
| Ni 231.604*†                                                     | 1.1                         | 0.0000 mg/L           | 0.00049  | 0.0000 mg/L           | 0.00049  | 992.32% |
| P 213.617*†                                                      | 13.1                        | 0.0076 mg/L           | 0.01472  | 0.0076 mg/L           | 0.01472  | 193.98% |
| P 214.914†                                                       | 13.0                        | 0.0114 mg/L           | 0.00258  | 0.0114 mg/L           | 0.00258  | 22.53%  |
| Pb 220.353*†                                                     | 23.0                        | 0.0031 mg/L           | 0.00144  | 0.0031 mg/L           | 0.00144  | 46.39%  |
| Sb 206.836†                                                      | 6.1                         | 0.0035 mg/L           | 0.00026  | 0.0035 mg/L           | 0.00026  | 7.44%   |
| Sb 217.582*†                                                     | 12.9                        | 0.0075 mg/L           | 0.00075  | 0.0075 mg/L           | 0.00075  | 10.07%  |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                             |                       |          |                       |          |         |
| Se 196.026*†                                                     | 0.6                         | 0.0003 mg/L           | 0.00065  | 0.0003 mg/L           | 0.00065  | 222.54% |
| QC value within limits for Se 196.026* Recovery = Not calculated |                             |                       |          |                       |          |         |
| Si 251.611*†                                                     | 17.3                        | 0.0005 mg/L           | 0.00088  | 0.0005 mg/L           | 0.00088  | 181.90% |
| Sn 189.927*†                                                     | 13.6                        | 0.0025 mg/L           | 0.00148  | 0.0025 mg/L           | 0.00148  | 59.68%  |
| Sn 242.170†                                                      | 56.2                        | 0.0347 mg/L           | 0.01168  | 0.0347 mg/L           | 0.01168  | 33.66%  |
| Sr 407.771*†                                                     | 33.9                        | 0.0001 mg/L           | 0.00006  | 0.0001 mg/L           | 0.00006  | 51.61%  |
| Ti 334.940†                                                      | 873.1                       | 0.0011 mg/L           | 0.00098  | 0.0011 mg/L           | 0.00098  | 86.01%  |
| Ti 336.121*†                                                     | 608.5                       | 0.0011 mg/L           | 0.00074  | 0.0011 mg/L           | 0.00074  | 67.54%  |
| Tl 190.801*†                                                     | -12.3                       | -0.0072 mg/L          | 0.00794  | -0.0072 mg/L          | 0.00794  | 109.53% |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                             |                       |          |                       |          |         |
| V 292.402*†                                                      | -1.5                        | -0.0000 mg/L          | 0.00017  | -0.0000 mg/L          | 0.00017  | >999.9% |
| Zn 206.200*†                                                     | -84.3                       | -0.0022 mg/L          | 0.00054  | -0.0022 mg/L          | 0.00054  | 24.14%  |
| QC value within limits for Zn 206.200* Recovery = Not calculated |                             |                       |          |                       |          |         |
| All analyte(s) passed QC.                                        |                             |                       |          |                       |          |         |

Sequence No.: 47

Sample ID: CCV= STD3x0.5

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 3

Date Collected: 3/20/2017 5:42:43 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                                                    | 76007.7                  | 101.0 %     | 0.03            |                    |          | 0.03% |
| Tb 350                                                    | 127957.8                 | 104.0 %     | 0.16            |                    |          | 0.16% |
| Ag 328.068*†                                              | 65527.7                  | 0.3665 mg/L | 0.00053         | 0.3665 mg/L        | 0.00053  | 0.14% |
| QC value within limits for Ag 328.068* Recovery = 97.72%  |                          |             |                 |                    |          |       |
| Al 308.215*†                                              | 222866.4                 | 13.54 mg/L  | 0.065           | 13.54 mg/L         | 0.065    | 0.48% |
| QC value within limits for Al 308.215* Recovery = 100.32% |                          |             |                 |                    |          |       |
| As 188.979†                                               | 7384.0                   | 3.887 mg/L  | 0.0205          | 3.887 mg/L         | 0.0205   | 0.53% |
| QC value within limits for As 188.979 Recovery = 103.64%  |                          |             |                 |                    |          |       |
| As 193.696*†                                              | 5105.0                   | 3.859 mg/L  | 0.0157          | 3.859 mg/L         | 0.0157   | 0.41% |
| QC value within limits for As 193.696* Recovery = 102.91% |                          |             |                 |                    |          |       |
| B 249.677*†                                               | 173397.5                 | 3.773 mg/L  | 0.0664          | 3.773 mg/L         | 0.0664   | 1.76% |
| QC value within limits for B 249.677* Recovery = 100.60%  |                          |             |                 |                    |          |       |
| Ba 233.527*†                                              | 1082793.2                | 7.778 mg/L  | 0.0378          | 7.778 mg/L         | 0.0378   | 0.49% |
| QC value within limits for Ba 233.527* Recovery = 103.70% |                          |             |                 |                    |          |       |
| Be 313.042*†                                              | 1999846.1                | 0.5826 mg/L | 0.00375         | 0.5826 mg/L        | 0.00375  | 0.64% |
| QC value within limits for Be 313.042* Recovery = 103.57% |                          |             |                 |                    |          |       |
| Ca 317.933*†                                              | 56858.7                  | 32.12 mg/L  | 0.060           | 32.12 mg/L         | 0.060    | 0.19% |
| QC value within limits for Ca 317.933* Recovery = 107.08% |                          |             |                 |                    |          |       |
| Cd 226.502*†                                              | 55366.2                  | 0.7647 mg/L | 0.00359         | 0.7647 mg/L        | 0.00359  | 0.47% |
| QC value within limits for Cd 226.502* Recovery = 101.96% |                          |             |                 |                    |          |       |
| Cd 228.802†                                               | 27877.4                  | 0.7524 mg/L | 0.00475         | 0.7524 mg/L        | 0.00475  | 0.63% |
| Co 228.616*†                                              | 50679.5                  | 1.915 mg/L  | 0.0120          | 1.915 mg/L         | 0.0120   | 0.63% |
| QC value within limits for Co 228.616* Recovery = 102.12% |                          |             |                 |                    |          |       |
| Cr 267.716*†                                              | 64178.7                  | 0.6005 mg/L | 0.00232         | 0.6005 mg/L        | 0.00232  | 0.39% |
| QC value within limits for Cr 267.716* Recovery = 100.09% |                          |             |                 |                    |          |       |
| Cu 324.752*†                                              | 217350.6                 | 0.9243 mg/L | 0.00232         | 0.9243 mg/L        | 0.00232  | 0.25% |
| QC value within limits for Cu 324.752* Recovery = 98.59%  |                          |             |                 |                    |          |       |
| Fe 273.955*†                                              | 84458.4                  | 3.828 mg/L  | 0.0038          | 3.828 mg/L         | 0.0038   | 0.10% |
| QC value within limits for Fe 273.955* Recovery = 102.09% |                          |             |                 |                    |          |       |
| K 766.490*†                                               | 75311.9                  | 27.73 mg/L  | 0.009           | 27.73 mg/L         | 0.009    | 0.03% |
| QC value within limits for K 766.490* Recovery = 102.70%  |                          |             |                 |                    |          |       |
| Mg 279.077*†                                              | 138014.1                 | 7.768 mg/L  | 0.0150          | 7.768 mg/L         | 0.0150   | 0.19% |
| QC value within limits for Mg 279.077* Recovery = 103.58% |                          |             |                 |                    |          |       |
| Mn 257.610*†                                              | 458781.8                 | 0.7772 mg/L | 0.00307         | 0.7772 mg/L        | 0.00307  | 0.40% |
| QC value within limits for Mn 257.610* Recovery = 103.63% |                          |             |                 |                    |          |       |
| Mo 202.031*†                                              | 5267.9                   | 0.6131 mg/L | 0.00161         | 0.6131 mg/L        | 0.00161  | 0.26% |
| QC value within limits for Mo 202.031* Recovery = 102.18% |                          |             |                 |                    |          |       |
| Na 589.592*†                                              | 152804.9                 | 38.08 mg/L  | 0.034           | 38.08 mg/L         | 0.034    | 0.09% |
| QC value within limits for Na 589.592* Recovery = 105.78% |                          |             |                 |                    |          |       |
| Ni 231.604*†                                              | 13712.4                  | 0.6164 mg/L | 0.00190         | 0.6164 mg/L        | 0.00190  | 0.31% |
| QC value within limits for Ni 231.604* Recovery = 102.73% |                          |             |                 |                    |          |       |
| P 213.617*†                                               | 10736.6                  | 6.236 mg/L  | 0.0280          | 6.236 mg/L         | 0.0280   | 0.45% |
| QC value within limits for P 213.617* Recovery = 103.93%  |                          |             |                 |                    |          |       |
| P 214.914†                                                | 7092.7                   | 6.232 mg/L  | 0.0373          | 6.232 mg/L         | 0.0373   | 0.60% |
| Pb 220.353*†                                              | 28560.8                  | 3.856 mg/L  | 0.0189          | 3.856 mg/L         | 0.0189   | 0.49% |
| QC value within limits for Pb 220.353* Recovery = 102.82% |                          |             |                 |                    |          |       |
| Sb 206.836†                                               | 7979.7                   | 4.608 mg/L  | 0.0310          | 4.608 mg/L         | 0.0310   | 0.67% |
| QC value within limits for Sb 206.836 Recovery = 102.39%  |                          |             |                 |                    |          |       |
| Sb 217.582*†                                              | 7924.3                   | 4.588 mg/L  | 0.0153          | 4.588 mg/L         | 0.0153   | 0.33% |
| QC value within limits for Sb 217.582* Recovery = 101.95% |                          |             |                 |                    |          |       |
| Se 196.026*†                                              | 3126.5                   | 1.556 mg/L  | 0.0270          | 1.556 mg/L         | 0.0270   | 1.74% |
| QC value within limits for Se 196.026* Recovery = 103.71% |                          |             |                 |                    |          |       |
| Si 251.611*†                                              | 217555.7                 | 6.099 mg/L  | 0.0496          | 6.099 mg/L         | 0.0496   | 0.81% |
| QC value within limits for Si 251.611* Recovery = 101.65% |                          |             |                 |                    |          |       |
| Sn 189.927*†                                              | 17221.3                  | 3.140 mg/L  | 0.0370          | 3.140 mg/L         | 0.0370   | 1.18% |
| QC value within limits for Sn 189.927* Recovery = 104.66% |                          |             |                 |                    |          |       |
| Sn 242.170†                                               | 4977.8                   | 3.073 mg/L  | 0.0206          | 3.073 mg/L         | 0.0206   | 0.67% |
| Sr 407.771*†                                              | 93263.3                  | 0.3144 mg/L | 0.00128         | 0.3144 mg/L        | 0.00128  | 0.41% |
| QC value within limits for Sr 407.771* Recovery = 104.80% |                          |             |                 |                    |          |       |

|                                                           |          |             |         |             |         |       |
|-----------------------------------------------------------|----------|-------------|---------|-------------|---------|-------|
| Ti 334.940†                                               | 470550.0 | 0.6159 mg/L | 0.00265 | 0.6159 mg/L | 0.00265 | 0.43% |
| Ti 336.121*†                                              | 333761.3 | 0.6035 mg/L | 0.00312 | 0.6035 mg/L | 0.00312 | 0.52% |
| QC value within limits for Ti 336.121* Recovery = 100.58% |          |             |         |             |         |       |
| Tl 190.801*†                                              | 2634.7   | 1.547 mg/L  | 0.0084  | 1.547 mg/L  | 0.0084  | 0.54% |
| QC value within limits for Tl 190.801* Recovery = 103.12% |          |             |         |             |         |       |
| V 292.402*†                                               | 239588.5 | 1.865 mg/L  | 0.0106  | 1.865 mg/L  | 0.0106  | 0.57% |
| QC value within limits for V 292.402* Recovery = 99.48%   |          |             |         |             |         |       |
| Zn 206.200*†                                              | 96382.2  | 2.562 mg/L  | 0.0163  | 2.562 mg/L  | 0.0163  | 0.64% |
| QC value within limits for Zn 206.200* Recovery = 102.48% |          |             |         |             |         |       |

All analyte(s) passed QC.

Sequence No.: 48

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/20/2017 5:43:36 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                                                           | 84107.8                  | 111.8       | %      | 1.61     |                    |          | 1.44%   |
| Tb 350                                                           | 138586.4                 | 112.6       | %      | 1.80     |                    |          | 1.60%   |
| Ag 328.068*†                                                     | 104.3                    | 0.0006      | mg/L   | 0.00051  | 0.0006 mg/L        | 0.00051  | 87.96%  |
| Al 308.215*†                                                     | 94.2                     | 0.0057      | mg/L   | 0.00411  | 0.0057 mg/L        | 0.00411  | 71.90%  |
| As 188.979†                                                      | 11.8                     | 0.0062      | mg/L   | 0.00144  | 0.0062 mg/L        | 0.00144  | 23.08%  |
| As 193.696*†                                                     | -3.6                     | -0.0027     | mg/L   | 0.00968  | -0.0027 mg/L       | 0.00968  | 355.47% |
| QC value within limits for As 193.696* Recovery = Not calculated |                          |             |        |          |                    |          |         |
| B 249.677*†                                                      | 900.0                    | 0.0196      | mg/L   | 0.00063  | 0.0196 mg/L        | 0.00063  | 3.22%   |
| Ba 233.527*†                                                     | 249.1                    | 0.0018      | mg/L   | 0.00023  | 0.0018 mg/L        | 0.00023  | 12.70%  |
| Be 313.042*†                                                     | 404.7                    | 0.0001      | mg/L   | 0.00005  | 0.0001 mg/L        | 0.00005  | 41.22%  |
| Ca 317.933*†                                                     | 34.5                     | 0.0195      | mg/L   | 0.00338  | 0.0195 mg/L        | 0.00338  | 17.36%  |
| Cd 226.502*†                                                     | -5.6                     | -0.0001     | mg/L   | 0.00006  | -0.0001 mg/L       | 0.00006  | 78.17%  |
| Cd 228.802†                                                      | 2.4                      | 0.0001      | mg/L   | 0.00007  | 0.0001 mg/L        | 0.00007  | 109.39% |
| Co 228.616*†                                                     | 17.6                     | 0.0007      | mg/L   | 0.00021  | 0.0007 mg/L        | 0.00021  | 32.26%  |
| Cr 267.716*†                                                     | -15.9                    | -0.0001     | mg/L   | 0.00079  | -0.0001 mg/L       | 0.00079  | 527.82% |
| Cu 324.752*†                                                     | -355.8                   | -0.0015     | mg/L   | 0.00030  | -0.0015 mg/L       | 0.00030  | 19.66%  |
| Fe 273.955*†                                                     | 176.0                    | 0.0080      | mg/L   | 0.00063  | 0.0080 mg/L        | 0.00063  | 7.96%   |
| K 766.490*†                                                      | -34.1                    | -0.0126     | mg/L   | 0.01618  | -0.0126 mg/L       | 0.01618  | 128.88% |
| Mg 279.077*†                                                     | 422.5                    | 0.0238      | mg/L   | 0.00011  | 0.0238 mg/L        | 0.00011  | 0.47%   |
| Mn 257.610*†                                                     | 195.4                    | 0.0003      | mg/L   | 0.00001  | 0.0003 mg/L        | 0.00001  | 3.06%   |
| Mo 202.031*†                                                     | 7.0                      | 0.0008      | mg/L   | 0.00118  | 0.0008 mg/L        | 0.00118  | 145.81% |
| Na 589.592*†                                                     | 397.2                    | 0.0990      | mg/L   | 0.01239  | 0.0990 mg/L        | 0.01239  | 12.52%  |
| Ni 231.604*†                                                     | -0.9                     | -0.0000     | mg/L   | 0.00070  | -0.0000 mg/L       | 0.00070  | >999.9% |
| P 213.617*†                                                      | 7.3                      | 0.0042      | mg/L   | 0.00270  | 0.0042 mg/L        | 0.00270  | 63.94%  |
| P 214.914†                                                       | 15.0                     | 0.0131      | mg/L   | 0.00535  | 0.0131 mg/L        | 0.00535  | 40.71%  |
| Pb 220.353*†                                                     | 14.6                     | 0.0020      | mg/L   | 0.00099  | 0.0020 mg/L        | 0.00099  | 50.42%  |
| Sb 206.836†                                                      | 1.9                      | 0.0011      | mg/L   | 0.00123  | 0.0011 mg/L        | 0.00123  | 113.87% |
| Sb 217.582*†                                                     | 11.9                     | 0.0069      | mg/L   | 0.00049  | 0.0069 mg/L        | 0.00049  | 7.11%   |
| QC value within limits for Sb 217.582* Recovery = Not calculated |                          |             |        |          |                    |          |         |
| Se 196.026*†                                                     | 10.9                     | 0.0054      | mg/L   | 0.00315  | 0.0054 mg/L        | 0.00315  | 58.20%  |
| QC value within limits for Se 196.026* Recovery = Not calculated |                          |             |        |          |                    |          |         |
| Si 251.611*†                                                     | -373.0                   | -0.0105     | mg/L   | 0.00126  | -0.0105 mg/L       | 0.00126  | 12.09%  |
| Sn 189.927*†                                                     | -6.6                     | -0.0012     | mg/L   | 0.00577  | -0.0012 mg/L       | 0.00577  | 480.02% |
| Sn 242.170†                                                      | 29.3                     | 0.0181      | mg/L   | 0.00770  | 0.0181 mg/L        | 0.00770  | 42.55%  |
| Sr 407.771*†                                                     | 39.5                     | 0.0001      | mg/L   | 0.00001  | 0.0001 mg/L        | 0.00001  | 9.20%   |
| Ti 334.940†                                                      | 642.0                    | 0.0008      | mg/L   | 0.00028  | 0.0008 mg/L        | 0.00028  | 33.31%  |
| Ti 336.121*†                                                     | 110.1                    | 0.0002      | mg/L   | 0.00003  | 0.0002 mg/L        | 0.00003  | 15.55%  |
| Tl 190.801*†                                                     | -10.8                    | -0.0064     | mg/L   | 0.00031  | -0.0064 mg/L       | 0.00031  | 4.93%   |
| QC value within limits for Tl 190.801* Recovery = Not calculated |                          |             |        |          |                    |          |         |
| V 292.402*†                                                      | -53.5                    | -0.0004     | mg/L   | 0.00049  | -0.0004 mg/L       | 0.00049  | 117.37% |
| Zn 206.200*†                                                     | -89.4                    | -0.0024     | mg/L   | 0.00026  | -0.0024 mg/L       | 0.00026  | 11.14%  |
| 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

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:18  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C1\17-03-0590-28 MIS.icp

**# 28**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM1-8

|                                |                                                                      |  |
|--------------------------------|----------------------------------------------------------------------|--|
| <b>LCS/MB BATCH:</b> 170320L03 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 2.00 g / ACTUAL: 2.00 g      |  |
| <b>MS/MSD BATCH:</b> 170320S03 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 ml / ACTUAL: 100.00 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> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Antimony        | 0.0109             | 1.00      | ND          | 0.750     |             |
| Arsenic         | 0.00624            | 1.00      | ND          | 0.750     |             |
| Barium          | 1.12               | 1.00      | 56.1        | 0.500     |             |
| Beryllium       | 0.00219            | 1.00      | ND          | 0.250     |             |
| Cadmium         | 0.00301            | 1.00      | ND          | 0.500     |             |
| Chromium        | 0.0741             | 1.00      | 3.70        | 0.250     |             |
| Cobalt          | 0.0796             | 1.00      | 3.98        | 0.250     |             |
| Copper          | 0.0994             | 1.00      | 4.97        | 0.500     |             |
| Lead            | 0.0245             | 1.00      | 1.23        | 0.500     |             |
| Molybdenum      | 0.00167            | 1.00      | ND          | 0.250     |             |
| Nickel          | 0.0632             | 1.00      | 3.16        | 0.250     |             |
| Selenium        | 0.00459            | 1.00      | ND          | 0.750     |             |
| Silver          | -0.000339          | 1.00      | ND          | 0.250     |             |
| Thallium        | -0.0183            | 1.00      | ND          | 0.750     |             |
| Vanadium        | 0.252              | 1.00      | 12.6        | 0.250     |             |
| Zinc            | 0.519              | 1.00      | 25.9        | 1.00      |             |

Return to Contents

Sequence No.: 19

Sample ID: 17-03-0590-28 MIS

Analyst: 935 icp 7300

Initial Sample Wt: 2 g

Dilution:

Wash Time: 15

Autosampler Location: 147

Date Collected: 3/20/2017 5:18:59 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-0590-28 MIS

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 67097.4                     | 89.17 %               | 0.528    |                       |          | 0.59%   |
| Tb 350       | 123223.7                    | 100.1 %               | 1.06     |                       |          | 1.06%   |
| Ag 328.068*† | -60.6                       | -0.0003 mg/L          | 0.00010  | -0.0170 mg/kg         | 0.00508  | 29.95%  |
| Al 308.215*† | 1640381.2                   | 99.69 mg/L            | 0.958    | 4984 mg/kg            | 47.89    | 0.96%   |
| As 188.979†  | 46.3                        | 0.0244 mg/L           | 0.00087  | 1.219 mg/kg           | 0.0434   | 3.56%   |
| As 193.696*† | 8.3                         | 0.0062 mg/L           | 0.00133  | 0.3121 mg/kg          | 0.06630  | 21.24%  |
| B 249.677*†  | -874.0                      | -0.0190 mg/L          | 0.00014  | -0.9508 mg/kg         | 0.00711  | 0.75%   |
| Ba 233.527*† | 156148.7                    | 1.122 mg/L            | 0.0147   | 56.08 mg/kg           | 0.735    | 1.31%   |
| Be 313.042*† | 7509.4                      | 0.0022 mg/L           | 0.00002  | 0.1094 mg/kg          | 0.00076  | 0.70%   |
| Ca 317.933*† | 100288.0                    | 56.66 mg/L            | 2.100    | 2833 mg/kg            | 104.98   | 3.71%   |
| Cd 226.502*† | 218.1                       | 0.0030 mg/L           | 0.00015  | 0.1506 mg/kg          | 0.00747  | 4.96%   |
| Cd 228.802†  | -11.7                       | -0.0003 mg/L          | 0.00067  | -0.0157 mg/kg         | 0.03335  | 211.79% |
| Co 228.616*† | 2105.8                      | 0.0796 mg/L           | 0.00088  | 3.978 mg/kg           | 0.0439   | 1.10%   |
| Cr 267.716*† | 7915.4                      | 0.0741 mg/L           | 0.00154  | 3.703 mg/kg           | 0.0770   | 2.08%   |
| Cu 324.752*† | 23374.9                     | 0.0994 mg/L           | 0.00070  | 4.970 mg/kg           | 0.0348   | 0.70%   |
| Fe 273.955*† | 2935461.9                   | 133.1 mg/L            | 2.91     | 6653 mg/kg            | 145.68   | 2.19%   |
| K 766.490*†  | 78470.8                     | 28.89 mg/L            | 0.826    | 1445 mg/kg            | 41.31    | 2.86%   |
| Mg 279.077*† | 860702.1                    | 48.45 mg/L            | 0.943    | 2422 mg/kg            | 47.17    | 1.95%   |
| Mn 257.610*† | 1418157.9                   | 2.403 mg/L            | 0.0263   | 120.1 mg/kg           | 1.31     | 1.09%   |
| Mo 202.031*† | 14.3                        | 0.0017 mg/L           | 0.00029  | 0.0835 mg/kg          | 0.01436  | 17.21%  |
| Na 589.592*† | 18099.0                     | 4.510 mg/L            | 0.1590   | 225.5 mg/kg           | 7.95     | 3.52%   |
| Ni 231.604*† | 1405.5                      | 0.0632 mg/L           | 0.00169  | 3.159 mg/kg           | 0.0845   | 2.67%   |
| P 213.617*†  | 14993.0                     | 8.708 mg/L            | 0.1436   | 435.4 mg/kg           | 7.18     | 1.65%   |
| P 214.914†   | 10208.3                     | 8.969 mg/L            | 0.1441   | 448.5 mg/kg           | 7.21     | 1.61%   |
| Pb 220.353*† | 181.8                       | 0.0245 mg/L           | 0.00363  | 1.227 mg/kg           | 0.1817   | 14.80%  |
| Sb 206.836†  | -0.1                        | -0.0001 mg/L          | 0.00097  | -0.0025 mg/kg         | 0.04851  | >999.9% |
| Sb 217.582*† | 18.8                        | 0.0109 mg/L           | 0.00238  | 0.5429 mg/kg          | 0.11914  | 21.94%  |
| Se 196.026*† | 9.2                         | 0.0046 mg/L           | 0.00910  | 0.2297 mg/kg          | 0.45485  | 198.02% |
| Si 251.611*† | 250420.2                    | 7.020 mg/L            | 0.0961   | 351.0 mg/kg           | 4.81     | 1.37%   |
| Sn 189.927*† | -346.0                      | -0.0631 mg/L          | 0.00037  | -3.154 mg/kg          | 0.0183   | 0.58%   |
| Sn 242.170†  | 632.7                       | 0.3906 mg/L           | 0.04978  | 19.53 mg/kg           | 2.489    | 12.75%  |
| Sr 407.771*† | 232905.7                    | 0.7851 mg/L           | 0.02776  | 39.26 mg/kg           | 1.388    | 3.54%   |
| Ti 334.940†  | 7149348.7                   | 9.358 mg/L            | 0.1881   | 467.9 mg/kg           | 9.40     | 2.01%   |
| Ti 336.121*† | 5131872.1                   | 9.279 mg/L            | 0.1816   | 463.9 mg/kg           | 9.08     | 1.96%   |
| Tl 190.801*† | -31.2                       | -0.0183 mg/L          | 0.00346  | -0.9161 mg/kg         | 0.17319  | 18.91%  |
| V 292.402*†  | 32614.9                     | 0.2517 mg/L           | 0.00259  | 12.59 mg/kg           | 0.130    | 1.03%   |
| Zn 206.200*† | 19510.4                     | 0.5186 mg/L           | 0.00855  | 25.93 mg/kg           | 0.428    | 1.65%   |



# **RAW DATA SHEET FOR METHOD: EPA 6010B**

**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:19  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C1\17-03-0590-29 MIS.icp

**# 29** **CLIENT SAMPLE NUMBER:** D-DU1-ISM2-8

**LCS/MB BATCH:** 170320L03 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170320S03 **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        | 0.00826            | 0.995     | ND          | 0.746     |             |
| Arsenic         | 0.00683            | 0.995     | ND          | 0.746     |             |
| Barium          | 1.08               | 0.995     | 53.6        | 0.498     |             |
| Beryllium       | 0.00235            | 0.995     | ND          | 0.249     |             |
| Cadmium         | 0.00307            | 0.995     | ND          | 0.498     |             |
| Chromium        | 0.0784             | 0.995     | 3.90        | 0.249     |             |
| Cobalt          | 0.0822             | 0.995     | 4.09        | 0.249     |             |
| Copper          | 0.107              | 0.995     | 5.32        | 0.498     |             |
| Lead            | 0.0274             | 0.995     | 1.36        | 0.498     |             |
| Molybdenum      | 0.000560           | 0.995     | ND          | 0.249     |             |
| Nickel          | 0.0675             | 0.995     | 3.36        | 0.249     |             |
| Selenium        | -0.00248           | 0.995     | ND          | 0.746     |             |
| Silver          | -0.00142           | 0.995     | ND          | 0.249     |             |
| Thallium        | -0.0161            | 0.995     | ND          | 0.746     |             |
| Vanadium        | 0.275              | 0.995     | 13.7        | 0.249     |             |
| Zinc            | 0.543              | 0.995     | 27.0        | 0.995     |             |

Sequence No.: 20

Sample ID: 17-03-0590-29 MIS

Analyst: 935 icp 7300

Initial Sample Wt: 2.01 g

Dilution:

Wash Time: 15

Autosampler Location: 148

Date Collected: 3/20/2017 5:19:50 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-0590-29 MIS

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 65811.1                     | 87.46 %               | 0.412    |                       |          | 0.47%   |
| Tb 350       | 123866.6                    | 100.7 %               | 0.43     |                       |          | 0.42%   |
| Ag 328.068*† | -253.4                      | -0.0014 mg/L          | 0.00069  | -0.0705 mg/kg         | 0.03423  | 48.55%  |
| Al 308.215*† | 1706027.6                   | 103.7 mg/L            | 0.01     | 5158 mg/kg            | 0.47     | 0.01%   |
| As 188.979†  | 52.2                        | 0.0275 mg/L           | 0.00007  | 1.367 mg/kg           | 0.0036   | 0.26%   |
| As 193.696*† | 9.0                         | 0.0068 mg/L           | 0.00071  | 0.3397 mg/kg          | 0.03520  | 10.36%  |
| B 249.677*†  | -1114.0                     | -0.0242 mg/L          | 0.00272  | -1.206 mg/kg          | 0.1355   | 11.24%  |
| Ba 233.527*† | 149944.7                    | 1.077 mg/L            | 0.0013   | 53.58 mg/kg           | 0.062    | 0.12%   |
| Be 313.042*† | 8073.3                      | 0.0024 mg/L           | 0.00006  | 0.1170 mg/kg          | 0.00280  | 2.39%   |
| Ca 317.933*† | 101337.8                    | 57.25 mg/L            | 1.201    | 2848 mg/kg            | 59.74    | 2.10%   |
| Cd 226.502*† | 222.1                       | 0.0031 mg/L           | 0.00018  | 0.1526 mg/kg          | 0.00882  | 5.78%   |
| Cd 228.802†  | -8.8                        | -0.0002 mg/L          | 0.00011  | -0.0119 mg/kg         | 0.00540  | 45.46%  |
| Co 228.616*† | 2176.5                      | 0.0822 mg/L           | 0.00108  | 4.091 mg/kg           | 0.0536   | 1.31%   |
| Cr 267.716*† | 8375.0                      | 0.0784 mg/L           | 0.00027  | 3.899 mg/kg           | 0.0135   | 0.35%   |
| Cu 324.752*† | 25150.3                     | 0.1069 mg/L           | 0.00121  | 5.321 mg/kg           | 0.0602   | 1.13%   |
| Fe 273.955*† | 3144343.3                   | 142.5 mg/L            | 0.80     | 7091 mg/kg            | 40.01    | 0.56%   |
| K 766.490*†  | 83405.2                     | 30.71 mg/L            | 0.425    | 1528 mg/kg            | 21.16    | 1.38%   |
| Mg 279.077*† | 929961.1                    | 52.34 mg/L            | 0.017    | 2604 mg/kg            | 0.86     | 0.03%   |
| Mn 257.610*† | 1514457.7                   | 2.566 mg/L            | 0.0016   | 127.6 mg/kg           | 0.08     | 0.06%   |
| Mo 202.031*† | 4.8                         | 0.0006 mg/L           | 0.00064  | 0.0278 mg/kg          | 0.03205  | 115.11% |
| Na 589.592*† | 14813.3                     | 3.691 mg/L            | 0.0553   | 183.7 mg/kg           | 2.75     | 1.50%   |
| Ni 231.604*† | 1502.0                      | 0.0675 mg/L           | 0.00010  | 3.359 mg/kg           | 0.0051   | 0.15%   |
| P 213.617*†  | 15855.2                     | 9.209 mg/L            | 0.0190   | 458.1 mg/kg           | 0.95     | 0.21%   |
| P 214.914†   | 10810.9                     | 9.499 mg/L            | 0.0166   | 472.6 mg/kg           | 0.83     | 0.18%   |
| Pb 220.353*† | 203.0                       | 0.0274 mg/L           | 0.00363  | 1.364 mg/kg           | 0.1804   | 13.23%  |
| Sb 206.836†  | -10.0                       | -0.0057 mg/L          | 0.00304  | -0.2860 mg/kg         | 0.15112  | 52.84%  |
| Sb 217.582*† | 14.3                        | 0.0083 mg/L           | 0.00133  | 0.4107 mg/kg          | 0.06600  | 16.07%  |
| Se 196.026*† | -5.0                        | -0.0025 mg/L          | 0.00381  | -0.1232 mg/kg         | 0.18976  | 154.02% |
| Si 251.611*† | 256757.4                    | 7.198 mg/L            | 0.0087   | 358.1 mg/kg           | 0.43     | 0.12%   |
| Sn 189.927*† | -384.1                      | -0.0700 mg/L          | 0.00452  | -3.484 mg/kg          | 0.2248   | 6.45%   |
| Sn 242.170†  | 618.1                       | 0.3816 mg/L           | 0.01609  | 18.98 mg/kg           | 0.800    | 4.22%   |
| Sr 407.771*† | 165264.5                    | 0.5571 mg/L           | 0.00956  | 27.72 mg/kg           | 0.476    | 1.72%   |
| Ti 334.940†  | 7889242.0                   | 10.33 mg/L            | 0.061    | 513.8 mg/kg           | 3.03     | 0.59%   |
| Ti 336.121*† | 5658633.1                   | 10.23 mg/L            | 0.074    | 509.0 mg/kg           | 3.67     | 0.72%   |
| Tl 190.801*† | -27.5                       | -0.0161 mg/L          | 0.00094  | -0.8029 mg/kg         | 0.04687  | 5.84%   |
| V 292.402*†  | 35651.5                     | 0.2752 mg/L           | 0.00025  | 13.69 mg/kg           | 0.013    | 0.09%   |
| Zn 206.200*† | 20417.9                     | 0.5427 mg/L           | 0.00115  | 27.00 mg/kg           | 0.057    | 0.21%   |

# RAW DATA SHEET FOR METHOD: EPA 6010B

**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:20  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C1\17-03-0590-30 MIS.icp

**# 30**

**CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

**LCS/MB BATCH:** 170320L03      **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g  
**MS/MSD BATCH:** 170320S03      **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        | 0.00720            | 1.00      | ND          | 0.750     |             |
| Arsenic         | 0.00574            | 1.00      | ND          | 0.750     |             |
| Barium          | 1.09               | 1.00      | 54.4        | 0.500     |             |
| Beryllium       | 0.00225            | 1.00      | ND          | 0.250     |             |
| Cadmium         | 0.00299            | 1.00      | ND          | 0.500     |             |
| Chromium        | 0.0772             | 1.00      | 3.86        | 0.250     |             |
| Cobalt          | 0.0816             | 1.00      | 4.08        | 0.250     |             |
| Copper          | 0.109              | 1.00      | 5.47        | 0.500     |             |
| Lead            | 0.0249             | 1.00      | 1.25        | 0.500     |             |
| Molybdenum      | 0.00123            | 1.00      | ND          | 0.250     |             |
| Nickel          | 0.0660             | 1.00      | 3.30        | 0.250     |             |
| Selenium        | 0.00318            | 1.00      | ND          | 0.750     |             |
| Silver          | -0.000334          | 1.00      | ND          | 0.250     |             |
| Thallium        | -0.0175            | 1.00      | ND          | 0.750     |             |
| Vanadium        | 0.264              | 1.00      | 13.2        | 0.250     |             |
| Zinc            | 0.533              | 1.00      | 26.7        | 1.00      |             |

Sequence No.: 21

Sample ID: 17-03-0590-30 MIS

Analyst: 935 icp 7300

Initial Sample Wt: 2 g

Dilution:

Wash Time: 15

Autosampler Location: 149

Date Collected: 3/20/2017 5:20:41 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-0590-30 MIS

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 66008.7                     | 87.72 %               | 1.250    |                       |          | 1.42%   |
| Tb 350       | 123003.3                    | 99.96 %               | 0.856    |                       |          | 0.86%   |
| Ag 328.068*† | -59.8                       | -0.0003 mg/L          | 0.00020  | -0.0167 mg/kg         | 0.01011  | 60.48%  |
| Al 308.215*† | 1654034.0                   | 100.5 mg/L            | 0.34     | 5026 mg/kg            | 16.90    | 0.34%   |
| As 188.979†  | 56.7                        | 0.0298 mg/L           | 0.00215  | 1.492 mg/kg           | 0.1073   | 7.19%   |
| As 193.696*† | 7.6                         | 0.0057 mg/L           | 0.00718  | 0.2868 mg/kg          | 0.35881  | 125.10% |
| B 249.677*†  | -1077.0                     | -0.0234 mg/L          | 0.00479  | -1.172 mg/kg          | 0.2394   | 20.43%  |
| Ba 233.527*† | 151378.5                    | 1.087 mg/L            | 0.0025   | 54.37 mg/kg           | 0.126    | 0.23%   |
| Be 313.042*† | 7728.9                      | 0.0023 mg/L           | 0.00001  | 0.1126 mg/kg          | 0.00058  | 0.51%   |
| Ca 317.933*† | 95931.7                     | 54.20 mg/L            | 1.589    | 2710 mg/kg            | 79.46    | 2.93%   |
| Cd 226.502*† | 216.8                       | 0.0030 mg/L           | 0.00012  | 0.1497 mg/kg          | 0.00617  | 4.12%   |
| Cd 228.802†  | -0.6                        | -0.0000 mg/L          | 0.00015  | -0.0009 mg/kg         | 0.00771  | 891.28% |
| Co 228.616*† | 2159.4                      | 0.0816 mg/L           | 0.00039  | 4.079 mg/kg           | 0.0197   | 0.48%   |
| Cr 267.716*† | 8250.5                      | 0.0772 mg/L           | 0.00094  | 3.860 mg/kg           | 0.0471   | 1.22%   |
| Cu 324.752*† | 25735.6                     | 0.1094 mg/L           | 0.00078  | 5.472 mg/kg           | 0.0388   | 0.71%   |
| Fe 273.955*† | 2956738.8                   | 134.0 mg/L            | 3.05     | 6701 mg/kg            | 152.74   | 2.28%   |
| K 766.490*†  | 80336.1                     | 29.58 mg/L            | 0.805    | 1479 mg/kg            | 40.27    | 2.72%   |
| Mg 279.077*† | 900045.6                    | 50.66 mg/L            | 0.260    | 2533 mg/kg            | 13.01    | 0.51%   |
| Mn 257.610*† | 1463036.4                   | 2.479 mg/L            | 0.0079   | 123.9 mg/kg           | 0.39     | 0.32%   |
| Mo 202.031*† | 10.6                        | 0.0012 mg/L           | 0.00047  | 0.0617 mg/kg          | 0.02356  | 38.21%  |
| Na 589.592*† | 14986.6                     | 3.735 mg/L            | 0.1046   | 186.7 mg/kg           | 5.23     | 2.80%   |
| Ni 231.604*† | 1468.4                      | 0.0660 mg/L           | 0.00098  | 3.300 mg/kg           | 0.0492   | 1.49%   |
| P 213.617*†  | 15795.5                     | 9.174 mg/L            | 0.0281   | 458.7 mg/kg           | 1.40     | 0.31%   |
| P 214.914†   | 10789.9                     | 9.480 mg/L            | 0.0289   | 474.0 mg/kg           | 1.44     | 0.30%   |
| Pb 220.353*† | 184.5                       | 0.0249 mg/L           | 0.00018  | 1.246 mg/kg           | 0.0091   | 0.73%   |
| Sb 206.836†  | 6.0                         | 0.0034 mg/L           | 0.00372  | 0.1722 mg/kg          | 0.18615  | 108.10% |
| Sb 217.582*† | 12.4                        | 0.0072 mg/L           | 0.00491  | 0.3598 mg/kg          | 0.24557  | 68.26%  |
| Se 196.026*† | 6.4                         | 0.0032 mg/L           | 0.00729  | 0.1589 mg/kg          | 0.36463  | 229.41% |
| Si 251.611*† | 237679.5                    | 6.663 mg/L            | 0.0244   | 333.1 mg/kg           | 1.22     | 0.37%   |
| Sn 189.927*† | -380.2                      | -0.0693 mg/L          | 0.00074  | -3.466 mg/kg          | 0.0370   | 1.07%   |
| Sn 242.170†  | 654.2                       | 0.4038 mg/L           | 0.00239  | 20.19 mg/kg           | 0.120    | 0.59%   |
| Sr 407.771*† | 194706.2                    | 0.6564 mg/L           | 0.01378  | 32.82 mg/kg           | 0.689    | 2.10%   |
| Ti 334.940†  | 7378633.6                   | 9.658 mg/L            | 0.1986   | 482.9 mg/kg           | 9.93     | 2.06%   |
| Ti 336.121*† | 5289862.5                   | 9.564 mg/L            | 0.1875   | 478.2 mg/kg           | 9.37     | 1.96%   |
| Tl 190.801*† | -29.9                       | -0.0175 mg/L          | 0.00970  | -0.8766 mg/kg         | 0.48499  | 55.33%  |
| V 292.402*†  | 34164.7                     | 0.2638 mg/L           | 0.00200  | 13.19 mg/kg           | 0.100    | 0.76%   |
| Zn 206.200*† | 20053.9                     | 0.5331 mg/L           | 0.00359  | 26.65 mg/kg           | 0.179    | 0.67%   |

# EPA 6010B ICP Metals (Solid)

## Quality Control

Method Blank  
LCS/LCSD  
MS/MSD

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 6010B

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**MB SAMPLE ID:** 097-01-002-24459  
**MB BATCH ID:** 170320L03  
**INSTRUMENT:** ICP 7300  
**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:04  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** W:\ICP-DATA\170320C1\170320-b-03\_\_337.icp

### **CLIENT WORK ORDER: 17-03-0590**

| <b><u>S#</u></b> | <b><u>RUN TYPE</u></b> | <b><u>CLIENT SAMPLE ID</u></b> | <b><u>D/T ANALYZED</u></b> | <b><u>DATA FILE</u></b>                    |
|------------------|------------------------|--------------------------------|----------------------------|--------------------------------------------|
| 28               | D-DU1-ISM1-8           |                                | 2017-03-20 17:18           | W:\ICP-DATA\170320C1\17-03-0590-28 MIS.icp |
| 29               | D-DU1-ISM2-8           |                                | 2017-03-20 17:19           | W:\ICP-DATA\170320C1\17-03-0590-29 MIS.icp |
| 30               | D-DU1-ISM3-8           |                                | 2017-03-20 17:20           | W:\ICP-DATA\170320C1\17-03-0590-30 MIS.icp |

# 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:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:04  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C1\170320-b-03\_\_337.icp

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

**LCS/MB BATCH:** 170320L03 **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        | 0.00383            | 0.962     | ND          | 0.721     |             |
| Arsenic         | 0.0000404          | 0.962     | ND          | 0.721     |             |
| Barium          | -0.00125           | 0.962     | ND          | 0.481     |             |
| Beryllium       | 0.00138            | 0.962     | ND          | 0.240     |             |
| Cadmium         | 0.00109            | 0.962     | ND          | 0.481     |             |
| Chromium        | 0.00176            | 0.962     | ND          | 0.240     |             |
| Cobalt          | 0.00108            | 0.962     | ND          | 0.240     |             |
| Copper          | -0.000984          | 0.962     | ND          | 0.481     |             |
| Lead            | 0.000470           | 0.962     | ND          | 0.481     |             |
| Molybdenum      | 0.00292            | 0.962     | ND          | 0.240     |             |
| Nickel          | 0.00143            | 0.962     | ND          | 0.240     |             |
| Selenium        | 0.00656            | 0.962     | ND          | 0.721     |             |
| Silver          | 0.000125           | 0.962     | ND          | 0.240     |             |
| Thallium        | -0.0130            | 0.962     | ND          | 0.721     |             |
| Vanadium        | -0.000105          | 0.962     | ND          | 0.240     |             |
| Zinc            | -0.00112           | 0.962     | ND          | 0.962     |             |

Return to Contents

# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

**LCS SAMPLE ID:** 097-01-002-24459  
**LCS/MB BATCH ID:** 170320L03  
**INSTRUMENT:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:05  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C\1\170320-I03\_338.icp

| COMPOUND   | CONC  | CONC REC | %REC | %REC CL | ME CL  | STATUS | QUALIFIERS |
|------------|-------|----------|------|---------|--------|--------|------------|
| Antimony   | 25.00 | 22.57    | 90   | 80-120  | 73-127 | PASS   |            |
| Arsenic    | 25.00 | 23.17    | 93   | 80-120  | 73-127 | PASS   |            |
| Barium     | 25.00 | 24.25    | 97   | 80-120  | 73-127 | PASS   |            |
| Beryllium  | 25.00 | 22.48    | 90   | 80-120  | 73-127 | PASS   |            |
| Cadmium    | 25.00 | 23.32    | 93   | 80-120  | 73-127 | PASS   |            |
| Chromium   | 25.00 | 23.43    | 94   | 80-120  | 73-127 | PASS   |            |
| Cobalt     | 25.00 | 24.27    | 97   | 80-120  | 73-127 | PASS   |            |
| Copper     | 25.00 | 23.20    | 93   | 80-120  | 73-127 | PASS   |            |
| Lead       | 25.00 | 23.38    | 94   | 80-120  | 73-127 | PASS   |            |
| Molybdenum | 25.00 | 22.93    | 92   | 80-120  | 73-127 | PASS   |            |
| Nickel     | 25.00 | 24.49    | 98   | 80-120  | 73-127 | PASS   |            |
| Phosphorus | 25.00 | 25.09    | 100  | 80-120  | 73-127 | PASS   |            |
| Selenium   | 25.00 | 22.90    | 92   | 80-120  | 73-127 | PASS   |            |
| Silver     | 12.50 | 11.07    | 89   | 80-120  | 73-127 | PASS   |            |
| Thallium   | 25.00 | 23.95    | 96   | 80-120  | 73-127 | PASS   |            |
| Vanadium   | 25.00 | 22.22    | 89   | 80-120  | 73-127 | PASS   |            |
| Zinc       | 25.00 | 23.79    | 95   | 80-120  | 73-127 | PASS   |            |
| Aluminum   | 25.00 | 24.38    | 98   | 80-120  | 73-127 | PASS   |            |
| Calcium    | 25.00 | 23.41    | 94   | 80-120  | 73-127 | PASS   |            |
| Iron       | 25.00 | 23.32    | 93   | 80-120  | 73-127 | PASS   |            |
| Magnesium  | 25.00 | 24.52    | 98   | 80-120  | 73-127 | PASS   |            |
| Manganese  | 25.00 | 24.01    | 96   | 80-120  | 73-127 | PASS   |            |
| Potassium  | 250.0 | 215.0    | 86   | 80-120  | 73-127 | PASS   |            |
| Sodium     | 250.0 | 231.4    | 93   | 80-120  | 73-127 | PASS   |            |
| Strontium  | 25.00 | 23.98    | 96   | 80-120  | 73-127 | PASS   |            |
| Tin        | 25.00 | 23.97    | 96   | 80-120  | 73-127 | PASS   |            |
| Titanium   | 25.00 | 23.00    | 92   | 80-120  | 73-127 | PASS   |            |
| Boron      | 25.00 | 21.05    | 84   | 80-120  | 73-127 | PASS   |            |
| Silicon    | 25.00 | 22.11    | 88   | 80-120  | 73-127 | PASS   |            |



LCS QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

**LCS SAMPLE ID:** 097-01-002-24459  
**LCS/MB BATCH ID:** 170320L03  
**INSTRUMENT:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:** 2017-03-20 17:05  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** W:\ICP-DATA\170320C\1\170320-I-03\_338.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: 17-03-1256-1  
MS/MSD BATCH: 170320S03

INSTRUMENTS:

SAMPLE: ICP 7300  
MS: ICP 7300  
MSD: ICP 7300

EXTRACTION: EPA 3050B  
D/T EXTRACTED:

SAMPLE: 2017-03-20 00:00  
MS: 2017-03-20 00:00  
MSD: 2017-03-20 00:00

ANALYZED BY: 935  
D/T ANALYZED:

SAMPLE: 2017-03-20 17:31  
MS: 2017-03-20 17:34  
MSD: 2017-03-20 17:35

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      | 1.495  | 0.5000  | 25.00 | 10.50   | 36       | 10.27    | 35        | 50-115   | 2   | 0-20   | FAIL   | 3G         |
| Arsenic       | 12.46  | 0.5000  | 25.00 | 37.09   | 99       | 38.78    | 105       | 75-125   | 4   | 0-20   | PASS   |            |
| Barium        | 144.2  | 0.5000  | 25.00 | 162.2   | 4x       | 167.4    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Beryllium     | 0.5455 | 0.5000  | 25.00 | 26.00   | 102      | 25.12    | 98        | 75-125   | 3   | 0-20   | PASS   |            |
| Cadmium       | 0.5976 | 0.5000  | 25.00 | 24.77   | 97       | 23.86    | 93        | 75-125   | 4   | 0-20   | PASS   |            |
| Chromium      | 18.98  | 0.5000  | 25.00 | 44.00   | 100      | 43.04    | 96        | 75-125   | 2   | 0-20   | PASS   |            |
| Cobalt        | 12.07  | 0.5000  | 25.00 | 36.01   | 96       | 35.15    | 92        | 75-125   | 2   | 0-20   | PASS   |            |
| Copper        | 18.96  | 0.5000  | 25.00 | 44.55   | 102      | 44.63    | 103       | 75-125   | 0   | 0-20   | PASS   |            |
| Lead          | 63.61  | 0.5000  | 25.00 | 96.60   | 132      | 91.57    | 112       | 75-125   | 5   | 0-20   | FAIL   | 3F         |
| Molybdenum    | ND     | 0.5000  | 25.00 | 22.89   | 92       | 21.84    | 87        | 75-125   | 5   | 0-20   | PASS   |            |
| Nickel        | 13.86  | 0.5000  | 25.00 | 38.42   | 98       | 37.88    | 96        | 75-125   | 1   | 0-20   | PASS   |            |
| Phosphorus    | 650.6  | 0.5000  | 25.00 | 732.5   | 4x       | 697.2    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Selenium      | ND     | 0.5000  | 25.00 | 26.06   | 104      | 24.85    | 99        | 75-125   | 5   | 0-20   | PASS   |            |
| Silver        | ND     | 0.2500  | 12.50 | 12.15   | 97       | 11.97    | 96        | 75-125   | 1   | 0-20   | PASS   |            |
| Thallium      | ND     | 0.5000  | 25.00 | 21.43   | 86       | 19.64    | 79        | 75-125   | 9   | 0-20   | PASS   |            |
| Vanadium      | 45.25  | 0.5000  | 25.00 | 70.19   | 100      | 68.92    | 95        | 75-125   | 2   | 0-20   | PASS   |            |
| Zinc          | 67.71  | 0.5000  | 25.00 | 100.0   | 129      | 104.1    | 146       | 75-125   | 4   | 0-20   | FAIL   | 3F         |
| Aluminum      | 16640  | 0.5000  | 25.00 | 17900   | 4x       | 17490    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Calcium       | 4921   | 0.5000  | 25.00 | 4915    | 4x       | 4848     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Iron          | 21810  | 0.5000  | 25.00 | 23120   | 4x       | 23120    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Magnesium     | 5705   | 0.5000  | 25.00 | 5933    | 4x       | 5886     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Manganese     | 403.4  | 0.5000  | 25.00 | 432.7   | 4x       | 471.8    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Potassium     | 2519   | 5.000   | 250.0 | 2997    | 4x       | 2899     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Sodium        | 347.7  | 5.000   | 250.0 | 617.8   | 108      | 609.8    | 105       | 75-125   | 1   | 0-20   | PASS   |            |
| Strontium     | 49.88  | 0.5000  | 25.00 | 73.62   | 95       | 73.40    | 94        | 75-125   | 0   | 0-20   | PASS   |            |
| Tin           | ND     | 0.5000  | 25.00 | 16.07   | 64       | 15.16    | 61        | 75-125   | 6   | 0-20   | FAIL   | 3G         |
| Titanium      | 1104   | 0.5000  | 25.00 | 1202    | 4x       | 1168     | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |
| Boron         | ND     | 0.5000  | 25.00 | 25.89   | 104      | 25.42    | 102       | 75-125   | 2   | 0-20   | PASS   |            |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 6010B

**SPIKED SAMPLE ID:** 17-03-1256-1  
**MS/MSD BATCH:** 170320S03  
**INSTRUMENTS:**  
**SAMPLE:** ICP 7300  
**MS:** ICP 7300  
**MSD:** ICP 7300

**EXTRACTION:** EPA 3050B  
**D/T EXTRACTED:**  
**SAMPLE:** 2017-03-20 00:00  
**MS:** 2017-03-20 00:00  
**MSD:** 2017-03-20 00:00

**ANALYZED BY:** 935  
**D/T ANALYZED:**  
**SAMPLE:** 2017-03-20 17:31  
**MS:** 2017-03-20 17:34  
**MSD:** 2017-03-20 17:35  
**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       | 632.4  | 0.5000  | 25.00 | 723.3   | 4x       | 660.4    | 4x        | 75-125   | 4x  | 0-20   | PASS   | Q          |

Data Files:

| TYPE | DATA FILE            | DATA FILE PATH        |
|------|----------------------|-----------------------|
| MS   | 17-03-1256-1 ms.icp  | W:\ICP-DATA\170320C1\ |
| MSD  | 17-03-1256-1 msd.icp | W:\ICP-DATA\170320C1\ |

Sequence No.: 3

Sample ID: 170320-b-03

Analyst: 935 icp 7300

Initial Sample Wt: 2.08 g

Dilution:

Wash Time: 15

Autosampler Location: 112

Date Collected: 3/20/2017 5:04:17 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 170320-b-03

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|---------|
| Tb 384       | 83239.9                     | 110.6 %               | 0.56     |                       |          | 0.50%   |
| Tb 350       | 138988.9                    | 113.0 %               | 0.30     |                       |          | 0.26%   |
| Ag 328.068*† | 22.4                        | 0.0001 mg/L           | 0.00068  | 0.0060 mg/kg          | 0.03287  | 546.06% |
| Al 308.215*† | -97.1                       | -0.0059 mg/L          | 0.00015  | -0.2837 mg/kg         | 0.00743  | 2.62%   |
| As 188.979†  | 5.1                         | 0.0027 mg/L           | 0.00182  | 0.1289 mg/kg          | 0.08737  | 67.76%  |
| As 193.696*† | 0.1                         | 0.0000 mg/L           | 0.00467  | 0.0019 mg/kg          | 0.22475  | >999.9% |
| B 249.677*†  | -626.1                      | -0.0136 mg/L          | 0.00011  | -0.6550 mg/kg         | 0.00518  | 0.79%   |
| Ba 233.527*† | -174.6                      | -0.0013 mg/L          | 0.00018  | -0.0603 mg/kg         | 0.00875  | 14.52%  |
| Be 313.042*† | 4745.5                      | 0.0014 mg/L           | 0.00027  | 0.0665 mg/kg          | 0.01283  | 19.30%  |
| Ca 317.933*† | -9.5                        | -0.0054 mg/L          | 0.00663  | -0.2577 mg/kg         | 0.31887  | 123.76% |
| Cd 226.502*† | 79.1                        | 0.0011 mg/L           | 0.00018  | 0.0525 mg/kg          | 0.00849  | 16.16%  |
| Cd 228.802†  | 49.2                        | 0.0013 mg/L           | 0.00012  | 0.0638 mg/kg          | 0.00593  | 9.29%   |
| Co 228.616*† | 28.6                        | 0.0011 mg/L           | 0.00037  | 0.0519 mg/kg          | 0.01776  | 34.21%  |
| Cr 267.716*† | 187.8                       | 0.0018 mg/L           | 0.00077  | 0.0845 mg/kg          | 0.03725  | 44.09%  |
| Cu 324.752*† | -231.5                      | -0.0010 mg/L          | 0.00026  | -0.0473 mg/kg         | 0.01272  | 26.86%  |
| Fe 273.955*† | -21.2                       | -0.0010 mg/L          | 0.00040  | -0.0462 mg/kg         | 0.01908  | 41.28%  |
| K 766.490*†  | -508.5                      | -0.1872 mg/L          | 0.07992  | -9.001 mg/kg          | 3.8425   | 42.69%  |
| Mg 279.077*† | 312.2                       | 0.0176 mg/L           | 0.00192  | 0.8448 mg/kg          | 0.09211  | 10.90%  |
| Mn 257.610*† | 861.6                       | 0.0015 mg/L           | 0.00041  | 0.0702 mg/kg          | 0.01952  | 27.81%  |
| Mo 202.031*† | 25.1                        | 0.0029 mg/L           | 0.00049  | 0.1403 mg/kg          | 0.02353  | 16.77%  |
| Na 589.592*† | 217.2                       | 0.0541 mg/L           | 0.00616  | 2.602 mg/kg           | 0.2960   | 11.38%  |
| Ni 231.604*† | 31.8                        | 0.0014 mg/L           | 0.00079  | 0.0688 mg/kg          | 0.03777  | 54.90%  |
| P 213.617*†  | 10.6                        | 0.0061 mg/L           | 0.00785  | 0.2955 mg/kg          | 0.37723  | 127.64% |
| P 214.914†   | 25.0                        | 0.0219 mg/L           | 0.00399  | 1.054 mg/kg           | 0.1919   | 18.20%  |
| Pb 220.353*† | 3.5                         | 0.0005 mg/L           | 0.00057  | 0.0226 mg/kg          | 0.02758  | 121.98% |
| Sb 206.836†  | 6.0                         | 0.0034 mg/L           | 0.00094  | 0.1653 mg/kg          | 0.04512  | 27.30%  |
| Sb 217.582*† | 6.6                         | 0.0038 mg/L           | 0.00051  | 0.1843 mg/kg          | 0.02470  | 13.40%  |
| Se 196.026*† | 13.2                        | 0.0066 mg/L           | 0.00256  | 0.3156 mg/kg          | 0.12327  | 39.07%  |
| Si 251.611*† | -584.7                      | -0.0164 mg/L          | 0.00105  | -0.7880 mg/kg         | 0.05061  | 6.42%   |
| Sn 189.927*† | -14.1                       | -0.0026 mg/L          | 0.00133  | -0.1234 mg/kg         | 0.06406  | 51.92%  |
| Sn 242.170†  | 26.4                        | 0.0163 mg/L           | 0.00533  | 0.7831 mg/kg          | 0.25625  | 32.72%  |
| Sr 407.771*† | 245.3                       | 0.0008 mg/L           | 0.00026  | 0.0398 mg/kg          | 0.01243  | 31.27%  |
| Ti 334.940†  | 1308.6                      | 0.0017 mg/L           | 0.00074  | 0.0824 mg/kg          | 0.03540  | 42.99%  |
| Ti 336.121*† | 875.9                       | 0.0016 mg/L           | 0.00047  | 0.0761 mg/kg          | 0.02278  | 29.91%  |
| Tl 190.801*† | -22.2                       | -0.0130 mg/L          | 0.00202  | -0.6254 mg/kg         | 0.09691  | 15.50%  |
| V 292.402*†  | -13.5                       | -0.0001 mg/L          | 0.00072  | -0.0051 mg/kg         | 0.03460  | 682.28% |
| Zn 206.200*† | -42.0                       | -0.0011 mg/L          | 0.00017  | -0.0537 mg/kg         | 0.00829  | 15.45%  |

Sequence No.: 4  
Sample ID: 170320-1-03  
Analyst: 935 icp 7300  
Initial Sample Wt: 2.09 g  
Dilution:  
Wash Time: 15

Autosampler Location: 113  
Date Collected: 3/20/2017 5:05:16 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

## Mean Data: 170320-1-03

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD   |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|-------|
| Tb 384       | 82662.0                     | 109.9 %               | 2.55     |                       |          | 2.32% |
| Tb 350       | 138423.8                    | 112.5 %               | 2.59     |                       |          | 2.30% |
| Ag 328.068*† | 41369.6                     | 0.2314 mg/L           | 0.00011  | 11.07 mg/kg           | 0.005    | 0.05% |
| Al 308.215*† | 8384.5                      | 0.5095 mg/L           | 0.00669  | 24.38 mg/kg           | 0.320    | 1.31% |
| As 188.979†  | 923.3                       | 0.4860 mg/L           | 0.01322  | 23.25 mg/kg           | 0.632    | 2.72% |
| As 193.696*† | 640.6                       | 0.4843 mg/L           | 0.01492  | 23.17 mg/kg           | 0.714    | 3.08% |
| B 249.677*†  | 20222.5                     | 0.4400 mg/L           | 0.00015  | 21.05 mg/kg           | 0.007    | 0.03% |
| Ba 233.527*† | 70562.5                     | 0.5069 mg/L           | 0.00253  | 24.25 mg/kg           | 0.121    | 0.50% |
| Be 313.042*† | 1613193.6                   | 0.4699 mg/L           | 0.01944  | 22.48 mg/kg           | 0.930    | 4.14% |
| Ca 317.933*† | 866.2                       | 0.4894 mg/L           | 0.01331  | 23.41 mg/kg           | 0.637    | 2.72% |
| Cd 226.502*† | 35290.9                     | 0.4874 mg/L           | 0.00262  | 23.32 mg/kg           | 0.125    | 0.54% |
| Cd 228.802†  | 17475.5                     | 0.4717 mg/L           | 0.00165  | 22.57 mg/kg           | 0.079    | 0.35% |
| Co 228.616*† | 13427.7                     | 0.5073 mg/L           | 0.00496  | 24.27 mg/kg           | 0.237    | 0.98% |
| Cr 267.716*† | 52341.7                     | 0.4898 mg/L           | 0.00040  | 23.43 mg/kg           | 0.019    | 0.08% |
| Cu 324.752*† | 114045.2                    | 0.4850 mg/L           | 0.00024  | 23.20 mg/kg           | 0.012    | 0.05% |
| Fe 273.955*† | 10751.5                     | 0.4873 mg/L           | 0.00112  | 23.32 mg/kg           | 0.053    | 0.23% |
| K 766.490*†  | 12204.2                     | 4.494 mg/L            | 0.2210   | 215.0 mg/kg           | 10.57    | 4.92% |
| Mg 279.077*† | 9103.8                      | 0.5124 mg/L           | 0.00471  | 24.52 mg/kg           | 0.225    | 0.92% |
| Mn 257.610*† | 296237.7                    | 0.5019 mg/L           | 0.00058  | 24.01 mg/kg           | 0.028    | 0.11% |
| Mo 202.031*† | 4117.5                      | 0.4792 mg/L           | 0.01280  | 22.93 mg/kg           | 0.612    | 2.67% |
| Na 589.592*† | 19410.1                     | 4.837 mg/L            | 0.2232   | 231.4 mg/kg           | 10.68    | 4.61% |
| Ni 231.604*† | 11387.0                     | 0.5118 mg/L           | 0.00246  | 24.49 mg/kg           | 0.118    | 0.48% |
| P 213.617*†  | 902.9                       | 0.5244 mg/L           | 0.02079  | 25.09 mg/kg           | 0.995    | 3.96% |
| P 214.914†   | 551.8                       | 0.4848 mg/L           | 0.02078  | 23.20 mg/kg           | 0.994    | 4.29% |
| Pb 220.353*† | 3619.5                      | 0.4886 mg/L           | 0.01295  | 23.38 mg/kg           | 0.620    | 2.65% |
| Sb 206.836†  | 822.4                       | 0.4748 mg/L           | 0.01241  | 22.72 mg/kg           | 0.594    | 2.61% |
| Sb 217.582*† | 814.8                       | 0.4717 mg/L           | 0.00341  | 22.57 mg/kg           | 0.163    | 0.72% |
| Se 196.026*† | 962.0                       | 0.4787 mg/L           | 0.01968  | 22.90 mg/kg           | 0.942    | 4.11% |
| Si 251.611*† | 16484.6                     | 0.4621 mg/L           | 0.00452  | 22.11 mg/kg           | 0.216    | 0.98% |
| Sn 189.927*† | 2747.9                      | 0.5010 mg/L           | 0.01678  | 23.97 mg/kg           | 0.803    | 3.35% |
| Sn 242.170†  | 846.4                       | 0.5225 mg/L           | 0.00347  | 25.00 mg/kg           | 0.166    | 0.66% |
| Sr 407.771*† | 148670.9                    | 0.5012 mg/L           | 0.01842  | 23.98 mg/kg           | 0.881    | 3.68% |
| Ti 334.940†  | 362548.9                    | 0.4746 mg/L           | 0.02067  | 22.71 mg/kg           | 0.989    | 4.36% |
| Ti 336.121*† | 265841.3                    | 0.4807 mg/L           | 0.00029  | 23.00 mg/kg           | 0.014    | 0.06% |
| Tl 190.801*† | 852.7                       | 0.5006 mg/L           | 0.01089  | 23.95 mg/kg           | 0.521    | 2.18% |
| V 292.402*†  | 59655.2                     | 0.4644 mg/L           | 0.00095  | 22.22 mg/kg           | 0.045    | 0.20% |
| Zn 206.200*† | 18708.2                     | 0.4973 mg/L           | 0.00042  | 23.79 mg/kg           | 0.020    | 0.08% |

Sequence No.: 37

Sample ID: 17-03-1256-1 ms

Analyst: 935 icp 7300

Initial Sample Wt: 2.09 g

Dilution:

Wash Time: 15

Autosampler Location: 121

Date Collected: 3/20/2017 5:34:30 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1256-1 ms

| Analyte      | Mean Corrected<br>Intensity | Calib.<br>Conc. Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD    |
|--------------|-----------------------------|-----------------------|----------|-----------------------|----------|--------|
| Tb 384       | 53503.7                     | 71.10 %               | 0.055    |                       |          | 0.08%  |
| Tb 350       | 115581.3                    | 93.93 %               | 0.526    |                       |          | 0.56%  |
| Ag 328.068*† | 45399.5                     | 0.2539 mg/L           | 0.00112  | 12.15 mg/kg           | 0.054    | 0.44%  |
| Al 308.215*† | 6155427.2                   | 374.1 mg/L            | 2.88     | 17900 mg/kg           | 137.83   | 0.77%  |
| As 188.979†  | 1525.4                      | 0.8029 mg/L           | 0.01615  | 38.42 mg/kg           | 0.773    | 2.01%  |
| As 193.696*† | 1025.4                      | 0.7752 mg/L           | 0.02089  | 37.09 mg/kg           | 1.000    | 2.70%  |
| B 249.677*†  | 24871.9                     | 0.5411 mg/L           | 0.00358  | 25.89 mg/kg           | 0.171    | 0.66%  |
| Ba 233.527*† | 471848.5                    | 3.389 mg/L            | 0.0132   | 162.2 mg/kg           | 0.63     | 0.39%  |
| Be 313.042*† | 1865514.1                   | 0.5434 mg/L           | 0.00180  | 26.00 mg/kg           | 0.086    | 0.33%  |
| Ca 317.933*† | 181824.7                    | 102.7 mg/L            | 1.06     | 4915 mg/kg            | 50.85    | 1.03%  |
| Cd 226.502*† | 37486.4                     | 0.5178 mg/L           | 0.00956  | 24.77 mg/kg           | 0.458    | 1.85%  |
| Cd 228.802†  | 19025.1                     | 0.5135 mg/L           | 0.00890  | 24.57 mg/kg           | 0.426    | 1.73%  |
| Co 228.616*† | 19923.0                     | 0.7527 mg/L           | 0.01564  | 36.01 mg/kg           | 0.748    | 2.08%  |
| Cr 267.716*† | 98267.6                     | 0.9195 mg/L           | 0.00071  | 44.00 mg/kg           | 0.034    | 0.08%  |
| Cu 324.752*† | 218962.3                    | 0.9311 mg/L           | 0.00183  | 44.55 mg/kg           | 0.088    | 0.20%  |
| Fe 273.955*† | 10660849.1                  | 483.2 mg/L            | 4.76     | 23120 mg/kg           | 227.69   | 0.98%  |
| K 766.490*†  | 170109.7                    | 62.63 mg/L            | 0.902    | 2997 mg/kg            | 43.18    | 1.44%  |
| Mg 279.077*† | 2203060.7                   | 124.0 mg/L            | 0.41     | 5933 mg/kg            | 19.84    | 0.33%  |
| Mn 257.610*† | 5337791.0                   | 9.043 mg/L            | 0.0115   | 432.7 mg/kg           | 0.55     | 0.13%  |
| Mo 202.031*† | 4110.9                      | 0.4784 mg/L           | 0.00378  | 22.89 mg/kg           | 0.181    | 0.79%  |
| Na 589.592*† | 51812.6                     | 12.91 mg/L            | 0.150    | 617.8 mg/kg           | 7.17     | 1.16%  |
| Ni 231.604*† | 17862.0                     | 0.8029 mg/L           | 0.01595  | 38.42 mg/kg           | 0.763    | 1.99%  |
| P 213.617*†  | 26357.6                     | 15.31 mg/L            | 0.362    | 732.5 mg/kg           | 17.33    | 2.37%  |
| P 214.914†   | 18352.2                     | 16.12 mg/L            | 0.427    | 771.5 mg/kg           | 20.44    | 2.65%  |
| Pb 220.353*† | 14954.8                     | 2.019 mg/L            | 0.0592   | 96.60 mg/kg           | 2.831    | 2.93%  |
| Sb 206.836†  | 386.8                       | 0.2233 mg/L           | 0.02361  | 10.69 mg/kg           | 1.130    | 10.57% |
| Sb 217.582*† | 379.1                       | 0.2195 mg/L           | 0.01974  | 10.50 mg/kg           | 0.944    | 8.99%  |
| Se 196.026*† | 1094.6                      | 0.5447 mg/L           | 0.00947  | 26.06 mg/kg           | 0.453    | 1.74%  |
| Si 251.611*† | 539287.4                    | 15.12 mg/L            | 0.038    | 723.3 mg/kg           | 1.82     | 0.25%  |
| Sn 189.927*† | 1842.7                      | 0.3359 mg/L           | 0.01754  | 16.07 mg/kg           | 0.839    | 5.22%  |
| Sn 242.170†  | 2808.6                      | 1.734 mg/L            | 0.0363   | 82.95 mg/kg           | 1.737    | 2.09%  |
| Sr 407.771*† | 456437.6                    | 1.539 mg/L            | 0.0119   | 73.62 mg/kg           | 0.570    | 0.77%  |
| Ti 334.940†  | 19356873.4                  | 25.34 mg/L            | 0.243    | 1212 mg/kg            | 11.64    | 0.96%  |
| Ti 336.121*† | 13899041.8                  | 25.13 mg/L            | 0.254    | 1202 mg/kg            | 12.16    | 1.01%  |
| Tl 190.801*† | 763.0                       | 0.4479 mg/L           | 0.01088  | 21.43 mg/kg           | 0.520    | 2.43%  |
| V 292.402*†  | 189451.2                    | 1.467 mg/L            | 0.0001   | 70.19 mg/kg           | 0.005    | 0.01%  |
| Zn 206.200*† | 78646.0                     | 2.091 mg/L            | 0.0050   | 100.0 mg/kg           | 0.24     | 0.24%  |

Sequence No.: 38

Sample ID: 17-03-1256-1 msd

Analyst: 935 icp 7300

Initial Sample Wt: 2.08 g

Dilution:

Wash Time: 15

Autosampler Location: 122

Date Collected: 3/20/2017 5:35:15 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1256-1 msd

| Analyte      | Mean Corrected |             | Calib. | Std.Dev. | Sample      |          | RSD   |
|--------------|----------------|-------------|--------|----------|-------------|----------|-------|
|              | Intensity      | Conc. Units |        |          | Conc. Units | Std.Dev. |       |
| Tb 384       | 54566.9        | 72.52 %     |        | 0.531    |             |          | 0.73% |
| Tb 350       | 116282.8       | 94.50 %     |        | 0.332    |             |          | 0.35% |
| Ag 328.068*† | 44530.9        | 0.2490 mg/L |        | 0.00078  | 11.97 mg/kg | 0.038    | 0.31% |
| Al 308.215*† | 5985943.7      | 363.8 mg/L  |        | 3.10     | 17490 mg/kg | 149.06   | 0.85% |
| As 188.979†  | 1514.7         | 0.7973 mg/L |        | 0.03087  | 38.33 mg/kg | 1.484    | 3.87% |
| As 193.696*† | 1067.1         | 0.8067 mg/L |        | 0.02398  | 38.78 mg/kg | 1.153    | 2.97% |
| B 249.677*†  | 24303.8        | 0.5288 mg/L |        | 0.01352  | 25.42 mg/kg | 0.650    | 2.56% |
| Ba 233.527*† | 484633.8       | 3.481 mg/L  |        | 0.0087   | 167.4 mg/kg | 0.42     | 0.25% |
| Be 313.042*† | 1793383.0      | 0.5224 mg/L |        | 0.00434  | 25.12 mg/kg | 0.209    | 0.83% |
| Ca 317.933*† | 178472.3       | 100.8 mg/L  |        | 0.19     | 4848 mg/kg  | 9.36     | 0.19% |
| Cd 226.502*† | 35931.5        | 0.4963 mg/L |        | 0.00491  | 23.86 mg/kg | 0.236    | 0.99% |
| Cd 228.802†  | 18376.2        | 0.4960 mg/L |        | 0.00166  | 23.85 mg/kg | 0.080    | 0.34% |
| Co 228.616*† | 19352.3        | 0.7311 mg/L |        | 0.00367  | 35.15 mg/kg | 0.176    | 0.50% |
| Cr 267.716*† | 95664.7        | 0.8951 mg/L |        | 0.00591  | 43.04 mg/kg | 0.284    | 0.66% |
| Cu 324.752*† | 218321.8       | 0.9284 mg/L |        | 0.00248  | 44.63 mg/kg | 0.119    | 0.27% |
| Fe 273.955*† | 10610435.5     | 480.9 mg/L  |        | 6.16     | 23120 mg/kg | 296.16   | 1.28% |
| K 766.490*†  | 163763.4       | 60.30 mg/L  |        | 0.127    | 2899 mg/kg  | 6.11     | 0.21% |
| Mg 279.077*† | 2175168.4      | 122.4 mg/L  |        | 0.34     | 5886 mg/kg  | 16.49    | 0.28% |
| Mn 257.610*† | 5792941.3      | 9.814 mg/L  |        | 0.0146   | 471.8 mg/kg | 0.70     | 0.15% |
| Mo 202.031*† | 3903.0         | 0.4543 mg/L |        | 0.00479  | 21.84 mg/kg | 0.230    | 1.05% |
| Na 589.592*† | 50899.3        | 12.68 mg/L  |        | 0.023    | 609.8 mg/kg | 1.13     | 0.19% |
| Ni 231.604*† | 17528.6        | 0.7879 mg/L |        | 0.00894  | 37.88 mg/kg | 0.430    | 1.14% |
| P 213.617*†  | 24968.2        | 14.50 mg/L  |        | 0.298    | 697.2 mg/kg | 14.32    | 2.05% |
| P 214.914†   | 17526.1        | 15.40 mg/L  |        | 0.091    | 740.3 mg/kg | 4.36     | 0.59% |
| Pb 220.353*† | 14109.6        | 1.905 mg/L  |        | 0.0074   | 91.57 mg/kg | 0.358    | 0.39% |
| Sb 206.836†  | 396.1          | 0.2287 mg/L |        | 0.01421  | 11.00 mg/kg | 0.683    | 6.21% |
| Sb 217.582*† | 369.0          | 0.2136 mg/L |        | 0.00973  | 10.27 mg/kg | 0.468    | 4.56% |
| Se 196.026*† | 1038.8         | 0.5169 mg/L |        | 0.01814  | 24.85 mg/kg | 0.872    | 3.51% |
| Si 251.611*† | 489994.6       | 13.74 mg/L  |        | 0.012    | 660.4 mg/kg | 0.60     | 0.09% |
| Sn 189.927*† | 1729.3         | 0.3153 mg/L |        | 0.01187  | 15.16 mg/kg | 0.571    | 3.77% |
| Sn 242.170†  | 2794.1         | 1.725 mg/L  |        | 0.0155   | 82.92 mg/kg | 0.746    | 0.90% |
| Sr 407.771*† | 452892.6       | 1.527 mg/L  |        | 0.0002   | 73.40 mg/kg | 0.010    | 0.01% |
| Ti 334.940†  | 18694208.2     | 24.47 mg/L  |        | 0.263    | 1176 mg/kg  | 12.64    | 1.07% |
| Ti 336.121*† | 13437451.8     | 24.30 mg/L  |        | 0.280    | 1168 mg/kg  | 13.46    | 1.15% |
| Tl 190.801*† | 695.7          | 0.4084 mg/L |        | 0.01028  | 19.64 mg/kg | 0.494    | 2.52% |
| V 292.402*†  | 185163.7       | 1.434 mg/L  |        | 0.0073   | 68.92 mg/kg | 0.352    | 0.51% |
| Zn 206.200*† | 81495.0        | 2.166 mg/L  |        | 0.0029   | 104.1 mg/kg | 0.14     | 0.14% |



Sequence No.: 34

Sample ID: 17-03-1256-1

Analyst: 935 icp 7300

Initial Sample Wt: 2.08 g

Dilution:

Wash Time: 15

Autosampler Location: 120

Date Collected: 3/20/2017 5:31:53 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1256-1

| Analyte      | Mean Corrected<br>Intensity | Conc. Units | Calib.<br>Units | Std.Dev. | Sample<br>Conc. Units | Std.Dev. | RSD     |
|--------------|-----------------------------|-------------|-----------------|----------|-----------------------|----------|---------|
| Tb 384       | 55461.6                     | 73.70       | %               | 0.086    |                       |          | 0.12%   |
| Tb 350       | 118118.1                    | 95.99       | %               | 1.228    |                       |          | 1.28%   |
| Ag 328.068*† | -601.3                      | -0.0034     | mg/L            | 0.00014  | -0.1617               | 0.00672  | 4.16%   |
| Al 308.215*† | 5696138.0                   | 346.2       | mg/L            | 4.61     | 16640                 | 221.52   | 1.33%   |
| As 188.979†  | 516.0                       | 0.2716      | mg/L            | 0.00765  | 13.06                 | 0.368    | 2.82%   |
| As 193.696*† | 342.7                       | 0.2591      | mg/L            | 0.02028  | 12.46                 | 0.975    | 7.83%   |
| B 249.677*†  | 667.8                       | 0.0145      | mg/L            | 0.00086  | 0.6986                | 0.04154  | 5.95%   |
| Ba 233.527*† | 417443.8                    | 2.999       | mg/L            | 0.0158   | 144.2                 | 0.76     | 0.53%   |
| Be 313.042*† | 38946.5                     | 0.0113      | mg/L            | 0.00011  | 0.5455                | 0.00523  | 0.96%   |
| Ca 317.933*† | 181175.6                    | 102.4       | mg/L            | 2.75     | 4921                  | 132.24   | 2.69%   |
| Cd 226.502*† | 899.9                       | 0.0124      | mg/L            | 0.00043  | 0.5976                | 0.02050  | 3.43%   |
| Cd 228.802†  | 102.9                       | 0.0028      | mg/L            | 0.00055  | 0.1336                | 0.02646  | 19.81%  |
| Co 228.616*† | 6647.4                      | 0.2511      | mg/L            | 0.00538  | 12.07                 | 0.259    | 2.14%   |
| Cr 267.716*† | 42194.0                     | 0.3948      | mg/L            | 0.00995  | 18.98                 | 0.478    | 2.52%   |
| Cu 324.752*† | 92749.5                     | 0.3944      | mg/L            | 0.00030  | 18.96                 | 0.014    | 0.08%   |
| Fe 273.955*† | 10006452.3                  | 453.6       | mg/L            | 5.58     | 21810                 | 268.31   | 1.23%   |
| K 766.490*†  | 142303.9                    | 52.40       | mg/L            | 1.388    | 2519                  | 66.74    | 2.65%   |
| Mg 279.077*† | 2108084.6                   | 118.7       | mg/L            | 1.14     | 5705                  | 54.58    | 0.96%   |
| Mn 257.610*† | 4952454.4                   | 8.390       | mg/L            | 0.0512   | 403.4                 | 2.46     | 0.61%   |
| Mo 202.031*† | -20.0                       | -0.0023     | mg/L            | 0.00240  | -0.1121               | 0.11546  | 103.01% |
| Na 589.592*† | 29020.4                     | 7.232       | mg/L            | 0.1999   | 347.7                 | 9.61     | 2.76%   |
| Ni 231.604*† | 6414.5                      | 0.2883      | mg/L            | 0.00153  | 13.86                 | 0.074    | 0.53%   |
| P 213.617*†  | 23300.8                     | 13.53       | mg/L            | 0.369    | 650.6                 | 17.72    | 2.72%   |
| P 214.914†   | 16445.9                     | 14.45       | mg/L            | 0.289    | 694.7                 | 13.88    | 2.00%   |
| Pb 220.353*† | 9801.1                      | 1.323       | mg/L            | 0.0344   | 63.61                 | 1.656    | 2.60%   |
| Sb 206.836†  | 18.8                        | 0.0109      | mg/L            | 0.02931  | 0.5225                | 1.40927  | 269.72% |
| Sb 217.582*† | 53.7                        | 0.0311      | mg/L            | 0.02089  | 1.495                 | 1.0045   | 67.21%  |
| Se 196.026*† | 6.9                         | 0.0034      | mg/L            | 0.00099  | 0.1650                | 0.04765  | 28.87%  |
| Si 251.611*† | 469210.7                    | 13.15       | mg/L            | 0.093    | 632.4                 | 4.46     | 0.71%   |
| Sn 189.927*† | -754.8                      | -0.1376     | mg/L            | 0.00178  | -6.616                | 0.0855   | 1.29%   |
| Sn 242.170†  | 1887.5                      | 1.165       | mg/L            | 0.0521   | 56.01                 | 2.504    | 4.47%   |
| Sr 407.771*† | 307751.1                    | 1.037       | mg/L            | 0.0247   | 49.88                 | 1.185    | 2.38%   |
| Ti 334.940†  | 17690477.1                  | 23.16       | mg/L            | 0.330    | 1113                  | 15.89    | 1.43%   |
| Ti 336.121*† | 12697037.9                  | 22.96       | mg/L            | 0.308    | 1104                  | 14.81    | 1.34%   |
| Tl 190.801*† | -59.0                       | -0.0346     | mg/L            | 0.00274  | -1.664                | 0.1319   | 7.93%   |
| V 292.402*†  | 121851.6                    | 0.9412      | mg/L            | 0.00095  | 45.25                 | 0.046    | 0.10%   |
| Zn 206.200*† | 52982.5                     | 1.408       | mg/L            | 0.0287   | 67.71                 | 1.378    | 2.03%   |



# EPA 6010B ICP Metals (Solid)

## Run Logs

# 170320C1

INT STD M120716A M006-032-05 0.050 ml  
 R.B. R12091602 PDS/PDSD 10 ml  
 M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

| No. | File Name                 | Date      | Time        | Analyst      | A/S | Location                 |
|-----|---------------------------|-----------|-------------|--------------|-----|--------------------------|
| 1   | Cal blank R12091601_935   | 3/20/2017 | 10:02:39 AM | 935 icp 7300 | 1   |                          |
| 2   | Cal blank R12091601_935   | 3/20/2017 | 10:03:53 AM | 935 icp 7300 | 1   |                          |
| 3   | STD3-M111116A_935_ICP7300 | 3/20/2017 | 10:04:59 AM | 935 icp 7300 | 2   |                          |
| 4   | ICV-M072816C              | 3/20/2017 | 10:05:55 AM | 935 icp 7300 | 10  |                          |
| 5   | ICB-R12091601             | 3/20/2017 | 10:06:52 AM | 935 icp 7300 | 1   |                          |
| 6   | Cal blank R12091601_935   | 3/20/2017 | 10:08:59 AM | 935 icp 7300 | 1   |                          |
| 7   | STD3-M111116A_935_ICP7300 | 3/20/2017 | 10:10:05 AM | 935 icp 7300 | 2   |                          |
| 8   | ICV-M072816C              | 3/20/2017 | 10:11:01 AM | 935 icp 7300 | 10  |                          |
| 9   | ICB-R12091601             | 3/20/2017 | 10:11:58 AM | 935 icp 7300 | 1   | ✓ B > RL                 |
| 10  | ICB-R12091601             | 3/20/2017 | 10:12:43 AM | 935 icp 7300 | 1   |                          |
| 11  | ICB-R12091601             | 3/20/2017 | 10:13:31 AM | 935 icp 7300 | 1   |                          |
| 12  | ICS_A - M110116B          | 3/20/2017 | 10:14:33 AM | 935 icp 7300 | 8   |                          |
| 13  | ICS_AB - M110116A         | 3/20/2017 | 10:15:24 AM | 935 icp 7300 | 9   |                          |
| 14  | CCV= STD3x0.5             | 3/20/2017 | 10:16:14 AM | 935 icp 7300 | 3   |                          |
| 15  | CCB-R12091601             | 3/20/2017 | 10:17:05 AM | 935 icp 7300 | 1   |                          |
| 16  | LLCV-M082616A             | 3/20/2017 | 10:56:30 AM | 935 icp 7300 | 101 | ✓ Mn, As, Pb, Sb, Zn act |
| 17  | LLCV-M082616A             | 3/20/2017 | 10:57:36 AM | 935 icp 7300 | 102 |                          |
| 18  | 17-03-0858-4 UTC          | 3/20/2017 | 10:58:35 AM | 935 icp 7300 | 110 |                          |
| 19  | LCS-JN-1012-1             | 3/20/2017 | 10:59:33 AM | 935 icp 7300 | 103 |                          |
| 20  | LCS-JN-1012-2             | 3/20/2017 | 11:00:26 AM | 935 icp 7300 | 104 |                          |
| 21  | LCS-JN-1012-3             | 3/20/2017 | 11:01:17 AM | 935 icp 7300 | 105 |                          |
| 22  | LCS-JN-1012-4             | 3/20/2017 | 11:02:08 AM | 935 icp 7300 | 106 |                          |
| 23  | LLCV-M082616A             | 3/20/2017 | 11:02:58 AM | 935 icp 7300 | 101 | ✓ Mn,                    |
| 24  | ICS_A - M110116B          | 3/20/2017 | 11:03:59 AM | 935 icp 7300 | 8   |                          |

| No. | File Name                 | Date      | Time       | Analyst Name | A/S Location |
|-----|---------------------------|-----------|------------|--------------|--------------|
| 185 | 17-03-1223-1              | 3/20/2017 | 1:38:27 PM | 935 icp 7300 | 203          |
| 186 | CCV= STD3x0.5             | 3/20/2017 | 1:39:18 PM | 935 icp 7300 | 3            |
| 187 | CCB-R12091601             | 3/20/2017 | 1:40:11 PM | 935 icp 7300 | 1            |
| 188 | 17-03-1223-1 ms           | 3/20/2017 | 1:41:11 PM | 935 icp 7300 | 204          |
| 189 | 17-03-1223-1 msd          | 3/20/2017 | 1:42:05 PM | 935 icp 7300 | 205          |
| 190 | 17-03-1223-2              | 3/20/2017 | 1:42:56 PM | 935 icp 7300 | 206          |
| 191 | 17-03-1223-3              | 3/20/2017 | 1:43:47 PM | 935 icp 7300 | 207          |
| 192 | 17-03-1223-4              | 3/20/2017 | 1:44:38 PM | 935 icp 7300 | 208          |
| 193 | 17-03-1223-5              | 3/20/2017 | 1:45:29 PM | 935 icp 7300 | 209          |
| 194 | 17-03-0485-7 MIS          | 3/20/2017 | 1:46:20 PM | 935 icp 7300 | 210          |
| 195 | 17-03-0485-8 MIS          | 3/20/2017 | 1:47:03 PM | 935 icp 7300 | 211          |
| 196 | 17-03-0485-9 MIS          | 3/20/2017 | 1:47:46 PM | 935 icp 7300 | 212          |
| 197 | 17-03-0884-1              | 3/20/2017 | 1:48:29 PM | 935 icp 7300 | 213          |
| 198 | CCV= STD3x0.5             | 3/20/2017 | 1:49:15 PM | 935 icp 7300 | 3            |
| 199 | CCB-R12091601             | 3/20/2017 | 1:50:07 PM | 935 icp 7300 | 1            |
| 200 | 17-03-0884-1 ms           | 3/20/2017 | 1:51:07 PM | 935 icp 7300 | 214          |
| 201 | 17-03-0884-1 msd          | 3/20/2017 | 1:51:55 PM | 935 icp 7300 | 215          |
| 202 | CCV= STD3x0.5             | 3/20/2017 | 1:52:41 PM | 935 icp 7300 | 3            |
| 203 | CCB-R12091601             | 3/20/2017 | 1:53:34 PM | 935 icp 7300 | 1            |
| 204 | CCV= STD3x0.5             | 3/20/2017 | 1:54:25 PM | 935 icp 7300 | 3            |
| 205 | CCB-R12091601             | 3/20/2017 | 1:55:23 PM | 935 icp 7300 | 1            |
| 206 | 170320-ba-2               | 3/20/2017 | 1:56:14 PM | 935 icp 7300 | 216          |
| 207 | 170320-la-2               | 3/20/2017 | 1:57:20 PM | 935 icp 7300 | 217          |
| 208 | 17-03-1178-1              | 3/20/2017 | 1:58:19 PM | 935 icp 7300 | 218          |
| 209 | 17-03-1178-2              | 3/20/2017 | 1:59:11 PM | 935 icp 7300 | 219          |
| 210 | 17-03-1178-3              | 3/20/2017 | 1:59:58 PM | 935 icp 7300 | 220          |
| 211 | 17-03-1113-1              | 3/20/2017 | 2:00:51 PM | 935 icp 7300 | 221          |
| 212 | 17-03-1153-2              | 3/20/2017 | 2:10:51 PM | 935 icp 7300 | 224          |
| 213 | Cal blankR12091601_935    | 3/20/2017 | 2:19:17 PM | 935 icp 7300 | 1            |
| 214 | STD3-M111116A_935_ICP7300 | 3/20/2017 | 2:20:22 PM | 935 icp 7300 | 2            |
| 215 | ICV-M072816C              | 3/20/2017 | 2:21:18 PM | 935 icp 7300 | 10           |
| 216 | Cal blankR12091601_935    | 3/20/2017 | 2:23:32 PM | 935 icp 7300 | 1            |

3 } \* T2-2 + minerals (G00B Soil)

3 } \* T2-2 + minerals (G00B Water)

No solution

out

|                            |                    |
|----------------------------|--------------------|
| Reviewed/Assign to Logbook | Date: 3/21/17      |
| Analysis: 2007/600         | Chemist ID: 1012   |
| Logbook Page: 89           | Instrument ID: 187 |

| No. | File Name                 | Date      | Time       | Analyst Name | A/S Location |
|-----|---------------------------|-----------|------------|--------------|--------------|
| 217 | STD3-M111116A_935_ICP7300 | 3/20/2017 | 2:24:37 PM | 935 icp 7300 | 2            |
| 218 | ICV-M072816C              | 3/20/2017 | 2:25:33 PM | 935 icp 7300 | 10           |
| 219 | ICB-R12091601             | 3/20/2017 | 2:26:30 PM | 935 icp 7300 | 1            |
| 220 | ICB-R12091601             | 3/20/2017 | 2:27:16 PM | 935 icp 7300 | 1            |
| 221 | ICB-R12091601             | 3/20/2017 | 2:28:04 PM | 935 icp 7300 | 1            |
| 222 | CCV= STD3x0.5             | 3/20/2017 | 2:29:07 PM | 935 icp 7300 | 3            |
| 223 | CCB-R12091601             | 3/20/2017 | 2:29:58 PM | 935 icp 7300 | 1            |
| 224 | 170320-ba-2               | 3/20/2017 | 2:30:49 PM | 935 icp 7300 | 216          |
| 225 | 170320-ba-2               | 3/20/2017 | 2:33:11 PM | 935 icp 7300 | 216          |
| 226 | 170320-la-2               | 3/20/2017 | 2:34:16 PM | 935 icp 7300 | 217          |
| 227 | CCV= STD3x0.5             | 3/20/2017 | 2:35:06 PM | 935 icp 7300 | 3            |
| 228 | CCB-R12091601             | 3/20/2017 | 2:35:59 PM | 935 icp 7300 | 1            |
| 229 | 17-03-1178-1              | 3/20/2017 | 2:36:50 PM | 935 icp 7300 | 218          |
| 230 | 17-03-1178-2              | 3/20/2017 | 2:37:49 PM | 935 icp 7300 | 219          |
| 231 | 17-03-1178-3              | 3/20/2017 | 2:38:36 PM | 935 icp 7300 | 220          |
| 232 | 17-03-1113x5-1            | 3/20/2017 | 2:39:29 PM | 935 icp 7300 | 221          |
| 233 | 17-03-1113x5-1 ms         | 3/20/2017 | 2:40:23 PM | 935 icp 7300 | 222          |
| 234 | 17-03-1113x5-1 msd        | 3/20/2017 | 2:41:17 PM | 935 icp 7300 | 223          |
| 235 | 17-03-1153-2              | 3/20/2017 | 2:42:11 PM | 935 icp 7300 | 224          |
| 236 | 17-03-1153-3              | 3/20/2017 | 2:43:03 PM | 935 icp 7300 | 225          |
| 237 | 17-03-1153-4              | 3/20/2017 | 2:43:55 PM | 935 icp 7300 | 226          |
| 238 | 17-03-1153-5              | 3/20/2017 | 2:44:48 PM | 935 icp 7300 | 227          |
| 239 | CCV= STD3x0.5             | 3/20/2017 | 2:45:41 PM | 935 icp 7300 | 3            |
| 240 | CCB-R12091601             | 3/20/2017 | 2:46:34 PM | 935 icp 7300 | 1            |
| 241 | 17-03-1153-6              | 3/20/2017 | 2:47:34 PM | 935 icp 7300 | 228          |
| 242 | 17-03-1153-7              | 3/20/2017 | 2:48:30 PM | 935 icp 7300 | 229          |
| 243 | 17-03-1153-8              | 3/20/2017 | 2:49:23 PM | 935 icp 7300 | 230          |
| 244 | 17-03-1153-9              | 3/20/2017 | 2:50:16 PM | 935 icp 7300 | 231          |
| 245 | 17-03-1153-10             | 3/20/2017 | 2:51:09 PM | 935 icp 7300 | 232          |
| 246 | 17-03-1153-11             | 3/20/2017 | 2:52:01 PM | 935 icp 7300 | 233          |
| 247 | 17-03-1153-12             | 3/20/2017 | 2:52:53 PM | 935 icp 7300 | 234          |
| 248 | 17-03-1153-13             | 3/20/2017 | 2:53:46 PM | 935 icp 7300 | 235          |

1, B > RL

Reviewed/Assign to Logbook Date: 3/21/17  
 Analysis: 200.71 2012 Chemist ID: 1012  
 Logbook Page: 90 Instrument ID: 1017

Reviewed/Assign to Logbook Date: 3/21/17  
 Analysis: 202716010 Chemist ID: 1012  
 Logbook Page: 98 Instrument ID: 1017

| No. | File Name          | Date      | Time       | Analyst Name | A/S Location |
|-----|--------------------|-----------|------------|--------------|--------------|
| 313 | CCB-R12091601      | 3/20/2017 | 4:33:17 PM | 935 icp 7300 | 1            |
| 314 | 17-03-1282-1       | 3/20/2017 | 4:35:00 PM | 935 icp 7300 | 450          |
| 315 | 17-03-1352-3       | 3/20/2017 | 4:36:01 PM | 935 icp 7300 | 451          |
| 316 | 17-03-1352-4       | 3/20/2017 | 4:36:55 PM | 935 icp 7300 | 452          |
| 317 | 17-03-1352-5       | 3/20/2017 | 4:37:50 PM | 935 icp 7300 | 453          |
| 318 | 17-03-1352-6       | 3/20/2017 | 4:38:43 PM | 935 icp 7300 | 454          |
| 319 | 17-03-1352-7       | 3/20/2017 | 4:39:35 PM | 935 icp 7300 | 455          |
| 320 | 17-03-1352-8       | 3/20/2017 | 4:40:22 PM | 935 icp 7300 | 456          |
| 321 | 17-03-1352-9       | 3/20/2017 | 4:41:15 PM | 935 icp 7300 | 457          |
| 322 | 17-03-1352-10      | 3/20/2017 | 4:42:08 PM | 935 icp 7300 | 458          |
| 323 | 17-03-1392-1       | 3/20/2017 | 4:43:01 PM | 935 icp 7300 | 459          |
| 324 | CCV= STD3x0.5      | 3/20/2017 | 4:43:58 PM | 935 icp 7300 | 3            |
| 325 | CCB-R12091601      | 3/20/2017 | 4:44:51 PM | 935 icp 7300 | 1            |
| 326 | 17-03-1392-f-1     | 3/20/2017 | 4:45:51 PM | 935 icp 7300 | 103          |
| 327 | 17-03-1392-f-1 ms  | 3/20/2017 | 4:46:48 PM | 935 icp 7300 | 104          |
| 328 | 17-03-1392-f-1 msd | 3/20/2017 | 4:47:44 PM | 935 icp 7300 | 105          |
| 329 | 17-03-1300-1       | 3/20/2017 | 4:48:40 PM | 935 icp 7300 | 106          |
| 330 | 17-03-1300-2       | 3/20/2017 | 4:49:27 PM | 935 icp 7300 | 107          |
| 331 | 17-03-1361-1       | 3/20/2017 | 4:50:14 PM | 935 icp 7300 | 108          |
| 332 | 17-03-1361-2       | 3/20/2017 | 4:51:06 PM | 935 icp 7300 | 109          |
| 333 | CCV= STD3x0.5      | 3/20/2017 | 4:51:58 PM | 935 icp 7300 | 3            |
| 334 | CCB-R12091601      | 3/20/2017 | 4:52:51 PM | 935 icp 7300 | 1            |
| 335 | 170320-b-02        | 3/20/2017 | 5:02:20 PM | 935 icp 7300 | 110          |
| 336 | 170320-l-02        | 3/20/2017 | 5:03:25 PM | 935 icp 7300 | 111          |
| 337 | 170320-b-03        | 3/20/2017 | 5:04:17 PM | 935 icp 7300 | 112          |
| 338 | 170320-l-03        | 3/20/2017 | 5:05:16 PM | 935 icp 7300 | 113          |
| 339 | 170320-b-04        | 3/20/2017 | 5:06:06 PM | 935 icp 7300 | 114          |
| 340 | 170320-l-04        | 3/20/2017 | 5:07:05 PM | 935 icp 7300 | 115          |
| 341 | 170320-b-05        | 3/20/2017 | 5:07:57 PM | 935 icp 7300 | 116          |
| 342 | 170320-l-05        | 3/20/2017 | 5:08:56 PM | 935 icp 7300 | 117          |
| 343 | 170320-b-06        | 3/20/2017 | 5:09:48 PM | 935 icp 7300 | 118          |
| 344 | 170320-l-06        | 3/20/2017 | 5:10:47 PM | 935 icp 7300 | 119          |

| No. | File Name         | Date      | Time       | Analyst Name | A/S Location |
|-----|-------------------|-----------|------------|--------------|--------------|
| 345 | CCV= STD3x0.5     | 3/20/2017 | 5:11:39 PM | 935 icp 7300 | 3            |
| 346 | CCB-R12091601     | 3/20/2017 | 5:12:31 PM | 935 icp 7300 | 1            |
| 347 | 17-03-0486-7 MIS  | 3/20/2017 | 5:13:31 PM | 935 icp 7300 | 141          |
| 348 | 17-03-0486-8 MIS  | 3/20/2017 | 5:14:30 PM | 935 icp 7300 | 142          |
| 349 | 17-03-0486-9 MIS  | 3/20/2017 | 5:15:27 PM | 935 icp 7300 | 143          |
| 350 | 17-03-0589-28 MIS | 3/20/2017 | 5:16:24 PM | 935 icp 7300 | 144          |
| 351 | 17-03-0589-29 MIS | 3/20/2017 | 5:17:15 PM | 935 icp 7300 | 145          |
| 352 | 17-03-0589-30 MIS | 3/20/2017 | 5:18:06 PM | 935 icp 7300 | 146          |
| 353 | 17-03-0590-28 MIS | 3/20/2017 | 5:18:59 PM | 935 icp 7300 | 147          |
| 354 | 17-03-0590-29 MIS | 3/20/2017 | 5:19:50 PM | 935 icp 7300 | 148          |
| 355 | 17-03-0590-30 MIS | 3/20/2017 | 5:20:41 PM | 935 icp 7300 | 149          |
| 356 | 17-03-0641-30 MIS | 3/20/2017 | 5:21:32 PM | 935 icp 7300 | 150          |
| 357 | CCV= STD3x0.5     | 3/20/2017 | 5:22:23 PM | 935 icp 7300 | 3            |
| 358 | CCB-R12091601     | 3/20/2017 | 5:23:15 PM | 935 icp 7300 | 1            |
| 359 | 17-03-0641-31 MIS | 3/20/2017 | 5:24:15 PM | 935 icp 7300 | 151          |
| 360 | 17-03-0641-32 MIS | 3/20/2017 | 5:25:10 PM | 935 icp 7300 | 152          |
| 361 | 17-03-0641-33 MIS | 3/20/2017 | 5:26:01 PM | 935 icp 7300 | 153          |
| 362 | 17-03-0642-30 MIS | 3/20/2017 | 5:26:52 PM | 935 icp 7300 | 154          |
| 363 | 17-03-0642-31 MIS | 3/20/2017 | 5:27:43 PM | 935 icp 7300 | 155          |
| 364 | 17-03-0642-32 MIS | 3/20/2017 | 5:28:34 PM | 935 icp 7300 | 156          |
| 365 | 17-03-0642-33 MIS | 3/20/2017 | 5:29:25 PM | 935 icp 7300 | 157          |
| 366 | 17-03-1273-1      | 3/20/2017 | 5:30:16 PM | 935 icp 7300 | 160          |
| 367 | 17-03-0986-1      | 3/20/2017 | 5:31:00 PM | 935 icp 7300 | 402          |
| 368 | 17-03-1256-1      | 3/20/2017 | 5:31:53 PM | 935 icp 7300 | 120          |
| 369 | CCV= STD3x0.5     | 3/20/2017 | 5:32:37 PM | 935 icp 7300 | 3            |
| 370 | CCB-R12091601     | 3/20/2017 | 5:33:30 PM | 935 icp 7300 | 1            |
| 371 | 17-03-1256-1 ms   | 3/20/2017 | 5:34:30 PM | 935 icp 7300 | 121          |
| 372 | 17-03-1256-1 msd  | 3/20/2017 | 5:35:15 PM | 935 icp 7300 | 122          |
| 373 | 17-03-1125-3      | 3/20/2017 | 5:35:58 PM | 935 icp 7300 | 123          |
| 374 | 17-03-1125-3 ms   | 3/20/2017 | 5:36:44 PM | 935 icp 7300 | 124          |
| 375 | 17-03-1125-3 msd  | 3/20/2017 | 5:37:31 PM | 935 icp 7300 | 125          |
| 376 | 17-03-1125-8      | 3/20/2017 | 5:38:18 PM | 935 icp 7300 | 126          |

| No. | File Name         | Date      | Time       | Analyst Name | A/S Location |
|-----|-------------------|-----------|------------|--------------|--------------|
| 377 | 17-03-1125-13     | 3/20/2017 | 5:39:16 PM | 935 icp 7300 | 127          |
| 378 | 17-03-1125-18     | 3/20/2017 | 5:40:14 PM | 935 icp 7300 | 128          |
| 379 | 17-03-1185-1      | 3/20/2017 | 5:41:11 PM | 935 icp 7300 | 129          |
| 380 | 17-03-1185-1 msd  | 3/20/2017 | 5:42:02 PM | 935 icp 7300 | 130          |
| 381 | CCV= STD3x0.5     | 3/20/2017 | 5:42:43 PM | 935 icp 7300 | 3            |
| 382 | CCB-R12091601     | 3/20/2017 | 5:43:36 PM | 935 icp 7300 | 1            |
| 383 | 17-03-1185-1 msd  | 3/20/2017 | 5:44:36 PM | 935 icp 7300 | 131          |
| 384 | 17-03-1188-1      | 3/20/2017 | 5:45:30 PM | 935 icp 7300 | 132          |
| 385 | 17-03-1188-1 msd  | 3/20/2017 | 5:46:21 PM | 935 icp 7300 | 133          |
| 386 | 17-03-1188-1 msd  | 3/20/2017 | 5:47:02 PM | 935 icp 7300 | 134          |
| 387 | 17-03-1189-1      | 3/20/2017 | 5:47:43 PM | 935 icp 7300 | 135          |
| 388 | 17-03-1189-1 msd  | 3/20/2017 | 5:48:26 PM | 935 icp 7300 | 136          |
| 389 | 17-03-1189-1 msd  | 3/20/2017 | 5:49:13 PM | 935 icp 7300 | 137          |
| 390 | 17-03-1260-2      | 3/20/2017 | 5:50:00 PM | 935 icp 7300 | 138          |
| 391 | 17-03-1260-2 msd  | 3/20/2017 | 5:50:51 PM | 935 icp 7300 | 139          |
| 392 | 17-03-1260-2 msd  | 3/20/2017 | 5:51:32 PM | 935 icp 7300 | 140          |
| 393 | CCV= STD3x0.5     | 3/20/2017 | 5:52:13 PM | 935 icp 7300 | 3            |
| 394 | CCB-R12091601     | 3/20/2017 | 5:53:05 PM | 935 icp 7300 | 1            |
| 395 | ICS_A - M110116B  | 3/20/2017 | 5:54:05 PM | 935 icp 7300 | 8            |
| 396 | ICS_AB - M110116A | 3/20/2017 | 5:54:56 PM | 935 icp 7300 | 9            |
| 397 | CCV= STD3x0.5     | 3/20/2017 | 5:55:46 PM | 935 icp 7300 | 3            |
| 398 | CCB-R12091601     | 3/20/2017 | 5:56:37 PM | 935 icp 7300 | 1            |

*Didn't take sample*

Reviewed/Assign to Logbook Date: 3/22/17  
 Analysis: 20.7/60.0 Chemist ID: 1012  
 Logbook Page: 95 Instrument ID: 1087

# 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 (CFO.0 °C) |                | HNO <sub>3</sub>              | P01311701        | 20 mL         | Spike 1                     | M022017 A  |                |        |        |
| <input type="checkbox"/> EPA 200.7            | <input type="checkbox"/> Other (Specify)  |                         |                | Block Digester       | 5                     |                | HCl                           | R12301602        | 15 mL         | Spike 2                     | M020617 C  |                |        |        |
| <input type="checkbox"/> EPA 200.8            |                                           |                         |                | Pipetter / Dispenser | P-072/0-027/0-028     |                | 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 170320-503                             |                                           | Tube / Container 170104 |                |                      | 65                    |                | Teflon Chip M006-035-15       |                  |               | 1 = Composite 2 = Subsample |            |                |        |        |
| (Specify)                                     |                                           | Filter                  |                |                      |                       |                | (Specify)                     |                  |               | 3 = Homogenize 4 = None     |            |                |        |        |
| DIGESTION                                     |                                           |                         |                |                      |                       |                | 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) |
| 3/20/17                                       | 11:20                                     | 95                      | 1080           | 12:50                | 95                    | 1080           | 4                             | MS 17-03-1256-1A | metals        | 2.09                        | 100        | 500            | 500    |        |
|                                               |                                           |                         |                |                      |                       |                |                               | MSD              |               | 2.08                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | LCS 17-0320-L03  |               | 2.09                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | LCSD / MB -B03   |               | 2.08                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | 17-03-1256-1A    |               | 2.08                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | 17-03-0590-28A   |               | 1.98                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -28B             |               | 2.00                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -28C             |               | 2.00                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -28D             |               | 2.03                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -28E             |               | 1.97                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -29A             |               | 1.96                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -29B             |               | 2.05                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -29C             |               | 2.04                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -29D             |               | 1.97                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -29E             |               | 2.04                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -30A             |               | 2.03                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -30B             |               | 1.96                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -30C             |               | 1.97                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -30D             |               | 2.01                        |            |                |        |        |
|                                               |                                           |                         |                |                      |                       |                |                               | -30E             |               | 2.03                        |            |                |        |        |

COMMENTS:

# EPA 7471A Mercury (Solid)

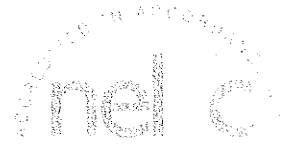
## RAW DATA

# EPA 7471A Mercury (Solid)

Initial Calibration  
ICV/ICB  
CCV/CCB

Sample Data

Quality Control  
Method Blank  
LCS/LCSD  
MS/MSD

**EPA Method 7471A**  
**Initial Calibration Verification**

Work Order No.: 17-03-0590

Instrument ID: HG 8 (H)

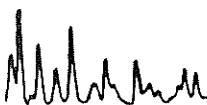
Concentration Unit: µg/L

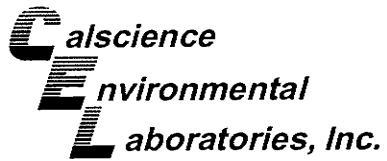
Test Method: EPA 7471A

| Analyte | Initial Calibration Verification |          |    |               |
|---------|----------------------------------|----------|----|---------------|
|         | True                             | ICV-1    |    | Control Limit |
|         |                                  | Observed | %D |               |
| Mercury | 5.000000                         | 5.011691 | 0  | 0 - 10        |

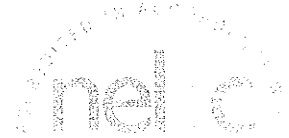
03/15/2017 19:25

ICV-1 File: ICV M030617B 03/15/2017 11:39:23 AM





**EPA Method 7471A  
Continuing Calibration Verification**



Work Order No.: 17-03-0590

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

| Analyte | Continuing Calibration Verification |          |    |          |    |          |    | Control Limit |
|---------|-------------------------------------|----------|----|----------|----|----------|----|---------------|
|         | True                                | CCV-1    |    | CCV-2    |    | CCV-3    |    |               |
|         |                                     | Observed | %D | Observed | %D | Observed | %D |               |
| Mercury | 2.000000                            | 2.081791 | 4  | 2.052224 | 3  | 2.063932 | 3  | 0 – 20        |

03/15/2017 19:26

CCV-1 File: CCV 0.2x10ppb 03/15/2017 11:46:10 AM

CCV-2 File: CCV 0.2x10ppb 03/15/2017 12:49:24 PM

CCV-3 File: CCV 0.2x10ppb 03/15/2017 01:12:14 PM

**EPA Method 7471A**  
**Initial and Continuing Calibration Blanks**


Work Order No.: 17-03-0590

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

Test Method: EPA 7471A

| Analyte | Initial and Continuing Calibration Blanks |           |          |           |            |
|---------|-------------------------------------------|-----------|----------|-----------|------------|
|         | ICB-1                                     | CCB-1     | CCB-2    | CCB-3     | RL (No PF) |
| Mercury | -0.002222                                 | -0.008953 | 0.003898 | -0.000827 | 0.500000   |

03/15/2017 19:27

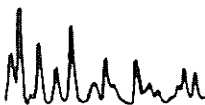
ICB-1 File: ICB 03/15/2017 11:41:37 AM

CCB-1 File: CCB 03/15/2017 11:48:26 AM

CCB-2 File: CCB 03/15/2017 12:51:40 PM

CCB-3 File: CCB 03/15/2017 01:14:30 PM

Note: Preparation factor (PF) = 167 L/kg



**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** Mercury 08  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-15 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-15 13:00  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-15 17:45

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170315H1\17-03-0590-25.icp

**# 25**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM1-8

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170315L01 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.58 g |
| <b>MS/MSD BATCH:</b> 170315S01 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 ml                |
| <b>UNITS:</b> mg/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 1.03                             |

**COMMENT:**

| <u>COMPOUND</u> | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000294           | 1.00      | ND          | 0.0862    |             |

Return to Contents

**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** Mercury 08  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-15 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-15 13:03  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-15 17:45

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170315H1\17-03-0590-26.icp

**# 26**      **CLIENT SAMPLE NUMBER: D-DU1-ISM2-8**

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170315L01 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.61 g |
| <b>MS/MSD BATCH:</b> 170315S01 | <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         | 0.000461           | 1.00      | ND          | 0.0820    |             |



**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** Mercury 08  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-15 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-15 13:05  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-15 17:45

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170315H1\17-03-0590-27.icp

**# 27**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170315L01 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 0.60 g / ACTUAL: 0.60 g |
| <b>MS/MSD BATCH:</b> 170315S01 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 100.00 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> |
|-----------------|--------------------|-----------|-------------|-----------|-------------|
| Mercury         | 0.000141           | 1.00      | ND          | 0.0833    |             |

# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 7471A

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**MB SAMPLE ID:** 099-16-272-2871  
**MB BATCH ID:** 170315L01  
**INSTRUMENT:** Mercury 08  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-15 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-15 12:25  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-15 15:02  
**MATRIX:** Soil

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170315H1\170315-B-01.icp

### CLIENT WORK ORDER: 17-03-0590

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                 |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------------|
| 25        | D-DU1-ISM1-8    |                         | 2017-03-15 13:00    | W:\MERCURY_DATA\FINAL\170315H1\17-03-0590-25.icp |
| 26        | D-DU1-ISM2-8    |                         | 2017-03-15 13:03    | W:\MERCURY_DATA\FINAL\170315H1\17-03-0590-26.icp |
| 27        | D-DU1-ISM3-8    |                         | 2017-03-15 13:05    | W:\MERCURY_DATA\FINAL\170315H1\17-03-0590-27.icp |

  
Return to Contents

**RAW DATA SHEET  
FOR METHOD: EPA 7471A**

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**WORK ORDER:** 099-16-272  
**INSTRUMENT:** Mercury 08  
**EXTRACTION:** EPA 7471A Total  
**D/T EXTRACTED:** 2017-03-15 00:00

**ANALYZED BY:** 868  
**D/T ANALYZED:** 2017-03-15 12:25  
**REVIEWED BY:** 309  
**D/T REVIEWED:** 2017-03-15 15:02

**DATA FILE:** W:\MERCURY\_DATA\FINAL\170315H1\170315-B-01.icp

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

**LCS/MB BATCH:** 170315L01      **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         | -0.0000119         | 1.00      | ND          | 0.0833    |             |

LCS QUALITY CONTROL SHEET  
FOR METHOD: EPA 7471A

LCS SAMPLE ID: 099-16-272- 2871  
LCS/MB BATCH ID: 170315L01  
INSTRUMENT: Mercury 08

EXTRACTION: EPA 7471A Total  
D/T EXTRACTED: 2017-03-15 00:00

ANALYZED BY: 868  
D/T ANALYZED: 2017-03-15 12:28  
REVIEWED BY: 309  
D/T REVIEWED: 2017-03-15 15:02

DATA FILE: W:\MERCURY\_DATA\FINAL\170315H1\170315-L-01.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            | 0.8273          | 99               | 85-121                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET  
FOR METHOD: EPA 7471A

SPIKED SAMPLE ID: 17-03-0982-1  
MS/MSD BATCH: 170315S01  
INSTRUMENTS:  
SAMPLE: Mercury 08  
MS: Mercury 08  
MSD: Mercury 08

EXTRACTION: EPA 7471A Total  
D/T EXTRACTED:  
SAMPLE: 2017-03-15 00:00  
MS: 2017-03-15 00:00  
MSD: 2017-03-15 00:00

ANALYZED BY: 868  
D/T ANALYZED:  
SAMPLE: 2017-03-15 12:30  
MS: 2017-03-15 12:32  
MSD: 2017-03-15 12:34  
REVIEWED BY: 309  
D/T REVIEWED: 2017-03-15 15:03

COMMENT:

| COMPOUND NAME | SAMPLE | INITIAL  | FINAL  | MS CONC | % MS.REC | MSD CONC | % MSD.REC | % REC CL | RPD | RPD CL | STATUS | QUALIFIERS |
|---------------|--------|----------|--------|---------|----------|----------|-----------|----------|-----|--------|--------|------------|
| Mercury       | ND     | 0.005000 | 0.8350 | 0.8230  | 99       | 0.8284   | 99        | 71-137   | 1   | 0-14   | PASS   |            |

Data Files:

| TYPE | DATA FILE            | DATA FILE PATH                  |
|------|----------------------|---------------------------------|
| MS   | 17-03-0982-1 MS.icp  | W:\MERCURY_DATA\FINAL\170315H1\ |
| MSD  | 17-03-0982-1 MSD.icp | W:\MERCURY_DATA\FINAL\170315H1\ |

User canceled analysis.

=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170315H1.sifx

Batch ID:

Results Data Set: 170315H1

Results Library: U:\MERCURY\_8\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: 3/15/2017 11:15:19 AM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
Auto Dilution Factor: 1-----  
Replicate Data: Calib blank\_868  
Analyte: Hg 253.7  

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     |            | [0.00]  | 0.0001  | 0.0002 | 0.0001 | 11:16:23 AM | Yes    |
| 2     |            | [0.00]  | 0.0001  | 0.0002 | 0.0001 | 11:17:08 AM | Yes    |
| Mean: |            | [0.00]  | 0.0001  |        |        |             |        |
| SD:   |            | 0.0000  | 0.0000  |        |        |             |        |
| %RSD: |            | 0.00%   | 11.23   |        |        |             |        |

  
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: 3/15/2017 11:17:33 AM  
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 | StdConc | BlkCorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     |            | [0.025] | 0.0003  | 0.0006 | 0.0004 | 11:18:37 AM | Yes    |
| 2     |            | [0.025] | 0.0002  | 0.0004 | 0.0003 | 11:19:22 AM | Yes    |
| Mean: |            | [0.025] | 0.0002  |        |        |             |        |
| SD:   |            | 0.00000 | 0.0000  |        |        |             |        |
| %RSD: |            | 0.00%   | 19.16   |        |        |             |        |

  
Standard number 1 applied. [0.025]  
Correlation Coef.: 1.000000 Slope: 0.00960 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: 3/15/2017 11:19:48 AM  
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 | StdConc | BlkCorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     |            | [0.100] | 0.0010  | 0.0030 | 0.0012 | 11:20:53 AM | Yes    |
| 2     |            | [0.100] | 0.0009  | 0.0023 | 0.0011 | 11:21:38 AM | Yes    |
| Mean: |            | [0.100] | 0.0010  |        |        |             |        |
| SD:   |            | 0.00000 | 0.0001  |        |        |             |        |
| %RSD: |            | 0.00%   | 6.65    |        |        |             |        |

  
Standard number 2 applied. [0.100]  
Correlation Coef.: 0.999956 Slope: 0.00998 Intercept: -0.00000

=====

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Sequence No.: 4                   | Autosampler Location: 4               |
| Sample ID: 1.00ppb M030617AX0.001 | Date Collected: 3/15/2017 11:22:04 AM |
| Analyst: <i>868</i>               | Data Type: Original                   |
| Initial Sample Wt:                | Initial Sample Vol:                   |
| Dilution:                         | Sample Prep Vol:                      |
| Wash Time (before sample): 0      | Auto Dilution Factor: 1               |

-----

Replicate Data: 1.00ppb M030617AX0.001      Analyte: Hg 253.7

| Repl                               | SampleConc | StdConc | BlkCorr | Peak           | Peak   | Time                | Peak   |
|------------------------------------|------------|---------|---------|----------------|--------|---------------------|--------|
| #                                  | mg/L       | ug/L    | Signal  | Area           | Height |                     | Stored |
| 1                                  |            | [1.000] | 0.0104  | 0.0316         | 0.0105 | 11:23:09 AM         | Yes    |
| 2                                  |            | [1.000] | 0.0095  | 0.0249         | 0.0096 | 11:23:54 AM         | Yes    |
| Mean:                              |            | [1.000] | 0.0100  |                |        |                     |        |
| SD:                                |            | 0.00000 | 0.0006  |                |        |                     |        |
| %RSD:                              |            | 0.00%   | 6.30    |                |        |                     |        |
| Standard number 3 applied. [1.000] |            |         |         |                |        |                     |        |
| Correlation Coef.: 1.000000        |            |         |         | Slope: 0.00999 |        | Intercept: -0.00000 |        |

=====

Sequence No.: 5      Autosampler Location: 5

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Sample ID: 2.00ppb M030617AX0.002 | Date Collected: 3/15/2017 11:24:21 AM |
| Analyst: <i>868</i>               | Data Type: Original                   |
| Initial Sample Wt:                | Initial Sample Vol:                   |
| Dilution:                         | Sample Prep Vol:                      |
| Wash Time (before sample): 0      | Auto Dilution Factor: 1               |

-----

Replicate Data: 2.00ppb M030617AX0.002      Analyte: Hg 253.7

| Repl                               | SampleConc | StdConc | BlkCorr | Peak           | Peak   | Time               | Peak   |
|------------------------------------|------------|---------|---------|----------------|--------|--------------------|--------|
| #                                  | mg/L       | ug/L    | Signal  | Area           | Height |                    | Stored |
| 1                                  |            | [2.000] | 0.0209  | 0.0599         | 0.0210 | 11:25:26 AM        | Yes    |
| 2                                  |            | [2.000] | 0.0189  | 0.0492         | 0.0191 | 11:26:11 AM        | Yes    |
| Mean:                              |            | [2.000] | 0.0199  |                |        |                    |        |
| SD:                                |            | 0.00000 | 0.0014  |                |        |                    |        |
| %RSD:                              |            | 0.00%   | 6.84    |                |        |                    |        |
| Standard number 4 applied. [2.000] |            |         |         |                |        |                    |        |
| Correlation Coef.: 0.999999        |            |         |         | Slope: 0.00996 |        | Intercept: 0.00000 |        |

=====

Sequence No.: 6      Autosampler Location: 6

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Sample ID: 5.00ppb M030617AX0.005 | Date Collected: 3/15/2017 11:26:38 AM |
| Analyst: <i>868</i>               | Data Type: Original                   |
| Initial Sample Wt:                | Initial Sample Vol:                   |
| Dilution:                         | Sample Prep Vol:                      |
| Wash Time (before sample): 0      | Auto Dilution Factor: 1               |

-----

Replicate Data: 5.00ppb M030617AX0.005      Analyte: Hg 253.7

| Repl                               | SampleConc | StdConc | BlkCorr | Peak           | Peak   | Time               | Peak   |
|------------------------------------|------------|---------|---------|----------------|--------|--------------------|--------|
| #                                  | mg/L       | ug/L    | Signal  | Area           | Height |                    | Stored |
| 1                                  |            | [5.000] | 0.0503  | 0.1510         | 0.0504 | 11:27:41 AM        | Yes    |
| 2                                  |            | [5.000] | 0.0462  | 0.1225         | 0.0463 | 11:28:26 AM        | Yes    |
| Mean:                              |            | [5.000] | 0.0482  |                |        |                    |        |
| SD:                                |            | 0.00000 | 0.0029  |                |        |                    |        |
| %RSD:                              |            | 0.00%   | 5.99    |                |        |                    |        |
| Standard number 5 applied. [5.000] |            |         |         |                |        |                    |        |
| Correlation Coef.: 0.999906        |            |         |         | Slope: 0.00966 |        | Intercept: 0.00015 |        |

=====

Sequence No.: 7      Autosampler Location: 7

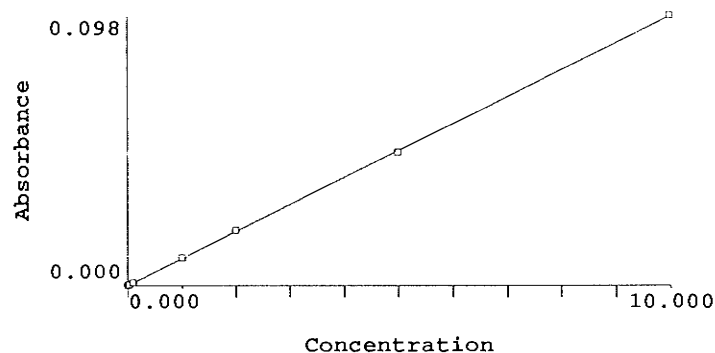
|                                  |                                       |
|----------------------------------|---------------------------------------|
| Sample ID: 10.0ppb M030617AX0.01 | Date Collected: 3/15/2017 11:28:52 AM |
| Analyst: <i>868</i>              | Data Type: Original                   |
| Initial Sample Wt:               | Initial Sample Vol:                   |
| Dilution:                        | Sample Prep Vol:                      |
| Wash Time (before sample): 0     | Auto Dilution Factor: 1               |

-----

Replicate Data: 10.0ppb M030617AX0.01      Analyte: Hg 253.7

| Repl | SampleConc | StdConc | BlkCorr | Peak | Peak | Time | Peak |
|------|------------|---------|---------|------|------|------|------|
|------|------------|---------|---------|------|------|------|------|

| #                                                             | mg/L | ug/L    | Signal | Area   | Height | Stored          |
|---------------------------------------------------------------|------|---------|--------|--------|--------|-----------------|
| 1                                                             |      | [10.00] | 0.1017 | 0.3024 | 0.1018 | 11:29:56 AM Yes |
| 2                                                             |      | [10.00] | 0.0945 | 0.2489 | 0.0946 | 11:30:40 AM Yes |
| Mean:                                                         |      | [10.00] | 0.0981 |        |        |                 |
| SD:                                                           |      | 0.0000  | 0.0050 |        |        |                 |
| %RSD:                                                         |      | 0.00%   | 5.14   |        |        |                 |
| Standard number 6 applied. [10.00]                            |      |         |        |        |        |                 |
| Correlation Coef.: 0.999955 Slope: 0.00978 Intercept: 0.00003 |      |         |        |        |        |                 |



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                        | -0.002650                   | 0.00                  | 11.23 |
| 0.025ppb 0.005x5ppb                                           | 0.0002               | 0.025                    | 0.021891                    | 0.00                  | 19.16 |
| 0.10ppb M030617AX0.0001                                       | 0.0010               | 0.100                    | 0.099090                    | 0.00                  | 6.65  |
| 1.00ppb M030617AX0.001                                        | 0.0100               | 1.000                    | 1.018354                    | 0.00                  | 6.30  |
| 2.00ppb M030617AX0.002                                        | 0.0199               | 2.000                    | 2.032813                    | 0.00                  | 6.84  |
| 5.00ppb M030617AX0.005                                        | 0.0482               | 5.000                    | 4.927765                    | 0.00                  | 5.99  |
| 10.0ppb M030617AX0.01                                         | 0.0981               | 10.00                    | 10.027736                   | 0.01                  | 5.14  |
| Correlation Coef.: 0.999955 Slope: 0.00978 Intercept: 0.00003 |                      |                          |                             |                       |       |



=====  
Analysis BegunLogged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170315H1.sifx

Batch ID:

Results Data Set: 170315H1

Results Library: U:\MERCURY\_8\Data\Results\results.mdb

=====  
Sequence No.: 1

Sample ID: ICV M030617B

Analyst: 868 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 8

Date Collected: 3/15/2017 11:37:35 AM

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     | 0.00514    | 5.14    | 0.0503  | 0.1500 | 0.0504 | 11:38:39 AM | Yes    |
| 2     | 0.00489    | 4.89    | 0.0478  | 0.1259 | 0.0479 | 11:39:23 AM | Yes    |
| Mean: | 0.00501    | 5.01    | 0.0490  |        |        |             |        |
| SD:   | 0.000177   | 0.177   | 0.0017  |        |        |             |        |
| %RSD: | 3.52%      | 3.52%   | 3.52    |        |        |             |        |

QC value within limits for Hg 253.7 Recovery = 100.23%

All analyte(s) passed QC.

=====  
Sequence No.: 2

Sample ID: ICB

Analyst: 868 HG-8

Initial Sample Wt:

Dilution:

Wash Time (before sample): 0

Autosampler Location: 1

Date Collected: 3/15/2017 11:39:49 AM

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     | -0.000003  | -0.00305 | -0.0000 | -0.0008 | 0.0001 | 11:40:52 AM | Yes    |
| 2     | -0.000001  | -0.00140 | 0.0000  | -0.0006 | 0.0001 | 11:41:37 AM | Yes    |
| Mean: | -0.000002  | -0.00222 | 0.0000  |         |        |             |        |
| SD:   | 0.0000012  | 0.001166 | 0.0000  |         |        |             |        |
| %RSD: | 52.50%     | 52.50%   | 272.72  |         |        |             |        |

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-8

Initial Sample Wt: 0.6 g

Dilution:

Wash Time (before sample): 0

Autosampler Location: 9

Date Collected: 3/15/2017 11:42:03 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

-----  
Replicate Data: CRQL 0.25

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | BlkCorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     | 0.0487     | 0.292   | 0.0029  | 0.0079 | 0.0030 | 11:43:07 AM | Yes    |
| 2     | 0.0458     | 0.275   | 0.0027  | 0.0069 | 0.0028 | 11:43:52 AM | Yes    |
| Mean: | 0.0472     | 0.283   | 0.0028  |        |        |             |        |
| SD:   | 0.00200    | 0.0120  | 0.0001  |        |        |             |        |
| %RSD: | 4.24%      | 4.24%   | 4.20    |        |        |             |        |

Sequence No.: 4  
Sample ID: CCV 0.2x10ppb  
Analyst: 868 HG-8  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 5  
Date Collected: 3/15/2017 11:44:18 AM  
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 | Blncorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/L       | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     | 0.00216    | 2.16    | 0.0211  | 0.0616 | 0.0212 | 11:45:25 AM | Yes    |
| 2     | 0.00201    | 2.01    | 0.0197  | 0.0511 | 0.0198 | 11:46:10 AM | Yes    |
| Mean: | 0.00208    | 2.08    | 0.0204  |        |        |             |        |
| SD:   | 0.000106   | 0.106   | 0.0010  |        |        |             |        |
| %RSD: | 5.10%      | 5.10%   | 5.09    |        |        |             |        |

QC value within limits for Hg 253.7 Recovery = 104.09%  
All analyte(s) passed QC.

Sequence No.: 5  
Sample ID: CCB  
Analyst: 868 HG-8  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 1  
Date Collected: 3/15/2017 11:46:38 AM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:  
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     | -0.000009  | -0.00941 | -0.0001 | -0.0020 | 0.0000 | 11:47:41 AM | Yes    |
| 2     | -0.000008  | -0.00850 | -0.0001 | -0.0020 | 0.0001 | 11:48:26 AM | Yes    |
| Mean: | -0.000009  | -0.00895 | -0.0001 |         |        |             |        |
| SD:   | 0.0000006  | 0.000646 | 0.0000  |         |        |             |        |
| %RSD: | 7.21%      | 7.21%    | 10.24   |         |        |             |        |

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-400Technique: AA FIMS-MHS  
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170315H1.sifx

Batch ID:

Results Data Set: 170315H1

Results Library: U:\MERCURY\_8\Data\Results\results.mdb

=====  
Sequence No.: 1  
Sample ID: 170315-B-01  
Analyst: 868 HG-8  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 92  
Date Collected: 3/15/2017 12:23:57 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 170315-B-01  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/kg | StdConc ug/L | BlkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|-------------|-------------|
| 1      | -0.00187         | -0.0112      | -0.0001        | -0.0001   | 0.0000      | 12:25:02 PM | Yes         |
| 2      | -0.00209         | -0.0125      | -0.0001        | -0.0007   | 0.0000      | 12:25:47 PM | Yes         |
| Mean:  | -0.00198         | -0.0119      | -0.0001        |           |             |             |             |
| SD:    | 0.000156         | 0.00094      | 0.0000         |           |             |             |             |
| %RSD:  | 7.89%            | 7.89%        | 10.16          |           |             |             |             |

=====  
Sequence No.: 2  
Sample ID: 170315-L-01  
Analyst: 868 HG-8  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 93  
Date Collected: 3/15/2017 12:26:14 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 170315-L-01  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/kg | StdConc ug/L | BlkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|-------------|-------------|
| 1      | 0.852            | 5.11         | 0.0500         | 0.1487    | 0.0501      | 12:27:19 PM | Yes         |
| 2      | 0.803            | 4.82         | 0.0471         | 0.1230    | 0.0472      | 12:28:04 PM | Yes         |
| Mean:  | 0.827            | 4.96         | 0.0486         |           |             |             |             |
| SD:    | 0.0349           | 0.209        | 0.0020         |           |             |             |             |
| %RSD:  | 4.22%            | 4.22%        | 4.21           |           |             |             |             |

=====  
Sequence No.: 3  
Sample ID: 17-03-0982-1  
Analyst: 868 HG-8  
Initial Sample Wt: 0.61 g  
Dilution:  
Wash Time (before sample): 0  
Autosampler Location: 94  
Date Collected: 3/15/2017 12:28:31 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1-----  
Replicate Data: 17-03-0982-1  
Analyte: Hg 253.7  

| Repl # | SampleConc mg/kg | StdConc ug/L | BlkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|-------------|-------------|
| 1      | 0.0236           | 0.144        | 0.0014         | 0.0053    | 0.0015      | 12:29:36 PM | Yes         |
| 2      | 0.0209           | 0.127        | 0.0013         | 0.0037    | 0.0014      | 12:30:21 PM | Yes         |
| Mean:  | 0.0222           | 0.136        | 0.0014         |           |             |             |             |
| SD:    | 0.00191          | 0.0117       | 0.0001         |           |             |             |             |
| %RSD:  | 8.61%            | 8.61%        | 8.44           |           |             |             |             |

=====  
Sequence No.: 4  
Sample ID: 17-03-0982-1 MS  
Analyst: 868 HG-8  
Initial Sample Wt: 0.62 g  
Autosampler Location: 95  
Date Collected: 3/15/2017 12:30:48 PM  
Data Type: Original  
Initial Sample Vol:

Dilution:  
Wash Time (before sample): 0

Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

Replicate Data: 17-03-0982-1 MS

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     | 0.849      | 5.27    | 0.0515  | 0.1565 | 0.0516 | 12:31:53 PM | Yes    |
| 2     | 0.797      | 4.94    | 0.0483  | 0.1312 | 0.0484 | 12:32:38 PM | Yes    |
| Mean: | 0.823      | 5.10    | 0.0499  |        |        |             |        |
| SD:   | 0.0373     | 0.231   | 0.0023  |        |        |             |        |
| %RSD: | 4.53%      | 4.53%   | 4.52    |        |        |             |        |

Sequence No.: 5

Autosampler Location: 96

Sample ID: 17-03-0982-1 MSD

Date Collected: 3/15/2017 12:33:05 PM

Analyst: 868 HG-8

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: 17-03-0982-1 MSD

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     | 0.851      | 5.28    | 0.0517  | 0.1552 | 0.0518 | 12:34:09 PM | Yes    |
| 2     | 0.805      | 4.99    | 0.0489  | 0.1299 | 0.0490 | 12:34:54 PM | Yes    |
| Mean: | 0.828      | 5.14    | 0.0503  |        |        |             |        |
| SD:   | 0.0326     | 0.202   | 0.0020  |        |        |             |        |
| %RSD: | 3.93%      | 3.93%   | 3.93    |        |        |             |        |

Sequence No.: 6

Autosampler Location: 97

Sample ID: 17-03-0982-2

Date Collected: 3/15/2017 12:35:21 PM

Analyst: 868 HG-8

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: 17-03-0982-2

Analyte: Hg 253.7

| Repl  | SampleConc | StdConc | Blncorr | Peak   | Peak   | Time        | Peak   |
|-------|------------|---------|---------|--------|--------|-------------|--------|
| #     | mg/kg      | ug/L    | Signal  | Area   | Height |             | Stored |
| 1     | 0.0117     | 0.0728  | 0.0007  | 0.0022 | 0.0008 | 12:36:26 PM | Yes    |
| 2     | 0.0104     | 0.0648  | 0.0007  | 0.0023 | 0.0008 | 12:37:11 PM | Yes    |
| Mean: | 0.0111     | 0.0688  | 0.0007  |        |        |             |        |
| SD:   | 0.00091    | 0.00567 | 0.0001  |        |        |             |        |
| %RSD: | 8.25%      | 8.25%   | 7.94    |        |        |             |        |

User canceled analysis.

Analysis Begun

Logged In Analyst: US26\_SVC\_INSTRUMENT  
Spectrometer: FIMS-400

Technique: AA FIMS-MHS  
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\  
170315H1.sifx

Batch ID:

Results Data Set: 170315H1

Results Library: U:\MERCURY\_8\Data\Results\results.mdb

Sequence No.: 7

Autosampler Location: 98

Sample ID: 17-03-0982-3

Date Collected: 3/15/2017 12:38:25 PM

Analyst: 868 HG-8

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: 17-03-0982-3

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|---------------|-----------------|-----------|-------------|-------------|-------------|
| 1      | 0.0208           | 0.125         | 0.0012          | 0.0034    | 0.0014      | 12:39:30 PM | Yes         |
| 2      | 0.0194           | 0.116         | 0.0012          | 0.0033    | 0.0013      | 12:40:15 PM | Yes         |
| Mean:  | 0.0201           | 0.121         | 0.0012          |           |             |             |             |
| SD:    | 0.00101          | 0.0061        | 0.0001          |           |             |             |             |
| %RSD:  | 5.03%            | 5.03%         | 4.92            |           |             |             |             |

Sequence No.: 8  
Sample ID: 17-03-1002-1  
Analyst: 868 HG-8  
Initial Sample Wt: 0.63 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 99  
Date Collected: 3/15/2017 12:40:42 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

Replicate Data: 17-03-1002-1  
Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|---------------|-----------------|-----------|-------------|-------------|-------------|
| 1      | 0.0121           | 0.0760        | 0.0008          | 0.0025    | 0.0009      | 12:41:47 PM | Yes         |
| 2      | 0.0107           | 0.0671        | 0.0007          | 0.0027    | 0.0008      | 12:42:32 PM | Yes         |
| Mean:  | 0.0114           | 0.0716        | 0.0007          |           |             |             |             |
| SD:    | 0.00100          | 0.00630       | 0.0001          |           |             |             |             |
| %RSD:  | 8.79%            | 8.79%         | 8.48            |           |             |             |             |

Sequence No.: 9  
Sample ID: 17-03-1050-1  
Analyst: 868 HG-8  
Initial Sample Wt: 0.6 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 100  
Date Collected: 3/15/2017 12:42:59 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

Replicate Data: 17-03-1050-1  
Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|---------------|-----------------|-----------|-------------|-------------|-------------|
| 1      | 0.198            | 1.19          | 0.0117          | 0.0366    | 0.0118      | 12:44:04 PM | Yes         |
| 2      | 0.187            | 1.12          | 0.0110          | 0.0304    | 0.0111      | 12:44:50 PM | Yes         |
| Mean:  | 0.193            | 1.16          | 0.0113          |           |             |             |             |
| SD:    | 0.0076           | 0.045         | 0.0004          |           |             |             |             |
| %RSD:  | 3.92%            | 3.92%         | 3.91            |           |             |             |             |

Sequence No.: 10  
Sample ID: 17-03-1054-1  
Analyst: 868 HG-8  
Initial Sample Wt: 0.61 g  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 101  
Date Collected: 3/15/2017 12:45:17 PM  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol: 100 mL  
Auto Dilution Factor: 1

Replicate Data: 17-03-1054-1  
Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|---------------|-----------------|-----------|-------------|-------------|-------------|
| 1      | 0.0668           | 0.408         | 0.0040          | 0.0137    | 0.0041      | 12:46:22 PM | Yes         |
| 2      | 0.0611           | 0.373         | 0.0037          | 0.0108    | 0.0038      | 12:47:07 PM | Yes         |
| Mean:  | 0.0639           | 0.390         | 0.0038          |           |             |             |             |
| SD:    | 0.00406          | 0.0247        | 0.0002          |           |             |             |             |
| %RSD:  | 6.34%            | 6.34%         | 6.30            |           |             |             |             |

Sequence No.: 11  
Sample ID: CCV 0.2x10ppb  
Analyst: 868 HG-8  
Initial Sample Wt:  
Dilution:  
Wash Time (before sample): 0

Autosampler Location: 5  
Date Collected: 3/15/2017 12:47:34 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 | StdConc ug/L | Blncorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|-----------------|--------------|----------------|-----------|-------------|-------------|-------------|
| 1      | 0.00211         | 2.11         | 0.0206         | 0.0633    | 0.0208      | 12:48:39 PM | Yes         |
| 2      | 0.00200         | 2.00         | 0.0196         | 0.0539    | 0.0197      | 12:49:24 PM | Yes         |
| Mean:  | 0.00205         | 2.05         | 0.0201         |           |             |             |             |
| SD:    | 0.000079        | 0.079        | 0.0008         |           |             |             |             |
| %RSD:  | 3.85%           | 3.85%        | 3.85           |           |             |             |             |

QC value within limits for Hg 253.7 Recovery = 102.61%  
All analyte(s) passed QC.

```

=====
Sequence No.: 12
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/15/2017 12:49:52 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 Blncorr Peak Peak Time Peak
      # mg/L ug/L Signal Area Height      Stored
1 0.000005 0.00506 0.0001 0.0015 0.0002 12:50:55 PM Yes
2 0.000003 0.00274 0.0001 0.0011 0.0002 12:51:40 PM Yes
Mean: 0.000004 0.00390 0.0001
SD: 0.0000016 0.001642 0.0000
%RSD: 42.12% 42.12% 25.07
=====

```

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

```

=====
Sequence No.: 13
Sample ID: 17-03-1054-2
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 102
Date Collected: 3/15/2017 12:52:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1054-2
Analyte: Hg 253.7
Repl # SampleConc StdConc Blncorr Peak Peak Time Peak
      # mg/kg ug/L Signal Area Height      Stored
1 0.0136 0.0832 0.0008 0.0033 0.0009 12:53:11 PM Yes
2 0.0124 0.0755 0.0008 0.0021 0.0009 12:53:55 PM Yes
Mean: 0.0130 0.0794 0.0008
SD: 0.00090 0.00549 0.0001
%RSD: 6.92% 6.92% 6.70
=====

```

```

=====
Sequence No.: 14
Sample ID: 17-03-1054-3
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 103
Date Collected: 3/15/2017 12:54:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1054-3
Analyte: Hg 253.7
Repl # SampleConc StdConc Blncorr Peak Peak Time Peak
      # mg/kg ug/L Signal Area Height      Stored
1 0.0186 0.117 0.0012 0.0036 0.0013 12:55:28 PM Yes
2 0.0176 0.111 0.0011 0.0038 0.0012 12:56:13 PM Yes
Mean: 0.0181 0.114 0.0011
SD: 0.00073 0.0046 0.0000
%RSD: 4.01% 4.01% 3.92
=====

```

```

=====
Sequence No.: 15
Sample ID: 17-03-1033-1
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:

Autosampler Location: 104
Date Collected: 3/15/2017 12:56:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
=====

```

Wash Time (before sample): 0

Auto Dilution Factor: 1

Replicate Data: 17-03-1033-1

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdConc ug/L | Blncorr Signal | Peak Area | Peak Height | Time        | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|-------------|-------------|
| 1      | 0.0316           | 0.187        | 0.0019         | 0.0063    | 0.0020      | 12:57:46 PM | Yes         |
| 2      | 0.0283           | 0.167        | 0.0017         | 0.0043    | 0.0018      | 12:58:31 PM | Yes         |
| Mean:  | 0.0300           | 0.177        | 0.0018         |           |             |             |             |
| SD:    | 0.00236          | 0.0140       | 0.0001         |           |             |             |             |
| %RSD:  | 7.89%            | 7.89%        | 7.77           |           |             |             |             |

Sequence No.: 16

Autosampler Location: 105

Sample ID: 17-03-0590-25

Date Collected: 3/15/2017 12:58:58 PM

Analyst: 868 HG-8

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: 17-03-0590-25

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdConc ug/L | Blncorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|------------|-------------|
| 1      | 0.0531           | 0.308        | 0.0030         | 0.0089    | 0.0031      | 1:00:03 PM | Yes         |
| 2      | 0.0484           | 0.281        | 0.0028         | 0.0082    | 0.0029      | 1:00:48 PM | Yes         |
| Mean:  | 0.0507           | 0.294        | 0.0029         |           |             |            |             |
| SD:    | 0.00332          | 0.0192       | 0.0002         |           |             |            |             |
| %RSD:  | 6.54%            | 6.54%        | 6.48           |           |             |            |             |

Sequence No.: 17

Autosampler Location: 106

Sample ID: 17-03-0590-26

Date Collected: 3/15/2017 1:01:15 PM

Analyst: 868 HG-8

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: 17-03-0590-26

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdConc ug/L | Blncorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|------------|-------------|
| 1      | 0.0782           | 0.477        | 0.0047         | 0.0143    | 0.0048      | 1:02:20 PM | Yes         |
| 2      | 0.0729           | 0.445        | 0.0044         | 0.0113    | 0.0045      | 1:03:05 PM | Yes         |
| Mean:  | 0.0756           | 0.461        | 0.0045         |           |             |            |             |
| SD:    | 0.00374          | 0.0228       | 0.0002         |           |             |            |             |
| %RSD:  | 4.95%            | 4.95%        | 4.93           |           |             |            |             |

Sequence No.: 18

Autosampler Location: 107

Sample ID: 17-03-0590-27

Date Collected: 3/15/2017 1:03:32 PM

Analyst: 868 HG-8

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: 17-03-0590-27

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdConc ug/L | Blncorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|--------------|----------------|-----------|-------------|------------|-------------|
| 1      | 0.0244           | 0.146        | 0.0015         | 0.0047    | 0.0016      | 1:04:37 PM | Yes         |
| 2      | 0.0225           | 0.135        | 0.0013         | 0.0033    | 0.0015      | 1:05:23 PM | Yes         |
| Mean:  | 0.0235           | 0.141        | 0.0014         |           |             |            |             |
| SD:    | 0.00134          | 0.0081       | 0.0001         |           |             |            |             |
| %RSD:  | 5.73%            | 5.73%        | 5.62           |           |             |            |             |

Sequence No.: 19

Autosampler Location: 108

Sample ID: 17-03-0881-1

Date Collected: 3/15/2017 1:05:50 PM

Analyst: 868 HG-8

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: 17-03-0881-1

Analyte: Hg 253.7

| Repl #                                                             | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------------------------------------------------------------------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1                                                                  | 20.8             | 129            | 1.2643          | 5.8814    | 1.2644      | 1:06:55 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| 2                                                                  | 20.6             | 128            | 1.2488          | 5.0765    | 1.2490      | 1:07:40 PM | Yes         |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |
| Mean:                                                              | 20.7             | 128            | 1.2566          |           |             |            |             |
| SD:                                                                | 0.18             | 1.12           | 0.0109          |           |             |            |             |
| %RSD:                                                              | 0.87%            | 0.87%          | 0.87            |           |             |            |             |
| Sample concentration is greater than that of the highest standard. |                  |                |                 |           |             |            |             |

Sequence No.: 20

Autosampler Location: 109

Sample ID: 17-03-0793-1

Date Collected: 3/15/2017 1:08:07 PM

Analyst: 868 HG-8

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: 17-03-0793-1

Analyte: Hg 253.7

| Repl # | SampleConc mg/kg | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|------------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | 1.36             | 8.16           | 0.0798          | 0.2488    | 0.0799      | 1:09:12 PM | Yes         |
| 2      | 1.28             | 7.66           | 0.0749          | 0.2147    | 0.0750      | 1:09:57 PM | Yes         |
| Mean:  | 1.32             | 7.91           | 0.0774          |           |             |            |             |
| SD:    | 0.059            | 0.354          | 0.0035          |           |             |            |             |
| %RSD:  | 4.48%            | 4.48%          | 4.47            |           |             |            |             |

Sequence No.: 21

Autosampler Location: 5

Sample ID: CCV 0.2x10ppb

Date Collected: 3/15/2017 1:10:24 PM

Analyst: 868 HG-8

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 mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | 0.00214         | 2.14           | 0.0210          | 0.0633    | 0.0211      | 1:11:29 PM | Yes         |
| 2      | 0.00199         | 1.99           | 0.0194          | 0.0540    | 0.0196      | 1:12:14 PM | Yes         |
| Mean:  | 0.00206         | 2.06           | 0.0202          |           |             |            |             |
| SD:    | 0.000111        | 0.111          | 0.0011          |           |             |            |             |
| %RSD:  | 5.39%           | 5.39%          | 5.38            |           |             |            |             |

QC value within limits for Hg 253.7 Recovery = 103.20%

All analyte(s) passed QC.

Sequence No.: 22

Autosampler Location: 1

Sample ID: CCB

Date Collected: 3/15/2017 1:12:41 PM

Analyst: 868 HG-8

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 mg/L | StdndConc ug/L | BlndCorr Signal | Peak Area | Peak Height | Time       | Peak Stored |
|--------|-----------------|----------------|-----------------|-----------|-------------|------------|-------------|
| 1      | -0.000001       | -0.000771      | 0.0000          | 0.0004    | 0.0001      | 1:13:45 PM | Yes         |
| 2      | -0.000001       | -0.000884      | 0.0000          | 0.0001    | 0.0001      | 1:14:30 PM | Yes         |
| Mean:  | -0.000001       | -0.000827      | 0.0000          |           |             |            |             |
| SD:    | 0.0000001       | 0.0000794      | 0.0000          |           |             |            |             |
| %RSD:  | 9.60%           | 9.60%          | 4.36            |           |             |            |             |

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.



# EPA 7471A Mercury (Solid)

## Run Logs

**170315H1**

Carrier solution R07141602

Reducing Agent R07141603

Initial

| Sample ID               | Analyst Name | Sample Wt | Analyte Name | Date      | Time        | Conc (Calib) | Units (Calib) | Conc (Samp) | Units (Samp) | Corr Coef |
|-------------------------|--------------|-----------|--------------|-----------|-------------|--------------|---------------|-------------|--------------|-----------|
| Calib blank_868         | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:17:08 AM |              | ug/L          |             | mg/L         |           |
| 0.025ppb 0.005x5ppb     | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:19:22 AM |              | ug/L          |             | mg/L         |           |
| 0.10ppb M030617AX0.0001 | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:21:38 AM |              | ug/L          |             | mg/L         |           |
| 1.00ppb M030617AX0.001  | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:23:54 AM |              | ug/L          |             | mg/L         |           |
| 2.00ppb M030617AX0.002  | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:26:11 AM |              | ug/L          |             | mg/L         |           |
| 5.00ppb M030617AX0.005  | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:28:26 AM |              | ug/L          |             | mg/L         |           |
| 10.0ppb M030617AX0.01   | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:30:40 AM |              | ug/L          |             | mg/L         |           |
| ICV M030617B            | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:39:23 AM | 5.011691     | ug/L          | 0.005012    | mg/L         | 0.999955  |
| ICB                     | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:41:37 AM | -0.00222     | ug/L          | -2.22E-06   | mg/L         | 0.999955  |
| CRQL 0.25               | 868 HG-8     | 0.6       | Hg 253.7     | 3/15/2017 | 11:43:52 AM | 0.283444     | ug/L          | 0.047241    | mg/kg        | 0.999955  |
| CCV 0.2x10ppb           | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:46:10 AM | 2.081791     | ug/L          | 0.002082    | mg/L         | 0.999955  |
| CCB                     | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 11:48:26 AM | -0.00895     | ug/L          | -8.95E-06   | mg/L         | 0.999955  |
| 170315-B-01             | 868 HG-8     | 0.6       | Hg 253.7     | 3/15/2017 | 12:25:47 PM | -0.01189     | ug/L          | -0.00198    | mg/kg        | 0.999955  |
| 170315-L-01             | 868 HG-8     | 0.6       | Hg 253.7     | 3/15/2017 | 12:28:04 PM | 4.964034     | ug/L          | 0.827339    | mg/kg        | 0.999955  |
| 17-03-0982-1            | 868 HG-8     | 0.61      | Hg 253.7     | 3/15/2017 | 12:30:21 PM | 0.135516     | ug/L          | 0.022216    | mg/kg        | 0.999955  |
| 17-03-0982-1 MS         | 868 HG-8     | 0.62      | Hg 253.7     | 3/15/2017 | 12:32:38 PM | 5.102625     | ug/L          | 0.823004    | mg/kg        | 0.999955  |
| 17-03-0982-1 MSD        | 868 HG-8     | 0.62      | Hg 253.7     | 3/15/2017 | 12:34:54 PM | 5.135767     | ug/L          | 0.82835     | mg/kg        | 0.999955  |
| 17-03-0982-2            | 868 HG-8     | 0.62      | Hg 253.7     | 3/15/2017 | 12:37:11 PM | 0.068771     | ug/L          | 0.011092    | mg/kg        | 0.999955  |
| 17-03-0982-3            | 868 HG-8     | 0.6       | Hg 253.7     | 3/15/2017 | 12:40:15 PM | 0.120731     | ug/L          | 0.020122    | mg/kg        | 0.999955  |
| 17-03-1002-1            | 868 HG-8     | 0.63      | Hg 253.7     | 3/15/2017 | 12:42:32 PM | 0.071589     | ug/L          | 0.011363    | mg/kg        | 0.999955  |
| 17-03-1050-1            | 868 HG-8     | 0.6       | Hg 253.7     | 3/15/2017 | 12:44:50 PM | 1.156668     | ug/L          | 0.192778    | mg/kg        | 0.999955  |
| 17-03-1054-1            | 868 HG-8     | 0.61      | Hg 253.7     | 3/15/2017 | 12:47:07 PM | 0.390078     | ug/L          | 0.063947    | mg/kg        | 0.999955  |
| CCV 0.2x10ppb           | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 12:49:24 PM | 2.052224     | ug/L          | 0.002052    | mg/L         | 0.999955  |
| CCB                     | 868 HG-8     |           | Hg 253.7     | 3/15/2017 | 12:51:40 PM | 0.003898     | ug/L          | 3.90E-06    | mg/L         | 0.999955  |
| 17-03-1054-2            | 868 HG-8     | 0.61      | Hg 253.7     | 3/15/2017 | 12:53:55 PM | 0.079354     | ug/L          | 0.013009    | mg/kg        | 0.999955  |

Reviewed/Assign to Logbook Date: 03-15-17

Analysis Hg Chemist ID: 309Logbook Page: 34 Instrument ID: Hg-8

| Sample ID          | Analyst Name | Initial Sample |              | Date      | Time        | Conc          |               | Conc           |                | Corr Coef |
|--------------------|--------------|----------------|--------------|-----------|-------------|---------------|---------------|----------------|----------------|-----------|
|                    |              | Wt             | Analyte Name |           |             | (Calib)       | (Calib)       | (Samp)         | (Samp)         |           |
| 17-03-1054-3       | 868 HG-8     | 0.63           | Hg 253.7     | 3/15/2017 | 12:56:13 PM | 0.114215 ug/L | 0.114215 ug/L | 0.018129 mg/kg | 0.018129 mg/kg | 0.999955  |
| 17-03-1033-1       | 868 HG-8     | 0.59           | Hg 253.7     | 3/15/2017 | 12:58:31 PM | 0.176814 ug/L | 0.176814 ug/L | 0.029968 mg/kg | 0.029968 mg/kg | 0.999955  |
| 17-03-0590-25      | 868 HG-8     | 0.58           | Hg 253.7     | 3/15/2017 | 1:00:48 PM  | 0.294139 ug/L | 0.294139 ug/L | 0.050714 mg/kg | 0.050714 mg/kg | 0.999955  |
| 17-03-0590-26      | 868 HG-8     | 0.61           | Hg 253.7     | 3/15/2017 | 1:03:05 PM  | 0.460994 ug/L | 0.460994 ug/L | 0.075573 mg/kg | 0.075573 mg/kg | 0.999955  |
| 17-03-0590-27      | 868 HG-8     | 0.6            | Hg 253.7     | 3/15/2017 | 1:05:23 PM  | 0.140725 ug/L | 0.140725 ug/L | 0.023454 mg/kg | 0.023454 mg/kg | 0.999955  |
| 17-03-0881-1       | 868 HG-8     | 0.62           | Hg 253.7     | 3/15/2017 | 1:07:40 PM  | 128.4747 ug/L | 128.4747 ug/L | 20.72173 mg/kg | 20.72173 mg/kg | 0.999955  |
| 17-03-0793-1       | 868 HG-8     | 0.6            | Hg 253.7     | 3/15/2017 | 1:09:57 PM  | 7.909335 ug/L | 7.909335 ug/L | 1.318223 mg/kg | 1.318223 mg/kg | 0.999955  |
| CCV 0.2x10ppb      | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 1:12:14 PM  | 2.063932 ug/L | 2.063932 ug/L | 0.002064 mg/L  | 0.002064 mg/L  | 0.999955  |
| CCB                | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 1:14:30 PM  | -0.00083 ug/L | -0.00083 ug/L | -8.27E-07 mg/L | -8.27E-07 mg/L | 0.999955  |
| 17-03-0797-1       | 868 HG-8     | 0.62           | Hg 253.7     | 3/15/2017 | 2:24:33 PM  | 0.120149 ug/L | 0.120149 ug/L | 0.019379 mg/kg | 0.019379 mg/kg | 0.999955  |
| 17-03-0821-1       | 868 HG-8     | 0.6            | Hg 253.7     | 3/15/2017 | 2:26:51 PM  | 0.200835 ug/L | 0.200835 ug/L | 0.033472 mg/kg | 0.033472 mg/kg | 0.999955  |
| 17-03-0822-1       | 868 HG-8     | 0.62           | Hg 253.7     | 3/15/2017 | 2:29:09 PM  | 0.006213 ug/L | 0.006213 ug/L | 0.001002 mg/kg | 0.001002 mg/kg | 0.999955  |
| 17-03-0838-1       | 868 HG-8     | 0.61           | Hg 253.7     | 3/15/2017 | 2:31:27 PM  | 48.14545 ug/L | 48.14545 ug/L | 7.892697 mg/kg | 7.892697 mg/kg | 0.999955  |
| 170315-B-A1        | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:33:44 PM  | 0.03253 ug/L  | 0.03253 ug/L  | 6.51E-05 mg/L  | 6.51E-05 mg/L  | 0.999955  |
| 170315-L-A1        | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:36:02 PM  | 4.787885 ug/L | 4.787885 ug/L | 0.009576 mg/L  | 0.009576 mg/L  | 0.999955  |
| 17-03-0779-F-1     | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:38:20 PM  | -0.00474 ug/L | -0.00474 ug/L | -9.49E-06 mg/L | -9.49E-06 mg/L | 0.999955  |
| 17-03-0779-F-1 MS  | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:40:38 PM  | 4.670606 ug/L | 4.670606 ug/L | 0.009341 mg/L  | 0.009341 mg/L  | 0.999955  |
| 17-03-0779-F-1 MSD | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:42:55 PM  | 4.806176 ug/L | 4.806176 ug/L | 0.009612 mg/L  | 0.009612 mg/L  | 0.999955  |
| 17-03-0779-F-2     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 2:45:12 PM  | -0.00617 ug/L | -0.00617 ug/L | -1.23E-05 mg/L | -1.23E-05 mg/L | 0.999955  |
| CCV 0.2x10ppb      | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:47:29 PM  | 1.990066 ug/L | 1.990066 ug/L | 0.00199 mg/L   | 0.00199 mg/L   | 0.999955  |
| CCB                | 868 HG-8     |                | Hg 253.7     | 3/15/2017 | 2:49:45 PM  | 0.000578 ug/L | 0.000578 ug/L | 5.78E-07 mg/L  | 5.78E-07 mg/L  | 0.999955  |
| 17-03-0779-F-3     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 2:52:00 PM  | -0.00858 ug/L | -0.00858 ug/L | -1.72E-05 mg/L | -1.72E-05 mg/L | 0.999955  |
| 17-03-0779-F-4     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 2:54:18 PM  | -0.00932 ug/L | -0.00932 ug/L | -1.86E-05 mg/L | -1.86E-05 mg/L | 0.999955  |
| 17-03-0779-F-6     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 2:56:36 PM  | 0.001362 ug/L | 0.001362 ug/L | 2.72E-06 mg/L  | 2.72E-06 mg/L  | 0.999955  |
| 17-03-0779-F-7     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 2:58:54 PM  | -0.00811 ug/L | -0.00811 ug/L | -1.62E-05 mg/L | -1.62E-05 mg/L | 0.999955  |
| 17-03-0779-F-8     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 3:01:13 PM  | -0.0049 ug/L  | -0.0049 ug/L  | -9.81E-06 mg/L | -9.81E-06 mg/L | 0.999955  |
| 17-03-0779-F-9     | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 3:03:30 PM  | -0.0065 ug/L  | -0.0065 ug/L  | -1.30E-05 mg/L | -1.30E-05 mg/L | 0.999955  |
| 17-03-0779-1       | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 3:05:48 PM  | -0.00627 ug/L | -0.00627 ug/L | -1.25E-05 mg/L | -1.25E-05 mg/L | 0.999955  |
| 17-03-0779-2       | 868 HG-7     |                | Hg 253.7     | 3/15/2017 | 3:08:07 PM  | -0.00196 ug/L | -0.00196 ug/L | -3.92E-06 mg/L | -3.92E-06 mg/L | 0.999955  |

Reviewed/Assign to Logbook Date: 03-15-17  
 Analysis Hg Chemist ID: 309  
 Logbook Page: 35 Instrument ID: Hg-8

# EPA 7471A Mercury (Solid)

## Preparation Logs

## 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             | GTOU (CF 2.0)  | Aqua Regia                 | 204791661        | 10 mL                      | Spike           | M03 0612A                   |             |            |                             |                        |
| <input type="checkbox"/> EPA 7471B            | <input type="checkbox"/> Other (Specify)  | Block Digester          | 3              | 5% KMnO <sub>4</sub>       | R10261601        |                            | IC              | 1 A                         |             |            |                             |                        |
|                                               |                                           | Pipetter / Dispenser    | P071/X         | NaCl-H <sub>2</sub> NO-HCl | R10261601        | 6 mL                       | ICV             | 1 B                         |             |            |                             |                        |
| BATCH NUMBER                                  |                                           | SUPPLY LOT #            |                | BALANCE ID #               |                  | QUALITY SYSTEM MATRIX ID # |                 | SAMPLE HANDLING             |             |            |                             |                        |
| MS/MSD 170315-S01                             |                                           | Tube / Container 160925 |                | 36                         |                  | Teflon Chip M006 35-15     |                 | 1 = Composite 2 = Subsample |             |            |                             |                        |
| (Specify)                                     |                                           | Filter                  |                |                            |                  | (Specify)                  |                 | 3 = Homogenize 4 = None     |             |            |                             |                        |
| DIGESTION                                     |                                           |                         |                |                            |                  |                            |                 |                             |             |            |                             |                        |
| DATE                                          | START                                     |                         | PREP TECH ID # | END                        |                  | PREP TECH ID #             | SAMPLE HANDLING | ECI ID #                    | SAMPLE      |            | 5% KMNO <sub>4</sub> V (mL) | SPIKE OR IC/ICV V (μL) |
|                                               | TIME                                      | TEMP W/O CF (°C)        |                | TIME                       | TEMP W/O CF (°C) |                            |                 |                             | INITIAL (g) | FINAL (mL) |                             |                        |
| 3/15/17                                       | 10:30                                     | 95                      | 868            | 11:15                      | 95               | 868                        | 4               | MS 17-03-0982-1A            | 0.62        | 100        | 15                          | 500                    |
|                                               |                                           |                         |                |                            |                  |                            |                 | MSD 1                       | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | LCS 110315-101              | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | LCSD / MB 170315-B01        | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0982-1A               | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 2                           | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 3                           | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0797-11A              | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0821-1B5              | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0822-12               | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-1002-1A               | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-1050-1A               | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-1054-1A               | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 2                           | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 3                           | 0.63        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-1033-1A               | 0.59        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0590-25A              | 0.58        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 26                          | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 27                          | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 11-03-0881-1A               | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0793-1A               | 0.60        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0838-1A               | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0882-1                | 0.61        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | 17-03-0883-1A               | 0.60        |            |                             |                        |
|                                               | 13:00                                     |                         |                | 13:45                      |                  |                            |                 | IC 17-03-10881A             | 0.62        |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | ICV                         |             |            |                             |                        |
|                                               |                                           |                         |                |                            |                  |                            |                 | CB                          |             |            |                             |                        |

COMMENTS: \*D003/M0043/D058 \*\* does not need Hg

# EPA METHOD 8082 PCB

## RAW DATA

# EPA METHOD 8082 PCB

## Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY  
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9351-5154  
ICAL BATCH ID: 170222I003  
INSTRUMENT: GC 66

ANALYZED BY: 669  
ICAL D/T ANALYZED: 2017-02-22 17:27  
REVIEWED BY: 27  
D/T REVIEWED: 2017-02-24 16:33

| 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       | 975,287   | 941,045 | 882,730 | 864,861 | 802,600 |   |   |   |   | 893,304 | 0.00    | 8       | 0-20    |                        |                        | PASS   |
| Atoclor-1260 | C          | Avg RF       | 1,012,414 | 995,847 | 939,916 | 914,296 | 876,433 |   |   |   |   | 947,781 | 0.00    | 6       | 0-20    |                        |                        | PASS   |

Data Files:

| Level # | D/T Analyzed     | Data File                                   |
|---------|------------------|---------------------------------------------|
| 1       | 2017-02-22 17:27 | /chem1/SVOA/GC_66/170222A/b1702220117022201 |
| 2       | 2017-02-22 17:45 | /chem1/SVOA/GC_66/170222A/b1702220217022202 |
| 3       | 2017-02-22 18:03 | /chem1/SVOA/GC_66/170222A/b1702220317022203 |
| 4       | 2017-02-22 18:21 | /chem1/SVOA/GC_66/170222A/b1702220417022204 |
| 5       | 2017-02-22 18:38 | /chem1/SVOA/GC_66/170222A/b1702220517022205 |





INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

ICV WORK ORDER: 099-12-532-9351-5154

INITIAL BATCH: 170222I003

INSTRUMENT: GC 66

ANALYZED BY: 669

D/T ANALYZED: 2017-02-22 17:27

INITIAL: 2017-02-22 18:56

ICV: 27

REVIEWED BY: 2017-02-24 16:33

D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC\_66/170222A/b1702220617022206

| 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   | 893304.438 | 1007962.398 |        |          | -13    | 0-15      | PASS   |
| Aroclor-1260  | C           | Avg Resp | 0.00   | 947781.003 | 1078849.128 |        |          | -14    | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Report Date : 03-Mar-2017 10:49

Page 1

## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27  
 End Cal Date : 22-FEB-2017 20:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Cal Date : 03-Mar-2017 10:49 uhhn  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem1/SVOA/GC\_66.i/170222A.b/b17022201.d  
 Level 2: /chem1/SVOA/GC\_66.i/170222A.b/b17022202.d  
 Level 3: /chem1/SVOA/GC\_66.i/170222A.b/b17022210.d  
 Level 4: /chem1/SVOA/GC\_66.i/170222A.b/b17022204.d  
 Level 5: /chem1/SVOA/GC\_66.i/170222A.b/b17022205.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      | 975287  | 941045  | 882730  | 864861  | 802600   | 893304 | 8     |
|          | 3 Aroclor 1016 (1)  | 101963  | 96557   | 88889   | 85902   | 76867    | 90036  | 11    |
|          | 4 Aroclor 1016 (2)  | 177940  | 169399  | 157230  | 152953  | 139805   | 159465 | 9     |
|          | 5 Aroclor 1016 (3)  | 368139  | 367391  | 353292  | 350925  | 334872   | 354924 | 4     |
|          | 6 Aroclor 1016 (4)  | 185303  | 173132  | 158540  | 153765  | 139752   | 162098 | 11    |
|          | 7 Aroclor 1016 (5)  | 141942  | 134567  | 124778  | 121316  | 111304   | 126781 | 9     |
| M        | 8 Aroclor-1260      | 1012414 | 995847  | 939916  | 914296  | 876433   | 947781 | 6     |
|          | 9 Aroclor 1260 (1)  | 295733  | 284622  | 266899  | 258701  | 245467   | 270285 | 7     |
|          | 10 Aroclor 1260 (2) | 233964  | 225940  | 211260  | 204056  | 194563   | 213956 | 7     |
|          | 11 Aroclor 1260 (3) | 244538  | 243699  | 232324  | 225188  | 219576   | 233065 | 5     |
|          | 12 Aroclor 1260 (4) | 84774   | 85815   | 81119   | 85251   | 78652    | 83122  | 4     |
|          | 13 Aroclor 1260 (5) | 153405  | 155772  | 148314  | 141098  | 138176   | 147353 | 5     |
| M        | 14 Aroclor-1221     | +++++   | +++++   | 293209  | +++++   | +++++    | 293209 | 0     |
|          | 15 Aroclor 1221 (1) | +++++   | +++++   | 43149   | +++++   | +++++    | 43149  | 0     |
|          | 16 Aroclor 1221 (2) | +++++   | +++++   | 55578   | +++++   | +++++    | 55578  | 0     |
|          | 17 Aroclor 1221 (3) | +++++   | +++++   | 34870   | +++++   | +++++    | 34870  | 0     |
|          | 18 Aroclor 1221 (4) | +++++   | +++++   | 138535  | +++++   | +++++    | 138535 | 0     |
|          | 19 Aroclor 1221 (5) | +++++   | +++++   | 21077   | +++++   | +++++    | 21077  | 0     |
| M        | 20 Aroclor-1232     | +++++   | +++++   | 461201  | +++++   | +++++    | 461201 | 0     |
|          | 21 Aroclor 1232 (1) | +++++   | +++++   | 93661   | +++++   | +++++    | 93661  | 0     |
|          | 22 Aroclor 1232 (2) | +++++   | +++++   | 75982   | +++++   | +++++    | 75982  | 0     |
|          | 23 Aroclor 1232 (3) | +++++   | +++++   | 160461  | +++++   | +++++    | 160461 | 0     |

Report Date : 03-Mar-2017 10:49

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27  
 End Cal Date : 22-FEB-2017 20:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Cal Date : 03-Mar-2017 10:49 uhhn  
 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 |
| =====               | =====   | =====   | =====   | =====   | =====    | =====   | ===== |
| 24 Aroclor 1232 (4) | +++++   | +++++   | 74085   | +++++   | +++++    | 74085   | 0     |
| 25 Aroclor 1232 (5) | +++++   | +++++   | 57013   | +++++   | +++++    | 57013   | 0     |
| M 26 Aroclor-1242   | +++++   | +++++   | 721392  | +++++   | +++++    | 721392  | 0     |
| 27 Aroclor 1242 (1) | +++++   | +++++   | 71280   | +++++   | +++++    | 71280   | 0     |
| 28 Aroclor 1242 (2) | +++++   | +++++   | 129507  | +++++   | +++++    | 129507  | 0     |
| 29 Aroclor 1242 (3) | +++++   | +++++   | 287006  | +++++   | +++++    | 287006  | 0     |
| 30 Aroclor 1242 (4) | +++++   | +++++   | 130903  | +++++   | +++++    | 130903  | 0     |
| 31 Aroclor 1242 (5) | +++++   | +++++   | 102696  | +++++   | +++++    | 102696  | 0     |
| M 32 Aroclor-1248   | +++++   | +++++   | 698713  | +++++   | +++++    | 698713  | 0     |
| 33 Aroclor 1248 (1) | +++++   | +++++   | 185195  | +++++   | +++++    | 185195  | 0     |
| 34 Aroclor 1248 (2) | +++++   | +++++   | 103145  | +++++   | +++++    | 103145  | 0     |
| 35 Aroclor 1248 (3) | +++++   | +++++   | 76812   | +++++   | +++++    | 76812   | 0     |
| 36 Aroclor 1248 (4) | +++++   | +++++   | 152023  | +++++   | +++++    | 152023  | 0     |
| 37 Aroclor 1248 (5) | +++++   | +++++   | 181538  | +++++   | +++++    | 181538  | 0     |
| M 38 Aroclor-1254   | +++++   | +++++   | 1318858 | +++++   | +++++    | 1318858 | 0     |
| 39 Aroclor 1254 (1) | +++++   | +++++   | 265379  | +++++   | +++++    | 265379  | 0     |
| 40 Aroclor 1254 (2) | +++++   | +++++   | 186148  | +++++   | +++++    | 186148  | 0     |
| 41 Aroclor 1254 (3) | +++++   | +++++   | 350152  | +++++   | +++++    | 350152  | 0     |
| 42 Aroclor 1254 (4) | +++++   | +++++   | 239737  | +++++   | +++++    | 239737  | 0     |
| 43 Aroclor 1254 (5) | +++++   | +++++   | 277442  | +++++   | +++++    | 277442  | 0     |
| M 44 Aroclor-1262   | +++++   | +++++   | 1059164 | +++++   | +++++    | 1059164 | 0     |
| 45 Aroclor 1262 (1) | +++++   | +++++   | 199559  | +++++   | +++++    | 199559  | 0     |
| 46 Aroclor 1262 (2) | +++++   | +++++   | 285769  | +++++   | +++++    | 285769  | 0     |
| 47 Aroclor 1262 (3) | +++++   | +++++   | 264628  | +++++   | +++++    | 264628  | 0     |
| 48 Aroclor 1262 (4) | +++++   | +++++   | 89771   | +++++   | +++++    | 89771   | 0     |
| 49 Aroclor 1262 (5) | +++++   | +++++   | 219437  | +++++   | +++++    | 219437  | 0     |
| M 50 Aroclor-1268   | +++++   | +++++   | 4264652 | +++++   | +++++    | 4264652 | 0     |
| 51 Aroclor 1268 (1) | +++++   | +++++   | 707347  | +++++   | +++++    | 707347  | 0     |
| 52 Aroclor 1268 (2) | +++++   | +++++   | 709040  | +++++   | +++++    | 709040  | 0     |

Report Date : 03-Mar-2017 10:49

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27  
 End Cal Date : 22-FEB-2017 20:07  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Cal Date : 03-Mar-2017 10:49 uhhn  
 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)               | +++++   | +++++   | 580421  | +++++   | +++++    | 580421  | 0     |
| 54 Aroclor 1268 (4)               | +++++   | +++++   | 255277  | +++++   | +++++    | 255277  | 0     |
| 55 Aroclor 1268 (5)               | +++++   | +++++   | 2012567 | +++++   | +++++    | 2012567 | 0     |
| =====                             | =====   | =====   | =====   | =====   | =====    | =====   | ===== |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 5417720 | 5823446 | 5836705 | 5879203 | 5752252  | 5741865 | 3     |
| \$ 56 Decachlorobiphenyl          | 5382862 | 5603807 | 5539339 | 5351948 | 5420179  | 5459627 | 2     |
| =====                             | =====   | =====   | =====   | =====   | =====    | =====   | ===== |

Report Date : 03-Mar-2017 10:49

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 22-FEB-2017 17:27  
End Cal Date : 22-FEB-2017 20:07  
Quant Method : ESTD  
Origin : Disabled  
Target Version : 3.50  
Integrator : HP Genie  
Method file : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
Cal Date : 03-Mar-2017 10:49 uhhn  
Curve Type : Average

|                             |          |
|-----------------------------|----------|
| Average %RSD Results.       |          |
| =====                       |          |
| Calculated Average %RSD =   | 6.53024  |
| Maximum Average %RSD =      | 20.00000 |
| * Passed Average %RSD Test. |          |

Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022206.d  
 Report Date: 02/23/2017 09:52

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_66.i      Injection Date and Time: 22-FEB-2017 18:56  
 Sample Name: PCB ICV P021517H 500PPB      Initial Calibration Date(s): 17-OCT-2016    22-FEB-2017  
 Sublist used: p1016\_1260.sub      Initial Calibration Time(s):    20:04      20:07  
 Method used: /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF     | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |          |
|------------------------------|--------------------|-------------|----------|-------------|---------------|------------|----------|
| =====                        |                    |             |          |             |               |            |          |
| Aroclor 1260 (1)             | 270284.532         | 318239.382  | 0.01     | -18         | 15            | Averaged   | <-Failed |
| Aroclor 1260 (2)             | 213956.488         | 237968.342  | 0.01     | -11         | 15            | Averaged   |          |
| Aroclor 1260 (3)             | 233064.808         | 267435.304  | 0.01     | -15         | 15            | Averaged   |          |
| Aroclor 1260 (4)             | 83122.167          | 83559.856   | 0.01     | -1          | 15            | Averaged   |          |
| Aroclor-1260                 | 947781.003         | 1078849.128 | 0.01     | -14         | 15            | Averaged   |          |
| Aroclor-1016                 | 893304.438         | 1007962.398 | 0.01     | -13         | 15            | Averaged   |          |
| Aroclor 1016 (1)             | 90035.625          | 99898.782   | 0.01     | -11         | 15            | Averaged   |          |
| Aroclor 1016 (2)             | 159465.395         | 177206.146  | 0.01     | -11         | 15            | Averaged   |          |
| Aroclor 1016 (3)             | 354923.864         | 406965.954  | 0.01     | -15         | 15            | Averaged   |          |
| Aroclor 1016 (4)             | 162098.269         | 181154.002  | 0.01     | -12         | 15            | Averaged   |          |
| Aroclor 1016 (5)             | 126781.283         | 142737.514  | 0.01     | -13         | 15            | Averaged   |          |
| Aroclor 1260 (5)             | 147353.008         | 171646.244  | 0.01     | -16         | 15            | Averaged   | <-Failed |
| =====                        |                    |             |          |             |               |            |          |
| Surrogate Standards          | ICAL RRF or Amount | ICV RRF     | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |          |
| =====                        |                    |             |          |             |               |            |          |
| 2,4,5,6-Tetrachloro-m-xylene | 5741865.170        | 5554897.950 | 0.01     | 3           | 15            | Averaged   |          |
| Decachlorobiphenyl           | 5459627.040        | 5505849.720 | 0.01     | -1          | 15            | Averaged   |          |

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022201.d  
 Report Date: 23-Feb-2017 09:41

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022201.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 17:27  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB ICAL1 P021517F 100PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 22-FEB-2017 17:27 Cal File: b17022201.d  
 Als bottle: 1 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  |
|                                   |        |        |        |           |  | ( ppb)  | ( ppb)  |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE  |  |         |         |
| =====                             | ==     | =====  | =====  | =====     |  | =====   | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.694  | 4.694  | 0.000  | 108354401 |  | 20.0000 | 18.9(a) |
| M 2 Aroclor-1016                  |        |        |        | 97528686  |  | 100.000 | 109     |
| 3 Aroclor 1016 (1)                | 5.539  | 5.533  | 0.006  | 10196308  |  | 100.000 | 113     |
| 4 Aroclor 1016 (2)                | 6.168  | 6.165  | 0.003  | 17794023  |  | 100.000 | 112     |
| 5 Aroclor 1016 (3)                | 6.852  | 6.844  | 0.008  | 36813879  |  | 100.000 | 104     |
| 6 Aroclor 1016 (4)                | 7.050  | 7.043  | 0.007  | 18530301  |  | 100.000 | 114     |
| 7 Aroclor 1016 (5)                | 7.204  | 7.194  | 0.010  | 14194175  |  | 100.000 | 112     |
| M 8 Aroclor-1260                  |        |        |        | 101241371 |  | 100.000 | 107     |
| 9 Aroclor 1260 (1)                | 9.753  | 9.749  | 0.004  | 29573320  |  | 100.000 | 109     |
| 10 Aroclor 1260 (2)               | 10.352 | 10.348 | 0.004  | 23396360  |  | 100.000 | 109     |
| 11 Aroclor 1260 (3)               | 10.745 | 10.742 | 0.003  | 24453781  |  | 100.000 | 105     |
| 12 Aroclor 1260 (4)               | 12.119 | 12.115 | 0.004  | 8477403   |  | 100.000 | 102     |
| 13 Aroclor 1260 (5)               | 12.340 | 12.337 | 0.003  | 15340507  |  | 100.000 | 104     |
| \$ 56 Decachlorobiphenyl          | 13.107 | 13.103 | 0.004  | 107657233 |  | 20.0000 | 19.7(a) |

## QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

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Data File: /chem1/SV04/GC\_66.i/170222A.b/b17022201.d

Date : 22-FEB-2017 17:27

Client ID:

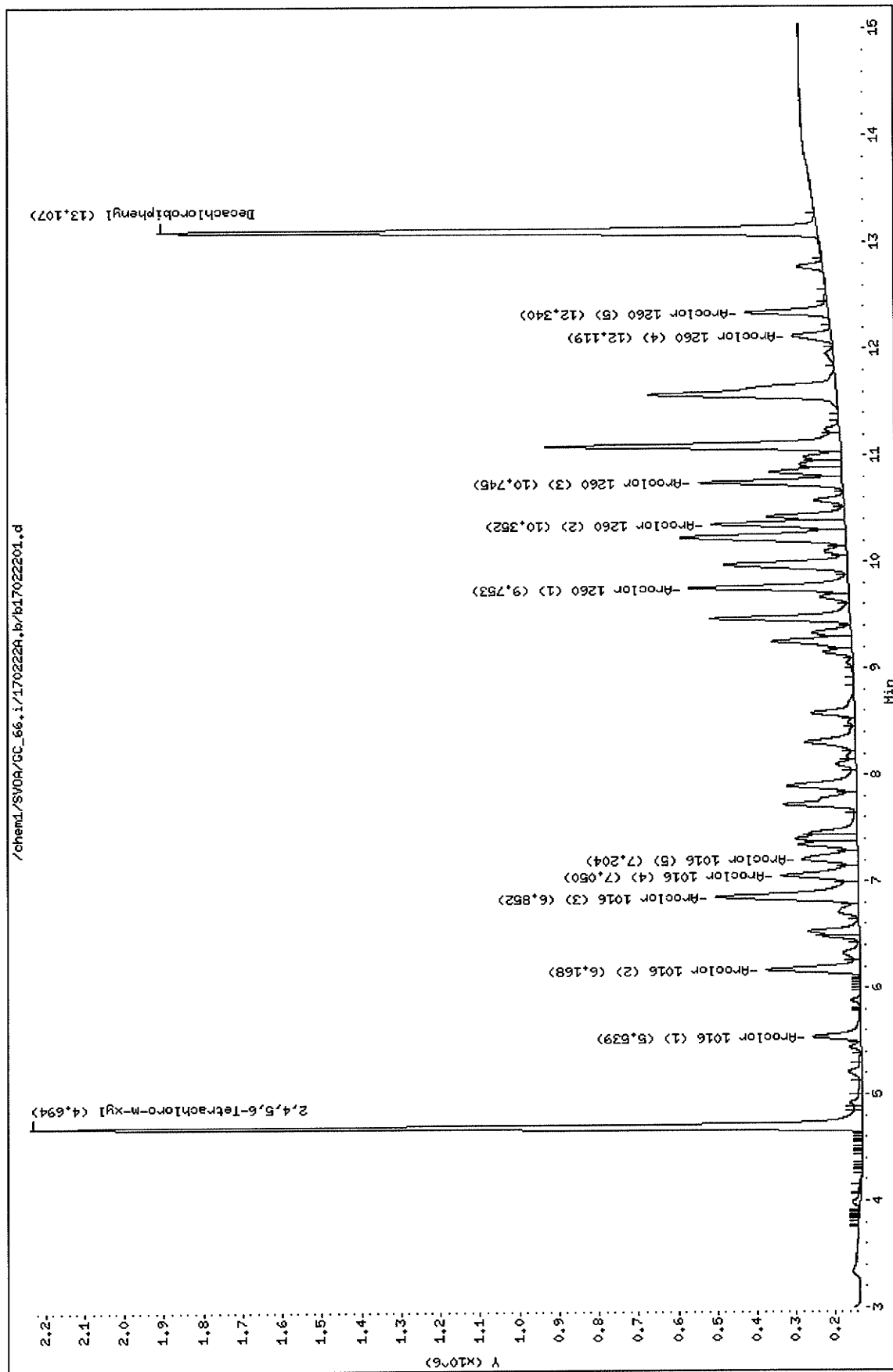
Sample Info: PCB ICAL1 P021517F 100PPB

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022202.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022202.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 17:45  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB ICAL2 P021517E 250PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 22-FEB-2017 17:45 Cal File: b17022202.d  
 Als bottle: 2 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) |
| =====                             | ==     | =====  | =====  | =====     | =====   | =====  |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.693  | 4.694  | -0.001 | 291172299 | 50.0000 | 50.7   |
| M 2 Aroclor-1016                  |        |        |        | 235261233 | 250.000 | 263    |
| 3 Aroclor 1016 (1)                | 5.536  | 5.539  | -0.003 | 24139170  | 250.000 | 268    |
| 4 Aroclor 1016 (2)                | 6.166  | 6.168  | -0.002 | 42349726  | 250.000 | 266    |
| 5 Aroclor 1016 (3)                | 6.848  | 6.852  | -0.004 | 91847697  | 250.000 | 259    |
| 6 Aroclor 1016 (4)                | 7.046  | 7.050  | -0.004 | 43282979  | 250.000 | 267    |
| 7 Aroclor 1016 (5)                | 7.198  | 7.204  | -0.006 | 33641661  | 250.000 | 265    |
| M 8 Aroclor-1260                  |        |        |        | 248961695 | 250.000 | 263    |
| 9 Aroclor 1260 (1)                | 9.751  | 9.753  | -0.002 | 71155515  | 250.000 | 263    |
| 10 Aroclor 1260 (2)               | 10.349 | 10.352 | -0.003 | 56484954  | 250.000 | 264    |
| 11 Aroclor 1260 (3)               | 10.743 | 10.745 | -0.002 | 60924633  | 250.000 | 261    |
| 12 Aroclor 1260 (4)               | 12.116 | 12.119 | -0.003 | 21453649  | 250.000 | 258    |
| 13 Aroclor 1260 (5)               | 12.339 | 12.340 | -0.001 | 38942944  | 250.000 | 264    |
| \$ 56 Decachlorobiphenyl          | 13.105 | 13.107 | -0.002 | 280190360 | 50.0000 | 51.3   |

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Data File: /chem1/SV04/DC\_66.i/170222A.b/b17022202.d

Date : 22-FEB-2017 17:45

Client ID:

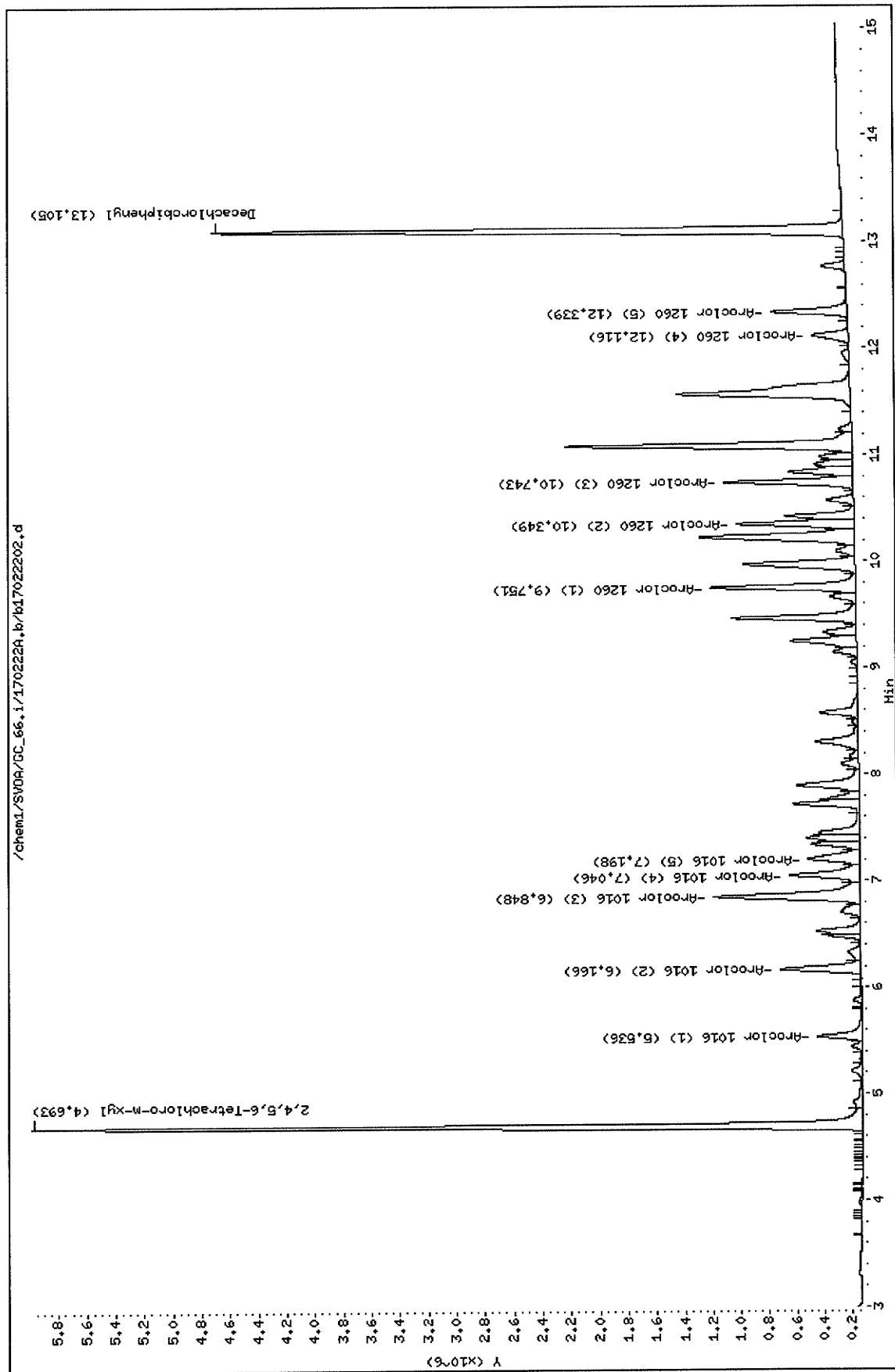
Sample Info: PCB ICAL2 P021517E 250PPB

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022203.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022203.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 18:03  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB ICAL3 P021517D 500PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 |
|                                   |        |        |        |           | ( ppb)  | ( ppb) |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE  |         |        |
| =====                             | ==     | =====  | =====  | =====     | =====   | =====  |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.692  | 4.693  | -0.001 | 583670480 | 100.000 | 102    |
| M 2 Aroclor-1016                  |        |        |        | 441364860 | 500.000 | 494    |
| 3 Aroclor 1016 (1)                | 5.533  | 5.536  | -0.003 | 44444648  | 500.000 | 494    |
| 4 Aroclor 1016 (2)                | 6.164  | 6.166  | -0.002 | 78615211  | 500.000 | 493    |
| 5 Aroclor 1016 (3)                | 6.844  | 6.848  | -0.004 | 176646127 | 500.000 | 498    |
| 6 Aroclor 1016 (4)                | 7.043  | 7.046  | -0.003 | 79269778  | 500.000 | 489    |
| 7 Aroclor 1016 (5)                | 7.195  | 7.198  | -0.003 | 62389096  | 500.000 | 492    |
| M 8 Aroclor-1260                  |        |        |        | 469957779 | 500.000 | 496    |
| 9 Aroclor 1260 (1)                | 9.749  | 9.751  | -0.002 | 133449409 | 500.000 | 494    |
| 10 Aroclor 1260 (2)               | 10.348 | 10.349 | -0.001 | 105630017 | 500.000 | 494    |
| 11 Aroclor 1260 (3)               | 10.742 | 10.743 | -0.001 | 116161904 | 500.000 | 498    |
| 12 Aroclor 1260 (4)               | 12.115 | 12.116 | -0.001 | 40559632  | 500.000 | 488    |
| 13 Aroclor 1260 (5)               | 12.337 | 12.339 | -0.002 | 74156817  | 500.000 | 503    |
| \$ 56 Decachlorobiphenyl          | 13.105 | 13.105 | 0.000  | 553933911 | 100.000 | 101    |

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Data File: /chem1/SV00A/GC\_66.i/170222A.b/b17022203.d

Date : 22-FEB-2017 18:03

Client ID:

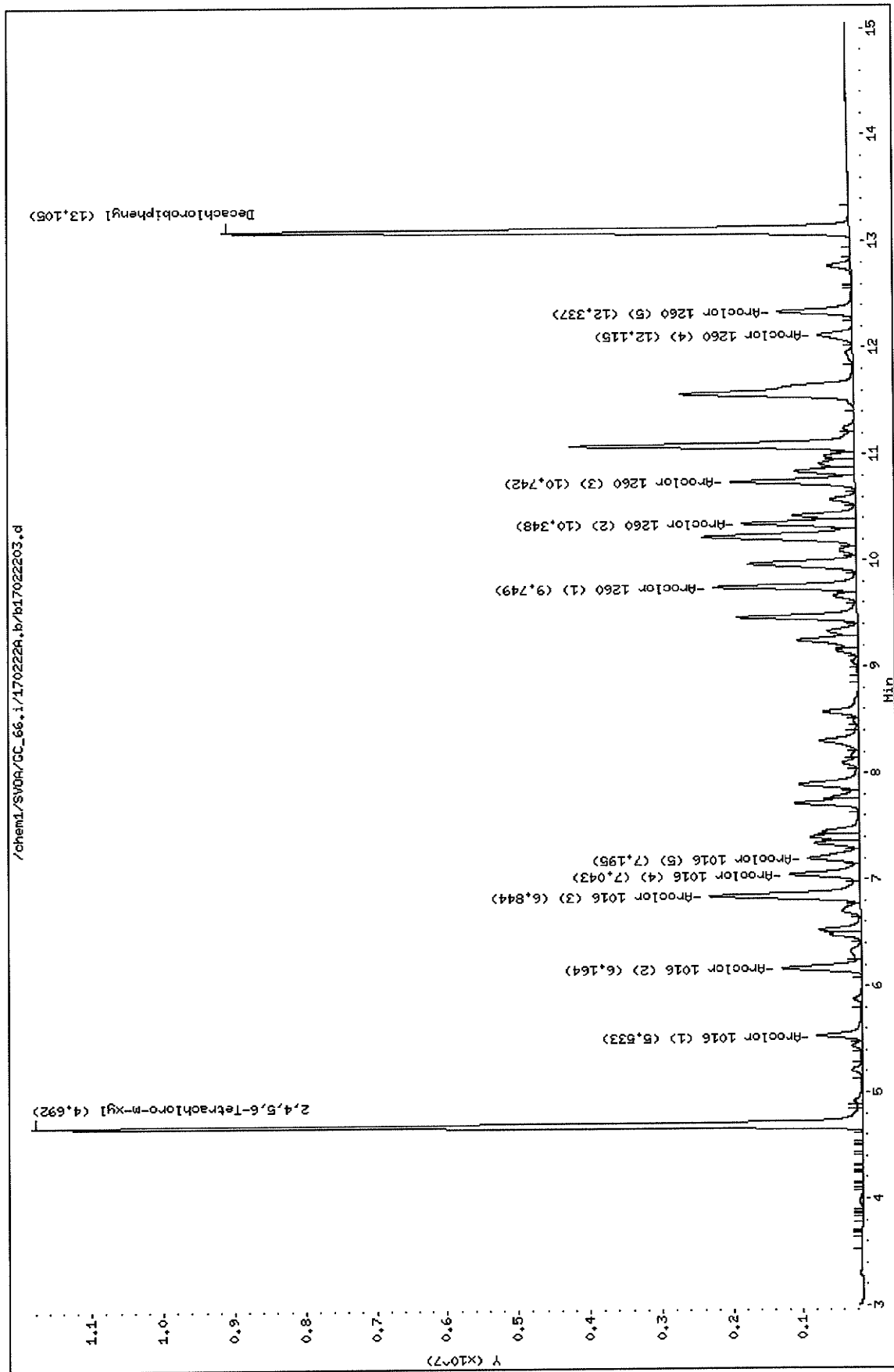
Sample Info: PCB ICAL3 P021517D 500PPB

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022204.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022204.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 18:21  
 Operator : 944  
 Smp Info : PCB ICAL4 P021517C 750PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k  
 Cal Date : 22-FEB-2017 18:21  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022204.d  
 Calibration Sample, Level: 4  
 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 |        |
| =====                             | ==     | =====  | =====  | =====     | =====    | =====  |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.691  | 4.692  | -0.001 | 881880457 | 150.000  | 154    |
| M 2 Aroclor-1016                  |        |        |        | 648645686 | 750.000  | 726    |
| 3 Aroclor 1016 (1)                | 5.530  | 5.533  | -0.003 | 64426684  | 750.000  | 716    |
| 4 Aroclor 1016 (2)                | 6.163  | 6.164  | -0.001 | 114714592 | 750.000  | 719    |
| 5 Aroclor 1016 (3)                | 6.842  | 6.844  | -0.002 | 263194053 | 750.000  | 742    |
| 6 Aroclor 1016 (4)                | 7.041  | 7.043  | -0.002 | 115323393 | 750.000  | 711    |
| 7 Aroclor 1016 (5)                | 7.192  | 7.195  | -0.003 | 90986964  | 750.000  | 718    |
| M 8 Aroclor-1260                  |        |        |        | 685721676 | 750.000  | 724    |
| 9 Aroclor 1260 (1)                | 9.748  | 9.749  | -0.001 | 194025997 | 750.000  | 718    |
| 10 Aroclor 1260 (2)               | 10.348 | 10.348 | 0.000  | 153042314 | 750.000  | 715    |
| 11 Aroclor 1260 (3)               | 10.742 | 10.742 | 0.000  | 168891068 | 750.000  | 725    |
| 12 Aroclor 1260 (4)               | 12.113 | 12.115 | -0.002 | 63938532  | 750.000  | 769    |
| 13 Aroclor 1260 (5)               | 12.336 | 12.337 | -0.001 | 105823765 | 750.000  | 718    |
| \$ 56 Decachlorobiphenyl          | 13.104 | 13.105 | -0.001 | 802792169 | 150.000  | 147    |

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Data File: /chem1/SV09/GC\_66.i/170222A.b/b17022204.d

Date : 22-FEB-2017 18:21

Client ID:

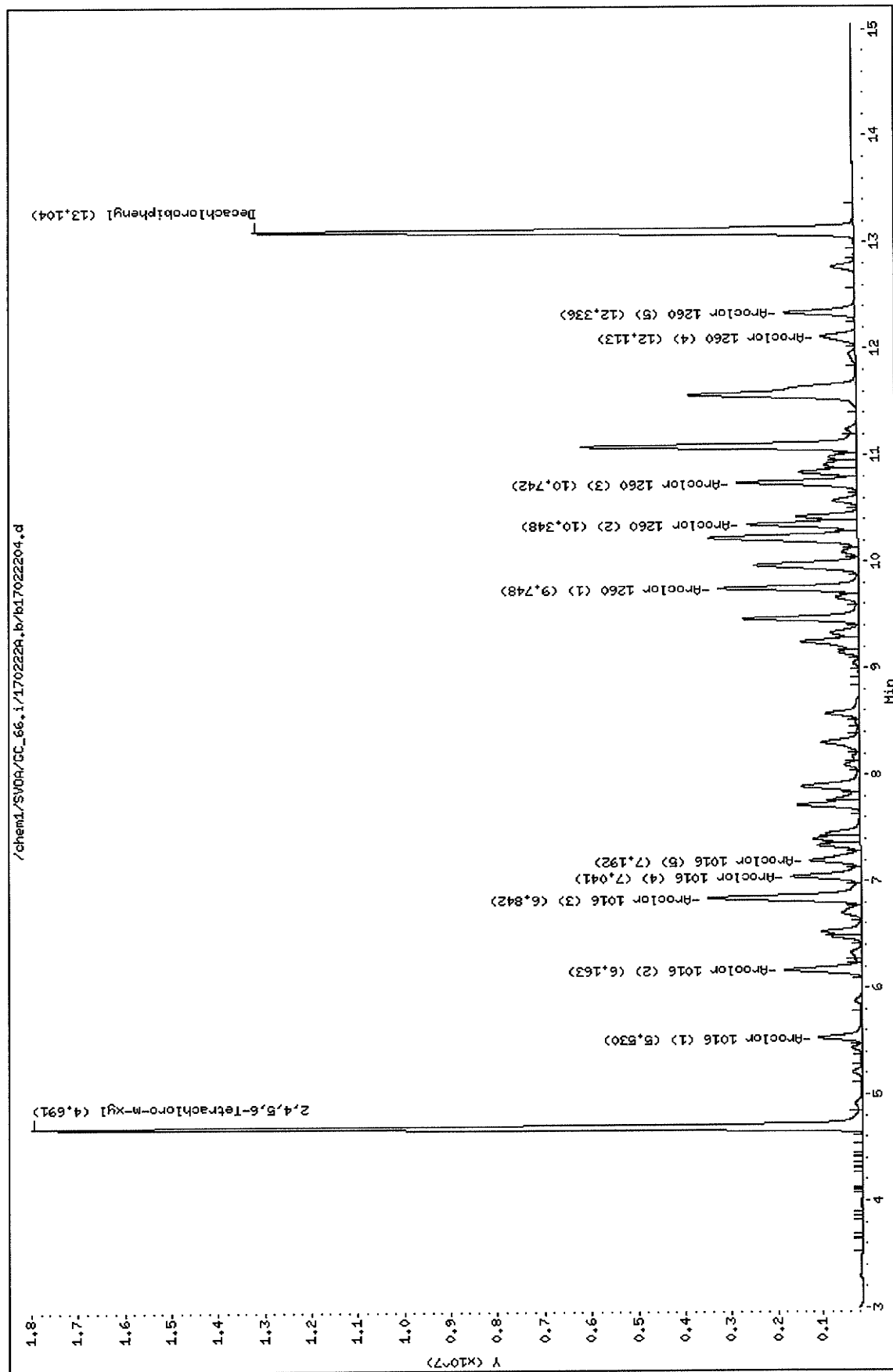
Sample Info: PCB ICAL4 Po21517C 750PPB

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022205.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022205.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 18:38  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB ICAL5 P021517B 2000PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 22-FEB-2017 18:38 Cal File: b17022205.d  
 Als bottle: 5 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  |
|                                   |        |        |        |            |  | ( ppb)  | ( ppb)  |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE   |  |         |         |
| =====                             | ==     | =====  | =====  | =====      |  | =====   | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.693  | 4.691  | 0.002  | 2300900796 |  | 400.000 | 401 (A) |
| M 2 Aroclor-1016                  |        |        |        | 1605199523 |  | 2000.00 | 1800    |
| 3 Aroclor 1016 (1)                | 5.530  | 5.530  | 0.000  | 153733649  |  | 2000.00 | 1710    |
| 4 Aroclor 1016 (2)                | 6.163  | 6.163  | 0.000  | 279609263  |  | 2000.00 | 1750    |
| 5 Aroclor 1016 (3)                | 6.839  | 6.842  | -0.003 | 669744171  |  | 2000.00 | 1890    |
| 6 Aroclor 1016 (4)                | 7.041  | 7.041  | 0.000  | 279504681  |  | 2000.00 | 1720    |
| 7 Aroclor 1016 (5)                | 7.190  | 7.192  | -0.002 | 222607759  |  | 2000.00 | 1760    |
| M 8 Aroclor-1260                  |        |        |        | 1752866795 |  | 2000.00 | 1850    |
| 9 Aroclor 1260 (1)                | 9.747  | 9.748  | -0.001 | 490934501  |  | 2000.00 | 1820    |
| 10 Aroclor 1260 (2)               | 10.347 | 10.348 | -0.001 | 389125144  |  | 2000.00 | 1820    |
| 11 Aroclor 1260 (3)               | 10.742 | 10.742 | 0.000  | 439151601  |  | 2000.00 | 1880    |
| 12 Aroclor 1260 (4)               | 12.114 | 12.113 | 0.001  | 157303133  |  | 2000.00 | 1890    |
| 13 Aroclor 1260 (5)               | 12.336 | 12.336 | 0.000  | 276352416  |  | 2000.00 | 1880    |
| \$ 56 Decachlorobiphenyl          | 13.104 | 13.104 | 0.000  | 2168071770 |  | 400.000 | 397     |

## QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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Data File: /chem1/SVDA/DC\_66.i/170222A.b/b17022205.d

Date : 22-FEB-2017 18:38

Client ID:

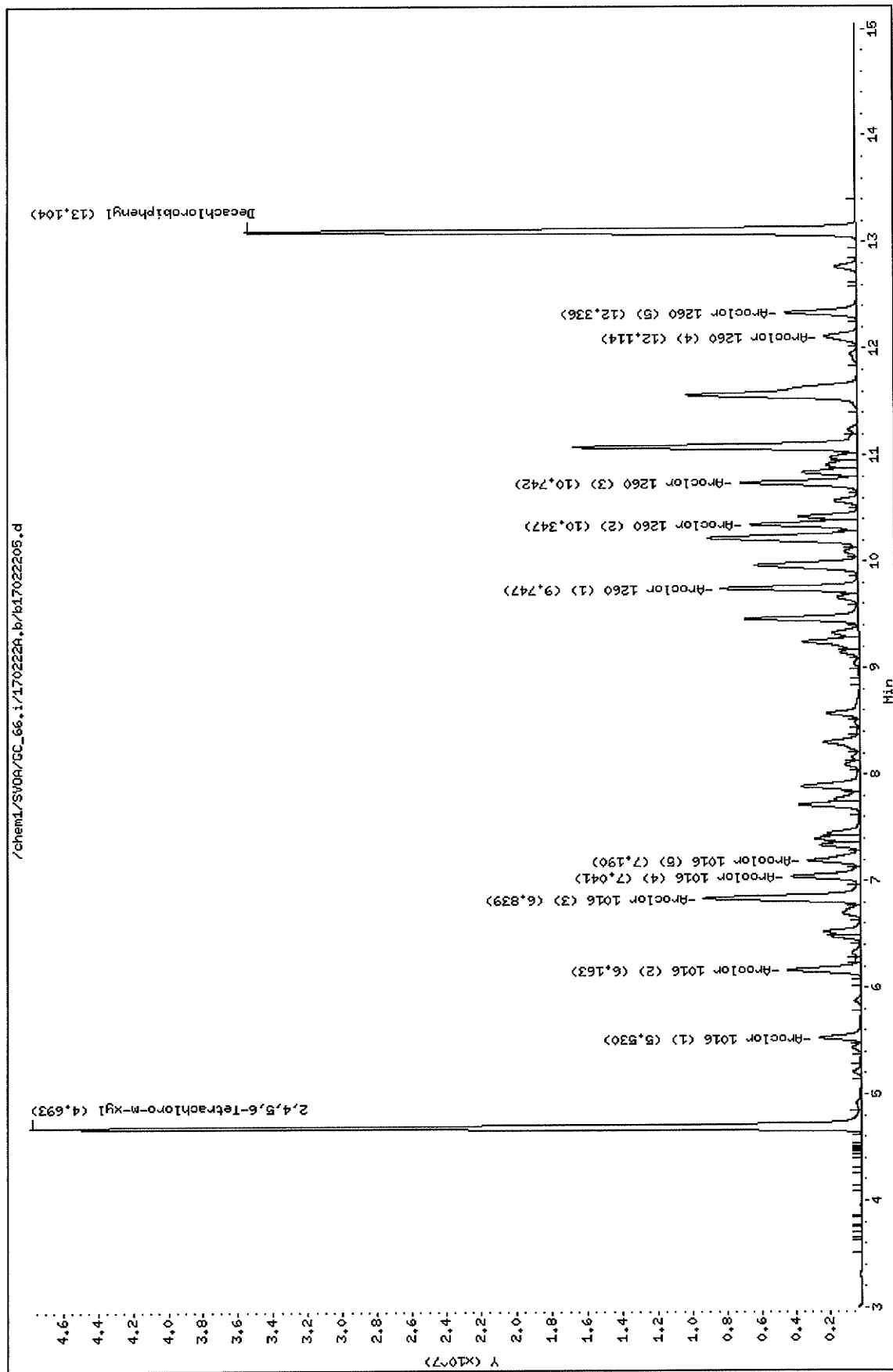
Sample Info: PCB ICAL5 P021517B 2000PPB

Instrument: DC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022206.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022206.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 18:56  
 Operator : 944  
 Smp Info : PCB ICV P021517H 500PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k  
 Cal Date : 22-FEB-2017 18:38  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022205.d  
 Continuing Calibration Sample  
 Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |  | AMOUNTS |        |        |                   |                  |
|-----------------------------------|--|---------|--------|--------|-------------------|------------------|
|                                   |  | RT      | EXP RT | DLT RT | RESPONSE          |                  |
|                                   |  | ==      | =====  | =====  | =====             | =====            |
| Compounds                         |  |         |        |        | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene |  | 4.694   | 4.693  | 0.001  | 555489795         | 100.000          |
| M 2 Aroclor-1016                  |  |         |        |        | 503981199         | 564              |
| 3 Aroclor 1016 (1)                |  | 5.533   | 5.530  | 0.003  | 49949391          | 555              |
| 4 Aroclor 1016 (2)                |  | 6.165   | 6.163  | 0.002  | 88603073          | 556              |
| 5 Aroclor 1016 (3)                |  | 6.844   | 6.839  | 0.005  | 203482977         | 573              |
| 6 Aroclor 1016 (4)                |  | 7.043   | 7.041  | 0.002  | 90577001          | 559              |
| 7 Aroclor 1016 (5)                |  | 7.194   | 7.190  | 0.004  | 71368757          | 563              |
| M 8 Aroclor-1260                  |  |         |        |        | 539424564         | 569              |
| 9 Aroclor 1260 (1)                |  | 9.749   | 9.747  | 0.002  | 159119691         | 589              |
| 10 Aroclor 1260 (2)               |  | 10.348  | 10.347 | 0.001  | 118984171         | 556              |
| 11 Aroclor 1260 (3)               |  | 10.742  | 10.742 | 0.000  | 133717652         | 574              |
| 12 Aroclor 1260 (4)               |  | 12.115  | 12.114 | 0.001  | 41779928          | 503              |
| 13 Aroclor 1260 (5)               |  | 12.337  | 12.336 | 0.001  | 85823122          | 582              |
| \$ 56 Decachlorobiphenyl          |  | 13.103  | 13.104 | -0.001 | 550584972         | 101              |

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Data File: /chem1/SV0A/GC\_66.i/170222A.b/17022206.d

Date : 22-FEB-2017 18:56

Client ID:

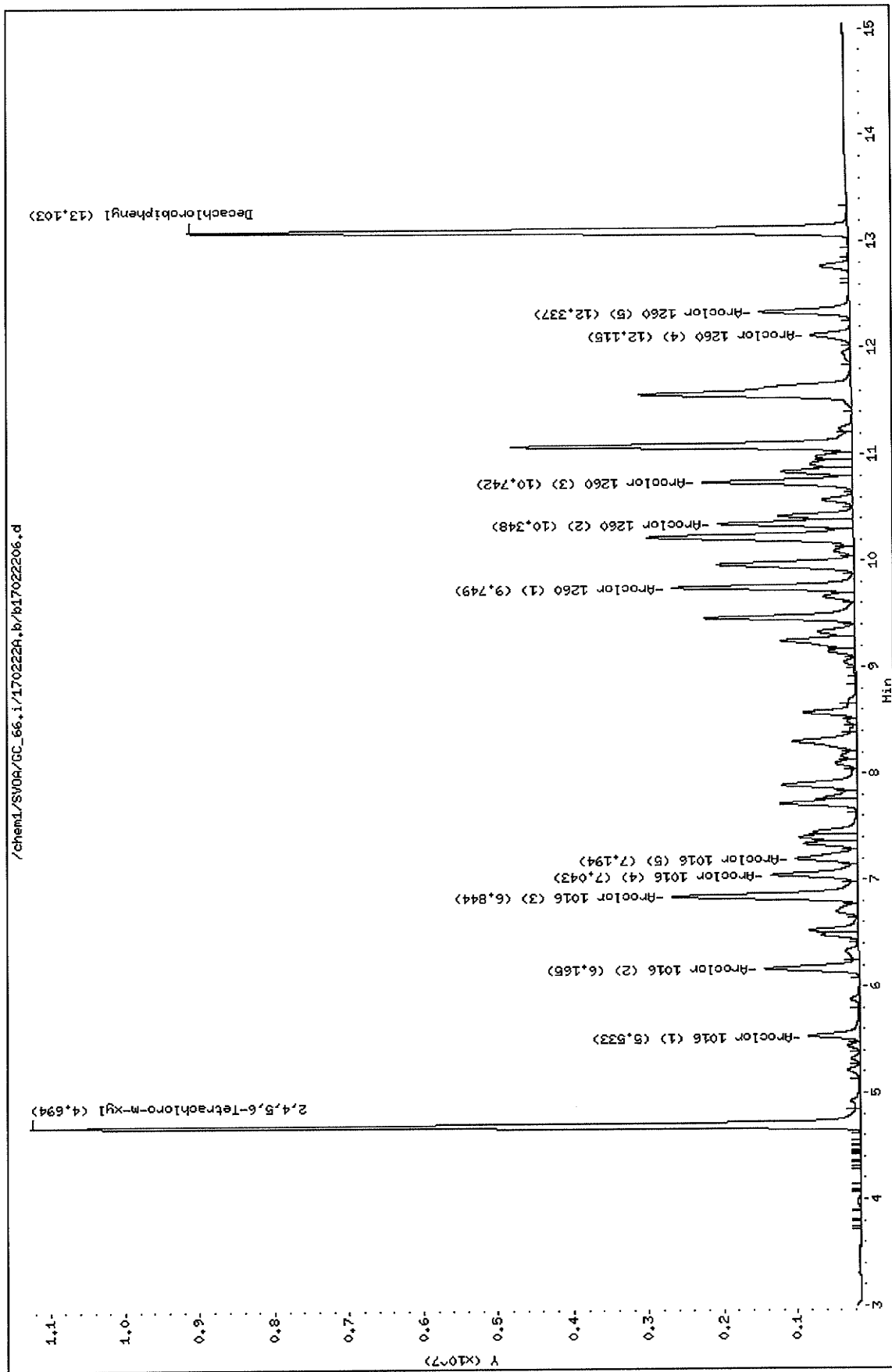
Sample Info: PCB ICV P021517H 500PPB

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022207.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022207.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 19:14  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB 1221/54 500PPB P120616I  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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

|                     |       |        |        |           | AMOUNTS |        |
|---------------------|-------|--------|--------|-----------|---------|--------|
|                     |       |        |        |           | CAL-AMT | ON-COL |
|                     |       |        |        |           | ( ppb)  | ( ppb) |
| Compounds           | RT    | EXP RT | DLT RT | RESPONSE  |         |        |
| =====               | ==    | =====  | =====  | =====     | =====   | =====  |
| M 14 Aroclor-1221   |       |        |        | 146604462 | 500.000 | 500    |
| 15 Aroclor 1221 (1) | 3.949 | 3.949  | 0.000  | 21574609  | 500.000 | 500    |
| 16 Aroclor 1221 (2) | 5.209 | 5.209  | 0.000  | 27788962  | 500.000 | 500    |
| 17 Aroclor 1221 (3) | 5.436 | 5.436  | 0.000  | 17435037  | 500.000 | 500    |
| 18 Aroclor 1221 (4) | 5.532 | 5.532  | 0.000  | 69267403  | 500.000 | 500    |
| 19 Aroclor 1221 (5) | 6.166 | 6.166  | 0.000  | 10538451  | 500.000 | 500    |
| M 38 Aroclor-1254   |       |        |        | 659429043 | 500.000 | 500    |
| 39 Aroclor 1254 (1) | 8.300 | 8.300  | 0.000  | 132689273 | 500.000 | 500    |
| 40 Aroclor 1254 (2) | 8.658 | 8.658  | 0.000  | 93074176  | 500.000 | 500    |
| 41 Aroclor 1254 (3) | 9.199 | 9.199  | 0.000  | 175076127 | 500.000 | 500    |
| 42 Aroclor 1254 (4) | 9.513 | 9.513  | 0.000  | 119868437 | 500.000 | 500    |
| 43 Aroclor 1254 (5) | 9.976 | 9.976  | 0.000  | 138721030 | 500.000 | 500    |

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Data File: /chem1/SV04/GC\_66.i/170222a.b/17022207.d

Date : 22-FEB-2017 19:14

Client ID:

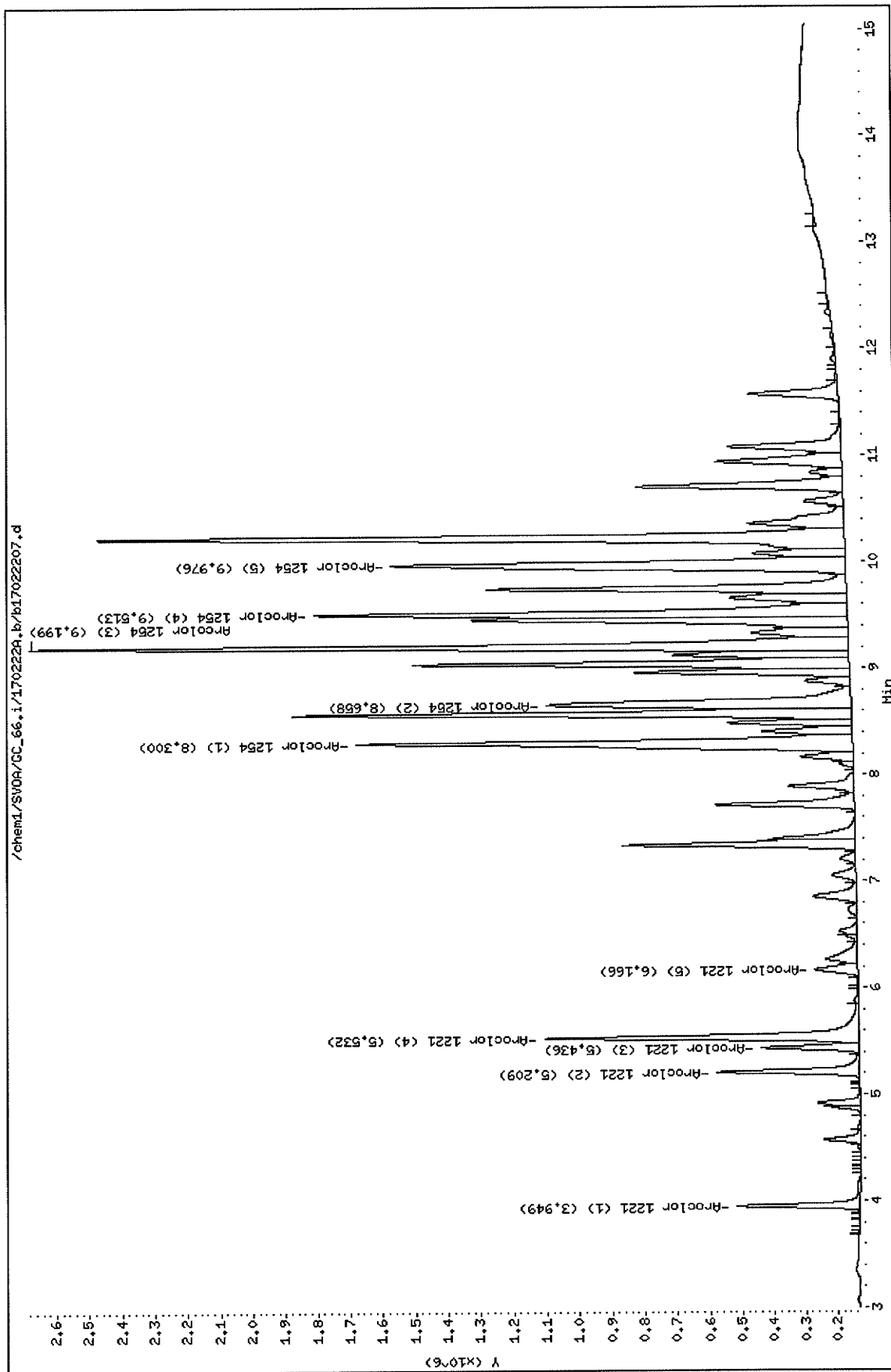
Sample Info: PCB 1221/54 500PPB P1206161

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022208.d  
 Report Date: 23-Feb-2017 09:42

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022208.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 19:32  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB 1232/62 500PPB P120616J  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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

|                     |        |        |        |    |           | AMOUNTS |        |
|---------------------|--------|--------|--------|----|-----------|---------|--------|
|                     |        |        |        |    |           | CAL-AMT | ON-COL |
|                     |        |        |        |    |           | ( ppb)  | ( ppb) |
| Compounds           | RT     | EXP RT | DLT RT | RT | RESPONSE  |         |        |
| =====               | ==     | =====  | =====  |    | =====     | =====   | =====  |
| M 20 Aroclor-1232   |        |        |        |    | 230600593 | 500.000 | 500    |
| 21 Aroclor 1232 (1) | 5.533  | 5.533  | 0.000  |    | 46830292  | 500.000 | 500    |
| 22 Aroclor 1232 (2) | 6.164  | 6.164  | 0.000  |    | 37990961  | 500.000 | 500    |
| 23 Aroclor 1232 (3) | 6.846  | 6.846  | 0.000  |    | 80230398  | 500.000 | 500    |
| 24 Aroclor 1232 (4) | 7.045  | 7.045  | 0.000  |    | 37042341  | 500.000 | 500    |
| 25 Aroclor 1232 (5) | 7.198  | 7.198  | 0.000  |    | 28506601  | 500.000 | 500    |
| M 44 Aroclor-1262   |        |        |        |    | 529581884 | 500.000 | 500    |
| 45 Aroclor 1262 (1) | 9.749  | 9.749  | 0.000  |    | 99779332  | 500.000 | 500    |
| 46 Aroclor 1262 (2) | 10.347 | 10.347 | 0.000  |    | 142884711 | 500.000 | 500    |
| 47 Aroclor 1262 (3) | 10.742 | 10.742 | 0.000  |    | 132313903 | 500.000 | 500    |
| 48 Aroclor 1262 (4) | 12.118 | 12.118 | 0.000  |    | 44885518  | 500.000 | 500    |
| 49 Aroclor 1262 (5) | 12.337 | 12.337 | 0.000  |    | 109718420 | 500.000 | 500    |

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Data File: /chem1/SV0A/GC\_66.i/170222a.b/b17022208.d

Date : 22-FEB-2017 19:32

Client ID:

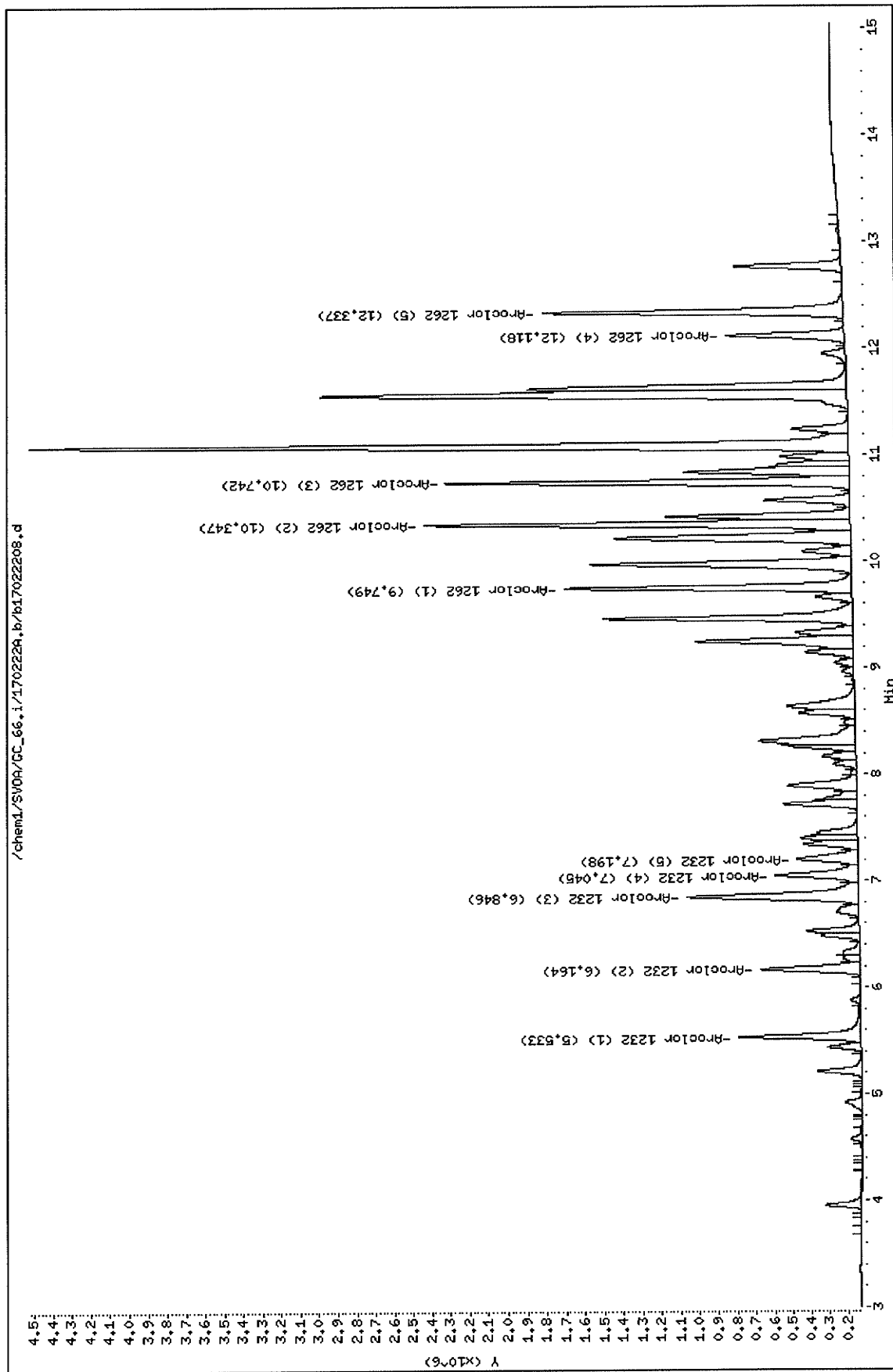
Sample Info: PCB 1232/62 500PPB P120616J

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022209.d  
 Report Date: 23-Feb-2017 09:43

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022209.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 19:50  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB 1248/68 500PPB P120616K  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.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 |
|                     |        |        |        |            | ( ppb)  | ( ppb) |
| Compounds           | RT     | EXP RT | DLT RT | RESPONSE   |         |        |
| =====               | ==     | =====  | =====  | =====      | =====   | =====  |
| M 32 Aroclor-1248   |        |        |        | 349356650  | 500.000 | 500    |
| 33 Aroclor 1248 (1) | 6.845  | 6.164  | 0.681  | 92597659   | 500.000 | 500    |
| 34 Aroclor 1248 (2) | 7.397  | 7.397  | 0.000  | 51572554   | 500.000 | 500    |
| 35 Aroclor 1248 (3) | 7.445  | 7.445  | 0.000  | 38405884   | 500.000 | 500    |
| 36 Aroclor 1248 (4) | 7.715  | 7.715  | 0.000  | 76011522   | 500.000 | 500    |
| 37 Aroclor 1248 (5) | 7.888  | 7.888  | 0.000  | 90769029   | 500.000 | 500    |
| M 50 Aroclor-1268   |        |        |        | 2132325871 | 500.000 | 500    |
| 51 Aroclor 1268 (1) | 11.554 | 11.554 | 0.000  | 353673525  | 500.000 | 500    |
| 52 Aroclor 1268 (2) | 11.615 | 11.615 | 0.000  | 354519915  | 500.000 | 500    |
| 53 Aroclor 1268 (3) | 11.948 | 11.948 | 0.000  | 290210573  | 500.000 | 500    |
| 54 Aroclor 1268 (4) | 12.334 | 12.334 | 0.000  | 127638418  | 500.000 | 500    |
| 55 Aroclor 1268 (5) | 12.764 | 12.764 | 0.000  | 1006283437 | 500.000 | 500    |

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Data File: /chem1/SV04/CC\_66.i/170222A.b/b17022209.d

Date : 22-FEB-2017 19:50

Client ID:

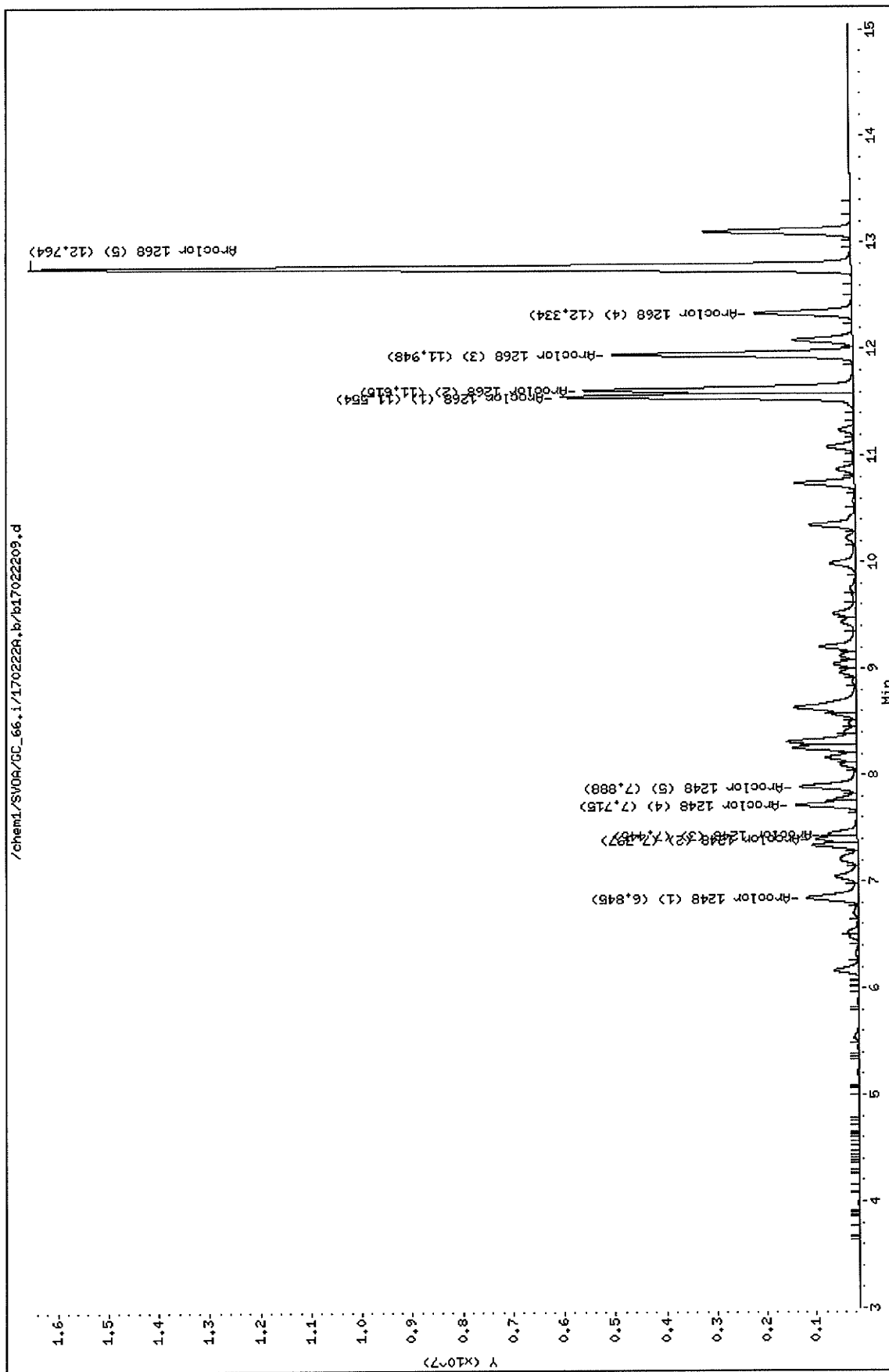
Sample Info: PCB 1248/68 500PPB P120616K

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:





Data File: /chem1/SVOA/GC\_66.i/170222A.b/b17022210.d  
 Report Date: 23-Feb-2017 09:43

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170222A.b/b17022210.d  
 Lab Smp Id:  
 Inj Date : 22-FEB-2017 20:07  
 Operator : 944 Inst ID: GC\_66.i  
 Smp Info : PCB 1242 500PPB P120616L  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170222A.b/b8082d-n2.m  
 Meth Date : 23-Feb-2017 09:41 uj3k Quant Type: ESTD  
 Cal Date : 27-JAN-2017 13:18 Cal File: b17012710.d  
 Als bottle: 10 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP Genie Compound Sublist: p1242-ical.sub  
 Target Version: 3.50  
 Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

| Compounds           |       |        |        |           | AMOUNTS           |                  |
|---------------------|-------|--------|--------|-----------|-------------------|------------------|
|                     | RT    | EXP RT | DLT RT | RESPONSE  | CAL-AMT<br>( ppb) | ON-COL<br>( ppb) |
| =====               | ==    | =====  | =====  | =====     | =====             | =====            |
| M 26 Aroclor-1242   |       |        |        | 360695998 | 500.000           | 500              |
| 27 Aroclor 1242 (1) | 5.534 | 5.534  | 0.000  | 35639904  | 500.000           | 500              |
| 28 Aroclor 1242 (2) | 6.164 | 6.164  | 0.000  | 64753688  | 500.000           | 500              |
| 29 Aroclor 1242 (3) | 6.844 | 6.844  | 0.000  | 143503184 | 500.000           | 500              |
| 30 Aroclor 1242 (4) | 7.044 | 7.044  | 0.000  | 65451422  | 500.000           | 500              |
| 31 Aroclor 1242 (5) | 7.195 | 7.195  | 0.000  | 51347800  | 500.000           | 500              |

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Data File: /chem1/SV0A/GC\_66.i/170222A.b/b17022210.d

Date : 22-FEB-2017 20:07

Client ID:

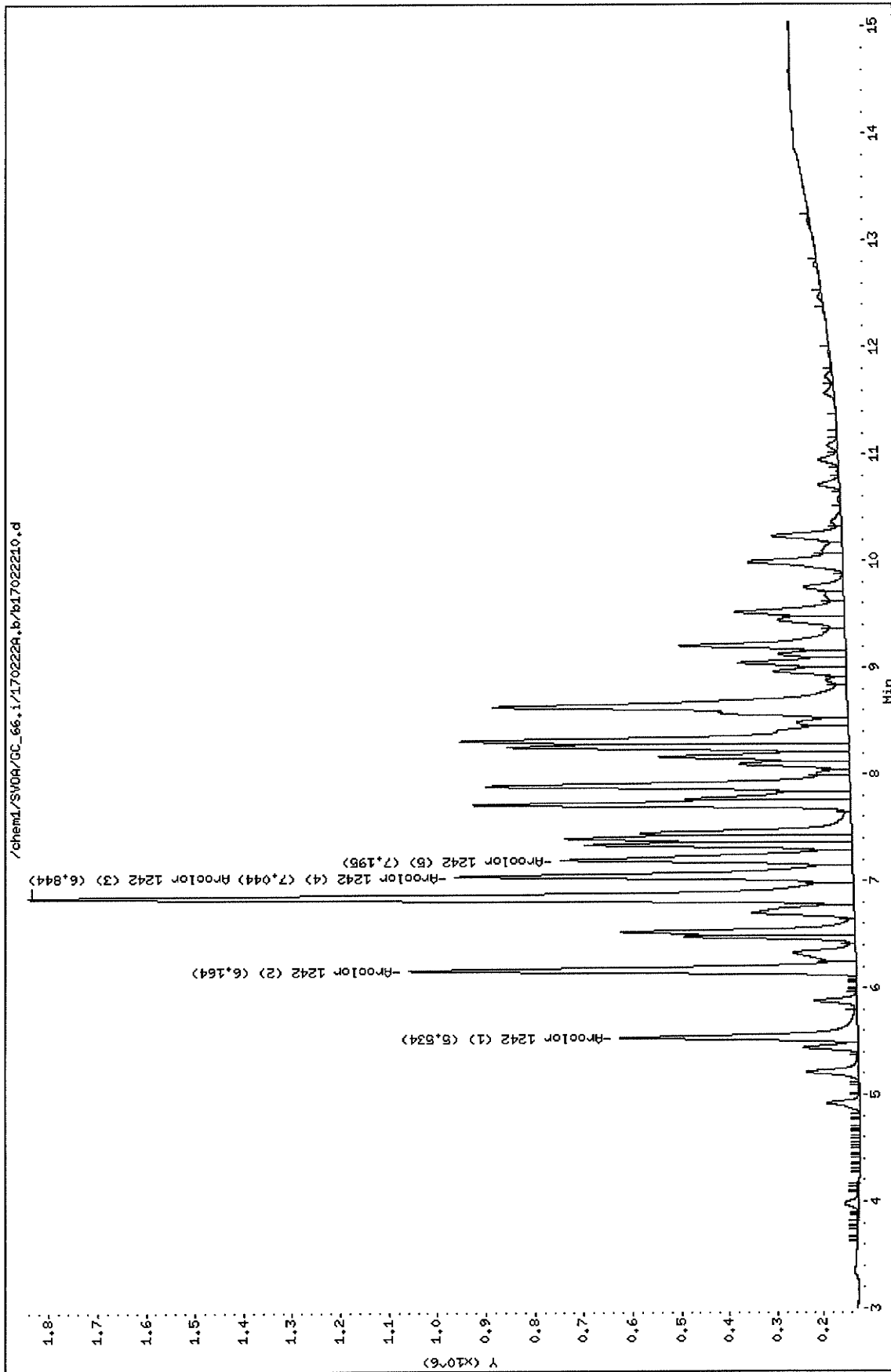
Sample Info: PCB 1242 500PPB P120616L

Instrument: GC\_66.i

Operator: 944

Column diameter: 2.00

Column phase:



# EPA METHOD 8082 PCB

## Sample Data

**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 66  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-13 00:00

**ANALYZED BY:** 669  
**D/T ANALYZED:** 2017-03-16 06:11  
**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-22 17:31

**DATA FILE:** /chem1/SVOA/GC\_66/170316/b1703161417031614

**# 28**      **CLIENT SAMPLE NUMBER: D-DU1-ISM1-8**

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170313L11 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.10 g  |
| <b>MS/MSD BATCH:</b> 170313S11 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 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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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031614.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031614.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 06:11  
 Operator : 669  
 Smp Info : 17-03-0590-28  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 14  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.d  
 Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |                        |        |        |           | CONCENTRATIONS |         |
|-----------------------------------|------------------------|--------|--------|-----------|----------------|---------|
|                                   |                        |        |        |           | ON-COLUMN      | FINAL   |
|                                   |                        |        |        |           | ( ppb)         | (ug/Kg) |
| Compounds                         | RT                     | EXP RT | DLT RT | RESPONSE  |                |         |
| =====                             | ==                     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.691                  | 4.692  | -0.001 | 413491970 | 72.0135        | 72.0    |
| 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. |        |        |           |                |         |

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031614.d  
 Report Date: 16-Mar-2017 09:39

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| Compounds                | RT     | EXP RT | DLT RT | RESPONSE               | CONCENTRATIONS      |                  |
|--------------------------|--------|--------|--------|------------------------|---------------------|------------------|
|                          |        |        |        |                        | 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. |                     |                  |
| \$ 56 Decachlorobiphenyl | 13.100 | 13.102 | -0.002 | 413766618              | 75.7866             | 75.8             |

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Data File: /chem1/SV00A/GC\_66.i/170316.b/b17031614.d

Date : 16-MAR-2017 06:11

Client ID:

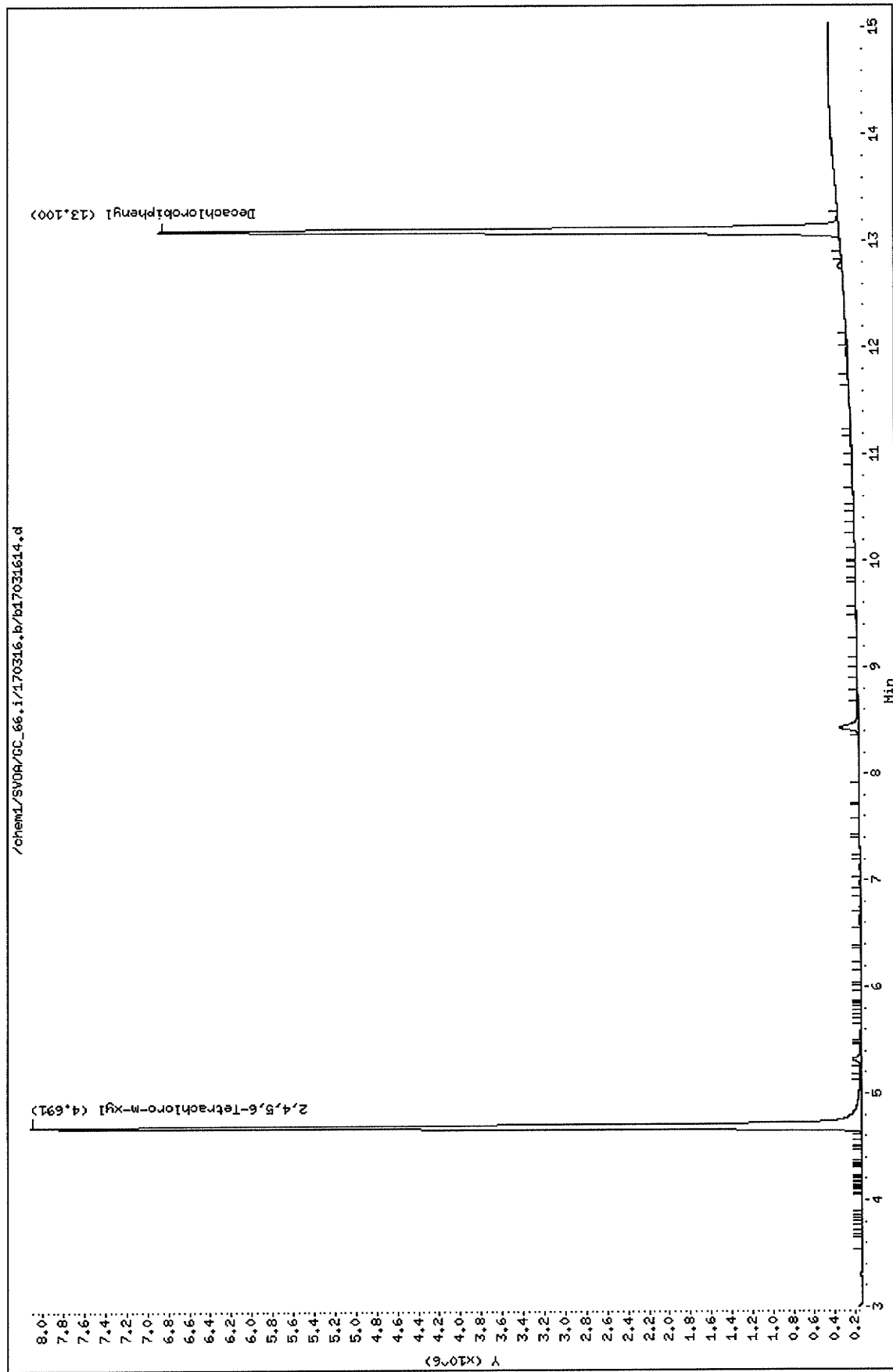
Sample Info: 17-03-0590-28

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 66  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-13 00:00

**ANALYZED BY:** 669  
**D/T ANALYZED:** 2017-03-16 06:29  
**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-22 17:31

**DATA FILE:** /chem1/SVOA/GC\_66/170316/b1703161517031615

**# 29**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM2-8

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170313L11 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.00 g  |
| <b>MS/MSD BATCH:</b> 170313S11 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 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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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031615.d  
 Report Date: 16-Mar-2017 09:40

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031615.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 06:29  
 Operator : 669  
 Smp Info : 17-03-0590-29  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 15  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.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) |
| =====                             | ==                     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.692                  | 4.692  | 0.000  | 408318266 | 71.1125        | 71.1    |
| 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. |        |        |           |                |         |

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031615.d  
 Report Date: 16-Mar-2017 09:40

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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. |          |                |         |
| \$ 56 Decachlorobiphenyl | 13.099 | 13.102 | -0.003 |     | 421005534              | 77.1125  | 77.1           |         |

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Data File: /chem1/SV0A/GC\_66.i/170316.b/17031615.d

Date : 16-MAR-2017 06:29

Client ID:

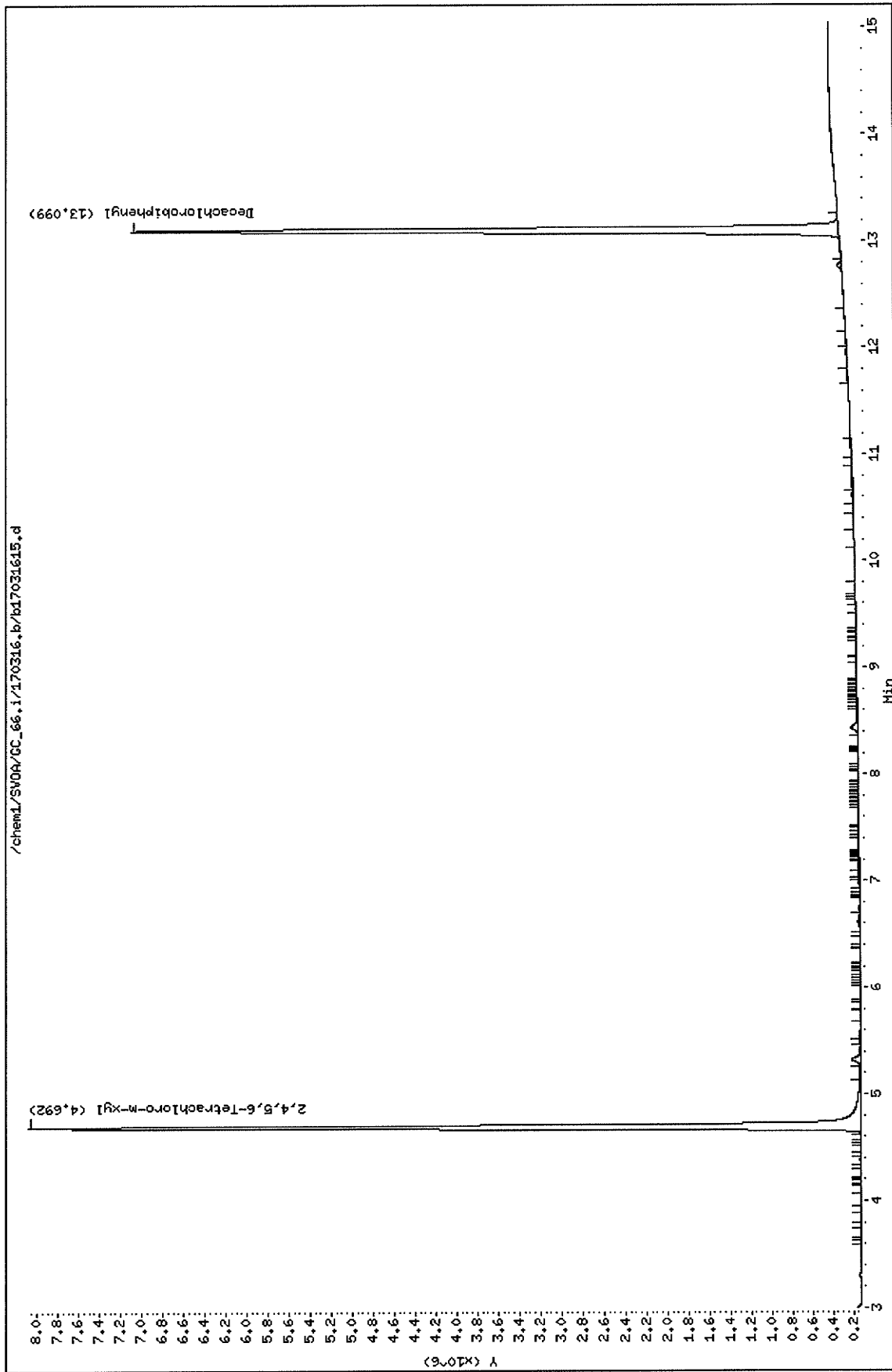
Sample Info: 17-03-0890-29

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC 66  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-13 00:00

**ANALYZED BY:** 669  
**D/T ANALYZED:** 2017-03-16 06:47  
**REVIEWED BY:** 421  
**D/T REVIEWED:** 2017-03-22 17:31

**DATA FILE:** /chem1/SVOA/GC\_66/170316/b1703161617031616

**# 30**      **CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

|                                |                                                                    |
|--------------------------------|--------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170313L11 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.20 g  |
| <b>MS/MSD BATCH:</b> 170313S11 | <b>FINAL VOLUME / WEIGHT:</b> DEFAULT: 10.00 ml / ACTUAL: 10.00 ml |
| <b>UNITS:</b> ug/kg            | <b>ADJUSTMENT RATIO TO PF:</b> 0.99                                |

**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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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031616.d  
 Report Date: 16-Mar-2017 09:40

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031616.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 06:47  
 Operator : 669  
 Smp Info : 17-03-0590-30  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 16  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.d  
 Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |       |        |        |                        | CONCENTRATIONS |         |
|-----------------------------------|-------|--------|--------|------------------------|----------------|---------|
|                                   |       |        |        |                        | ON-COLUMN      | FINAL   |
|                                   |       |        |        |                        | ( ppb)         | (ug/Kg) |
| Compounds                         | RT    | EXP RT | DLT RT | RESPONSE               |                |         |
| =====                             | ==    | =====  | =====  | =====                  | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.690 | 4.692  | -0.002 | 393553711              | 68.5411        | 68.5    |
| 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. |                |         |

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031616.d  
 Report Date: 16-Mar-2017 09:40

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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. |                |         |
| \$ 56 Decachlorobiphenyl | 13.099 | 13.102 | -0.003 |       | 410744128 |                        | 75.2330        | 75.2    |

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Data File: /chem1/SVDA/CC\_66.i/170316.b/17031616.d

Date : 16-MAR-2017 06:47

Client ID:

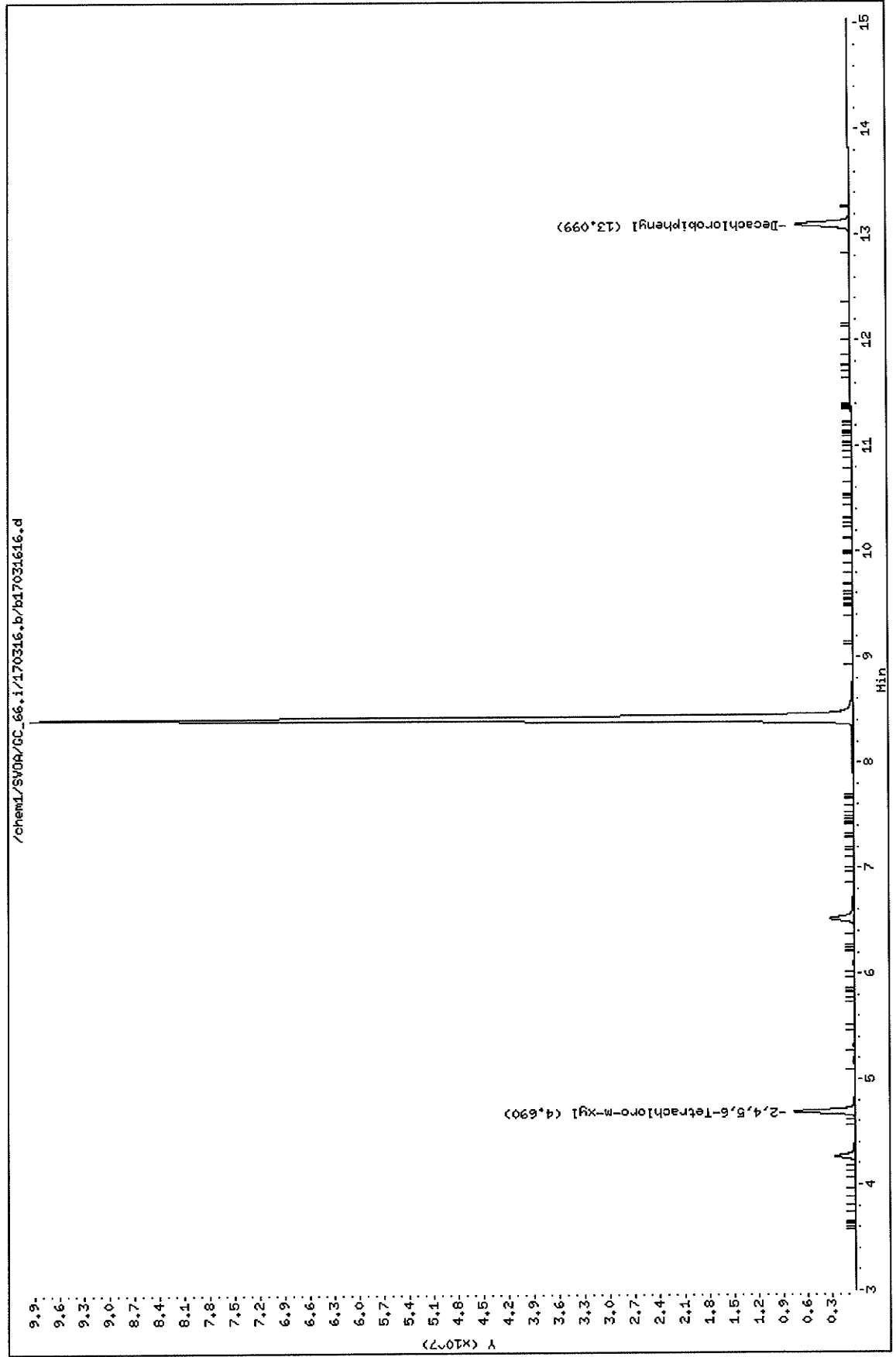
Sample Info: 17-03-0590-30

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



# EPA METHOD 8082 PCB

## Quality Control

### Method Blank LCS/LCSD MS/MSD



# METHOD BLANK ASSOCIATION SUMMARY

## FOR METHOD: EPA 8082

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**MB SAMPLE ID:** 099-12-535-4095  
**MB BATCH ID:** 170313L11  
**INSTRUMENT:** GC 66  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-13 00:00

**ANALYZED BY:** 669  
**D/T ANALYZED:** 2017-03-16 02:37  
**REVIEWED BY:**   
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** /chem1/SVOA/GC\_66/170316/b1703160217031602

### CLIENT WORK ORDER: 17-03-0590

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                           |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------|
| 28        | D-DU1-ISM1-8    |                         | 2017-03-16 06:11    | /chem1/SVOA/GC_66/170316/b1703161417031614 |
| 29        | D-DU1-ISM2-8    |                         | 2017-03-16 06:29    | /chem1/SVOA/GC_66/170316/b1703161517031615 |
| 30        | D-DU1-ISM3-8    |                         | 2017-03-16 06:47    | /chem1/SVOA/GC_66/170316/b1703161617031616 |

  
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**RAW DATA SHEET  
FOR METHOD: EPA 8082**

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**WORK ORDER:** 099-12-535  
**INSTRUMENT:** GC 66  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-13 00:00

**ANALYZED BY:** 669  
**D/T ANALYZED:** 2017-03-16 02:37  
**REVIEWED BY:**  
**D/T REVIEWED:** 

**DATA FILE:** /chem1/SVOA/GC\_66/170316/b1703160217031602

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

|                                |                                                                  |
|--------------------------------|------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170313L11 | <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: 099-12-535-4095  
LCS/MB BATCH ID: 170313L11  
INSTRUMENT: GC 66

EXTRACTION: EPA 3545  
D/T EXTRACTED: 2017-03-13 00:00

ANALYZED BY: 669  
D/T ANALYZED: 2017-03-16 02:55  
REVIEWED BY: *zy*  
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC\_66/170316/b1703160317031603

| <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> |
|----------------------|-------------------|-----------------|------------------|---------------------------|---------------|-------------------|
| Atroclor-1016        | 100.0             | 84.00           | 84               | 50-135                    | PASS          |                   |
| Atroclor-1260        | 100.0             | 85.00           | 85               | 50-135                    | PASS          |                   |

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET

FOR METHOD: EPA 8082

SPIKED SAMPLE ID: 17-03-0642-30  
MS/MSD BATCH: 170313S11  
INSTRUMENTS:  
SAMPLE: GC 66  
MS: GC 66  
MSD: GC 66

EXTRACTION: EPA 3545  
D/T EXTRACTED:  
SAMPLE: 2017-03-13 00:00  
MS: 2017-03-13 00:00  
MSD: 2017-03-13 00:00

ANALYZED BY: 669  
D/T ANALYZED:  
SAMPLE: 2017-03-16 03:48  
MS: 2017-03-16 03:13  
MSD: 2017-03-16 03:31  
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 | 83.00   | 83       | 82.50    | 82        | 50-135   | 1   | 0-20   | PASS   |            |
| Aroclor-1260  | ND     | 200.0   | 100.0 | 84.50   | 84       | 85.00    | 85        | 50-135   | 1   | 0-20   | PASS   |            |

Data Files:

| TYPE | DATA FILE | DATA FILE PATH                     |
|------|-----------|------------------------------------|
| MS   | 17031604  | /chem1/SVOA/GC_66/170316/b17031604 |
| MSD  | 17031605  | /chem1/SVOA/GC_66/170316/b17031605 |

# **SURROGATE RECOVERIES FOR METHOD: EPA 8082**

WORK ORDER: 17-03-0590

BATCH ID:

LCS/MB: 170313L11MS: 170313S11

EXTRACTION: EPA 3545

REVIEWED BY: *aa*D/T REVIEWED:# 28 CLIENT SAMPLE NUMBER : D-DU1-ISM1-8INSTRUMENT: GC 66D/T EXTRACTED: 2017-03-13 00:00DATA FILE: /chem1/SVOA/GC\_66/170316/b1703161417031614ANALYZED BY: 669D/T ANALYZED 2017-03-16 06:11COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 76           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 72           | 25-145          | PASS          |                   |

# 29 CLIENT SAMPLE NUMBER : D-DU1-ISM2-8INSTRUMENT: GC 66D/T EXTRACTED: 2017-03-13 00:00DATA FILE: /chem1/SVOA/GC\_66/170316/b1703161517031615ANALYZED BY: 669D/T ANALYZED 2017-03-16 06:29COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 77           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 71           | 25-145          | PASS          |                   |

# 30 CLIENT SAMPLE NUMBER : D-DU1-ISM3-8INSTRUMENT: GC 66D/T EXTRACTED: 2017-03-13 00:00DATA FILE: /chem1/SVOA/GC\_66/170316/b1703161617031616ANALYZED BY: 669D/T ANALYZED 2017-03-16 06:47COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 75           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 68           | 25-145          | PASS          |                   |

# MB CLIENT SAMPLE NUMBER : Method BlankINSTRUMENT: GC 66D/T EXTRACTED: 2017-03-13 00:00DATA FILE: /chem1/SVOA/GC\_66/170316/b1703160217031602ANALYZED BY: 669D/T ANALYZED 2017-03-16 02:37COMMENT:

| <u>COMPOUND</u>              | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------------------|--------------|-----------------|---------------|-------------------|
| Decachlorobiphenyl           | 75           | 24-168          | PASS          |                   |
| 2,4,5,6-Tetrachloro-m-Xylene | 69           | 25-145          | PASS          |                   |

# SURROGATE RECOVERIES FOR METHOD: EPA 8082

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WORK ORDER: 17-03-0590

BATCH ID:

**LCS/MB:** 170313L11**MS:**

EXTRACTION: EPA 3545

REVIEWED BY: 

D/T REVIEWED:

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

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-03-13 00:00

DATA FILE: /chem1/SVOA/GC\_66/170316/b1703160317031603

ANALYZED BY: 669

D/T ANALYZED 2017-03-16 02:55

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 76    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 68    | 25-145   | PASS   |            |

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

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-03-13 00:00

DATA FILE: /chem1/SVOA/GC\_66/170316/b1703160417031604

ANALYZED BY: 669

D/T ANALYZED 2017-03-16 03:13

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 75    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 68    | 25-145   | PASS   |            |

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

INSTRUMENT: GC 66

D/T EXTRACTED: 2017-03-13 00:00

DATA FILE: /chem1/SVOA/GC\_66/170316/b1703160517031605

ANALYZED BY: 669

D/T ANALYZED 2017-03-16 03:31

COMMENT:

| COMPOUND                     | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------------------|-------|----------|--------|------------|
| Decachlorobiphenyl           | 76    | 24-168   | PASS   |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 67    | 25-145   | PASS   |            |

  
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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031602.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031602.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 02:37  
 Operator : 669  
 Smp Info : MB 170313L11  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.d  
 Compound Sublist: all.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |                        |        |        |           | CONCENTRATIONS |         |
|-----------------------------------|------------------------|--------|--------|-----------|----------------|---------|
|                                   |                        |        |        |           | ON-COLUMN      | FINAL   |
|                                   |                        |        |        |           | ( ppb)         | (ug/Kg) |
| Compounds                         | RT                     | EXP RT | DLT RT | RESPONSE  |                |         |
| =====                             | ==                     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.692                  | 4.692  | 0.000  | 394803974 | 68.7588        | 68.8    |
| 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. |        |        |           |                |         |

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031602.d  
 Report Date: 16-Mar-2017 09:39

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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. |          |                |         |
| \$ 56 Decachlorobiphenyl | 13.101 | 13.102 | -0.001 | 409460756 |                        | 74.9979  | 75.0           |         |



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Data File: /chem1/SV04/GC\_66.i/170316.b/b17031602.d

Date : 16-MAR-2017 02:37

Client ID:

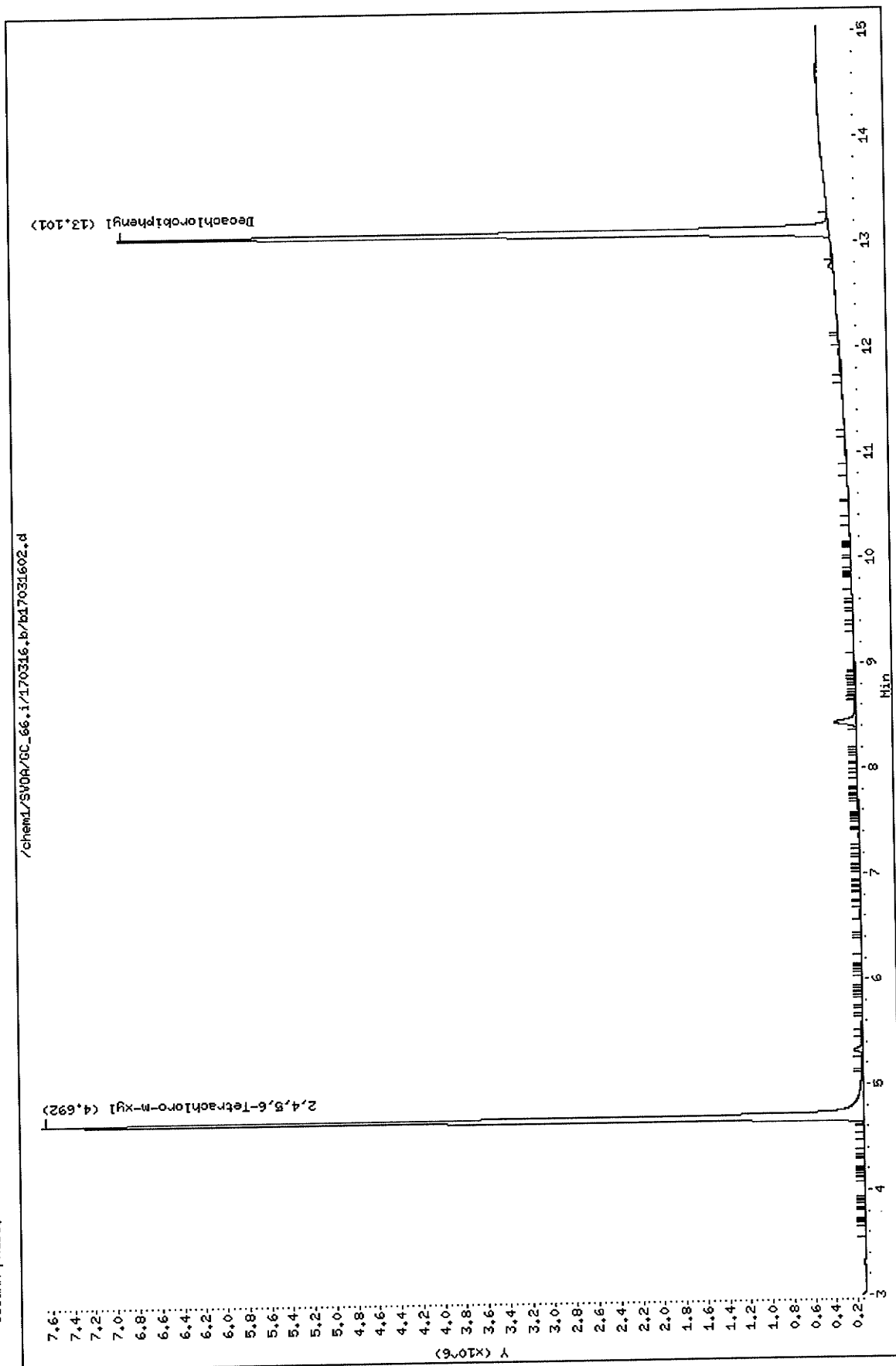
Sample Info: MB 170313L11

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031603.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031603.d

Lab Smp Id:

Inj Date : 16-MAR-2017 02:55

Operator : 669

Inst ID: GC\_66.i

Smp Info : LCS 170313L11

Misc Info :

Comment : Rtx-CLPesticide II

Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m

Meth Date : 16-Mar-2017 09:39 uhhn

Quant Type: ESTD

Cal Date : 22-FEB-2017 20:07

Cal File: b17022210.d

Als bottle: 3

Dil Factor: 1.00000

Compound Sublist: p1016\_1260.sub

Integrator: HP Genie

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |        |        |        |           | CONCENTRATIONS |         |
|-----------------------------------|--------|--------|--------|-----------|----------------|---------|
|                                   |        |        |        |           | ON-COLUMN      | FINAL   |
|                                   |        |        |        |           | ( ppb)         | (ug/Kg) |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE  |                |         |
| =====                             | ==     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.693  | 4.692  | 0.001  | 392010377 | 68.2723        | 68.3    |
| M 2 Aroclor-1016                  |        |        |        | 149699541 | 167.580        | 168     |
| 3 Aroclor 1016 (1)                | 5.540  | 5.535  | 0.005  | 16209045  | 180.029        | 180     |
| 4 Aroclor 1016 (2)                | 6.165  | 6.164  | 0.001  | 27261897  | 170.958        | 171     |
| 5 Aroclor 1016 (3)                | 6.852  | 6.846  | 0.006  | 56331026  | 158.713        | 159     |
| 6 Aroclor 1016 (4)                | 7.049  | 7.046  | 0.003  | 28344591  | 174.861        | 175     |
| 7 Aroclor 1016 (5)                | 7.203  | 7.197  | 0.006  | 21552982  | 170.001        | 170     |
| M 8 Aroclor-1260                  |        |        |        | 161569753 | 170.472        | 170     |
| 9 Aroclor 1260 (1)                | 9.748  | 9.748  | 0.000  | 47960963  | 177.446        | 177     |
| 10 Aroclor 1260 (2)               | 10.347 | 10.347 | 0.000  | 38254424  | 178.795        | 179     |
| 11 Aroclor 1260 (3)               | 10.740 | 10.741 | -0.001 | 37955501  | 162.854        | 163     |
| 12 Aroclor 1260 (4)               | 12.115 | 12.116 | -0.001 | 11135467  | 133.965        | 134     |
| 13 Aroclor 1260 (5)               | 12.334 | 12.335 | -0.001 | 26263398  | 178.235        | 178     |
| \$ 56 Decachlorobiphenyl          | 13.100 | 13.102 | -0.002 | 413893821 | 75.8099        | 75.8    |

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Data File: /chem1/SV0A/GC\_66.i/170316.b/b17031603.d

Date : 16-HAR-2017 02:55

Client ID:

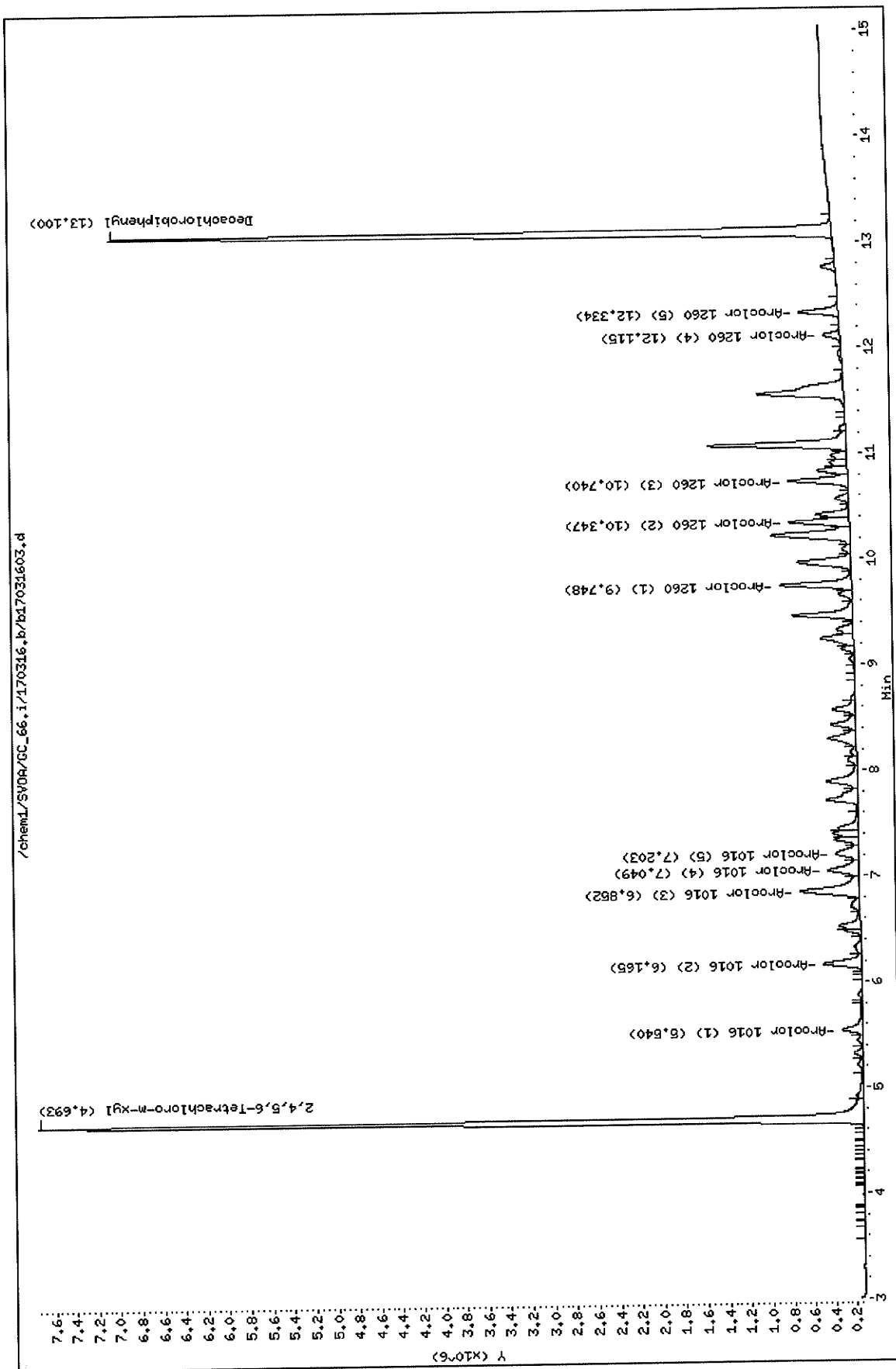
Sample Info: LCS 170313L11

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031604.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031604.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 03:13  
 Operator : 669  
 Smp Info : MS 17-03-0642-30 170313S11  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i

Quant Type: ESTD

Cal File: b17022210.d

Compound Sublist: p1016\_1260.sub

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |        |        |        |           | CONCENTRATIONS |         |
|-----------------------------------|--------|--------|--------|-----------|----------------|---------|
|                                   |        |        |        |           | ON-COLUMN      | FINAL   |
|                                   |        |        |        |           | ( ppb)         | (ug/Kg) |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE  |                |         |
| =====                             | ==     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.692  | 4.692  | 0.000  | 391758120 | 68.2284        | 68.2    |
| M 2 Aroclor-1016                  |        |        |        | 147932078 | 165.601        | 166     |
| 3 Aroclor 1016 (1)                | 5.538  | 5.535  | 0.003  | 16166680  | 179.559        | 180     |
| 4 Aroclor 1016 (2)                | 6.166  | 6.164  | 0.002  | 26761260  | 167.819        | 168     |
| 5 Aroclor 1016 (3)                | 6.850  | 6.846  | 0.004  | 55807556  | 157.238        | 157     |
| 6 Aroclor 1016 (4)                | 7.048  | 7.046  | 0.002  | 28023615  | 172.880        | 173     |
| 7 Aroclor 1016 (5)                | 7.200  | 7.197  | 0.003  | 21172967  | 167.004        | 167     |
| M 8 Aroclor-1260                  |        |        |        | 160522866 | 169.367        | 169     |
| 9 Aroclor 1260 (1)                | 9.749  | 9.748  | 0.001  | 47494181  | 175.719        | 176     |
| 10 Aroclor 1260 (2)               | 10.346 | 10.347 | -0.001 | 37930713  | 177.282        | 177     |
| 11 Aroclor 1260 (3)               | 10.741 | 10.741 | 0.000  | 37740248  | 161.930        | 162     |
| 12 Aroclor 1260 (4)               | 12.116 | 12.116 | 0.000  | 11218175  | 134.960        | 135     |
| 13 Aroclor 1260 (5)               | 12.334 | 12.335 | -0.001 | 26139549  | 177.394        | 177     |
| \$ 56 Decachlorobiphenyl          | 13.101 | 13.102 | -0.001 | 407340932 | 74.6097        | 74.6    |

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Data File: /chem1/SV08/GC\_66.i/170316.b/b17031604.d

Date : 16-MAR-2017 03:13

Client ID:

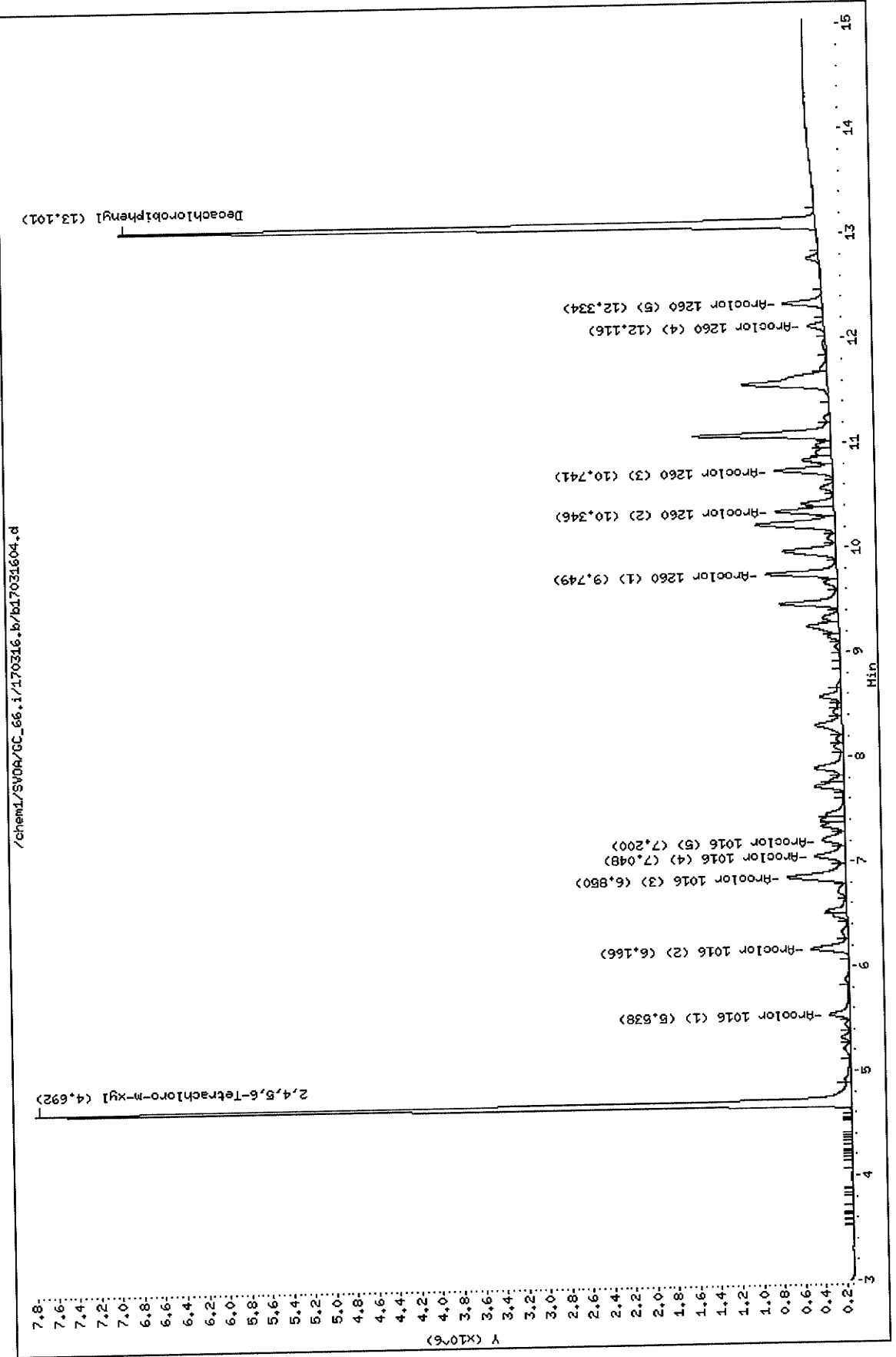
Sample Info: MS 17-03-0642-30 170313S11

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:

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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031605.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031605.d

Lab Smp Id:

Inj Date : 16-MAR-2017 03:31

Operator : 669

Inst ID: GC\_66.i

Smp Info : MSD 17-03-0642-30 170313S11

Misc Info :

Comment : Rtx-CLPesticide II

Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m

Meth Date : 16-Mar-2017 09:39 uhhn

Quant Type: ESTD

Cal Date : 22-FEB-2017 20:07

Cal File: b17022210.d

Als bottle: 5

Dil Factor: 1.00000

Compound Sublist: p1016\_1260.sub

Integrator: HP Genie

Target Version: 3.50

Processing Host: US26TAR4

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable

Local Compound Variable

|                                   |        |        |        |           | CONCENTRATIONS |         |
|-----------------------------------|--------|--------|--------|-----------|----------------|---------|
|                                   |        |        |        |           | ON-COLUMN      | FINAL   |
| Compounds                         | RT     | EXP RT | DLT RT | RESPONSE  | ( ppb)         | (ug/Kg) |
| =====                             | ==     | =====  | =====  | =====     | =====          | =====   |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.691  | 4.692  | -0.001 | 386391515 | 67.2937        | 67.3    |
| M 2 Aroclor-1016                  |        |        |        | 147703155 | 165.345        | 165     |
| 3 Aroclor 1016 (1)                | 5.537  | 5.535  | 0.002  | 16101587  | 178.836        | 179     |
| 4 Aroclor 1016 (2)                | 6.165  | 6.164  | 0.001  | 26507276  | 166.226        | 166     |
| 5 Aroclor 1016 (3)                | 6.851  | 6.846  | 0.005  | 56093492  | 158.044        | 158     |
| 6 Aroclor 1016 (4)                | 7.048  | 7.046  | 0.002  | 27978865  | 172.604        | 173     |
| 7 Aroclor 1016 (5)                | 7.201  | 7.197  | 0.004  | 21021935  | 165.813        | 166     |
| M 8 Aroclor-1260                  |        |        |        | 160678733 | 169.531        | 170     |
| 9 Aroclor 1260 (1)                | 9.747  | 9.748  | -0.001 | 47637382  | 176.249        | 176     |
| 10 Aroclor 1260 (2)               | 10.346 | 10.347 | -0.001 | 37698861  | 176.199        | 176     |
| 11 Aroclor 1260 (3)               | 10.738 | 10.741 | -0.003 | 38124388  | 163.578        | 164     |
| 12 Aroclor 1260 (4)               | 12.114 | 12.116 | -0.002 | 11254981  | 135.403        | 135     |
| 13 Aroclor 1260 (5)               | 12.333 | 12.335 | -0.002 | 25963121  | 176.197        | 176     |
| \$ 56 Decachlorobiphenyl          | 13.099 | 13.102 | -0.003 | 412287604 | 75.5157        | 75.5    |

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Data File: /chem1/SVDA/GC\_66.i/170316.b/b17031605.d

Date : 16-MAR-2017 03:31

**Client ID:**

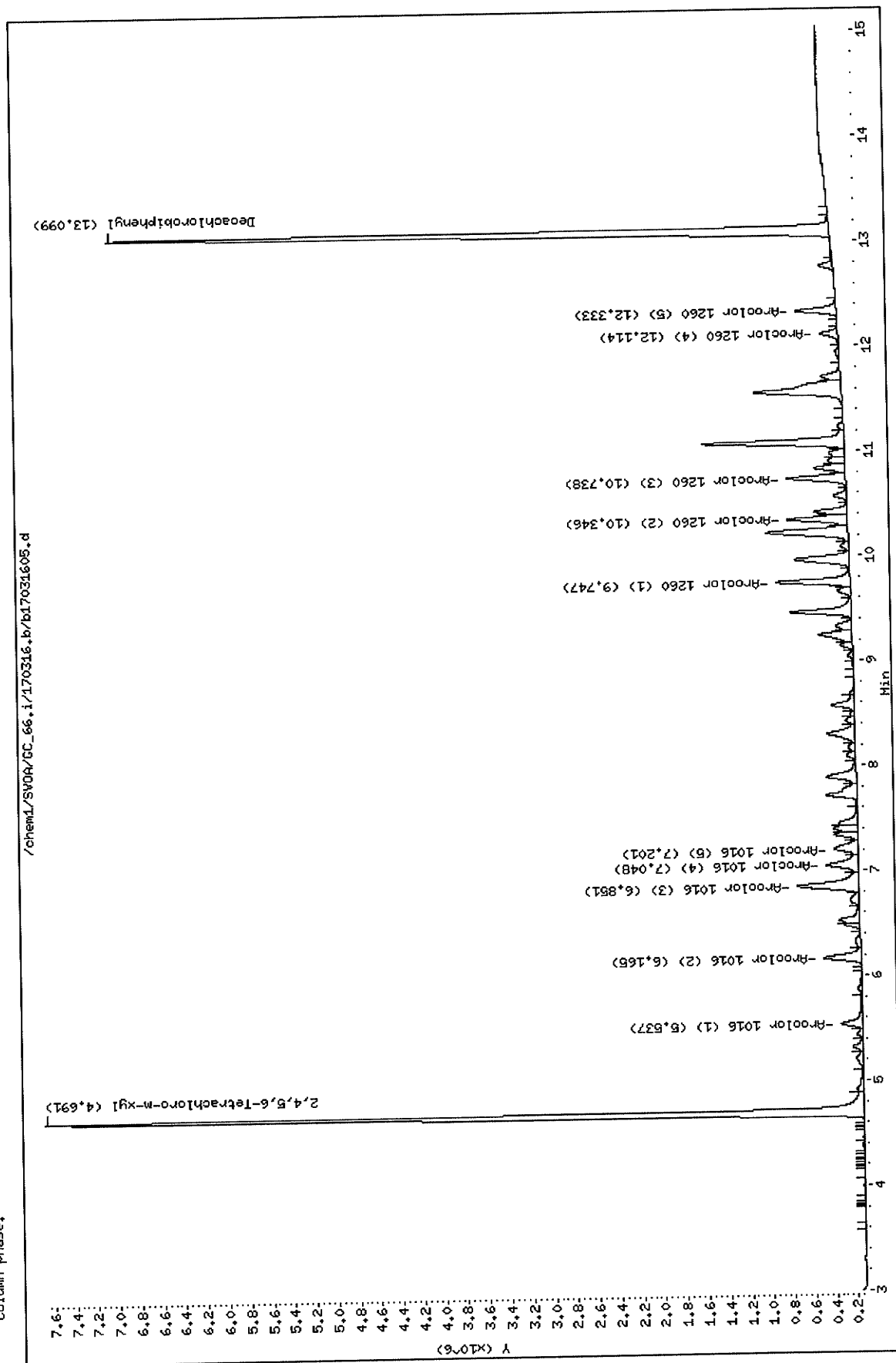
Sample Info: MSD 17-03-0642-30 170313S11

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031606.d  
 Report Date: 16-Mar-2017 09:39

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031606.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 03:48  
 Operator : 669  
 Smp Info : 17-03-0642-30  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.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) |
| =====     |                              | ==                     | =====  | =====  | =====     | =====     | =====   |
| \$ 1      | 2,4,5,6-Tetrachloro-m-xylene | 4.691                  | 4.692  | -0.001 | 396892431 | 69.1226   | 69.1    |
| 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. |        |        |           |           |         |



Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031606.d  
 Report Date: 16-Mar-2017 09:39

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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. |          |                |         |
| \$ 56 Decachlorobiphenyl | 13.099 | 13.102 | -0.003 |     | 414797331              | 75.9754  | 76.0           |         |

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Data File: /chem1/SV00/CC\_66.i/170316.b/b17031606.d

Date : 16-MAR-2017 03:48

Client ID:

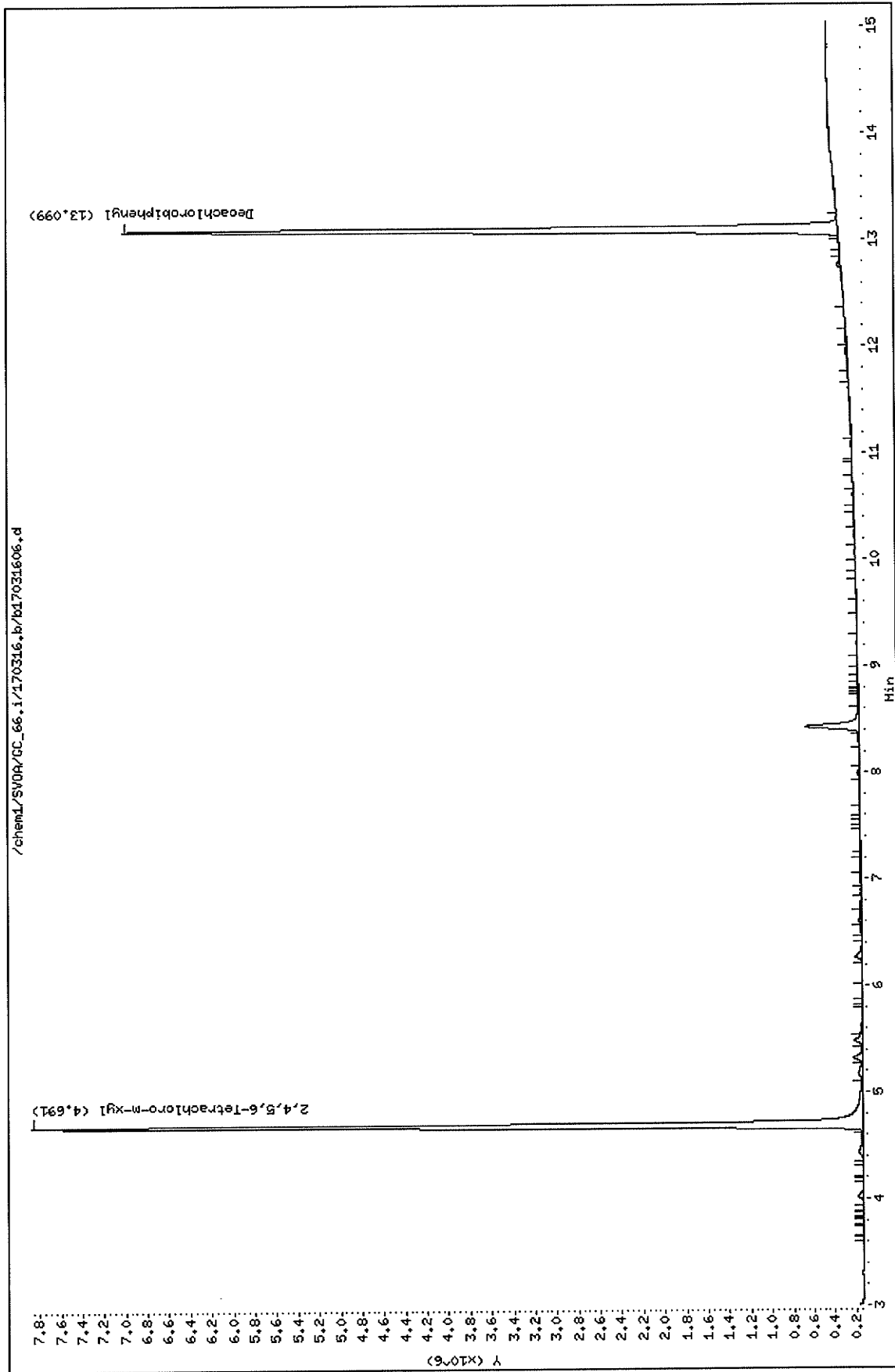
Sample Info: 17-03-0642-30

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:



# EPA METHOD 8082 PCB

## Continuing Calibration

# CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8082

**BATCH ID:** 170316A020  
**INSTRUMENT:** GC 66

**ANALYZED BY:** 669

**WORK ORDER:** 099-12-532  
**MATRIX:** Water

**REVIEWED BY:**   
**D/T REVIEWED:**

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                           |
|-------------------------|-------------------------|---------------------|--------------------------------------------|
| 9440                    | Daily Calibration       | 2017-03-16 02:19    | /chem1/SVOA/GC_66/170316/b1703160117031601 |
| 9441                    | Daily Calibration       |                     |                                            |

**WORK ORDER:** 17-03-0590  
**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>                           |
|-------------------------|-------------------------|---------------------|--------------------------------------------|
| 28                      | D-DU1-ISM1-8            | 2017-03-16 06:11    | /chem1/SVOA/GC_66/170316/b1703161417031614 |
| 29                      | D-DU1-ISM2-8            | 2017-03-16 06:29    | /chem1/SVOA/GC_66/170316/b1703161517031615 |
| 30                      | D-DU1-ISM3-8            | 2017-03-16 06:47    | /chem1/SVOA/GC_66/170316/b1703161617031616 |

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9440-5154

BATCH ID:

170222I003

170316A020

GC 66

INITIAL:

CCV:

INSTRUMENT:

DATA FILE: /chem1/SVOA/GC\_66/170316/b/1703160117031601

ANALYZED BY: 669

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2017-02-22 17:27

2017-03-16 02:19

✓

| 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   | 893304.438 | 838691.902 |        |          | 6      | 0-15      | PASS   |
| Aroclor-1260  | C    | Avg Resp    | 0.00   | 947781.003 | 921272.452 |        |          | 3      | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031601.d  
 Report Date: 03/16/2017 10:06

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_66.i                      Injection Date and Time: 16-MAR-2017 02:19  
 Sample Name: PCB CCV P021517I 500PPB      Initial Calibration Date(s): 22-FEB-2017    22-FEB-2017  
 Sublist used: p1016\_1260.sub              Initial Calibration Time(s):      17:27      20:07  
 Method used: /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF     | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |          |
|------------------------------|--------------------|-------------|----------|-------------|---------------|------------|----------|
| Aroclor 1260 (1)             | 270284.532         | 261311.072  | 0.01     | 3           | 15            | Averaged   |          |
| Aroclor 1260 (2)             | 213956.488         | 217726.262  | 0.01     | -2          | 15            | Averaged   |          |
| Aroclor 1260 (3)             | 233064.808         | 217223.318  | 0.01     | 7           | 15            | Averaged   |          |
| Aroclor 1260 (4)             | 83122.167          | 66454.886   | 0.01     | 20          | 15            | Averaged   | <-Failed |
| Aroclor-1260                 | 947781.003         | 921272.452  | 0.01     | 3           | 15            | Averaged   |          |
| Aroclor-1016                 | 893304.438         | 838691.902  | 0.01     | 6           | 15            | Averaged   |          |
| Aroclor 1016 (1)             | 90035.625          | 85510.550   | 0.01     | 5           | 15            | Averaged   |          |
| Aroclor 1016 (2)             | 159465.395         | 150722.344  | 0.01     | 5           | 15            | Averaged   |          |
| Aroclor 1016 (3)             | 354923.864         | 331584.622  | 0.01     | 7           | 15            | Averaged   |          |
| Aroclor 1016 (4)             | 162098.269         | 151984.626  | 0.01     | 6           | 15            | Averaged   |          |
| Aroclor 1016 (5)             | 126781.283         | 118889.760  | 0.01     | 6           | 15            | Averaged   |          |
| Aroclor 1260 (5)             | 147353.008         | 158556.914  | 0.01     | -8          | 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 | 5741865.174        | 5523862.840 | 0.01     | 4           | 15            | Averaged   |          |
| Decachlorobiphenyl           | 5459627.036        | 5410297.090 | 0.01     | 1           | 15            | Averaged   |          |

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Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031601.d  
 Report Date: 16-Mar-2017 09:39

Page 1

## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031601.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 02:19  
 Operator : 669  
 Smp Info : PCB CCV P021517I 500PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:39 uhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.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  |         |        |
| =====                             | ==     | =====  | =====  | =====     | =====   | =====  |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.692  | 4.692  | 0.000  | 552386284 | 100.000 | 96.2   |
| M 2 Aroclor-1016                  |        |        |        | 419345951 | 500.000 | 469    |
| 3 Aroclor 1016 (1)                | 5.535  | 5.535  | 0.000  | 42755275  | 500.000 | 475    |
| 4 Aroclor 1016 (2)                | 6.164  | 6.164  | 0.000  | 75361172  | 500.000 | 472    |
| 5 Aroclor 1016 (3)                | 6.846  | 6.846  | 0.000  | 165792311 | 500.000 | 467    |
| 6 Aroclor 1016 (4)                | 7.046  | 7.046  | 0.000  | 75992313  | 500.000 | 469    |
| 7 Aroclor 1016 (5)                | 7.197  | 7.197  | 0.000  | 59444880  | 500.000 | 469    |
| M 8 Aroclor-1260                  |        |        |        | 460636226 | 500.000 | 486    |
| 9 Aroclor 1260 (1)                | 9.748  | 9.748  | 0.000  | 130655536 | 500.000 | 483    |
| 10 Aroclor 1260 (2)               | 10.347 | 10.347 | 0.000  | 108863131 | 500.000 | 509    |
| 11 Aroclor 1260 (3)               | 10.741 | 10.741 | 0.000  | 108611659 | 500.000 | 466    |
| 12 Aroclor 1260 (4)               | 12.116 | 12.116 | 0.000  | 33227443  | 500.000 | 400    |
| 13 Aroclor 1260 (5)               | 12.335 | 12.335 | 0.000  | 79278457  | 500.000 | 538    |
| \$ 56 Decachlorobiphenyl          | 13.102 | 13.102 | 0.000  | 541029709 | 100.000 | 99.1   |

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Data File: /chem1/SV0A/GC\_66.i/170316.b/b17031601.d

Date : 16-MAR-2017 02:19

Client ID:

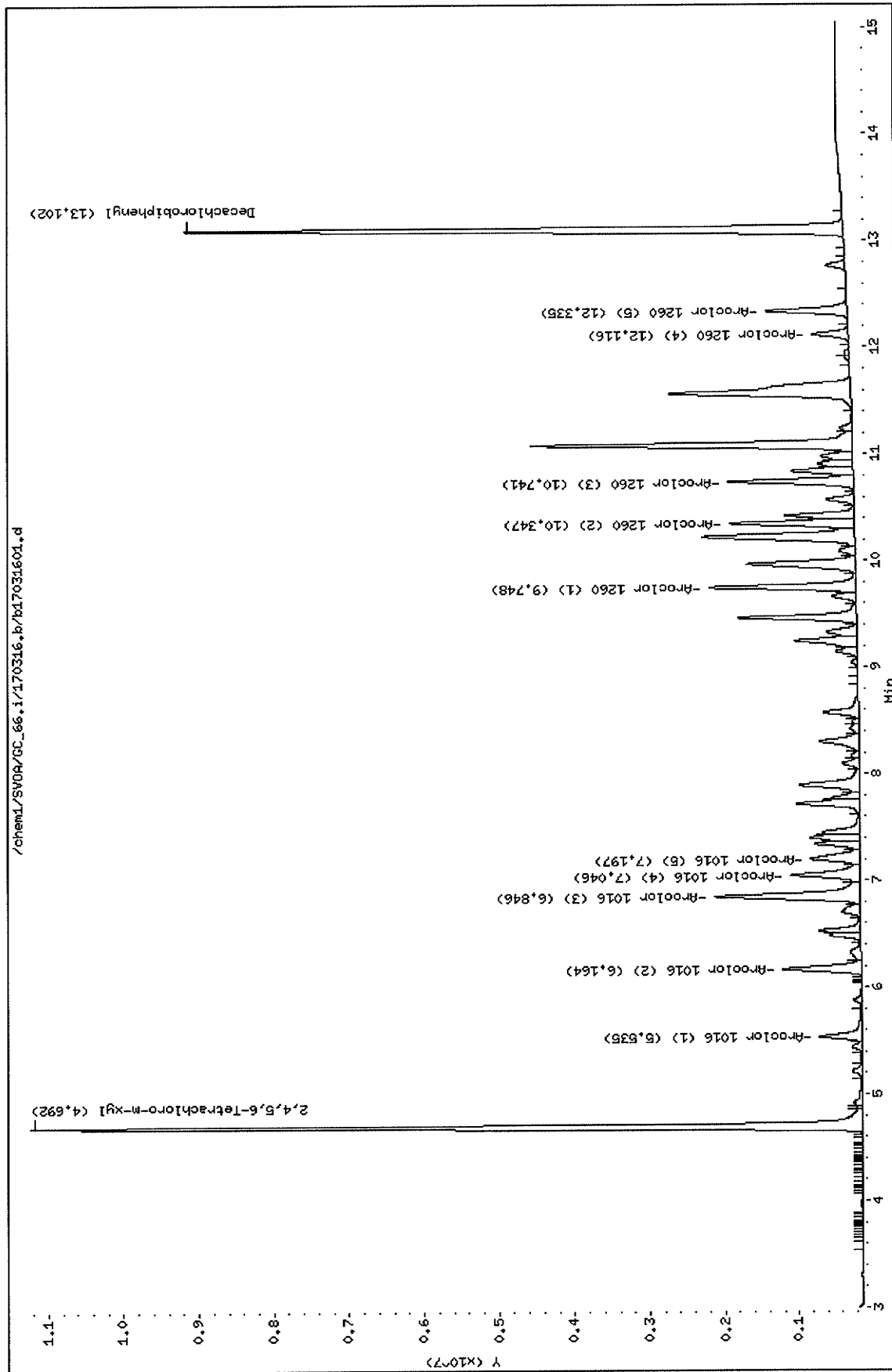
Sample Info: PCB CCV P0215171 500PPB

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:





CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET  
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9442-5154

BATCH ID:

INITIAL: 170222I003

CCV: 170316A021

INSTRUMENT: GC 66

DATA FILE: /chem1/SVOA/GC\_66/170316/b17031622/17031622

ANALYZED BY: 669

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

2017-02-22 17:27

2017-03-16 08:34

✓

| 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   | 893304.438 | 845781.252 |        |          | 5      | 0-15      | PASS   |
| Aroclor-1260  | C    | Avg Resp    | 0.00   | 947781.003 | 892972.092 |        |          | 6      | 0-15      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031622.d  
 Report Date: 03/16/2017 10:06

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GC\_66.i Injection Date and Time: 16-MAR-2017 08:34  
 Sample Name: PCB CCV P021517I 500PPB Initial Calibration Date(s): 22-FEB-2017 22-FEB-2017  
 Sublist used: p1016\_1260.sub Initial Calibration Time(s): 17:27 20:07  
 Method used: /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m

| Target Compounds             | ICAL RRF or Amount | ICV RRF     | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
|------------------------------|--------------------|-------------|----------|-------------|---------------|------------|
| Aroclor 1260 (1)             | 270284.532         | 255217.226  | 0.01     | 6           | 15            | Averaged   |
| Aroclor 1260 (2)             | 213956.488         | 211749.022  | 0.01     | 1           | 15            | Averaged   |
| Aroclor 1260 (3)             | 233064.808         | 211936.784  | 0.01     | 9           | 15            | Averaged   |
| Aroclor 1260 (4)             | 83122.167          | 64326.602   | 0.01     | 23          | 15            | Averaged   |
| Aroclor-1260                 | 947781.003         | 892972.092  | 0.01     | 6           | 15            | Averaged   |
| Aroclor-1016                 | 893304.438         | 845781.252  | 0.01     | 5           | 15            | Averaged   |
| Aroclor 1016 (1)             | 90035.625          | 86228.788   | 0.01     | 4           | 15            | Averaged   |
| Aroclor 1016 (2)             | 159465.395         | 151793.146  | 0.01     | 5           | 15            | Averaged   |
| Aroclor 1016 (3)             | 354923.864         | 337878.302  | 0.01     | 5           | 15            | Averaged   |
| Aroclor 1016 (4)             | 162098.269         | 151802.942  | 0.01     | 6           | 15            | Averaged   |
| Aroclor 1016 (5)             | 126781.283         | 118078.074  | 0.01     | 7           | 15            | Averaged   |
| Aroclor 1260 (5)             | 147353.008         | 149742.458  | 0.01     | -2          | 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 | 5741865.174        | 5689242.590 | 0.01     | 1           | 15            | Averaged   |
| Decachlorobiphenyl           | 5459627.036        | 5450682.520 | 0.01     | 0           | 15            | Averaged   |

<-Failed

page 1

Data File: /chem1/SVOA/GC\_66.i/170316.b/b17031622.d  
 Report Date: 16-Mar-2017 09:40

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## Eurofins Calscience

## EPA 8082/A PCB analysis

Data file : /chem1/SVOA/GC\_66.i/170316.b/b17031622.d  
 Lab Smp Id:  
 Inj Date : 16-MAR-2017 08:34  
 Operator : 669  
 Smp Info : PCB CCV P021517I 500PPB  
 Misc Info :  
 Comment : Rtx-CLPesticide II  
 Method : /chem1/SVOA/GC\_66.i/170316.b/b8082d-n2.m  
 Meth Date : 16-Mar-2017 09:40 uhn  
 Cal Date : 22-FEB-2017 20:07  
 Als bottle: 22  
 Dil Factor: 1.00000  
 Integrator: HP Genie  
 Target Version: 3.50  
 Processing Host: US26TAR4

Inst ID: GC\_66.i  
 Quant Type: ESTD  
 Cal File: b17022210.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  |  |         |        |
| =====                             | ==     | =====  | =====  | =====     |  | =====   | =====  |
| \$ 1 2,4,5,6-Tetrachloro-m-xylene | 4.691  | 4.691  | 0.000  | 568924259 |  | 100.000 | 99.1   |
| M 2 Aroclor-1016                  |        |        |        | 422890626 |  | 500.000 | 473    |
| 3 Aroclor 1016 (1)                | 5.532  | 5.532  | 0.000  | 43114394  |  | 500.000 | 479    |
| 4 Aroclor 1016 (2)                | 6.163  | 6.163  | 0.000  | 75896573  |  | 500.000 | 476    |
| 5 Aroclor 1016 (3)                | 6.843  | 6.843  | 0.000  | 168939151 |  | 500.000 | 476    |
| 6 Aroclor 1016 (4)                | 7.042  | 7.042  | 0.000  | 75901471  |  | 500.000 | 468    |
| 7 Aroclor 1016 (5)                | 7.193  | 7.193  | 0.000  | 59039037  |  | 500.000 | 466    |
| M 8 Aroclor-1260                  |        |        |        | 446486046 |  | 500.000 | 471    |
| 9 Aroclor 1260 (1)                | 9.745  | 9.745  | 0.000  | 127608613 |  | 500.000 | 472    |
| 10 Aroclor 1260 (2)               | 10.344 | 10.344 | 0.000  | 105874511 |  | 500.000 | 495    |
| 11 Aroclor 1260 (3)               | 10.738 | 10.738 | 0.000  | 105968392 |  | 500.000 | 455    |
| 12 Aroclor 1260 (4)               | 12.112 | 12.112 | 0.000  | 32163301  |  | 500.000 | 387    |
| 13 Aroclor 1260 (5)               | 12.332 | 12.332 | 0.000  | 74871229  |  | 500.000 | 508    |
| \$ 56 Decachlorobiphenyl          | 13.099 | 13.099 | 0.000  | 545068252 |  | 100.000 | 99.8   |

Page 1

Data File: /chem1/SV00A/GC\_66.i/170316.b/b17031622.d

Date : 16-MAR-2017 08:34

Client ID:

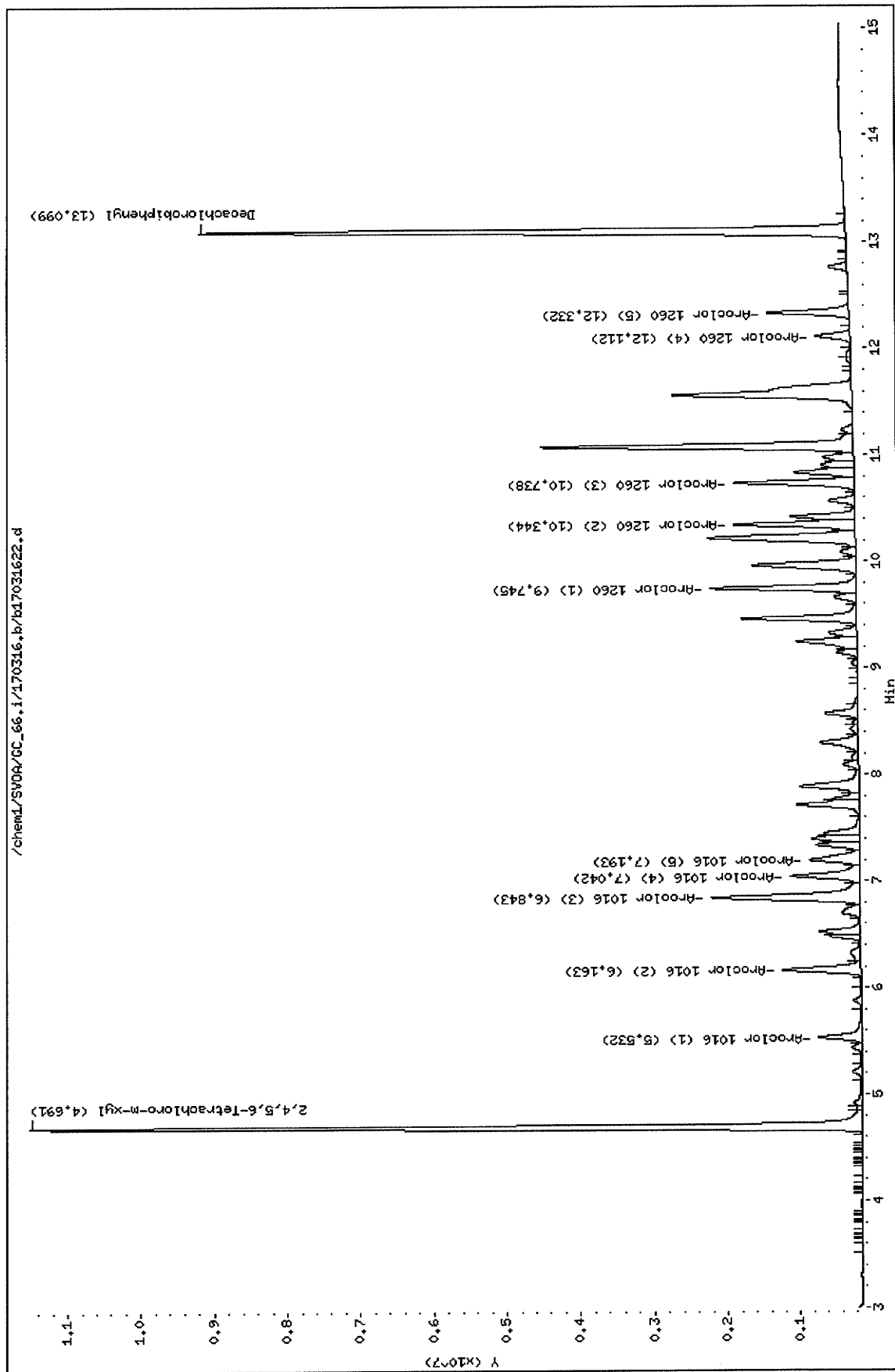
Sample Info: PCB CCV P0215171 500PPB

Instrument: GC\_66.i

Operator: 669

Column diameter: 2.00

Column phase:

[Return to Contents](#)

# EPA METHOD 8082 PCB

## Run Logs

| Line | Vial | File     | Name                        | Method   | InjVolume | Acquired            |
|------|------|----------|-----------------------------|----------|-----------|---------------------|
| 1    | 100  | 17022200 | IB S007-044-07              | 8082D-N2 |           | 22-Feb-17, 17:09:45 |
| 2    | 1    | 17022201 | PCB ICAL1 P021517F 100PPB   | 8082D-N2 |           | 22-Feb-17, 17:27:32 |
| 3    | 2    | 17022202 | PCB ICAL2 P021517E 250PPB   | 8082D-N2 |           | 22-Feb-17, 17:45:20 |
| 4    | 3    | 17022203 | PCB ICAL3 P021517D 500PPB   | 8082D-N2 |           | 22-Feb-17, 18:03:10 |
| 5    | 4    | 17022204 | PCB ICAL4 P021517C 750PPB   | 8082D-N2 |           | 22-Feb-17, 18:21:00 |
| 6    | 5    | 17022205 | PCB ICAL5 P021517B 2000PPB  | 8082D-N2 | 1003      | 22-Feb-17, 18:38:49 |
| 7    | 6    | 17022206 | PCB ICV P021517H 500PPB     | 8082D-N2 |           | 22-Feb-17, 18:56:37 |
| 8    | 7    | 17022207 | PCB 1221/54 500PPB P120616I | 8082D-N2 |           | 22-Feb-17, 19:14:26 |
| 9    | 8    | 17022208 | PCB 1232/62 500PPB P120616J | 8082D-N2 |           | 22-Feb-17, 19:32:18 |
| 10   | 9    | 17022209 | PCB 1248/68 500PPB P120616K | 8082D-N2 |           | 22-Feb-17, 19:50:07 |
| 11   | 10   | 17022210 | PCB 1242 500PPB P120616L    | 8082D-N2 |           | 22-Feb-17, 20:07:55 |

| Line | Vial | File     | Name                        | Method   | InjVolume    | Acquired            |
|------|------|----------|-----------------------------|----------|--------------|---------------------|
| 1    | 150  | 17031600 | S007-46-21                  | 8082D-N2 | <i>17020</i> | 16-Mar-17, 02:01:53 |
| 2    | 1    | 17031601 | PCB CCV P021517I 500PPB     | 8082D-N2 |              | 16-Mar-17, 02:19:41 |
| 3    | 2    | 17031602 | MB 170313L11                | 8082D-N2 |              | 16-Mar-17, 02:37:27 |
| 4    | 3    | 17031603 | LCS 170313L11               | 8082D-N2 |              | 16-Mar-17, 02:55:14 |
| 5    | 4    | 17031604 | MS 17-03-0642-30 170313S11  | 8082D-N2 |              | 16-Mar-17, 03:13:09 |
| 6    | 5    | 17031605 | MSD 17-03-0642-30 170313S11 | 8082D-N2 |              | 16-Mar-17, 03:31:04 |
| 7    | 6    | 17031606 | 17-03-0642-30               | 8082D-N2 |              | 16-Mar-17, 03:48:56 |
| 8    | 7    | 17031607 | 17-03-0642-31               | 8082D-N2 |              | 16-Mar-17, 04:06:43 |
| 9    | 8    | 17031608 | 17-03-0642-32               | 8082D-N2 |              | 16-Mar-17, 04:24:35 |
| 10   | 9    | 17031609 | 17-03-0642-33               | 8082D-N2 |              | 16-Mar-17, 04:42:26 |
| 11   | 10   | 17031610 | 17-03-0641-30               | 8082D-N2 |              | 16-Mar-17, 05:00:16 |
| 12   | 11   | 17031611 | 17-03-0641-31               | 8082D-N2 |              | 16-Mar-17, 05:18:05 |
| 13   | 12   | 17031612 | 17-03-0641-32               | 8082D-N2 |              | 16-Mar-17, 05:35:59 |
| 14   | 13   | 17031613 | 17-03-0641-33               | 8082D-N2 |              | 16-Mar-17, 05:53:50 |
| 15   | 14   | 17031614 | 17-03-0590-28               | 8082D-N2 |              | 16-Mar-17, 06:11:37 |
| 16   | 15   | 17031615 | 17-03-0590-29               | 8082D-N2 |              | 16-Mar-17, 06:29:29 |
| 17   | 16   | 17031616 | 17-03-0590-30               | 8082D-N2 |              | 16-Mar-17, 06:47:21 |
| 18   | 17   | 17031617 | 17-03-0589-28               | 8082D-N2 |              | 16-Mar-17, 07:05:08 |
| 19   | 18   | 17031618 | 17-03-0589-29               | 8082D-N2 |              | 16-Mar-17, 07:22:58 |
| 20   | 19   | 17031619 | 17-03-0589-30               | 8082D-N2 |              | 16-Mar-17, 07:40:46 |
| 21   | 20   | 17031620 | 17-03-0486-7 Hg             | 8082D-N2 |              | 16-Mar-17, 07:58:37 |
| 22   | 21   | 17031621 | 17-03-0486-8 Hg             | 8082D-N2 |              | 16-Mar-17, 08:16:26 |
| 23   | 22   | 17031622 | PCB CCV P021517I 500PPB     | 8082D-N2 | <i>17021</i> | 16-Mar-17, 08:34:16 |
| 24   | 23   | 17031623 | 17-03-0486-9 Hg             | 8082D-N2 |              | 16-Mar-17, 08:52:05 |
| 25   | 24   | 17031624 | MB 170315L06                | 8082D-N2 |              | 16-Mar-17, 09:09:59 |
| 26   | 25   | 17031625 | LCS 170315L06               | 8082D-N2 |              | 16-Mar-17, 09:27:50 |
| 27   | 26   | 17031626 | MS 17-03-0966-1 170315S06   | 8082D-N2 |              |                     |
| 28   | 27   | 17031627 | MSD 17-03-0966-1 170315S06  | 8082D-N2 |              |                     |
| 29   | 28   | 17031628 | 17-03-0966-1                | 8082D-N2 |              |                     |
| 30   | 29   | 17031629 | LCS 170314L12               | 8082D-N2 |              |                     |
| 31   | 30   | 17031630 | MB 170314L12                | 8082D-N2 |              |                     |
| 32   | 31   | 17031631 | MS 17-03-0683-1 170314S12   | 8082D-N2 |              |                     |
| 33   | 32   | 17031632 | MSD 17-03-0683-1 170314S12  | 8082D-N2 |              |                     |
| 34   | 33   | 17031633 | 17-03-0683-1                | 8082D-N2 |              |                     |
| 35   | 34   | 17031634 | 17-03-0683-2                | 8082D-N2 |              |                     |
| 36   | 35   | 17031635 | 17-03-0683-4                | 8082D-N2 |              |                     |
| 37   | 36   | 17031636 | 17-03-0683-5                | 8082D-N2 |              |                     |
| 38   | 37   | 17031637 | 17-03-0683-6                | 8082D-N2 |              |                     |
| 39   | 38   | 17031638 | 17-03-0683-7                | 8082D-N2 |              |                     |
| 40   | 39   | 17031639 | 17-03-0683-9                | 8082D-N2 |              |                     |
| 41   | 40   | 17031640 | 17-03-0683-10               | 8082D-N2 |              |                     |
| 42   | 41   | 17031641 | 17-03-0683-11               | 8082D-N2 |              |                     |
| 43   | 42   | 17031642 | 17-03-0683-12               | 8082D-N2 | <i>17022</i> |                     |
| 44   | 43   | 17031643 | PCB CCV P021517I 500PPB     | 8082D-N2 |              |                     |
| 45   | 44   | 17031644 | 17-03-0683-14               | 8082D-N2 |              |                     |
| 46   | 45   | 17031645 | 17-03-0683-15               | 8082D-N2 |              |                     |
| 47   | 46   | 17031646 | 17-03-0683-16               | 8082D-N2 |              |                     |
| 48   | 47   | 17031647 | 17-03-0683-17               | 8082D-N2 |              |                     |
| 49   | 43   | 17031648 | PCB CCV P021517I 500PPB     | 8082D-N2 | <i>17023</i> |                     |

# EPA METHOD 8082 PCB

## Preparation Logs



|                                                                                                                                                                                                                                                                                |                                     |                                                                                                                                                                      |                                     |                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|
| Analysis Method (EPA Method): <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                     |                                     |                                                                                                                                                                      |                                     |                                                              |
| <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 ) |                                     |                                                                                                                                                                      |                                     |                                                              |
| 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- <u>1002</u> Start Extraction- <u>1002</u> Blow Down- <u>1084</u> Clean Up- <u>1084</u>                                                                                                                                                          |                                     |                                                                                                                                                                      |                                     |                                                              |
| 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#: <u>53</u> Filter ID#: <u>S07-17-17</u> ASE ID#: <u>7,10</u> Soxtherm ID#: _____ Orbit Shaker ID#: _____ Sonicator ID#: _____                                                                                                                                      |                                     |                                                                                                                                                                      |                                     |                                                              |
| Ext. Start Date/Time: <u>03/13/2017 16:00</u> Ext. End Date/Time: <u>3/13/2017 19:10</u>                                                                                                                                                                                       |                                     |                                                                                                                                                                      |                                     |                                                              |
| Sand or Wipe ID#: <u>S07-19-19</u>                                                                                                                                                                                                                                             |                                     | Drying Agent: <input checked="" type="checkbox"/> Na <sub>2</sub> SO <sub>4</sub> <input checked="" type="checkbox"/> Diatomaceous Earth                             |                                     |                                                              |
|                                                                                                                                                                                                                                                                                |                                     | Drying Agent(s) ID#: <u>S07-44-18 / S07-22-03</u>                                                                                                                    |                                     |                                                              |
| Surrogate Std ID# & Volume Added (mL): <u>S 101316A 0.5</u>                                                                                                                                                                                                                    |                                     |                                                                                                                                                                      |                                     |                                                              |
| Spike Std ID# & Volume Added (mL): <u>S0203 17A 0.5</u>                                                                                                                                                                                                                        |                                     | 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 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          |                                     |                                                                                                                                                                      |                                     |                                                              |
| Extraction Solvent ID#: <u>S07-44-07 / S07-44-08</u> Exchange Solvent ( <input checked="" type="checkbox"/> Hexane <input type="checkbox"/> Acetonitrile ) ID#: <u>S07-42-09</u>                                                                                               |                                     |                                                                                                                                                                      |                                     |                                                              |
| Clean Up Start Date & Time: <u>03/14/2017 8:00</u> Clean Up End Date & Time: <u>03/14/2017 8:30</u>                                                                                                                                                                            |                                     |                                                                                                                                                                      |                                     |                                                              |
| Clean Up: <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 _____                                                                     |                                     |                                                                                                                                                                      |                                     | Cartridge ID#: _____                                         |
| Clean Up Reagent ID#: <u>S07-52-12</u>                                                                                                                                                                                                                                         |                                     |                                                                                                                                                                      |                                     | Cartridge Conditioning Column Pre-Elution Reagent ID#: _____ |
| MB/LCS/MS Batch #: <u>170313 L11</u>                                                                                                                                                                                                                                           |                                     | Sample <u>W (g) / V (mL)</u>                                                                                                                                         |                                     |                                                              |
| Cel ID#:                                                                                                                                                                                                                                                                       | Initial                             | Final                                                                                                                                                                | Clean Up Performed                  | Comments                                                     |
| MB                                                                                                                                                                                                                                                                             | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| LCS                                                                                                                                                                                                                                                                            | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| LCSD                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>                                                                                                                                  | <input type="checkbox"/>            |                                                              |
| MS <u>17-03-0642-30A</u>                                                                                                                                                                                                                                                       | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| MSD <u>V -30A</u>                                                                                                                                                                                                                                                              | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0486-7A</u>                                                                                                                                                                                                                                                           | 10.1                                | 5                                                                                                                                                                    | <input checked="" type="checkbox"/> |                                                              |
| <u>-8A</u>                                                                                                                                                                                                                                                                     | 10.0                                | 5                                                                                                                                                                    | <input checked="" type="checkbox"/> |                                                              |
| <u>-9A</u>                                                                                                                                                                                                                                                                     | 10.1                                | 5                                                                                                                                                                    | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0589-28A</u>                                                                                                                                                                                                                                                          | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-29A</u>                                                                                                                                                                                                                                                                    | 20.2                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-30A</u>                                                                                                                                                                                                                                                                    | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0590-28A</u>                                                                                                                                                                                                                                                          | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-29A</u>                                                                                                                                                                                                                                                                    | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-30A</u>                                                                                                                                                                                                                                                                    | 20.2                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0591-28A</u>                                                                                                                                                                                                                                                          | 20.2                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-29A</u>                                                                                                                                                                                                                                                                    | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-30A</u>                                                                                                                                                                                                                                                                    | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0641-30A</u>                                                                                                                                                                                                                                                          | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-31A</u>                                                                                                                                                                                                                                                                    | 20.2                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-32A</u>                                                                                                                                                                                                                                                                    | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-33A</u>                                                                                                                                                                                                                                                                    | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>17-03-0642-30A</u>                                                                                                                                                                                                                                                          | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-31A</u>                                                                                                                                                                                                                                                                    | 20.1                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-32A</u>                                                                                                                                                                                                                                                                    | 20.0                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |
| <u>-33A</u>                                                                                                                                                                                                                                                                    | 20.2                                | 10                                                                                                                                                                   | <input checked="" type="checkbox"/> |                                                              |

Peer Reviewed by: XV7Peer Reviewed Date: 03/14/17

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: 099-06-009-4976-4741  
ICAL BATCH ID: 1703131002  
INSTRUMENT: GC/MS AAA

ANALYZED BY: 907  
ICAL D/T ANALYZED: 2017-03-13 13:34  
REVIEWED BY: 262  
D/T REVIEWED: 2017-03-13 16:33

| COMPOUND                  | COMP. TYPE | CALIB. MODEL | 1     | 2     | 3     | 4     | 5     | 6 | 7 | 8 | 9 | AVG. RF | MIN. RF | %RSD CL | %R SD CL | R or R^2 | R or R^2 CL | STATUS |
|---------------------------|------------|--------------|-------|-------|-------|-------|-------|---|---|---|---|---------|---------|---------|----------|----------|-------------|--------|
| Naphthalene               |            | Avg RF       | 1.094 | 0.977 | 1.072 | 1.081 | 1.037 |   |   |   |   | 1.052   | 0.00    | 4       | 0-15     | 4.489    |             | PASS   |
| 2-Methylnaphthalene       |            | Avg RF       | 0.686 | 0.637 | 0.698 | 0.718 | 0.691 |   |   |   |   | 0.686   | 0.00    | 4       | 0-15     | 4.366    |             | PASS   |
| 1-Methylnaphthalene       |            | Avg RF       | 0.683 | 0.635 | 0.698 | 0.707 | 0.671 |   |   |   |   | 0.679   | 0.00    | 4       | 0-15     | 4.137    |             | PASS   |
| Acenaphthylene            |            | Avg RF       | 2.278 | 2.113 | 2.302 | 2.378 | 2.279 |   |   |   |   | 2.270   | 0.00    | 4       | 0-15     | 4.271    |             | PASS   |
| Acenaphthene              | C          | Avg RF       | 1.342 | 1.216 | 1.330 | 1.355 | 1.306 |   |   |   |   | 1.310   | 0.00    | 4       | 0-15     | 4.240    |             | PASS   |
| Fluorene                  |            | Avg RF       | 1.499 | 1.409 | 1.562 | 1.599 | 1.543 |   |   |   |   | 1.522   | 0.00    | 5       | 0-15     | 4.776    |             | PASS   |
| Phenanthrene              |            | Avg RF       | 1.068 | 0.987 | 1.088 | 1.131 | 1.090 |   |   |   |   | 1.073   | 0.00    | 5       | 0-15     | 4.958    |             | PASS   |
| Anthracene                |            | Avg RF       | 1.120 | 1.028 | 0.999 | 1.176 | 1.134 |   |   |   |   | 1.092   | 0.00    | 7       | 0-15     | 6.822    |             | PASS   |
| Fluoranthene              | C          | Avg RF       | 1.282 | 1.196 | 1.325 | 1.412 | 1.351 |   |   |   |   | 1.313   | 0.00    | 6       | 0-15     | 6.115    |             | PASS   |
| Pyrene                    |            | Avg RF       | 1.404 | 1.295 | 1.439 | 1.484 | 1.450 |   |   |   |   | 1.414   | 0.00    | 5       | 0-15     | 5.128    |             | PASS   |
| Benzo (a) Anthracene      |            | Avg RF       | 1.402 | 1.189 | 1.285 | 1.352 | 1.345 |   |   |   |   | 1.315   | 0.00    | 6       | 0-15     | 6.202    |             | PASS   |
| Chrysene                  |            | Avg RF       | 1.270 | 1.142 | 1.260 | 1.265 | 1.240 |   |   |   |   | 1.236   | 0.00    | 4       | 0-15     | 4.313    |             | PASS   |
| Benzo (k) Fluoranthene    |            | Avg RF       | 1.421 | 1.349 | 1.493 | 1.512 | 1.440 |   |   |   |   | 1.443   | 0.00    | 4       | 0-15     | 4.481    |             | PASS   |
| Benzo (b) Fluoranthene    |            | Avg RF       | 1.307 | 1.150 | 1.459 | 1.401 | 1.408 |   |   |   |   | 1.345   | 0.00    | 9       | 0-15     | 9.070    |             | PASS   |
| Benzo (a) Pyrene          | C          | Avg RF       | 1.297 | 1.177 | 1.304 | 1.346 | 1.279 |   |   |   |   | 1.281   | 0.00    | 5       | 0-15     | 4.912    |             | PASS   |
| Indeno (1,2,3-c,d) Pyrene |            | Avg RF       | 1.444 | 1.339 | 1.563 | 1.553 | 1.529 |   |   |   |   | 1.485   | 0.00    | 6       | 0-15     | 6.354    |             | PASS   |
| Dibenz (a,h) Anthracene   |            | Avg RF       | 1.123 | 1.067 | 1.237 | 1.227 | 1.191 |   |   |   |   | 1.169   | 0.00    | 6       | 0-15     | 6.186    |             | PASS   |
| Benzo (g,h,i) Perylene    |            | Avg RF       | 1.204 | 1.097 | 1.257 | 1.257 | 1.229 |   |   |   |   | 1.209   | 0.00    | 5       | 0-15     | 5.484    |             | PASS   |

## Data Files:

LR - E: Linear Regression (Equal Weight)  
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)  
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

# INITIAL CALIBRATION QUALITY CONTROL SUMMARY

## FOR METHOD: EPA 8270C SIM PAHS

ICAL WORK ORDER: 099-06-009-4976-4741  
 ICAL BATCH ID: 170313I002  
 INSTRUMENT: GC/MS AAA

ANALYZED BY: 907  
 ICAL D/T ANALYZED: 2017-03-13 13:34  
 REVIEWED BY: 262  
 D/T REVIEWED: 2017-03-13 16:33

| LEVEL # | D/T ANALYZED     | DATA FILE                                                   |
|---------|------------------|-------------------------------------------------------------|
| 1       | 2017-03-13 13:34 | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar008.d\13mar008.r |
| 2       | 2017-03-13 13:15 | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar007.d\13mar007.r |
| 3       | 2017-03-13 12:55 | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar006.d\13mar006.r |
| 4       | 2017-03-13 12:35 | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar005.d\13mar005.r |
| 5       | 2017-03-13 12:16 | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar004.d\13mar004.r |

LR - E: Linear Regression (Equal Weight)  
 Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)  
 QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

# INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHS

ICV WORK ORDER: 099-06-009-4976-4741  
 INITIAL BATCH ID: 170313I002  
 INSTRUMENT: GC/MS AAA

ANALYZED BY: 907  
 D/T ANALYZED: 2017-03-13 13:34  
 INITIAL: 2017-03-13 13:54  
 ICV: 262  
 REVIEWED BY: 2017-03-13 16:33  
 D/T REVIEWED:

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\20171170313113mar009.d\13mar009.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   | 1.052  | 1.119  |        |     | -6     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp  |             | 0.00   | 0.686  | 0.796  |        |     | -16    | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp  |             | 0.00   | 0.679  | 0.730  |        |     | -8     | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp  |             | 0.00   | 2.270  | 2.398  |        |     | -6     | 0-20      | PASS   |
| Acenaphthene              | C         |             | 0.00   | 1.310  | 1.440  |        |     | -10    | 0-20      | PASS   |
| Fluorene                  | Avg Resp  |             | 0.00   | 1.522  | 1.679  |        |     | -10    | 0-20      | PASS   |
| Phenanthrene              | Avg Resp  |             | 0.00   | 1.073  | 1.225  |        |     | -14    | 0-20      | PASS   |
| Anthracene                | Avg Resp  |             | 0.00   | 1.092  | 1.199  |        |     | -10    | 0-20      | PASS   |
| Fluoranthene              | C         |             | 0.00   | 1.313  | 1.434  |        |     | -9     | 0-20      | PASS   |
| Pyrene                    | Avg Resp  |             | 0.00   | 1.414  | 1.534  |        |     | -8     | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp  |             | 0.00   | 1.315  | 1.364  |        |     | -4     | 0-20      | PASS   |
| Chrysene                  | Avg Resp  |             | 0.00   | 1.236  | 1.288  |        |     | -4     | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp  |             | 0.00   | 1.443  | 1.584  |        |     | -10    | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp  |             | 0.00   | 1.345  | 1.393  |        |     | -4     | 0-20      | PASS   |
| Benzo (a) Pyrene          | C         |             | 0.00   | 1.281  | 1.337  |        |     | -4     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp  |             | 0.00   | 1.485  | 1.541  |        |     | -4     | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp  |             | 0.00   | 1.169  | 1.231  |        |     | -5     | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp  |             | 0.00   | 1.209  | 1.309  |        |     | -8     | 0-20      | PASS   |

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 14:55

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 17:28  
 End Cal Date : 13-MAR-2017 13:34  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m  
 Cal Date : 13-Mar-2017 14:53 ev7p  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar008.d  
 Level 2: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar007.d  
 Level 3: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar006.d  
 Level 4: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar005.d  
 Level 5: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar004.d

|                               | 0.10000 | 0.50000 | 1.000   | 2.000   | 5.000   |         |       |
|-------------------------------|---------|---------|---------|---------|---------|---------|-------|
| Compound                      | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | RRF     | % RSD |
| 4 Naphthalene                 | 1.09385 | 0.97659 | 1.07180 | 1.08137 | 1.03681 | 1.05209 | 4     |
| 5 2-Methylnaphthalene         | 0.68554 | 0.63704 | 0.69835 | 0.71775 | 0.69148 | 0.68603 | 4     |
| 6 1-Methylnaphthalene         | 0.68289 | 0.63479 | 0.69764 | 0.70688 | 0.67130 | 0.67870 | 4     |
| 8 Biphenyl                    | 2.16644 | 1.96594 | 2.16003 | 2.14549 | 2.03227 | 2.09403 | 4     |
| 9 2,6-Dimethylnaphthalene     | 1.55347 | 1.41005 | 1.53941 | 1.55897 | 1.49704 | 1.51179 | 4     |
| 10 Acenaphthylene             | 2.27806 | 2.11290 | 2.30165 | 2.37847 | 2.27903 | 2.27002 | 4     |
| 12 Acenaphthene               | 1.34190 | 1.21569 | 1.33044 | 1.35456 | 1.30570 | 1.30966 | 4     |
| 13 Dibenzofuran               | 1.87476 | 1.77796 | 1.96814 | 2.01585 | 1.94706 | 1.91675 | 5     |
| 14 1,6,7-Trimethylnaphthalene | 1.52468 | 1.38537 | 1.51994 | 1.55698 | 1.48361 | 1.49412 | 4     |
| 15 Fluorene                   | 1.49915 | 1.40934 | 1.56234 | 1.59858 | 1.54302 | 1.52249 | 5     |
| 16 Dibenzothiophene           | 2.79109 | 2.56641 | 2.83728 | 2.97282 | 2.91846 | 2.81721 | 6     |
| 18 Phenanthrene               | 1.06827 | 0.98692 | 1.08813 | 1.13110 | 1.08972 | 1.07283 | 5     |
| 19 Anthracene                 | 1.12039 | 1.02844 | 0.99944 | 1.17551 | 1.13440 | 1.09164 | 7     |
| 20 1-Methylphenanthrene       | 1.08036 | 0.99436 | 1.09406 | 1.14905 | 1.13790 | 1.09115 | 6     |
| 21 Fluoranthene               | 1.28248 | 1.19637 | 1.32488 | 1.41151 | 1.35059 | 1.31317 | 6     |
| 22 Pyrene                     | 1.40416 | 1.29495 | 1.43927 | 1.48368 | 1.44973 | 1.41436 | 5     |
| 24 Benzo (a) Anthracene       | 1.40151 | 1.18890 | 1.28510 | 1.35219 | 1.34547 | 1.31463 | 6     |
| 26 Chrysene                   | 1.26972 | 1.14244 | 1.26018 | 1.26546 | 1.24029 | 1.23562 | 4     |
| 27 Benzo (b) Fluoranthene     | 1.30658 | 1.15032 | 1.45930 | 1.40137 | 1.40753 | 1.34502 | 9     |
| 28 Benzo (k) Fluoranthene     | 1.42096 | 1.34890 | 1.49348 | 1.51245 | 1.43970 | 1.44310 | 4     |
| 29 Benzo (e) pyrene           | 1.58081 | 1.42277 | 1.65604 | 1.63617 | 1.60280 | 1.57972 | 6     |
| 30 Benzo (a) Pyrene           | 1.29689 | 1.17692 | 1.30373 | 1.34597 | 1.27947 | 1.28059 | 5     |

Report Date : 13-Mar-2017 14:55

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## Eurofins Calscience

## INITIAL CALIBRATION DATA

Start Cal Date : 06-DEC-2016 17:28  
 End Cal Date : 13-MAR-2017 13:34  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m  
 Cal Date : 13-Mar-2017 14:53 ev7p  
 Curve Type : Average

| Compound                     | 0.10000 | 0.50000 | 1.000   | 2.000   | 5.000   | RRF     | % RSD |
|------------------------------|---------|---------|---------|---------|---------|---------|-------|
| Level 1                      | Level 2 | Level 3 | Level 4 | Level 5 |         |         |       |
| 32 Perylene                  | 1.62127 | 1.42943 | 1.59538 | 1.61256 | 1.56628 | 1.56498 | 5     |
| 33 Indeno (1,2,3-c,d) Pyrene | 1.44353 | 1.33902 | 1.56310 | 1.55254 | 1.52914 | 1.48547 | 6     |
| 34 Dibenz (a,h) Anthracene   | 1.12332 | 1.06671 | 1.23658 | 1.22659 | 1.19081 | 1.16880 | 6     |
| 35 Benzo (g,h,i) Perylene    | 1.20375 | 1.09684 | 1.25672 | 1.25676 | 1.22913 | 1.20864 | 5     |
| =====                        |         |         |         |         |         |         |       |
| \$ 2 Nitrobenzene-d5         | 0.33991 | 0.34002 | 0.39373 | 0.40003 | 0.39476 | 0.37369 | 8     |
| \$ 7 2-Fluorobiphenyl        | 1.66075 | 1.54110 | 1.68248 | 1.66836 | 1.54430 | 1.61940 | 4     |
| \$ 23 p-Terphenyl-d14        | 0.72431 | 0.67710 | 0.75455 | 0.77989 | 0.77847 | 0.74286 | 6     |



Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar009.d  
 Report Date: 03/13/2017 14:54

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_AAA.i Injection Date and Time: 13-MAR-2017 13:54  
 Sample Name: ICV S010317I 1PPM Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 17:28 13:34  
 Method used: /chem/SVOA/GCMS\_AAA.i/170313.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                | 1.052                 | 1.119      | 0.00        | -6             | 20              | Averaged   |
| 2-Methylnaphthalene        | 0.686                 | 0.796      | 0.00        | -16            | 20              | Averaged   |
| 1-Methylnaphthalene        | 0.679                 | 0.730      | 0.00        | -8             | 20              | Averaged   |
| Acenaphthylene             | 2.270                 | 2.398      | 0.00        | -6             | 20              | Averaged   |
| Acenaphthene               | 1.310                 | 1.440      | 0.00        | -10            | 20              | Averaged   |
| Fluorene                   | 1.522                 | 1.679      | 0.00        | -10            | 20              | Averaged   |
| Phenanthrene               | 1.073                 | 1.225      | 0.00        | -14            | 20              | Averaged   |
| Anthracene                 | 1.092                 | 1.199      | 0.00        | -10            | 20              | Averaged   |
| Fluoranthene               | 1.313                 | 1.434      | 0.00        | -9             | 20              | Averaged   |
| Pyrene                     | 1.414                 | 1.534      | 0.00        | -8             | 20              | Averaged   |
| Benzo (a) Anthracene       | 1.315                 | 1.364      | 0.00        | -4             | 20              | Averaged   |
| Chrysene                   | 1.236                 | 1.288      | 0.00        | -4             | 20              | Averaged   |
| Benzo (b) Fluoranthene     | 1.345                 | 1.393      | 0.00        | -4             | 20              | Averaged   |
| Benzo (k) Fluoranthene     | 1.443                 | 1.584      | 0.00        | -10            | 20              | Averaged   |
| Benzo (a) Pyrene           | 1.281                 | 1.337      | 0.00        | -4             | 20              | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.485                 | 1.541      | 0.00        | -4             | 20              | Averaged   |
| Dibenz (a,h) Anthracene    | 1.169                 | 1.231      | 0.00        | -5             | 20              | Averaged   |
| Benzo (g,h,i) Perylene     | 1.209                 | 1.309      | 0.00        | -8             | 20              | Averaged   |
| Biphenyl                   | 2.094                 | 1.920      | 0.00        | 8              | 20              | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.512                 | 1.369      | 0.00        | 9              | 20              | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.494                 | 1.312      | 0.00        | 12             | 20              | Averaged   |
| Dibenzothiophene           | 2.817                 | 2.588      | 0.00        | 8              | 20              | Averaged   |
| 1-Methylphenanthrene       | 1.091                 | 0.986      | 0.00        | 10             | 20              | Averaged   |
| Benzo (e) pyrene           | 1.580                 | 1.416      | 0.00        | 10             | 20              | Averaged   |
| Perylene                   | 1.565                 | 1.359      | 0.00        | 13             | 20              | Averaged   |
| Dibenzofuran               | 1.917                 | 2.112      | 0.00        | -10            | 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            | 0.374                 | 0.442      | 0.00        | -18            | 20              | Averaged   |
| 2-Fluorobiphenyl           | 1.619                 | 1.908      | 0.00        | -18            | 20              | Averaged   |
| p-Terphenyl-d14            | 0.743                 | 0.855      | 0.00        | -15            | 20              | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar004.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 12:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I002  
 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)                | 3.686  | 152   | 108994 | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)                | 4.937  | 136   | 329494 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)                | 6.834  | 164   | 163934 | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)                | 8.437  | 188   | 323816 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)                | 13.009 | 264   | 282888 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)                | 11.375 | 240   | 308710 | 5.000                         | 0.00     |
| System Monitoring Compounds    |                    |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)                | 4.241  | 82    | 130072 | 5.282                         | 0.00     |
| SpikedAmount 5.000             | Recovery = 526.869 |        |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)                | 6.115  | 172   | 253163 | 4.768                         | 0.00     |
| SpikedAmount 5.000             | Recovery = 485.891 |        |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)                | 10.229 | 244   | 240321 | 5.240                         | 0.00     |
| SpikedAmount 5.000             | Recovery = 520.854 |        |       |        |                               |          |
| Target Compounds               |                    |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)                | 4.959  | 128   | 341623 | 4.927                         | 100      |
| 5) 2-Methylnaphthalene         | (2)                | 5.690  | 142   | 227840 | 5.040                         | 100      |
| 6) 1-Methylnaphthalene         | (2)                | 5.803  | 142   | 221189 | 4.945                         | 99       |
| 10) Acenaphthylene             | (3)                | 6.664  | 152   | 373610 | 5.020                         | 100      |
| 12) Acenaphthene               | (3)                | 6.865  | 153   | 214048 | 4.985                         | 100      |
| 15) Fluorene                   | (3)                | 7.420  | 166   | 252954 | 5.067                         | 99       |
| 18) Phenanthrene               | (4)                | 8.461  | 178   | 352869 | 5.079                         | 100      |
| 19) Anthracene                 | (4)                | 8.510  | 178   | 367338 | 5.196                         | 99       |
| 21) Fluoranthene               | (4)                | 9.777  | 202   | 437343 | 5.143                         | 99       |
| 22) Pyrene                     | (5)                | 10.019 | 202   | 447546 | 5.125                         | 99       |
| 24) Benzo (a) Anthracene       | (5)                | 11.354 | 228   | 415359 | 5.117                         | 100      |
| 26) Chrysene                   | (5)                | 11.399 | 228   | 382889 | 5.019                         | 100      |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.585 | 252   | 398174 | 5.232                         | 99       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.609 | 252   | 407273 | 4.988                         | 97       |
| 30) Benzo (a) Pyrene           | (6)                | 12.944 | 252   | 361946 | 4.996                         | 98       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.187 | 276   | 432575 | 5.147                         | 99       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.207 | 278   | 336867 | 5.094                         | 99       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.494 | 276   | 347707 | 5.085                         | 99       |
| 8) Biphenyl                    | (3)                | 6.207  | 154   | 333158 | 4.853                         | 100      |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.367  | 156   | 245415 | 4.951                         | 99       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.297  | 170   | 243214 | 4.965                         | 99       |
| 16) Dibenzothiophene           | (3)                | 8.324  | 184   | 478435 | 5.180                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar004.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 12:16 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 13:57  
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

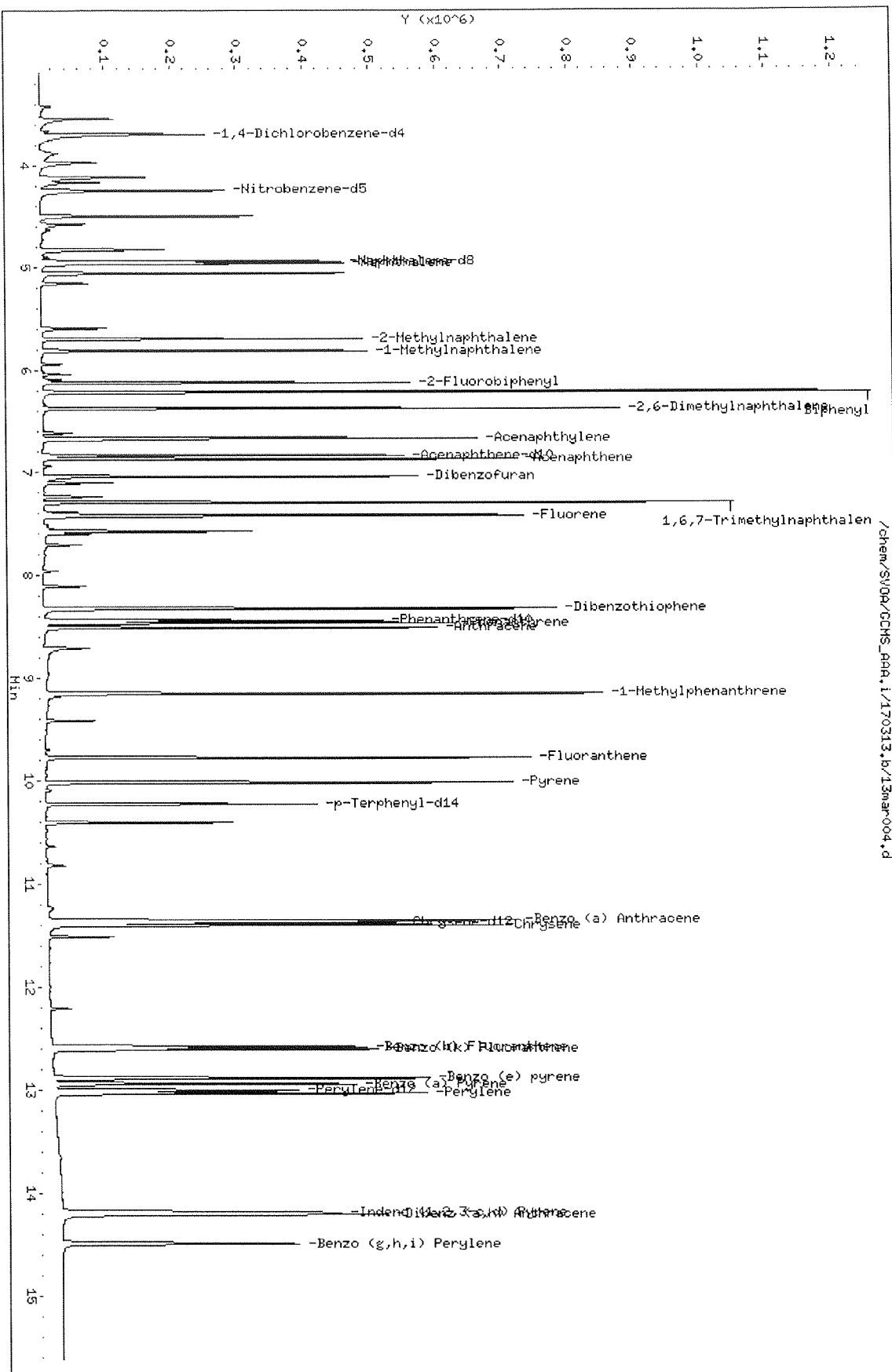
Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I002  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area   | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|--------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 351280 | 5.214                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.888 | 252  | 453412 | 5.073                         | 99     |
| 32) Perylene             | (6)          | 13.037 | 252  | 443082 | 5.004                         | 100    |
| 13) Dibenzofuran         | (3)          | 7.042  | 168  | 319189 | 5.079                         | 80     |

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Data File: /chem/SV04/GCHS\_AAA.i/170313.b/13mar004.d  
 Date : 13-MAR-2017 12:16  
 Client ID:  
 Sample Info: ICAL-1 S010317D SPPH  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-SMS

Instrument: GCHS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar005.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 12:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

Sample Name: ICAL-2 S010317E 2PPM 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)                | 3.686  | 152   | 116724 | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)                | 4.937  | 136   | 358355 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)                | 6.833  | 164   | 178488 | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)                | 8.437  | 188   | 349171 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)                | 13.005 | 264   | 302694 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)                | 11.370 | 240   | 340071 | 5.000                         | 0.00     |
| System Monitoring Compounds    |                    |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)                | 4.240  | 82    | 57341  | 2.141                         | 0.00     |
| SpikedAmount 2.000             | Recovery = 213.561 |        |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)                | 6.115  | 172   | 119113 | 2.060                         | 0.00     |
| SpikedAmount 2.000             | Recovery = 209.970 |        |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)                | 10.228 | 244   | 106087 | 2.100                         | 0.00     |
| SpikedAmount 2.000             | Recovery = 208.722 |        |       |        |                               |          |
| Target Compounds               |                    |        |       |        |                               | QValue   |
| 4) Naphthalene                 | (2)                | 4.956  | 128   | 155006 | 2.056                         | 99       |
| 5) 2-Methylnaphthalene         | (2)                | 5.690  | 142   | 102884 | 2.092                         | 100      |
| 6) 1-Methylnaphthalene         | (2)                | 5.803  | 142   | 101325 | 2.083                         | 99       |
| 10) Acenaphthylene             | (3)                | 6.663  | 152   | 169811 | 2.096                         | 100      |
| 12) Acenaphthene               | (3)                | 6.865  | 153   | 96709  | 2.069                         | 100      |
| 15) Fluorene                   | (3)                | 7.420  | 166   | 114131 | 2.100                         | 100      |
| 18) Phenanthrene               | (4)                | 8.461  | 178   | 157979 | 2.109                         | 100      |
| 19) Anthracene                 | (4)                | 8.509  | 178   | 164181 | 2.154                         | 99       |
| 21) Fluoranthene               | (4)                | 9.772  | 202   | 197143 | 2.150                         | 100      |
| 22) Pyrene                     | (5)                | 10.014 | 202   | 201823 | 2.098                         | 100      |
| 24) Benzo (a) Anthracene       | (5)                | 11.350 | 228   | 183936 | 2.057                         | 100      |
| 26) Chrysene                   | (5)                | 11.399 | 228   | 172138 | 2.048                         | 100      |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.581 | 252   | 169675 | 2.084                         | 100      |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.609 | 252   | 183124 | 2.096                         | 99       |
| 30) Benzo (a) Pyrene           | (6)                | 12.940 | 252   | 162967 | 2.102                         | 99       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.179 | 276   | 187978 | 2.090                         | 99       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.203 | 278   | 148513 | 2.099                         | 99       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.485 | 276   | 152166 | 2.080                         | 99       |
| 8) Biphenyl                    | (3)                | 6.203  | 154   | 153178 | 2.049                         | 100      |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.367  | 156   | 111303 | 2.062                         | 100      |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.294  | 170   | 111161 | 2.084                         | 99       |
| 16) Dibenzothiophene           | (3)                | 8.324  | 184   | 212245 | 2.110                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar005.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 12:35 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

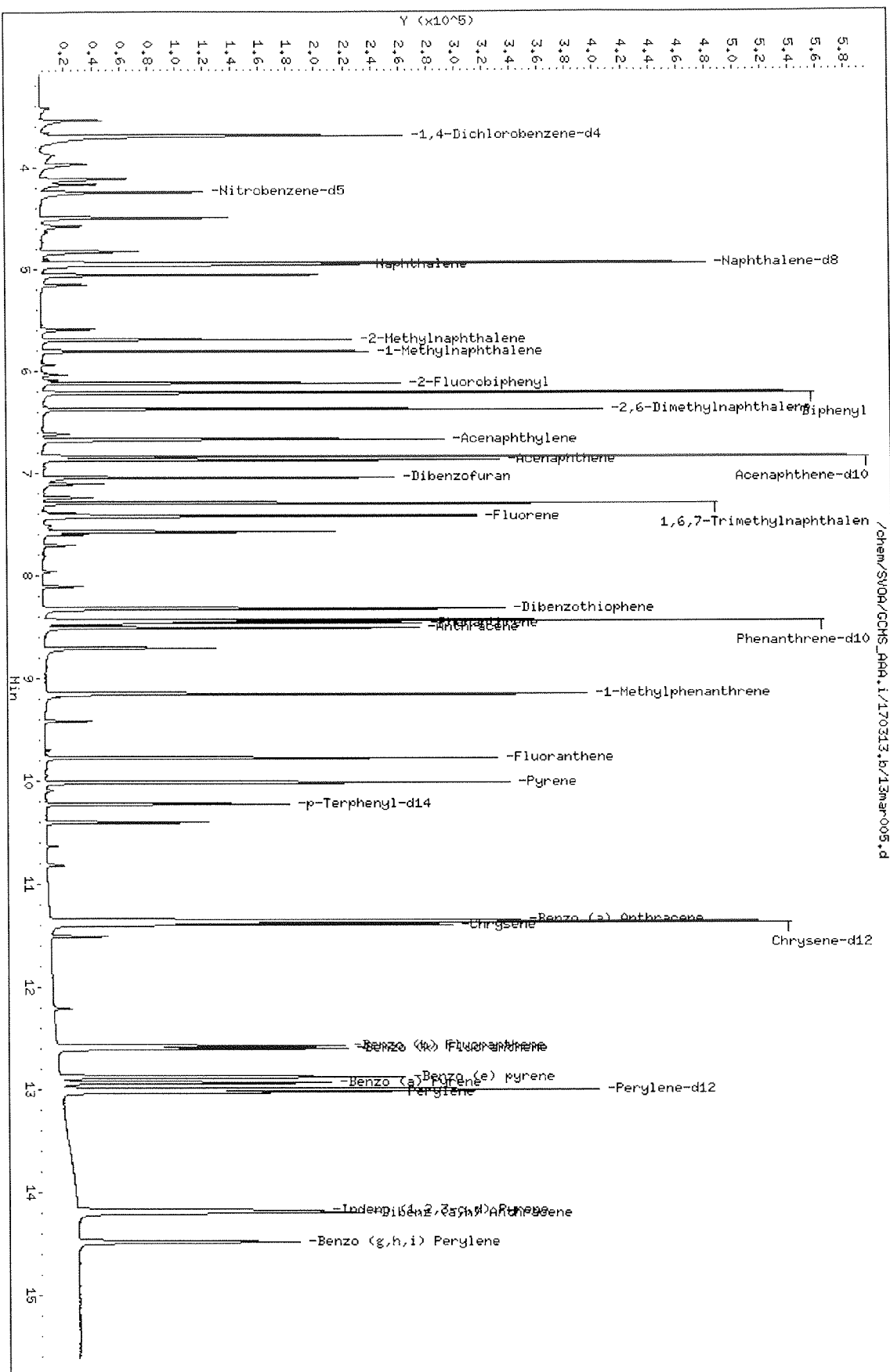
Sample Name: ICAL-2 S010317E 2PPM Misc Info:  
 Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area   | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|--------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 156304 | 2.106                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.883 | 252  | 198103 | 2.071                         | 100    |
| 32) Perylene             | (6)          | 13.033 | 252  | 195245 | 2.061                         | 99     |
| 13) Dibenzofuran         | (3)          | 7.041  | 168  | 143922 | 2.103                         | 99     |

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Data File: /chem/SV09/GCMS\_AAA.i/170313.b/13mar005.d  
 Date: 13-MAR-2017 12:35  
 Client ID:  
 Sample Info: ICAL-2 S010317E 2PPH  
 Volume Injected (uL): 10.0  
 Column phase: 38M DB-SMS

Instrument: GCMS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar006.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 12:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

Sample Name: ICAL-3 S010317F 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)                | 3.686  | 152   | 120202 | 5.000            | 0.00      |
| 3)*Naphthalene-d8              | (2)                | 4.937  | 136   | 373417 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)                | 6.833  | 164   | 184044 | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)                | 8.437  | 188   | 359556 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)                | 13.004 | 264   | 295234 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)                | 11.370 | 240   | 345241 | 5.000            | 0.00      |
| System Monitoring Compounds    |                    |        |       |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)                | 4.240  | 82    | 29405  | 1.054            | 0.00      |
| SpikedAmount 1.000             | Recovery = 105.098 |        |       |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)                | 6.115  | 172   | 61930  | 1.039            | 0.00      |
| SpikedAmount 1.000             | Recovery = 105.873 |        |       |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)                | 10.224 | 244   | 52100  | 1.016            | 0.00      |
| SpikedAmount 1.000             | Recovery = 100.970 |        |       |        |                  |           |
| Target Compounds               |                    |        |       |        |                  | QValue    |
| 4) Naphthalene                 | (2)                | 4.955  | 128   | 80046  | 1.019            | 100       |
| 5) 2-Methylnaphthalene         | (2)                | 5.690  | 142   | 52155  | 1.018            | 100       |
| 6) 1-Methylnaphthalene         | (2)                | 5.803  | 142   | 52102  | 1.028            | 100       |
| 10) Acenaphthylene             | (3)                | 6.663  | 152   | 84721  | 1.014            | 100       |
| 12) Acenaphthene               | (3)                | 6.865  | 153   | 48972  | 1.016            | 100       |
| 15) Fluorene                   | (3)                | 7.416  | 166   | 57508  | 1.026            | 100       |
| 18) Phenanthrene               | (4)                | 8.461  | 178   | 78249  | 1.014            | 100       |
| 19) Anthracene                 | (4)                | 8.509  | 178   | 71871  | 0.916            | 100       |
| 21) Fluoranthene               | (4)                | 9.772  | 202   | 95274  | 1.009            | 100       |
| 22) Pyrene                     | (5)                | 10.014 | 202   | 99379  | 1.018            | 100       |
| 24) Benzo (a) Anthracene       | (5)                | 11.350 | 228   | 88734  | 0.978            | 100       |
| 26) Chrysene                   | (5)                | 11.394 | 228   | 87013  | 1.020            | 100       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.577 | 252   | 86167  | 1.085            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.605 | 252   | 88185  | 1.035            | 100       |
| 30) Benzo (a) Pyrene           | (6)                | 12.936 | 252   | 76981  | 1.018            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.179 | 276   | 92296  | 1.052            | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.199 | 278   | 73016  | 1.058            | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.481 | 276   | 74205  | 1.040            | 100       |
| 8) Biphenyl                    | (3)                | 6.203  | 154   | 79508  | 1.032            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.367  | 156   | 56664  | 1.018            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.293  | 170   | 55947  | 1.017            | 100       |
| 16) Dibenzothiophene           | (3)                | 8.324  | 184   | 104437 | 1.007            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar006.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 12:55 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

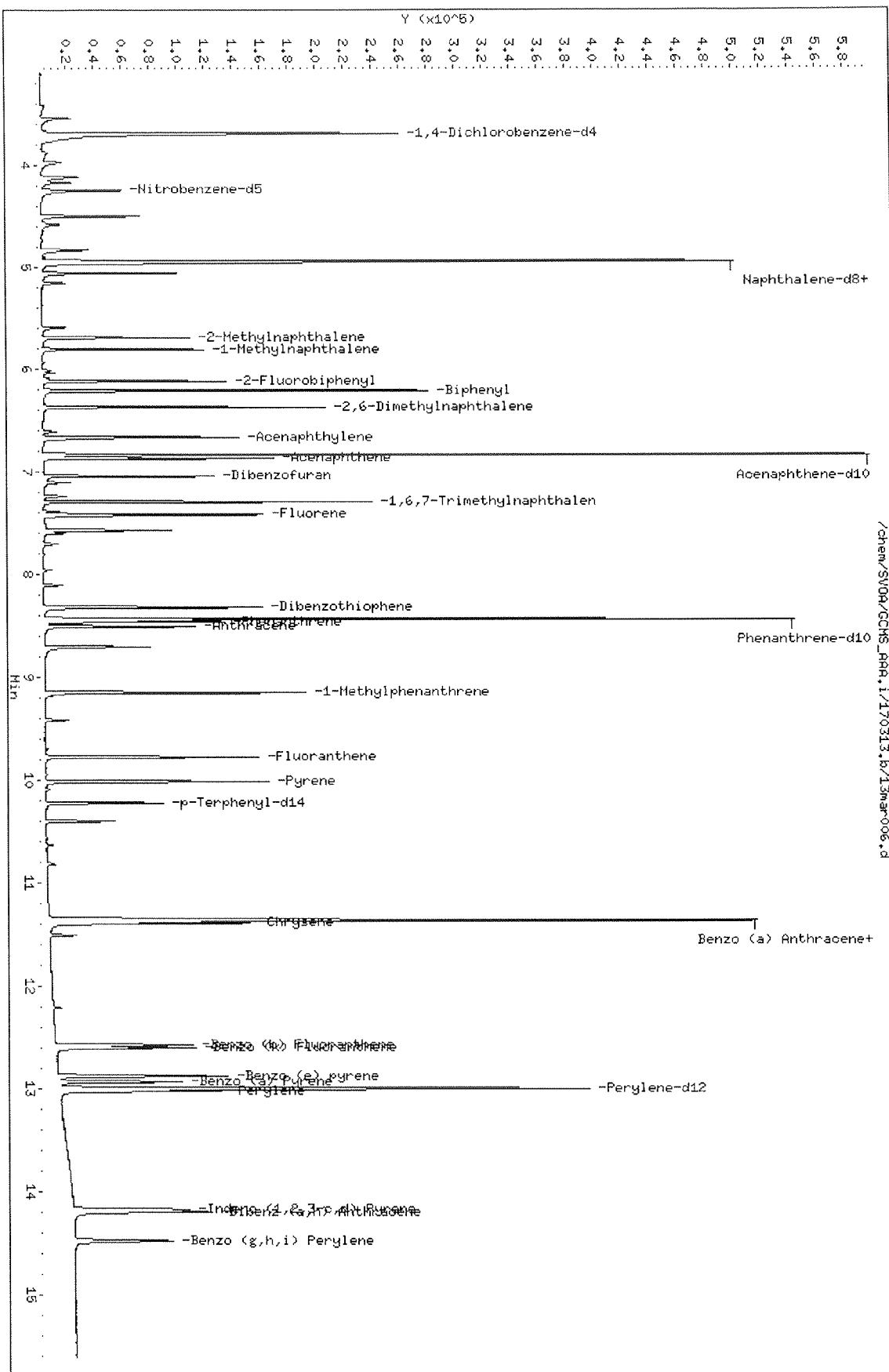
Sample Name: ICAL-3 S010317F 1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 75543 | 1.003                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.883 | 252  | 97784 | 1.048                         | 100    |
| 32) Perylene             | (6)          | 13.029 | 252  | 94202 | 1.019                         | 100    |
| 13) Dibenzofuran         | (3)          | 7.041  | 168  | 72445 | 1.027                         | 100    |

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Data File: /chem/SV09/GCMS\_AAA.i/170313.b/13mar006.d  
 Date : 13-MAR-2017 12:55  
 Client ID:  
 Sample Info: ICP-3 SOL0317F 1PPH  
 Volume Injected (uL): 10.0  
 Column phase: 38M DB-SMS

Instrument: GCMS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar007.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 13:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)               | 3.683  | 152   | 115396 | 5.000            | 0.00      |
| 3)*Naphthalene-d8              | (2)               | 4.937  | 136   | 363775 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)               | 6.833  | 164   | 183525 | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)               | 8.437  | 188   | 357842 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)               | 13.004 | 264   | 307948 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)               | 11.370 | 240   | 343317 | 5.000            | 0.00      |
| System Monitoring Compounds    |                   |        |       |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)               | 4.243  | 82    | 12369  | 0.455            | 0.00      |
| SpikedAmount 0.500             | Recovery = 45.387 |        |       |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)               | 6.115  | 172   | 28283  | 0.476            | 0.00      |
| SpikedAmount 0.500             | Recovery = 47.463 |        |       |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)               | 10.228 | 244   | 23246  | 0.456            | 0.00      |
| SpikedAmount 0.500             | Recovery = 45.034 |        |       |        |                  |           |
| Target Compounds               |                   |        |       |        |                  | QValue    |
| 4) Naphthalene                 | (2)               | 4.955  | 128   | 35526  | 0.464            | 100       |
| 5) 2-Methylnaphthalene         | (2)               | 5.690  | 142   | 23174  | 0.464            | 99        |
| 6) 1-Methylnaphthalene         | (2)               | 5.803  | 142   | 23092  | 0.468            | 100       |
| 10) Acenaphthylene             | (3)               | 6.663  | 152   | 38777  | 0.465            | 100       |
| 12) Acenaphthene               | (3)               | 6.865  | 153   | 22311  | 0.464            | 99        |
| 15) Fluorene                   | (3)               | 7.420  | 166   | 25865  | 0.463            | 100       |
| 18) Phenanthrene               | (4)               | 8.461  | 178   | 35316  | 0.460            | 100       |
| 19) Anthracene                 | (4)               | 8.509  | 178   | 36802  | 0.471            | 99        |
| 21) Fluoranthene               | (4)               | 9.776  | 202   | 42811  | 0.456            | 100       |
| 22) Pyrene                     | (5)               | 10.014 | 202   | 44458  | 0.458            | 100       |
| 24) Benzo (a) Anthracene       | (5)               | 11.350 | 228   | 40817  | 0.452            | 100       |
| 26) Chrysene                   | (5)               | 11.398 | 228   | 39222  | 0.462            | 99        |
| 27) Benzo (b) Fluoranthene     | (6)               | 12.581 | 252   | 35424  | 0.428            | 99        |
| 28) Benzo (k) Fluoranthene     | (6)               | 12.609 | 252   | 41539  | 0.467            | 99        |
| 30) Benzo (a) Pyrene           | (6)               | 12.940 | 252   | 36243  | 0.460            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)               | 14.183 | 276   | 41235  | 0.451            | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)               | 14.207 | 278   | 32849  | 0.456            | 99        |
| 35) Benzo (g,h,i) Perylene     | (6)               | 14.485 | 276   | 33777  | 0.454            | 99        |
| 8) Biphenyl                    | (3)               | 6.203  | 154   | 36080  | 0.469            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)               | 6.367  | 156   | 25878  | 0.466            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)               | 7.293  | 170   | 25425  | 0.464            | 100       |
| 16) Dibenzothiophene           | (3)               | 8.324  | 184   | 47100  | 0.455            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar007.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 13:15 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 13:57  
Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

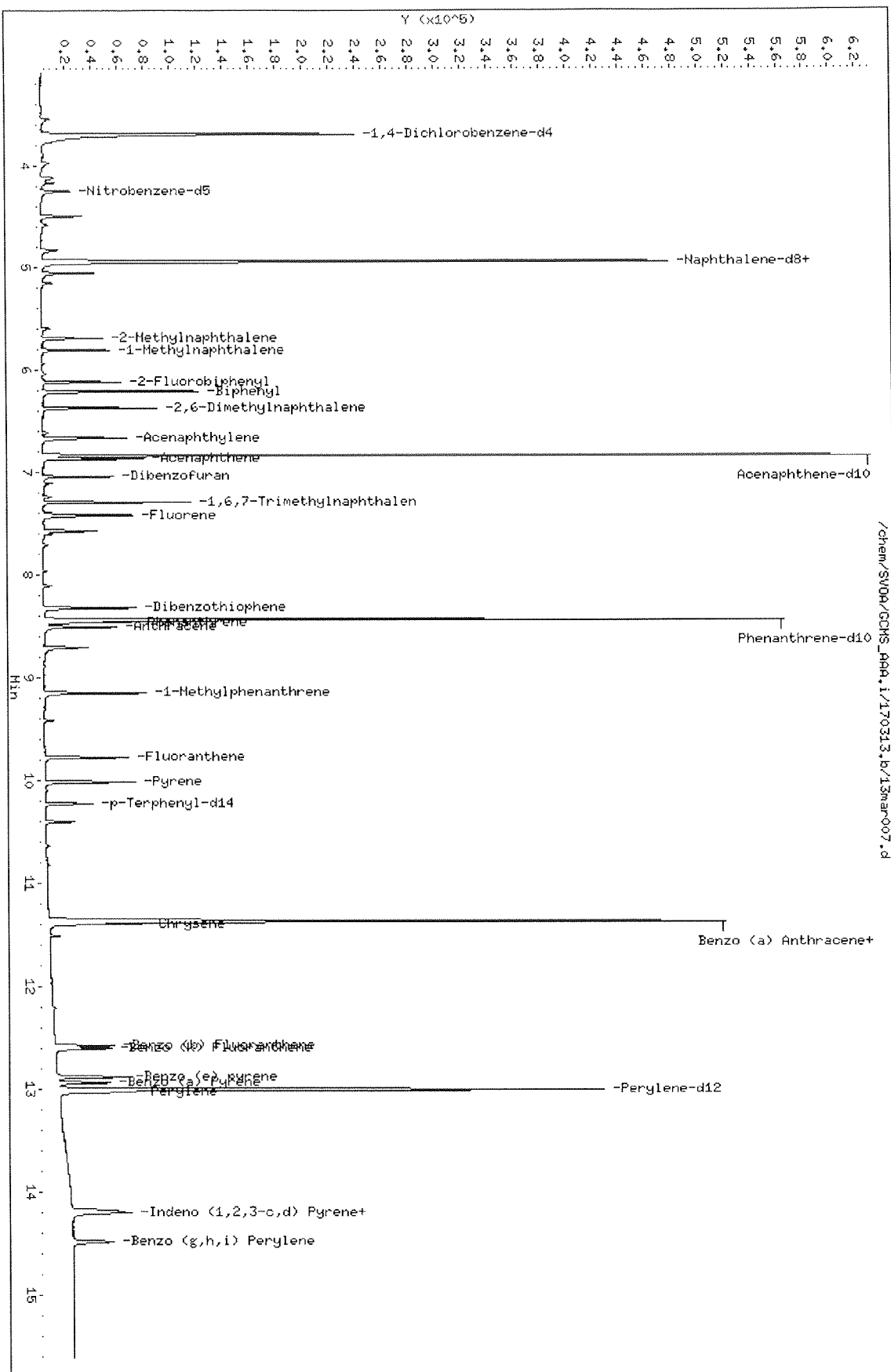
Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:  
Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 34138 | 0.456                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.883 | 252  | 43814 | 0.450                         | 100    |
| 32) Perylene             | (6)          | 13.033 | 252  | 44019 | 0.457                         | 99     |
| 13) Dibenzofuran         | (3)          | 7.041  | 168  | 32630 | 0.464                         | 100    |

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Data File: /chem/SV09/GCHS\_AAA.i/170313.b/13mar007.d  
 Date: 13-Mar-2017 13:15  
 Client ID:  
 Sample Info: ICAL-4 S010317G 0.5PPM  
 Volume Injected (uL): 10.0  
 Column phase: JSM DB-SMS

Instrument: GCHS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar008.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 13:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 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)          | 3.686  | 152    | 112975 | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.937  | 136    | 358185 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.830  | 164    | 184104 | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.433  | 188    | 357823 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 13.001 | 264    | 299024 | 5.000                         | 0.01     |
| 25)*Chrysene-d12               | (5)          | 11.366 | 240    | 339563 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |        |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 4.247  | 82     | 2435   | 0.091                         | -0.01    |
| SpikedAmount 0.100             | Recovery =   |        | 9.077  |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 6.115  | 172    | 6115   | 0.103                         | 0.00     |
| SpikedAmount 0.100             | Recovery =   |        | 10.231 |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 10.224 | 244    | 4919   | 0.098                         | 0.00     |
| SpikedAmount 0.100             | Recovery =   |        | 9.635  |        |                               |          |
| Target Compounds               |              |        |        |        |                               | QValue   |
| 4) Naphthalene                 | (2)          | 4.956  | 128    | 7836   | 0.104                         | 100      |
| 5) 2-Methylnaphthalene         | (2)          | 5.690  | 142    | 4911   | 0.100                         | 100      |
| 6) 1-Methylnaphthalene         | (2)          | 5.803  | 142    | 4892   | 0.101                         | 99       |
| 10) Acenaphthylene             | (3)          | 6.663  | 152    | 8388   | 0.100                         | 99       |
| 12) Acenaphthene               | (3)          | 6.865  | 153    | 4941   | 0.102                         | 99       |
| 15) Fluorene                   | (3)          | 7.417  | 166    | 5520   | 0.098                         | 99       |
| 18) Phenanthrene               | (4)          | 8.457  | 178    | 7645   | 0.100                         | 98       |
| 19) Anthracene                 | (4)          | 8.509  | 178    | 8018   | 0.103                         | 99       |
| 21) Fluoranthene               | (4)          | 9.772  | 202    | 9178   | 0.098                         | 100      |
| 22) Pyrene                     | (5)          | 10.015 | 202    | 9536   | 0.099                         | 100      |
| 24) Benzo (a) Anthracene       | (5)          | 11.350 | 228    | 9518   | 0.107                         | 97       |
| 26) Chrysene                   | (5)          | 11.395 | 228    | 8623   | 0.103                         | 100      |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.577 | 252    | 7814   | 0.097                         | 91       |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.605 | 252    | 8498   | 0.098                         | 99       |
| 30) Benzo (a) Pyrene           | (6)          | 12.936 | 252    | 7756   | 0.101                         | 94       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 14.183 | 276    | 8633   | 0.097                         | 99       |
| 34) Dibenz (a,h) Anthracene    | (6)          | 14.207 | 278    | 6718   | 0.096                         | 96       |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.486 | 276    | 7199   | 0.100                         | 99       |
| 8) Biphenyl                    | (3)          | 6.203  | 154    | 7977   | 0.103                         | 99       |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.367  | 156    | 5720   | 0.103                         | 98       |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 7.294  | 170    | 5614   | 0.102                         | 100      |
| 16) Dibenzothiophene           | (3)          | 8.324  | 184    | 10277  | 0.099                         | 100      |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar008.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 13:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 13:57  
 Date, time and analyst ID of latest file update: 13-Mar-2017 13:57 ev7p

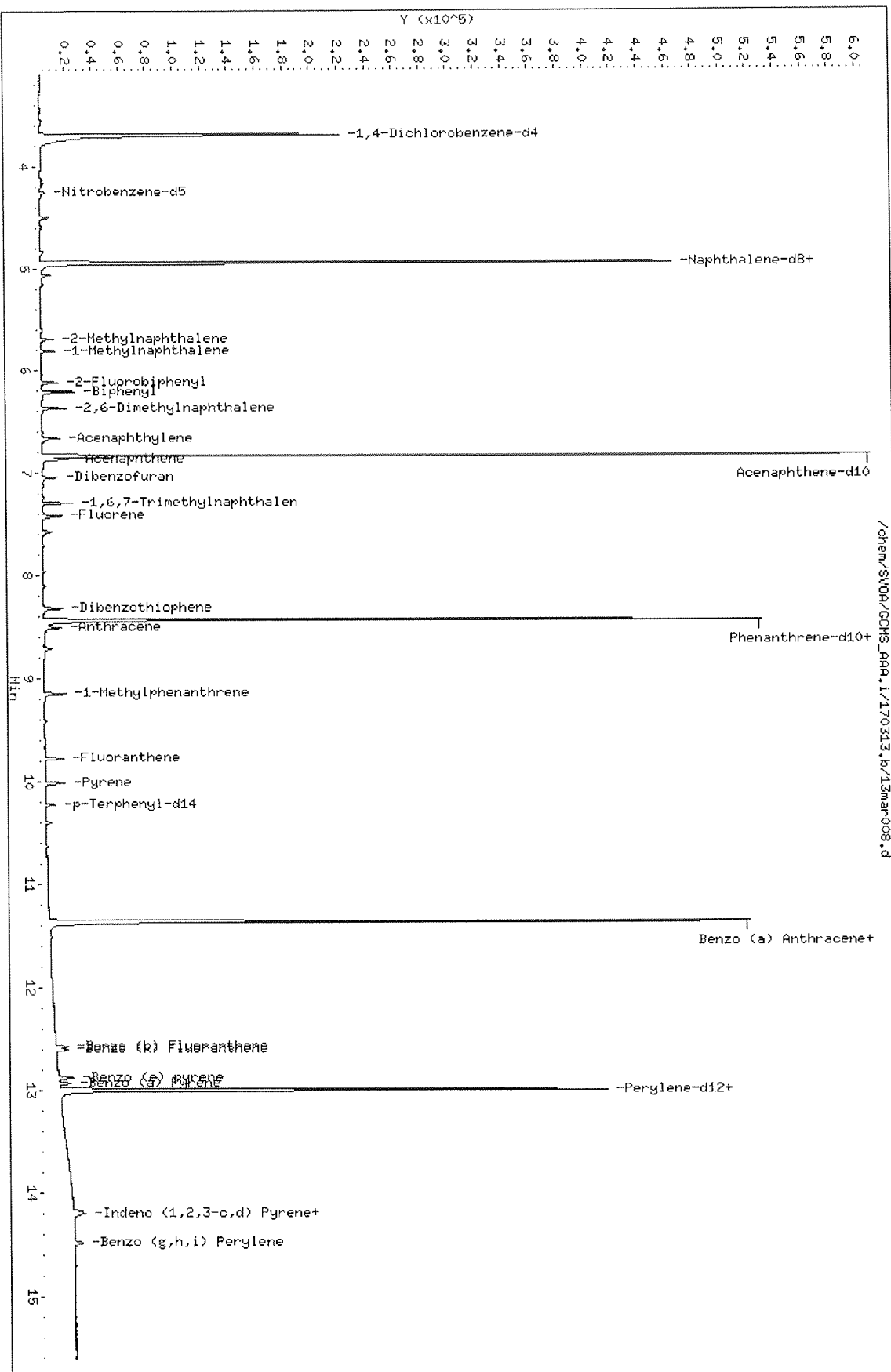
Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 7337 | 0.099                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.880 | 252  | 9454 | 0.100                         | 98     |
| 32) Perylene             | (6)          | 13.029 | 252  | 9696 | 0.104                         | 94     |
| 13) Dibenzofuran         | (3)          | 7.042  | 168  | 6903 | 0.098                         | 97     |

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Data File: /chem/SV04/GCHS\_AAA.i/170313.b/13mar008.d  
 Date : 13-MAR-2017 13:34  
 Client ID:  
 Sample Info: ICAL-5 S010317H 0.1PPH  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-SMS

Instrument: GCHS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18





## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar009.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 13:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:17  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:17 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) | DEV (Min) |
|--------------------------------|--------------------|--------|-------|--------|-------------------------------|-----------|
| =====                          | =====              | =====  | ===== | =====  | =====                         | =====     |
| Internal Standards             |                    |        |       |        |                               |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.686  | 152   | 97964  | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)                | 4.933  | 136   | 304263 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)                | 6.830  | 164   | 151183 | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)                | 8.437  | 188   | 297682 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)                | 13.004 | 264   | 253681 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)                | 11.370 | 240   | 285311 | 5.000                         | 0.00      |
| System Monitoring Compounds    |                    |        |       |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)                | 4.237  | 82    | 26885  | 1.182                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 118.231 |        |       |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)                | 6.115  | 172   | 57697  | 1.178                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 117.834 |        |       |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)                | 10.228 | 244   | 48767  | 1.150                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 115.047 |        |       |        |                               |           |
| Target Compounds               |                    |        |       |        |                               | QValue    |
| 4) Naphthalene                 | (2)                | 4.952  | 128   | 68108  | 1.064                         | 100       |
| 5) 2-Methylnaphthalene         | (2)                | 5.686  | 142   | 48456  | 1.161                         | 100       |
| 6) 1-Methylnaphthalene         | (2)                | 5.800  | 142   | 44438  | 1.076                         | 100       |
| 10) Acenaphthylene             | (3)                | 6.660  | 152   | 72498  | 1.056                         | 100       |
| 12) Acenaphthene               | (3)                | 6.865  | 153   | 43530  | 1.099                         | 100       |
| 15) Fluorene                   | (3)                | 7.416  | 166   | 50760  | 1.103                         | 100       |
| 18) Phenanthrene               | (4)                | 8.457  | 178   | 72924  | 1.142                         | 100       |
| 19) Anthracene                 | (4)                | 8.509  | 178   | 71357  | 1.098                         | 100       |
| 21) Fluoranthene               | (4)                | 9.772  | 202   | 85398  | 1.092                         | 100       |
| 22) Pyrene                     | (5)                | 10.014 | 202   | 87549  | 1.085                         | 100       |
| 24) Benzo (a) Anthracene       | (5)                | 11.350 | 228   | 77856  | 1.038                         | 100       |
| 26) Chrysene                   | (5)                | 11.398 | 228   | 73521  | 1.043                         | 100       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.581 | 252   | 70652  | 1.035                         | 100       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.609 | 252   | 80385  | 1.098                         | 100       |
| 30) Benzo (a) Pyrene           | (6)                | 12.940 | 252   | 67815  | 1.044                         | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.183 | 276   | 78202  | 1.038                         | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.203 | 278   | 62444  | 1.053                         | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.485 | 276   | 66434  | 1.083                         | 100       |
| 8) Biphenyl                    | (3)                | 6.203  | 154   | 58069  | 0.917                         | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.367  | 156   | 41405  | 0.906                         | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.293  | 170   | 39662  | 0.878                         | 100       |
| 16) Dibenzothiophene           | (3)                | 8.324  | 184   | 78239  | 0.918                         | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar009.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 13:54 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:17  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:17 ev7p

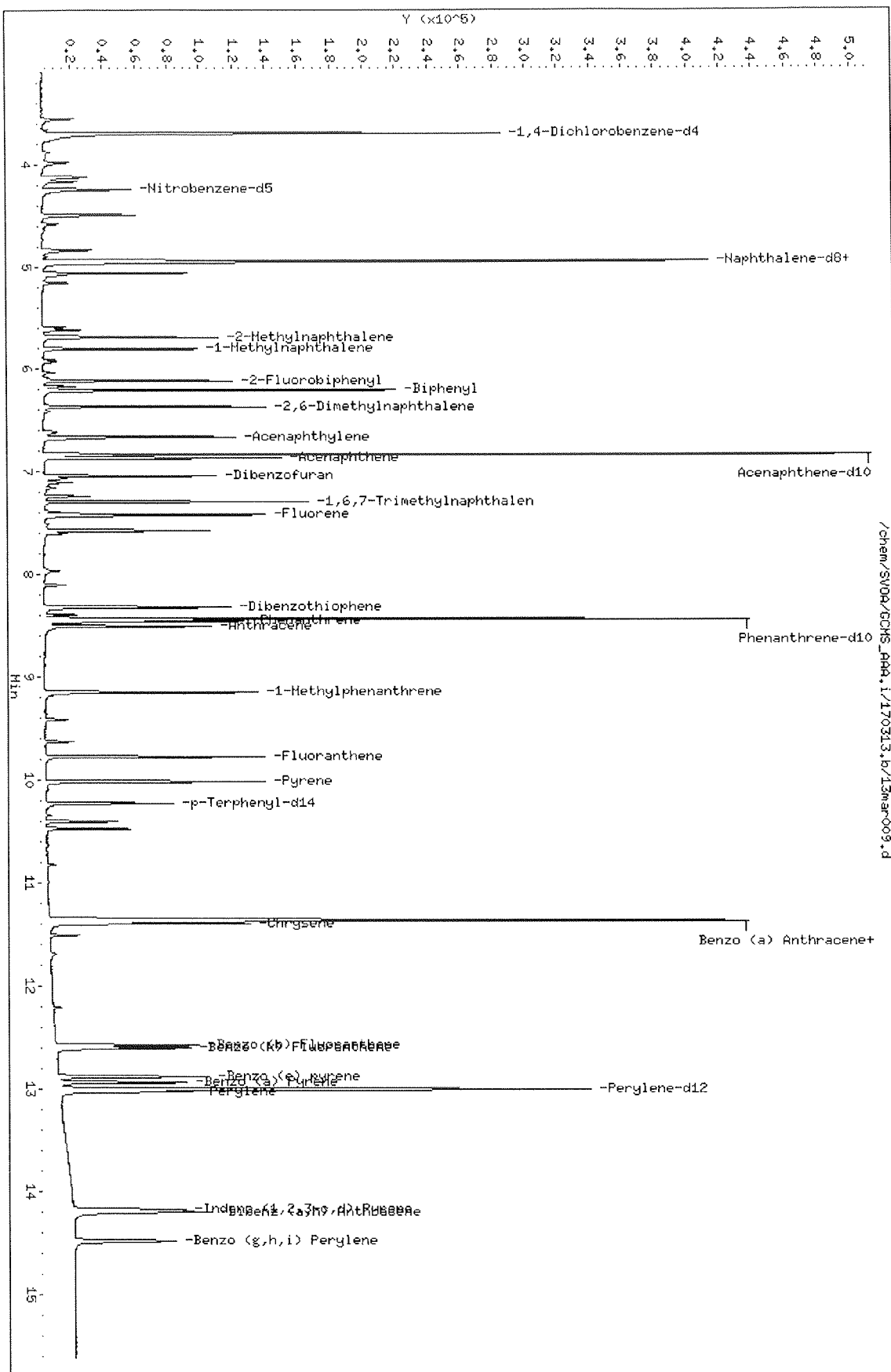
Sample Name: ICV S010317I 1PPM Misc Info:  
 Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 56269 | 0.904                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.883 | 252  | 71830 | 0.896                         | 100    |
| 32) Perylene             | (6)          | 13.033 | 252  | 68970 | 0.869                         | 100    |
| 13) Dibenzofuran         | (3)          | 7.041  | 168  | 63853 | 1.102                         | 100    |

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Data File: /chem/SV08/GCHS\_AAA.i/170313.b/13mar009.d  
 Date: 13-MAR-2017 13:54  
 Client ID:  
 Sample Info: ICV S0103171 1PPM  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-SMS

Instrument: GCHS\_AAA.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:** 17-03-0590  
**INSTRUMENT:** GC/MS AAA  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 22:05  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar034.d\13mar034.rr

**# 25** **CLIENT SAMPLE NUMBER:** D-DU1-ISM1-8

|                                |                                                                   |
|--------------------------------|-------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170310L04 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.10 g |
| <b>MS/MSD BATCH:</b> 170310S04 | <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:**

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.0139             | 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     |             |

Return to Contents

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar034.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 22:05 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

Sample Name: 17-03-0590-25 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)          | 3.686  | 152   | 114886 | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)          | 4.934  | 136   | 363207 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.830  | 164   | 207320 | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.437  | 188   | 366405 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 13.005 | 264   | 302923 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 11.370 | 240   | 341153 | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |       |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 4.240  | 82    | 24727  | 0.911                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   | 91.091 |       |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 6.115  | 172   | 50942  | 0.759                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   | 75.867 |       |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 10.228 | 244   | 47319  | 0.934                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   | 93.357 |       |        |                               |           |
| Target Compounds               |              |        |       |        |                               |           |
| 4) Naphthalene                 | (2)          | 4.956  | 128   | 1065   | 0.014                         | 95        |
| 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  |       | 0D     | 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\_AAA.i/170313.b/13mar034.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 22:05 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

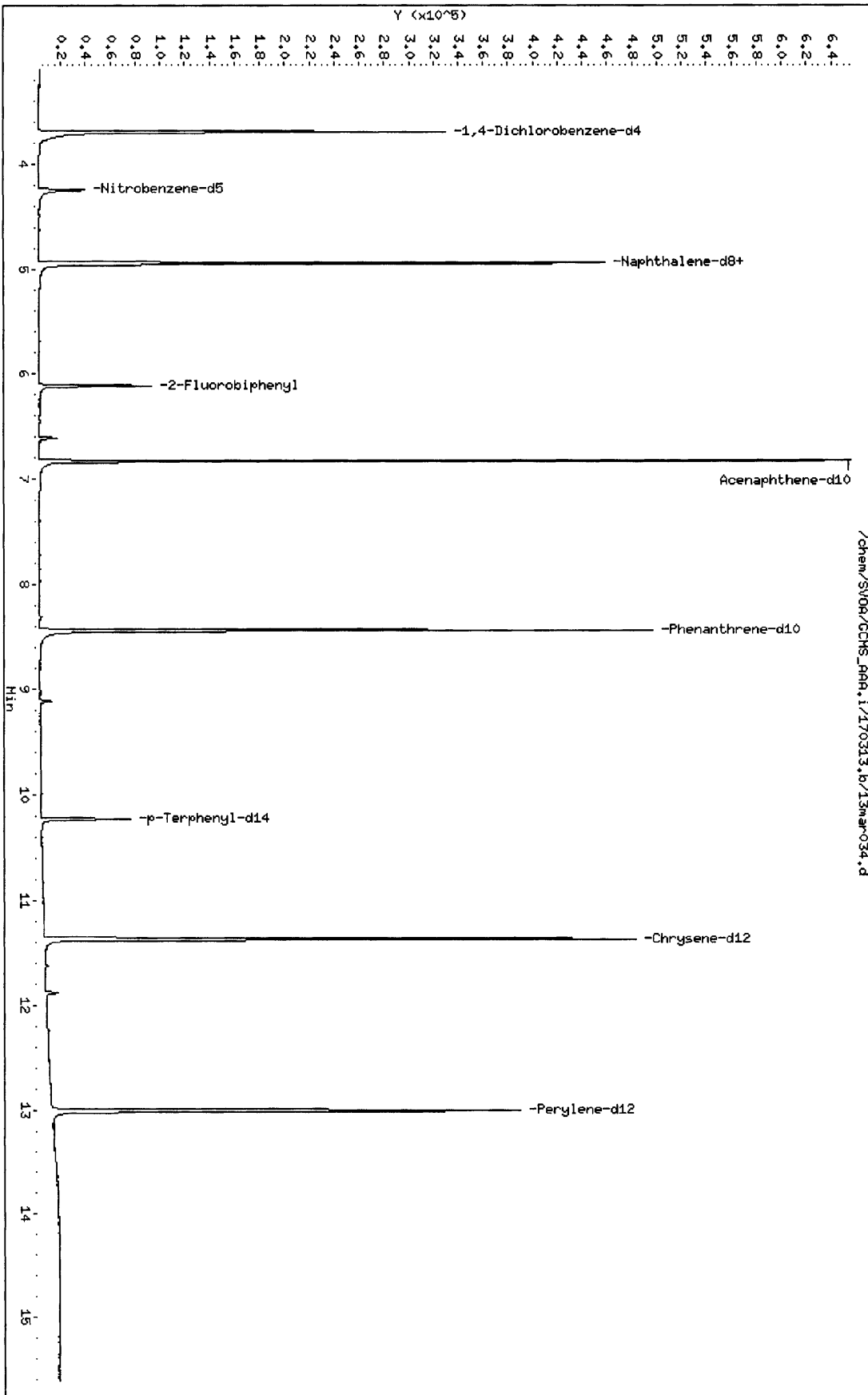
Sample Name: 17-03-0590-25 Misc Info: S101716B 10UL  
Response via Initial Calibration

| 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/SV08/CCHS\_AAA.i/170313.b/13mar034.d  
Date: 13-MAR-2017 22:05  
Client ID:  
Sample Info: 17-03-0590-25  
Volume Injected (uL): 10.0  
Column Phase: J&W DB-5MS

Instrument: CCHS\_AAA.i  
Operator: 907  
Column diameter: 0.18





# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC/MS AAA  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 22:24  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar035.d\13mar035.rr

**# 26** **CLIENT SAMPLE NUMBER:** D-DU1-ISM2-8

|                                |                                                                   |
|--------------------------------|-------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170310L04 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.00 g |
| <b>MS/MSD BATCH:</b> 170310S04 | <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:**

| <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                  | 0.0105             | 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     |             |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar035.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 22:24 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

Sample Name: 17-03-0590-26 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)          | 3.686  | 152   | 117986 | 5.000                         | 0.00     |
| 3)*Naphthalene-d8              | (2)          | 4.933  | 136   | 370573 | 5.000                         | 0.00     |
| 11)*Acenaphthene-d10           | (3)          | 6.830  | 164   | 210416 | 5.000                         | 0.00     |
| 17)*Phenanthrene-d10           | (4)          | 8.436  | 188   | 371855 | 5.000                         | 0.00     |
| 31)*Perylene-d12               | (6)          | 13.008 | 264   | 311334 | 5.000                         | 0.00     |
| 25)*Chrysene-d12               | (5)          | 11.370 | 240   | 345560 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2)\$Nitrobenzene-d5            | (2)          | 4.240  | 82    | 25757  | 0.930                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 93.000 |       |        |                               |          |
| 7)\$2-Fluorobiphenyl           | (3)          | 6.115  | 172   | 55092  | 0.808                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 80.840 |       |        |                               |          |
| 23)\$p-Terphenyl-d14           | (5)          | 10.228 | 244   | 50996  | 0.993                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 99.328 |       |        |                               |          |
| 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)          | 11.390 | 228   | 900    | 0.011                         | 55       |
| 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  |       | 0D     | 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\_AAA.i/170313.b/13mar035.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 22:24 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

Sample Name: 17-03-0590-26 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 |       | 0D    | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |       | 0D    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |       | 0     | N.D.                          |        |

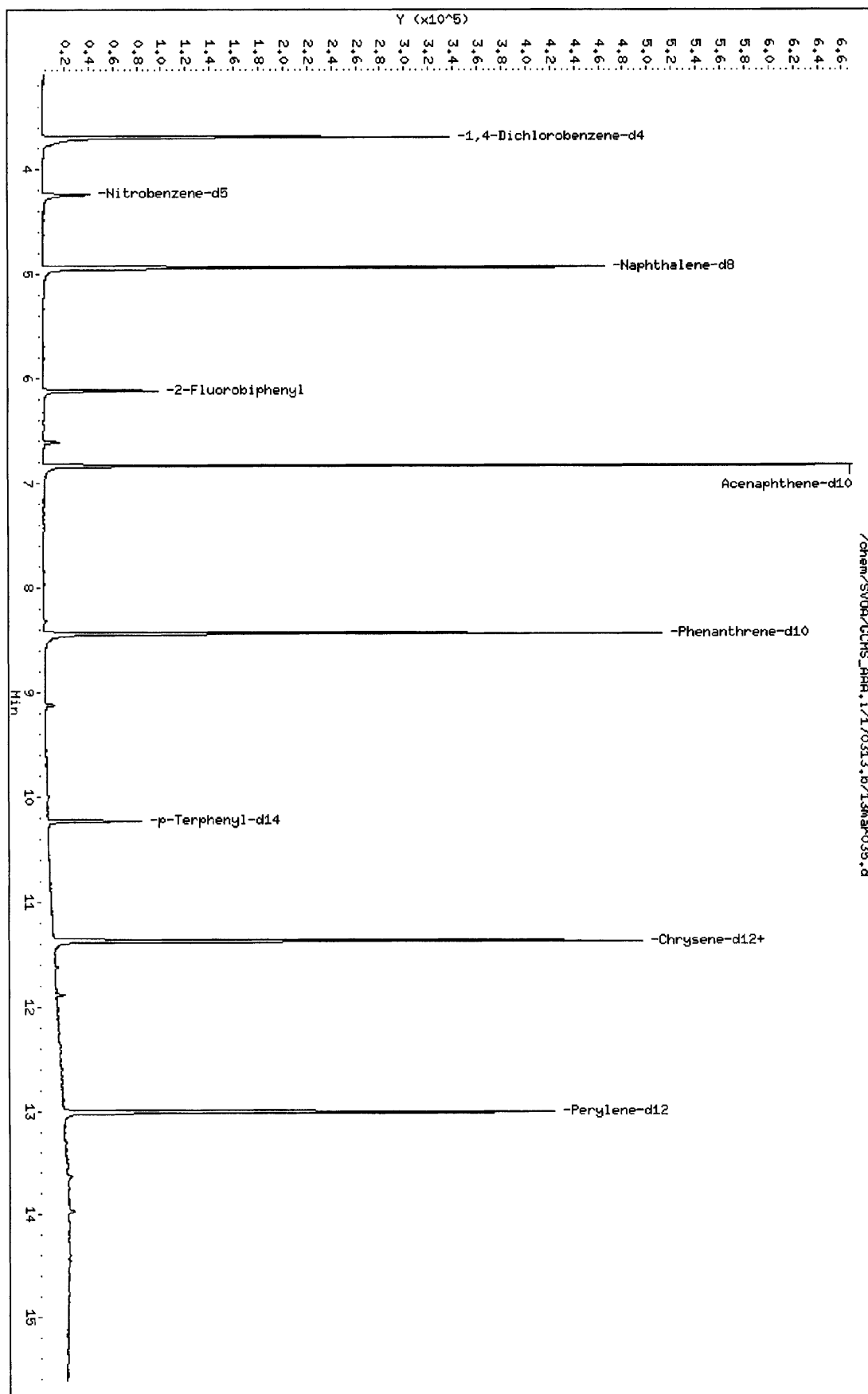
D = Compound was deleted.

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Data File: /chem/SV09/CCHS\_AAA.i/170313.b/13mar035.d  
Date: 13-MAR-2017 22:24  
Client ID:  
Sample Info: 17-03-0590-26  
Volume Injected (uL): 10.0  
Column phase: 3uM DB-SMS

Instrument: CCHS\_AAA.i  
Operator: 907  
Column diameter: 0.18

/chem/SV09/CCHS\_AAA.i/170313.b/13mar035.d



# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 17-03-0590  
**INSTRUMENT:** GC/MS AAA  
**EXTRACTION :** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 22:44  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar036.d\13mar036.rr

**# 27** **CLIENT SAMPLE NUMBER:** D-DU1-ISM3-8

|                                |                                                                   |
|--------------------------------|-------------------------------------------------------------------|
| <b>LCS/MB BATCH:</b> 170310L04 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.10 g |
| <b>MS/MSD BATCH:</b> 170310S04 | <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:**

| <u>COMPOUND</u>           | <u>ON COL CONC</u> | <u>DF</u> | <u>CONC</u> | <u>RL</u> | <u>QUAL</u> |
|---------------------------|--------------------|-----------|-------------|-----------|-------------|
| Naphthalene               | 0.0230             | 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     |             |

Return to Contents

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar036.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 22:44 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

Sample Name: 17-03-0590-27 Misc Info: S101716B 10UL  
 Response via Initial Calibration

|                                |  | I.S.       |        |        | On-Column |            |
|--------------------------------|--|------------|--------|--------|-----------|------------|
| Compounds                      |  | Ref.       | RT     | QIon   | Amount    | DEV (Min)  |
| =====                          |  | =====      | =====  | =====  | =====     | =====      |
| Internal Standards             |  |            |        |        |           |            |
| 1)*1,4-Dichlorobenzene-d4      |  | (1)        | 3.686  | 152    | 116306    | 5.000 0.00 |
| 3)*Naphthalene-d8              |  | (2)        | 4.934  | 136    | 370589    | 5.000 0.00 |
| 11)*Acenaphthene-d10           |  | (3)        | 6.831  | 164    | 210755    | 5.000 0.00 |
| 17)*Phenanthrene-d10           |  | (4)        | 8.437  | 188    | 372354    | 5.000 0.00 |
| 31)*Perylene-d12               |  | (6)        | 13.005 | 264    | 308525    | 5.000 0.00 |
| 25)*Chrysene-d12               |  | (5)        | 11.371 | 240    | 345845    | 5.000 0.00 |
| System Monitoring Compounds    |  |            |        |        |           |            |
| 2)\$Nitrobenzene-d5            |  | (2)        | 4.241  | 82     | 23784     | 0.859 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 85.872 |           |            |
| 7)\$2-Fluorobiphenyl           |  | (3)        | 6.115  | 172    | 51844     | 0.760 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 75.952 |           |            |
| 23)\$p-Terphenyl-d14           |  | (5)        | 10.229 | 244    | 45670     | 0.889 0.00 |
| SpikedAmount 1.000             |  | Recovery = |        | 88.881 |           |            |
| Target Compounds               |  |            |        |        |           | QValue     |
| 4) Naphthalene                 |  | (2)        | 4.956  | 128    | 1793      | 0.023 96   |
| 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  |        | 0D        | 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\_AAA.i/170313.b/13mar036.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 22:44 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 14-Mar-2017 09:57 ev7p

Sample Name: 17-03-0590-27 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 |      | 0D   | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |      | 0    | N.D.                          |        |

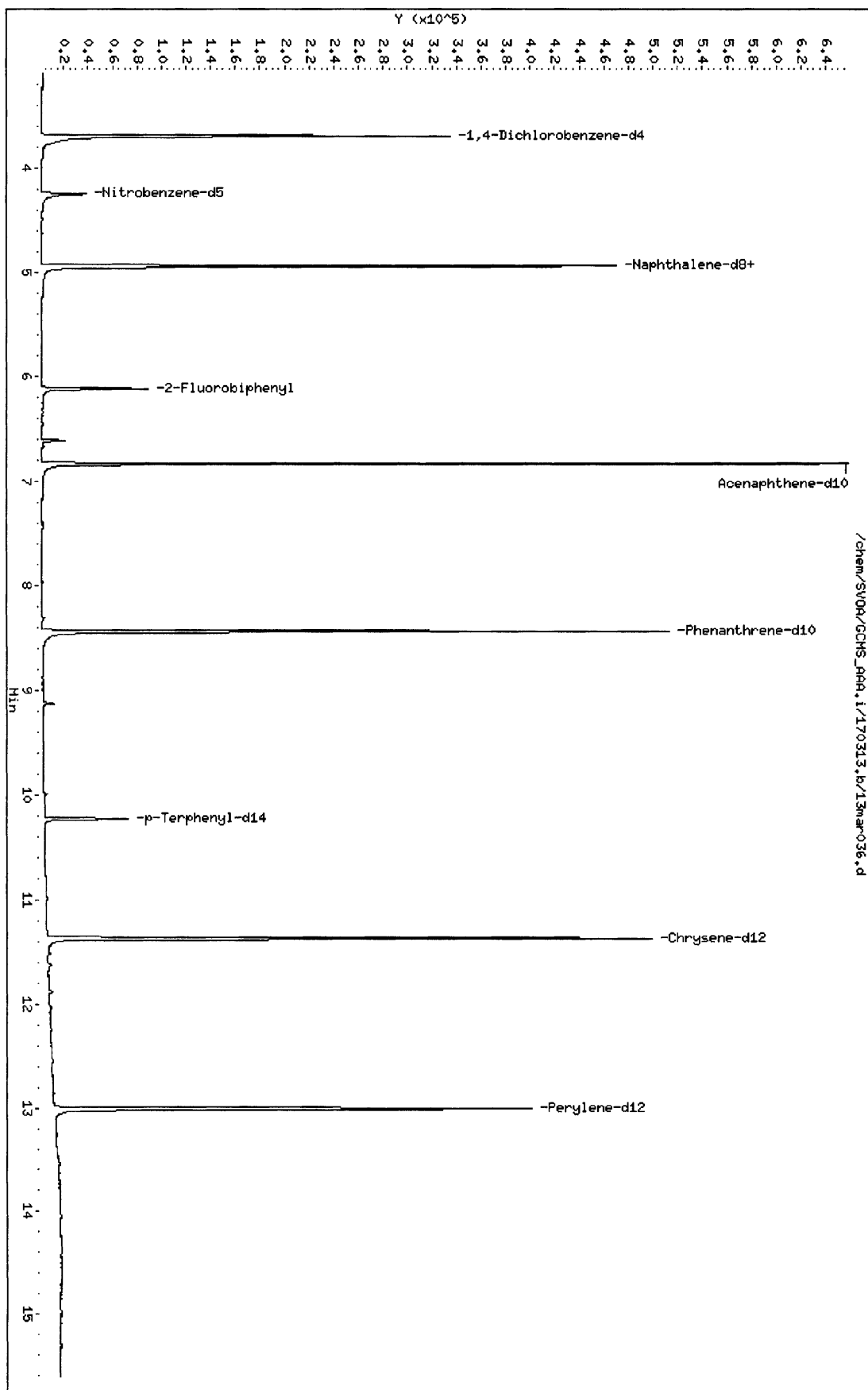
D = Compound was deleted.

page 2 of 2

Data File: /chem/SV09/CCHS\_AAA.i/170313.b/13mar036.d  
Date: 13-MAR-2017 22:44  
Client ID:  
Sample Info: 17-03-0590-27  
Volume Injected (uL): 10.0  
Column phase: J&W DB-SMS

Instrument: CCHS\_AAA.i  
Operator: 907  
Column diameter: 0.18

/chem/SV09/CCHS\_AAA.i/170313.b/13mar036.d





# 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:** 099-14-035-380  
**MB BATCH ID:** 170310L04  
**INSTRUMENT:** GC/MS AAA  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 17:09  
**REVIEWED BY:**  
**D/T REVIEWED:**  
**MATRIX:** Soil

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar019.d\13mar019.rr

**CLIENT WORK ORDER: 17-03-0590**

| <u>S#</u> | <u>RUN TYPE</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                             |
|-----------|-----------------|-------------------------|---------------------|--------------------------------------------------------------|
| 25        | D-DU1-ISM1-8    |                         | 2017-03-13 22:05    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar034.d\13mar034.rr |
| 26        | D-DU1-ISM2-8    |                         | 2017-03-13 22:24    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar035.d\13mar035.rr |
| 27        | D-DU1-ISM3-8    |                         | 2017-03-13 22:44    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar036.d\13mar036.rr |

# RAW DATA SHEET FOR METHOD: EPA 8270C SIM PAHs

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**WORK ORDER:** 099-14-035  
**INSTRUMENT:** GC/MS AAA  
**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 17:09  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar019.d\13mar019.rr

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

|                                |                                                                   |  |
|--------------------------------|-------------------------------------------------------------------|--|
| <b>LCS/MB BATCH:</b> 170310L04 | <b>SAMPLE VOLUME / WEIGHT:</b> DEFAULT: 20.00 g / ACTUAL: 20.00 g |  |
| <b>MS/MSD BATCH:</b>           | <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:**

| COMPOUND                  | ON COL CONC | DF   | CONC | RL    | QUAL |
|---------------------------|-------------|------|------|-------|------|
| 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 |      |

Return to Contents

# LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8270C SIM PAHS

**LCS SAMPLE ID:** 099-14-035-380  
**LCS/MB BATCH ID:** 170310L04  
**INSTRUMENT:** GC/MS AAA

**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 17:28  
**REVIEWED BY:**  
**D/T REVIEWED:**

**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar020.d\13mar020.rr

| COMPOUND                  | CONC.  | CONC REC | %REC | %REC CL | ME CL  | STATUS | QUALIFIERS |
|---------------------------|--------|----------|------|---------|--------|--------|------------|
| Naphthalene               | 0.1000 | 0.06679  | 67   | 51-129  | 38-142 | PASS   |            |
| 2-Methylnaphthalene       | 0.1000 | 0.07206  | 72   | 50-127  | 37-140 | PASS   |            |
| 1-Methylnaphthalene       | 0.1000 | 0.06639  | 66   | 54-132  | 41-145 | PASS   |            |
| Acenaphthylene            | 0.1000 | 0.05763  | 58   | 50-123  | 38-135 | PASS   |            |
| Acenaphthene              | 0.1000 | 0.05903  | 59   | 53-125  | 41-137 | PASS   |            |
| Fluorene                  | 0.1000 | 0.06071  | 61   | 55-127  | 43-139 | PASS   |            |
| Phenanthrene              | 0.1000 | 0.07239  | 72   | 50-122  | 38-134 | PASS   |            |
| Anthracene                | 0.1000 | 0.07105  | 71   | 50-132  | 36-146 | PASS   |            |
| Fluoranthene              | 0.1000 | 0.07754  | 78   | 55-127  | 43-139 | PASS   |            |
| Pyrene                    | 0.1000 | 0.07831  | 78   | 50-134  | 36-148 | PASS   |            |
| Benzo (a) Anthracene      | 0.1000 | 0.08311  | 83   | 50-133  | 36-147 | PASS   |            |
| Chrysene                  | 0.1000 | 0.08263  | 83   | 51-129  | 38-142 | PASS   |            |
| Benzo (k) Fluoranthene    | 0.1000 | 0.08987  | 90   | 49-150  | 32-167 | PASS   |            |
| Benzo (b) Fluoranthene    | 0.1000 | 0.08263  | 83   | 50-142  | 35-157 | PASS   |            |
| Benzo (a) Pyrene          | 0.1000 | 0.08523  | 85   | 50-134  | 36-148 | PASS   |            |
| Indeno (1,2,3-c,d) Pyrene | 0.1000 | 0.08255  | 83   | 50-148  | 34-164 | PASS   |            |
| Dibenz (a,h) Anthracene   | 0.1000 | 0.08511  | 85   | 50-133  | 36-147 | PASS   |            |
| Benzo (g,h,i) Perylene    | 0.1000 | 0.08546  | 85   | 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:** 17-03-0641-26  
**MS/MSD BATCH:** 170310S04  
**INSTRUMENTS:**  
**SAMPLE:** GC/MS AAA  
**MS:** GC/MS AAA  
**MSD:** GC/MS AAA

**EXTRACTION:** EPA 3545  
**D/T EXTRACTED:**  
**SAMPLE:** 2017-03-10 00:00  
**MS:** 2017-03-10 00:00  
**MSD:** 2017-03-10 00:00

**ANALYZED BY:** 907  
**D/T ANALYZED:**  
**SAMPLE:** 2017-03-13 19:46  
**MS:** 2017-03-14 12:30  
**MSD:** 2017-03-13 18:08  
**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-23 17:18

### 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 | 0.09218 | 92       | 0.08516  | 85        | 20-150   | 8   | 0-33   | PASS   |            |
| 2-Methylnaphthalene       | ND     | 1.000   | 0.1000 | 0.1045  | 104      | 0.09445  | 94        | 29-137   | 10  | 0-31   | PASS   |            |
| 1-Methylnaphthalene       | ND     | 1.000   | 0.1000 | 0.09569 | 96       | 0.08605  | 86        | 34-136   | 11  | 0-29   | PASS   |            |
| Acenaphthylene            | ND     | 1.000   | 0.1000 | 0.08040 | 80       | 0.07637  | 75        | 29-131   | 6   | 0-32   | PASS   |            |
| Acenaphthene              | ND     | 1.000   | 0.1000 | 0.08276 | 83       | 0.07798  | 78        | 29-137   | 6   | 0-28   | PASS   |            |
| Fluorene                  | ND     | 1.000   | 0.1000 | 0.08493 | 85       | 0.07855  | 79        | 36-132   | 8   | 0-27   | PASS   |            |
| Phenanthrene              | ND     | 1.000   | 0.1000 | 0.09732 | 97       | 0.09182  | 92        | 20-144   | 6   | 0-27   | PASS   |            |
| Anthracene                | ND     | 1.000   | 0.1000 | 0.1009  | 101      | 0.09138  | 91        | 26-134   | 10  | 0-27   | PASS   |            |
| Fluoranthene              | ND     | 1.000   | 0.1000 | 0.09398 | 94       | 0.08904  | 89        | 20-151   | 5   | 0-26   | PASS   |            |
| Pyrene                    | ND     | 1.000   | 0.1000 | 0.1040  | 104      | 0.09233  | 92        | 20-150   | 12  | 0-32   | PASS   |            |
| Benzo (a) Anthracene      | ND     | 1.000   | 0.1000 | 0.09475 | 95       | 0.09013  | 90        | 24-150   | 5   | 0-24   | PASS   |            |
| Chrysene                  | ND     | 1.000   | 0.1000 | 0.09979 | 100      | 0.08850  | 88        | 25-145   | 12  | 0-28   | PASS   |            |
| Benzo (k) Fluoranthene    | ND     | 1.000   | 0.1000 | 0.1023  | 102      | 0.09310  | 93        | 28-148   | 9   | 0-26   | PASS   |            |
| Benzo (b) Fluoranthene    | ND     | 1.000   | 0.1000 | 0.08982 | 90       | 0.08694  | 87        | 21-153   | 3   | 0-26   | PASS   |            |
| Benzo (a) Pyrene          | ND     | 1.000   | 0.1000 | 0.09441 | 94       | 0.08980  | 90        | 29-149   | 5   | 0-22   | PASS   |            |
| Indeno (1,2,3-c,d) Pyrene | ND     | 1.000   | 0.1000 | 0.08802 | 88       | 0.08785  | 88        | 20-154   | 0   | 0-25   | PASS   |            |
| Dibenz (a,h) Anthracene   | ND     | 1.000   | 0.1000 | 0.08938 | 89       | 0.08940  | 89        | 20-132   | 0   | 0-26   | PASS   |            |
| Benzo (g,h,i) Perylene    | ND     | 1.000   | 0.1000 | 0.08732 | 87       | 0.09140  | 91        | 20-148   | 5   | 0-27   | PASS   |            |

### Data Files:

#### DATA FILE PATH

| TYPE | DATA FILE   |
|------|-------------|
| MS   | 14mar007.rr |
| MSD  | 13mar022.rr |

# **SURROGATE RECOVERIES FOR METHOD: EPA 8270C SIM PAHs**

WORK ORDER: 17-03-0590

BATCH ID:

REVIEWED BY:

D/T REVIEWED:

LCS/MB: 170310L04MS: 170310S04EXTRACTION: EPA 3545

# 25

CLIENT SAMPLE NUMBER: D-DU1-ISM1-8INSTRUMENT: GC/MS AAAANALYZED BY: 907D/T EXTRACTED: 2017-03-10 00:00D/T ANALYZED 2017-03-13 22:05DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar034.d\13mar034.rrCOMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| 2-Fluorobiphenyl | 76           | 13-127          | PASS          |                   |
| Nitrobenzene-d5  | 91           | 17-137          | PASS          |                   |
| p-Terphenyl-d14  | 93           | 4-160           | PASS          |                   |

# 26

CLIENT SAMPLE NUMBER: D-DU1-ISM2-8INSTRUMENT: GC/MS AAAANALYZED BY: 907D/T EXTRACTED: 2017-03-10 00:00D/T ANALYZED 2017-03-13 22:24DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar035.d\13mar035.rrCOMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| p-Terphenyl-d14  | 99           | 4-160           | PASS          |                   |
| Nitrobenzene-d5  | 93           | 17-137          | PASS          |                   |
| 2-Fluorobiphenyl | 81           | 13-127          | PASS          |                   |

# 27

CLIENT SAMPLE NUMBER: D-DU1-ISM3-8INSTRUMENT: GC/MS AAAANALYZED BY: 907D/T EXTRACTED: 2017-03-10 00:00D/T ANALYZED 2017-03-13 22:44DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar036.d\13mar036.rrCOMMENT:

| <u>COMPOUND</u>  | <u>% REC</u> | <u>% REC CL</u> | <u>STATUS</u> | <u>QUALIFIERS</u> |
|------------------|--------------|-----------------|---------------|-------------------|
| 2-Fluorobiphenyl | 76           | 13-127          | PASS          |                   |
| Nitrobenzene-d5  | 86           | 17-137          | PASS          |                   |
| p-Terphenyl-d14  | 89           | 4-160           | PASS          |                   |

**SURROGATE RECOVERIES  
FOR METHOD: EPA 8270C SIM PAHs**

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WORK ORDER: 17-03-0589

BATCH ID:

**LCS/MB:**     **170310L04**

**MS:**

EXTRACTION : EPA 3545

REVIEWED BY: 262

D/T REVIEWED: 2017-03-15 12:31

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

INSTRUMENT: GC/MS AAA

ANALYZED BY: 907

D/T EXTRACTED: 2017-03-10 00:00

D/T ANALYZED 2017-03-13 17:09

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar019.d\13mar019.rr

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| 2-Fluorobiphenyl | 55    | 13-127   | PASS   |            |
| Nitrobenzene-d5  | 61    | 17-137   | PASS   |            |
| p-Terphenyl-d14  | 74    | 4-160    | PASS   |            |

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

INSTRUMENT: GC/MS AAA

ANALYZED BY: 907

D/T EXTRACTED: 2017-03-10 00:00

D/T ANALYZED 2017-03-13 17:28

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar020.d\13mar020.rr

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| p-Terphenyl-d14  | 82    | 4-160    | PASS   |            |
| Nitrobenzene-d5  | 70    | 17-137   | PASS   |            |
| 2-Fluorobiphenyl | 59    | 13-127   | PASS   |            |

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

INSTRUMENT: GC/MS AAA

ANALYZED BY: 907

D/T EXTRACTED: 2017-03-10 00:00

D/T ANALYZED 2017-03-14 12:30

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170314\14mar007.d\14mar007.rr

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| p-Terphenyl-d14  | 102   | 4-160    | PASS   |            |
| Nitrobenzene-d5  | 92    | 17-137   | PASS   |            |
| 2-Fluorobiphenyl | 80    | 13-127   | PASS   |            |

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

INSTRUMENT: GC/MS AAA

ANALYZED BY: 907

D/T EXTRACTED: 2017-03-10 00:00

D/T ANALYZED 2017-03-13 18:08

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar022.d\13mar022.rr

COMMENT:

| COMPOUND         | % REC | % REC CL | STATUS | QUALIFIERS |
|------------------|-------|----------|--------|------------|
| 2-Fluorobiphenyl | 76    | 13-127   | PASS   |            |
| Nitrobenzene-d5  | 86    | 17-137   | PASS   |            |
| p-Terphenyl-d14  | 88    | 4-160    | PASS   |            |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar019.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 17:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: MB 170310 L04 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)          | 3.686  | 152    | 128497 | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)          | 4.933  | 136    | 411882 | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.830  | 164    | 237794 | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.436  | 188    | 424517 | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 13.008 | 264    | 371587 | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 11.370 | 240    | 403685 | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |        |        |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 4.240  | 82     | 18820  | 0.611                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 61.137 |        |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 6.115  | 172    | 42720  | 0.555                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 55.469 |        |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 10.228 | 244    | 44192  | 0.737                         | 0.00      |
| SpikedAmount 1.000             | Recovery =   |        | 73.682 |        |                               |           |
| 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  |        | 0D     | 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  |        | 0D     | 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\_AAA.i/170313.b/13mar019.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 17:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 14-Mar-2017 09:49 ev7p

Sample Name: MB 170310 L04 Misc Info: S101716B 10UL  
Response via Initial Calibration

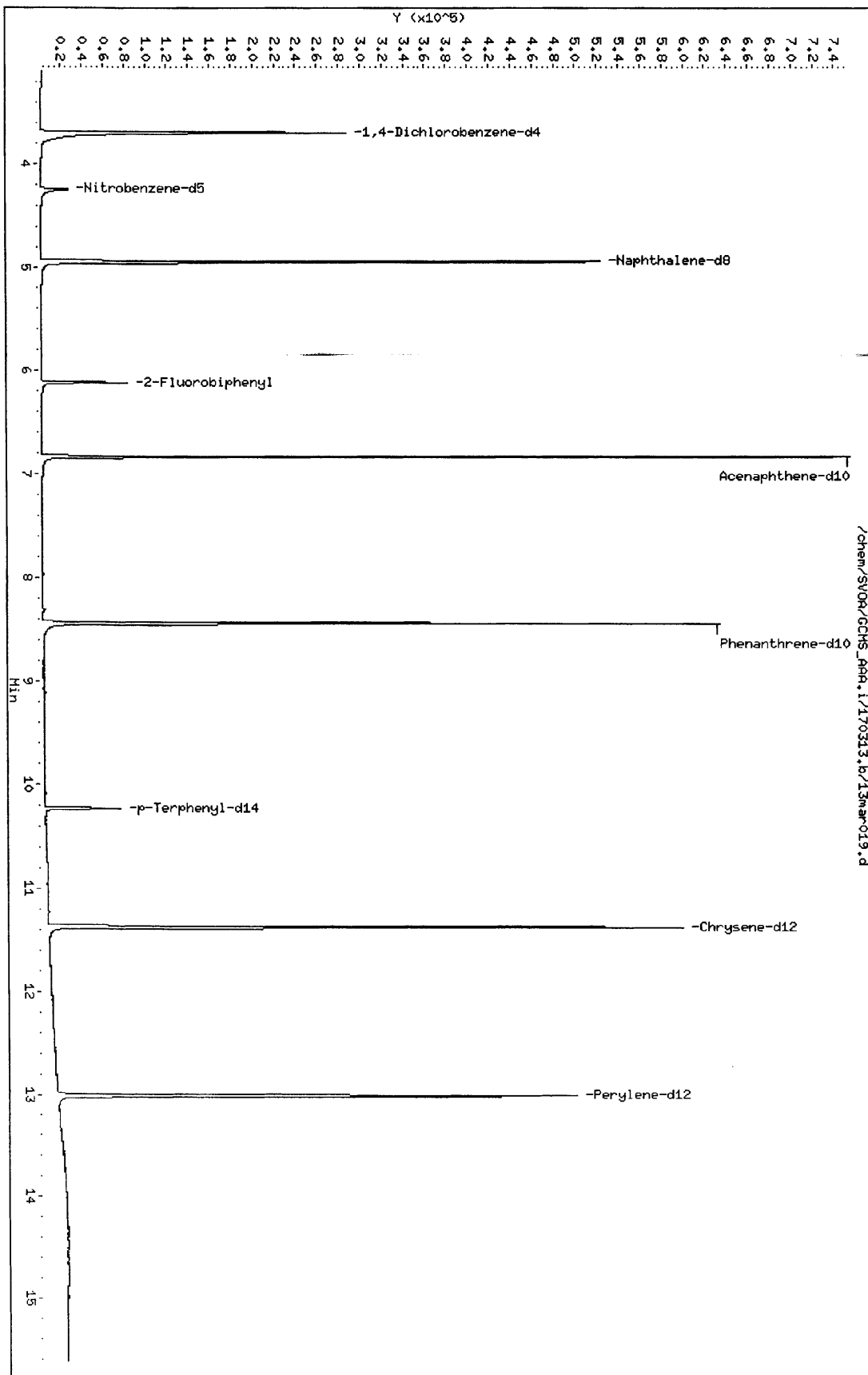
| Compounds                | I.S.<br>Ref. | RT    | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 0.000 |      | 0    | N.D.                          |        |
| 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.                          |        |

page 2 of 2

Data File: /chem/SVDR/GCHS\_AAA.i/170313.b/13mar019.d  
 Date : 13-Mar-2017 17:09  
 Client ID:  
 Sample Info: MB 170310 L04  
 Volume Injected (uL): 10.0  
 Column phase: J&M DB-SHS

Instrument: GCHS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18

Page 1



## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar020.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 17:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 13-Mar-2017 17:51 Unknown

Sample Name: LCS 170310 L04 Misc Info: S101716B 10UL  
 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)  |  | 3.683      | 152    | 121322 | 5.000            | 0.00      |
| 3) *Naphthalene-d8             | (2)  |  | 4.934      | 136    | 381080 | 5.000            | 0.00      |
| 11) *Acenaphthene-d10          | (3)  |  | 6.834      | 164    | 215883 | 5.000            | 0.00      |
| 17) *Phenanthrene-d10          | (4)  |  | 8.437      | 188    | 389406 | 5.000            | 0.00      |
| 31) *Perylene-d12              | (6)  |  | 13.005     | 264    | 338055 | 5.000            | 0.00      |
| 25) *Chrysene-d12              | (5)  |  | 11.370     | 240    | 372921 | 5.000            | 0.00      |
|                                |      |  |            |        |        |                  |           |
| System Monitoring Compounds    |      |  |            |        |        |                  |           |
| 2) \$Nitrobenzene-d5           | (2)  |  | 4.240      | 82     | 19848  | 0.697            | 0.00      |
| SpikedAmount 1.000             |      |  | Recovery = | 69.689 |        |                  |           |
| 7) \$2-Fluorobiphenyl          | (3)  |  | 6.115      | 172    | 41547  | 0.594            | 0.00      |
| SpikedAmount 1.000             |      |  | Recovery = | 59.422 |        |                  |           |
| 23) \$p-Terphenyl-d14          | (5)  |  | 10.228     | 244    | 45181  | 0.815            | 0.00      |
| SpikedAmount 1.000             |      |  | Recovery = | 81.546 |        |                  |           |
|                                |      |  |            |        |        |                  |           |
| Target Compounds               |      |  |            |        |        |                  | QValue    |
| 4) Naphthalene                 | (2)  |  | 4.956      | 128    | 53555  | 0.668            | 99        |
| 5) 2-Methylnaphthalene         | (2)  |  | 5.687      | 142    | 37676  | 0.721            | 99        |
| 6) 1-Methylnaphthalene         | (2)  |  | 5.803      | 142    | 34343  | 0.664            | 100       |
| 10) Acenaphthylene             | (3)  |  | 6.663      | 152    | 56482  | 0.576            | 99        |
| 12) Acenaphthene               | (3)  |  | 6.865      | 153    | 33377  | 0.590            | 100       |
| 15) Fluorene                   | (3)  |  | 7.420      | 166    | 39907  | 0.607            | 100       |
| 18) Phenanthrene               | (4)  |  | 8.461      | 178    | 60481  | 0.724            | 99        |
| 19) Anthracene                 | (4)  |  | 8.509      | 178    | 60407  | 0.711            | 99        |
| 21) Fluoranthene               | (4)  |  | 9.776      | 202    | 79297  | 0.775            | 99        |
| 22) Pyrene                     | (5)  |  | 10.014     | 202    | 82610  | 0.783            | 100       |
| 24) Benzo (a) Anthracene       | (5)  |  | 11.350     | 228    | 81492  | 0.831            | 100       |
| 26) Chrysene                   | (5)  |  | 11.399     | 228    | 76147  | 0.826            | 100       |
| 27) Benzo (b) Fluoranthene     | (6)  |  | 12.581     | 252    | 75142  | 0.826            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)  |  | 12.609     | 252    | 87687  | 0.899            | 99        |
| 30) Benzo (a) Pyrene           | (6)  |  | 12.940     | 252    | 73794  | 0.852            | 99        |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)  |  | 14.183     | 276    | 82911  | 0.826            | 99        |
| 34) Dibenz (a,h) Anthracene    | (6)  |  | 14.203     | 278    | 67257  | 0.851            | 99        |
| 35) Benzo (g,h,i) Perylene     | (6)  |  | 14.486     | 276    | 69837  | 0.855            | 99        |
| 8) Biphenyl                    | (3)  |  | 6.203      | 154    | 51200  | 0.566            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)  |  | 6.367      | 156    | 36329  | 0.557            | 99        |
| 14) 1,6,7-Trimethylnaphthalene | (3)  |  | 7.294      | 170    | 35439  | 0.549            | 99        |
| 16) Dibenzothiophene           | (3)  |  | 8.324      | 184    | 72060  | 0.592            | 99        |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

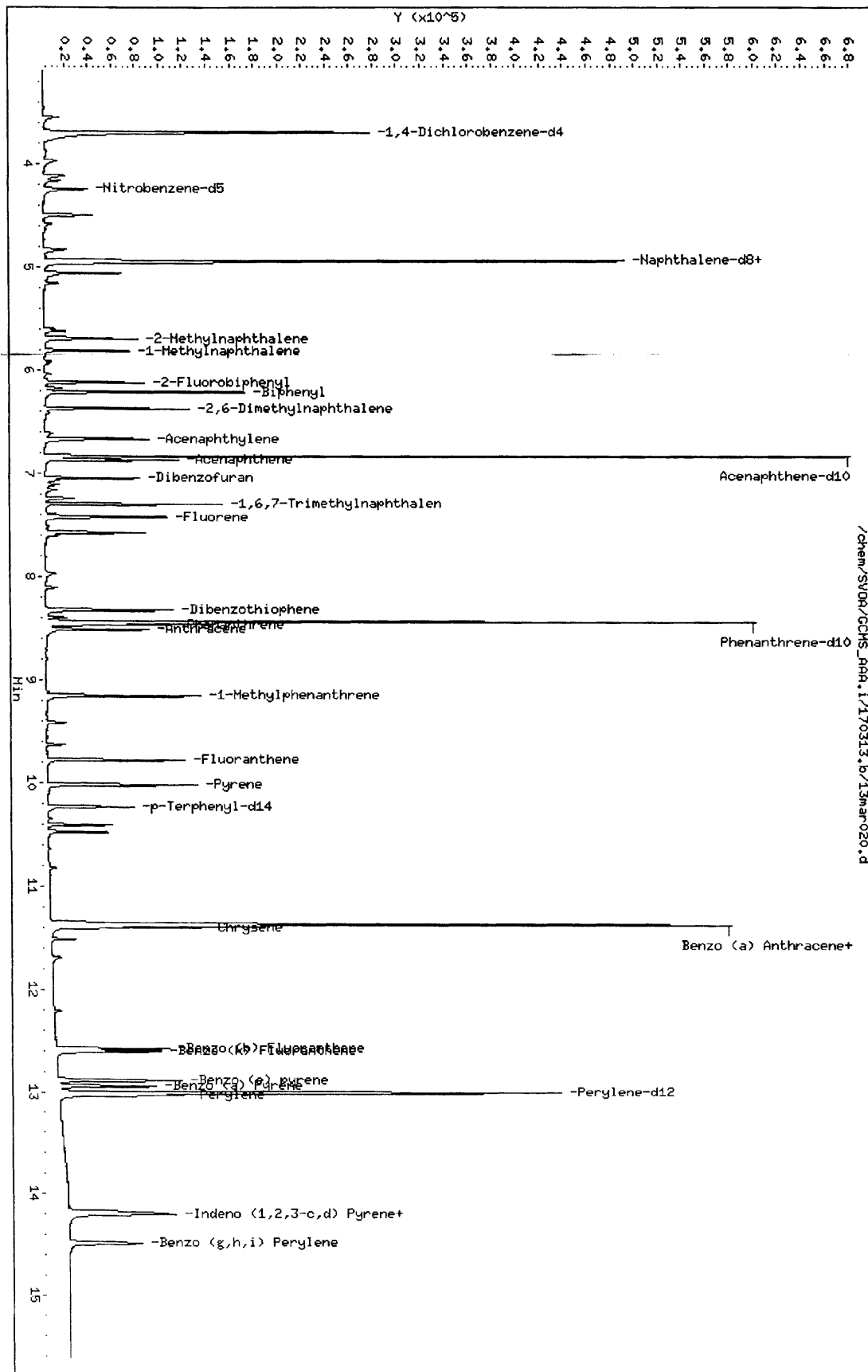
Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar020.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 17:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 13-Mar-2017 17:51 Unknown

Sample Name: LCS 170310 L04 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)          | 9.151  | 192  | 56611 | 0.696                         | 99     |
| 29) Benzo (e) pyrene     | (6)          | 12.883 | 252  | 86628 | 0.811                         | 99     |
| 32) Perylene             | (6)          | 13.033 | 252  | 86459 | 0.817                         | 99     |
| 13) Dibenzofuran         | (3)          | 7.042  | 168  | 49673 | 0.600                         | 100    |

page 2 of 2



Data File: /chem/SV04/GCHS\_AAA.i/170313.b/13mar020.d  
 Date : 13-MAR-2017 17:28  
 Client ID:  
 Sample Info: LCS 170310 L04  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-5MS

Instrument: GCHS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170314.b/14mar007.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 14-MAR-2017 12:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170314.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 14-MAR-2017 11:17  
 Date, time and analyst ID of latest file update: 14-Mar-2017 12:52 Unknown

Sample Name: 17-03-0641-26 MS RB Misc Info: S101716B 10UL  
 Response via Initial Calibration

|                                |       | I.S.               |        |      |        | On-Column |           |
|--------------------------------|-------|--------------------|--------|------|--------|-----------|-----------|
| Compounds                      |       | Ref.               | RT     | QIon | Area   | Amount    | DEV (Min) |
|                                |       |                    |        |      |        | (mg/L)    |           |
| =====                          |       |                    |        |      |        |           |           |
| Internal Standards             |       |                    |        |      |        |           |           |
| 1) *1,4-Dichlorobenzene-d4     |       | (1)                | 3.677  | 152  | 98844  | 5.000     | 0.00      |
| 3) *Naphthalene-d8             |       | (2)                | 4.921  | 136  | 307556 | 5.000     | 0.00      |
| 11) *Acenaphthene-d10          |       | (3)                | 6.821  | 164  | 180156 | 5.000     | 0.00      |
| 17) *Phenanthrene-d10          |       | (4)                | 8.425  | 188  | 312346 | 5.000     | 0.00      |
| 31) *Perylene-d12              |       | (6)                | 12.997 | 264  | 232750 | 5.000     | 0.00      |
| 25) *Chrysene-d12              |       | (5)                | 11.362 | 240  | 268408 | 5.000     | 0.00      |
|                                |       |                    |        |      |        |           |           |
| System Monitoring Compounds    |       |                    |        |      |        |           |           |
| 2) \$Nitrobenzene-d5           |       | (2)                | 4.228  | 82   | 21186  | 0.922     | 0.00      |
| SpikedAmount                   | 1.000 | Recovery = 92.173  |        |      |        |           |           |
| 7) \$2-Fluorobiphenyl          |       | (3)                | 6.103  | 172  | 46763  | 0.801     | 0.00      |
| SpikedAmount                   | 1.000 | Recovery = 80.145  |        |      |        |           |           |
| 23) \$p-Terphenyl-d14          |       | (5)                | 10.220 | 244  | 40841  | 1.024     | 0.00      |
| SpikedAmount                   | 1.000 | Recovery = 102.417 |        |      |        |           |           |
|                                |       |                    |        |      |        |           |           |
| Target Compounds               |       |                    |        |      |        |           | QValue    |
| 4) Naphthalene                 |       | (2)                | 4.943  | 128  | 59651  | 0.922     | 100       |
| 5) 2-Methylnaphthalene         |       | (2)                | 5.674  | 142  | 44091  | 1.045     | 100       |
| 6) 1-Methylnaphthalene         |       | (2)                | 5.791  | 142  | 39948  | 0.957     | 98        |
| 10) Acenaphthylene             |       | (3)                | 6.651  | 152  | 65760  | 0.804     | 100       |
| 12) Acenaphthene               |       | (3)                | 6.856  | 153  | 39054  | 0.828     | 100       |
| 15) Fluorene                   |       | (3)                | 7.407  | 166  | 46592  | 0.849     | 99        |
| 18) Phenanthrene               |       | (4)                | 8.449  | 178  | 65225  | 0.973     | 99        |
| 19) Anthracene                 |       | (4)                | 8.501  | 178  | 68782  | 1.009     | 98        |
| 21) Fluoranthene               |       | (4)                | 9.765  | 202  | 77092  | 0.940     | 99        |
| 22) Pyrene                     |       | (5)                | 10.007 | 202  | 78927  | 1.040     | 99        |
| 24) Benzo (a) Anthracene       |       | (5)                | 11.342 | 228  | 66869  | 0.948     | 100       |
| 26) Chrysene                   |       | (5)                | 11.391 | 228  | 66189  | 0.998     | 99        |
| 27) Benzo (b) Fluoranthene     |       | (6)                | 12.573 | 252  | 56239  | 0.898     | 99        |
| 28) Benzo (k) Fluoranthene     |       | (6)                | 12.601 | 252  | 68738  | 1.023     | 96        |
| 30) Benzo (a) Pyrene           |       | (6)                | 12.932 | 252  | 56276  | 0.944     | 97        |
| 33) Indeno (1,2,3-c,d) Pyrene  |       | (6)                | 14.175 | 276  | 60865  | 0.880     | 98        |
| 34) Dibenz (a,h) Anthracene    |       | (6)                | 14.195 | 278  | 48629  | 0.894     | 97        |
| 35) Benzo (g,h,i) Perylene     |       | (6)                | 14.478 | 276  | 49130  | 0.873     | 97        |
| 8) Biphenyl                    |       | (3)                | 6.194  | 154  | 59211  | 0.785     | 100       |
| 9) 2,6-Dimethylnaphthalene     |       | (3)                | 6.355  | 156  | 42600  | 0.782     | 98        |
| 14) 1,6,7-Trimethylnaphthalene |       | (3)                | 7.284  | 170  | 42387  | 0.787     | 98        |
| 16) Dibenzothiophene           |       | (3)                | 8.312  | 184  | 79137  | 0.780     | 99        |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170314.b/14mar007.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 14-MAR-2017 12:30 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170314.b/simpah-extra.m Sublist used: all  
Calibration date and time: 14-MAR-2017 11:17  
Date, time and analyst ID of latest file update: 14-Mar-2017 12:52 Unknown

Sample Name: 17-03-0641-26 MS RB  
Response via Initial Calibration

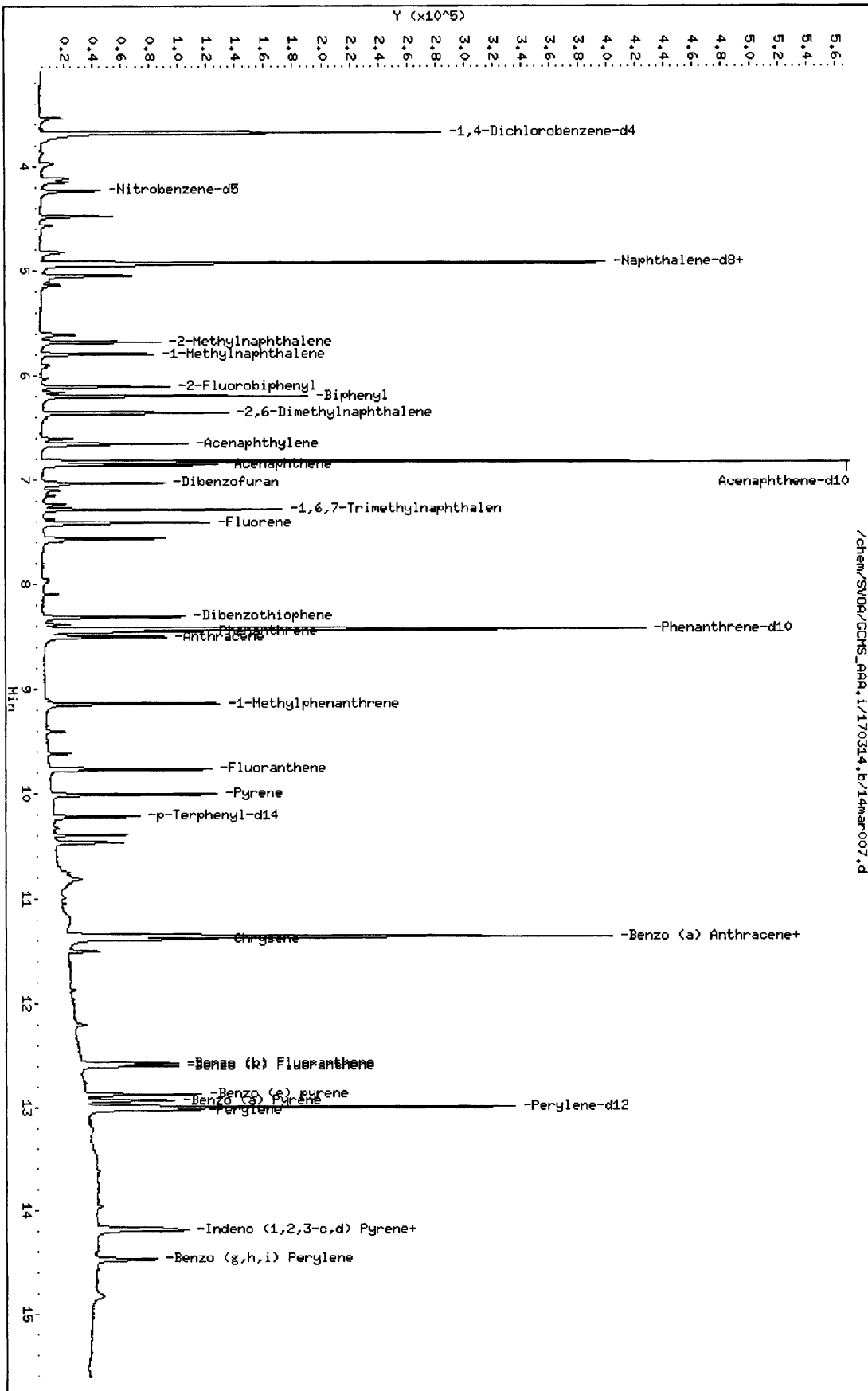
Misc Info: S101716B 10UL

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.143  | 192  | 59246 | 1.011                         | 98     |
| 29) Benzo (e) pyrene     | (6)          | 12.876 | 252  | 65720 | 0.894                         | 95     |
| 32) Perylene             | (6)          | 13.025 | 252  | 65907 | 0.905                         | 77     |
| 13) Dibenzofuran         | (3)          | 7.032  | 168  | 58392 | 0.845                         | 98     |

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Data File: /chem/SV06/COHS\_A00.i/170314.b/14mar007.d  
 Date : 14-Mar-2017 12:30  
 Client ID:  
 Sample Info: 17-03-0641-26 HS RB  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-SMS

Instrument: COHS\_A00.i  
 Operator: 907  
 Column diameter: 0.18





## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar022.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 18:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 13-Mar-2017 18:30 Unknown

Sample Name: 17-03-0641-26 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)          | 3.686  | 152   | 113728 | 5.000                         | 0.00     |
| 3) *Naphthalene-d8             | (2)          | 4.934  | 136   | 353701 | 5.000                         | 0.00     |
| 11) *Acenaphthene-d10          | (3)          | 6.834  | 164   | 198392 | 5.000                         | 0.00     |
| 17) *Phenanthrene-d10          | (4)          | 8.437  | 188   | 352891 | 5.000                         | 0.00     |
| 31) *Perylene-d12              | (6)          | 13.005 | 264   | 300339 | 5.000                         | 0.00     |
| 25) *Chrysene-d12              | (5)          | 11.370 | 240   | 324694 | 5.000                         | 0.00     |
| System Monitoring Compounds    |              |        |       |        |                               |          |
| 2) \$Nitrobenzene-d5           | (2)          | 4.237  | 82    | 22723  | 0.860                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 85.960 |       |        |                               |          |
| 7) \$2-Fluorobiphenyl          | (3)          | 6.112  | 172   | 48520  | 0.755                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 75.512 |       |        |                               |          |
| 23) \$p-Terphenyl-d14          | (5)          | 10.228 | 244   | 42512  | 0.881                         | 0.00     |
| SpikedAmount 1.000             | Recovery =   | 88.126 |       |        |                               |          |
| Target Compounds               |              |        |       |        |                               |          |
|                                |              |        |       |        | QValue                        |          |
| 4) Naphthalene                 | (2)          | 4.953  | 128   | 63381  | 0.852                         | 99       |
| 5) 2-Methylnaphthalene         | (2)          | 5.687  | 142   | 45837  | 0.945                         | 99       |
| 6) 1-Methylnaphthalene         | (2)          | 5.800  | 142   | 41316  | 0.861                         | 99       |
| 10) Acenaphthylene             | (3)          | 6.664  | 152   | 67890  | 0.754                         | 100      |
| 12) Acenaphthene               | (3)          | 6.865  | 153   | 40522  | 0.780                         | 99       |
| 15) Fluorene                   | (3)          | 7.417  | 166   | 47449  | 0.785                         | 99       |
| 18) Phenanthrene               | (4)          | 8.461  | 178   | 69524  | 0.918                         | 99       |
| 19) Anthracene                 | (4)          | 8.509  | 178   | 70407  | 0.914                         | 99       |
| 21) Fluoranthene               | (4)          | 9.773  | 202   | 82520  | 0.890                         | 99       |
| 22) Pyrene                     | (5)          | 10.015 | 202   | 84801  | 0.923                         | 99       |
| 24) Benzo (a) Anthracene       | (5)          | 11.350 | 228   | 76948  | 0.901                         | 100      |
| 26) Chrysene                   | (5)          | 11.399 | 228   | 71010  | 0.885                         | 99       |
| 27) Benzo (b) Fluoranthene     | (6)          | 12.581 | 252   | 70238  | 0.869                         | 99       |
| 28) Benzo (k) Fluoranthene     | (6)          | 12.609 | 252   | 80699  | 0.931                         | 99       |
| 30) Benzo (a) Pyrene           | (6)          | 12.940 | 252   | 69075  | 0.898                         | 99       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)          | 14.183 | 276   | 78391  | 0.879                         | 98       |
| 34) Dibenz (a,h) Anthracene    | (6)          | 14.207 | 278   | 62762  | 0.894                         | 96       |
| 35) Benzo (g,h,i) Perylene     | (6)          | 14.490 | 276   | 66356  | 0.914                         | 100      |
| 8) Biphenyl                    | (3)          | 6.204  | 154   | 62476  | 0.752                         | 100      |
| 9) 2,6-Dimethylnaphthalene     | (3)          | 6.367  | 156   | 43983  | 0.733                         | 99       |
| 14) 1,6,7-Trimethylnaphthalene | (3)          | 7.294  | 170   | 43027  | 0.726                         | 99       |
| 16) Dibenzothiophene           | (3)          | 8.324  | 184   | 83210  | 0.744                         | 99       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar022.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 18:08 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all

Calibration date and time: 13-MAR-2017 16:28

Date, time and analyst ID of latest file update: 13-Mar-2017 18:30 Unknown

Sample Name: 17-03-0641-26 MSD

Misc Info: S101716B 10UL

Response via Initial Calibration

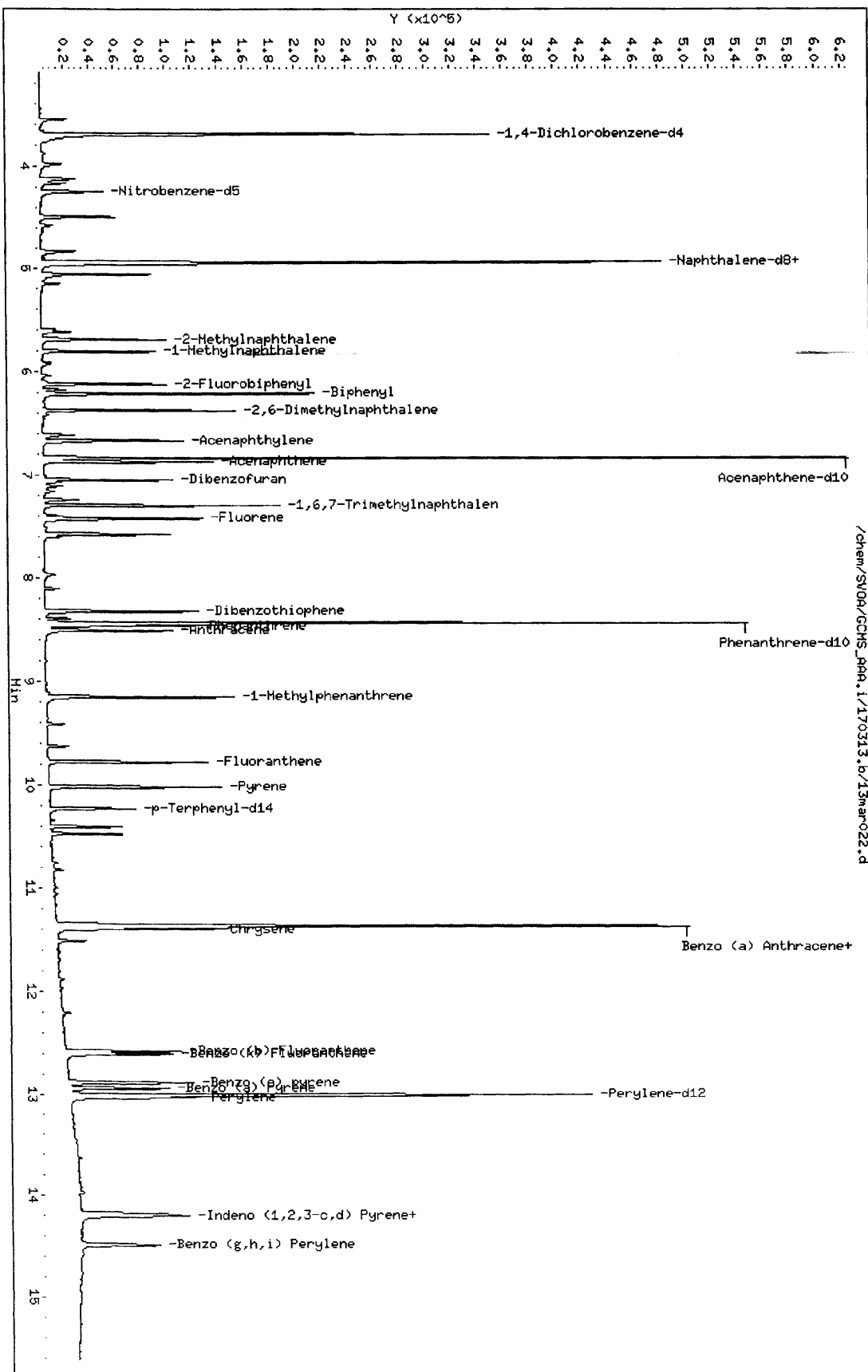
| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.151  | 192  | 62302 | 0.879                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.884 | 252  | 80671 | 0.850                         | 99     |
| 32) Perylene             | (6)          | 13.033 | 252  | 81044 | 0.862                         | 96     |
| 13) Dibenzofuran         | (3)          | 7.042  | 168  | 60424 | 0.794                         | 99     |

page 2 of 2

Data File: /chem/SV08/GCHS\_APP.1/170313.b/13mar022.d  
 Date: 13-Mar-2017 18:08  
 Client ID:  
 Sample Info: 17-03-0641-26 MSD  
 Volume Injected (uL): 10.0  
 Column phase: J&M DB-SMS

Instrument: GCHS\_APP.1  
 Operator: 907  
 Column diameter: 0.18

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## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar027.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 19:46 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 16:28  
 Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0641-26 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)          | 3.686  | 152  | 121223            | 5.000                         | 0.00      |
| 3)*Naphthalene-d8              | (2)          | 4.934  | 136  | 377476            | 5.000                         | 0.00      |
| 11)*Acenaphthene-d10           | (3)          | 6.831  | 164  | 216433            | 5.000                         | 0.00      |
| 17)*Phenanthrene-d10           | (4)          | 8.437  | 188  | 386679            | 5.000                         | 0.00      |
| 31)*Perylene-d12               | (6)          | 13.005 | 264  | 334402            | 5.000                         | 0.00      |
| 25)*Chrysene-d12               | (5)          | 11.370 | 240  | 363542            | 5.000                         | 0.00      |
| System Monitoring Compounds    |              |        |      |                   |                               |           |
| 2)\$Nitrobenzene-d5            | (2)          | 4.237  | 82   | 21928             | 0.777                         | 0.00      |
| SpikedAmount 1.000             |              |        |      | Recovery = 77.726 |                               |           |
| 7)\$2-Fluorobiphenyl           | (3)          | 6.115  | 172  | 50547             | 0.721                         | 0.00      |
| SpikedAmount 1.000             |              |        |      | Recovery = 72.109 |                               |           |
| 23)\$p-Terphenyl-d14           | (5)          | 10.228 | 244  | 46838             | 0.867                         | 0.00      |
| SpikedAmount 1.000             |              |        |      | Recovery = 86.717 |                               |           |
| 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  |      | 0D                | 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\_AAA.i/170313.b/13mar027.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 19:46 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 16:28  
Date, time and analyst ID of latest file update: 14-Mar-2017 09:55 ev7p

Sample Name: 17-03-0641-26 Misc Info: S101716B 10UL  
Response via Initial Calibration

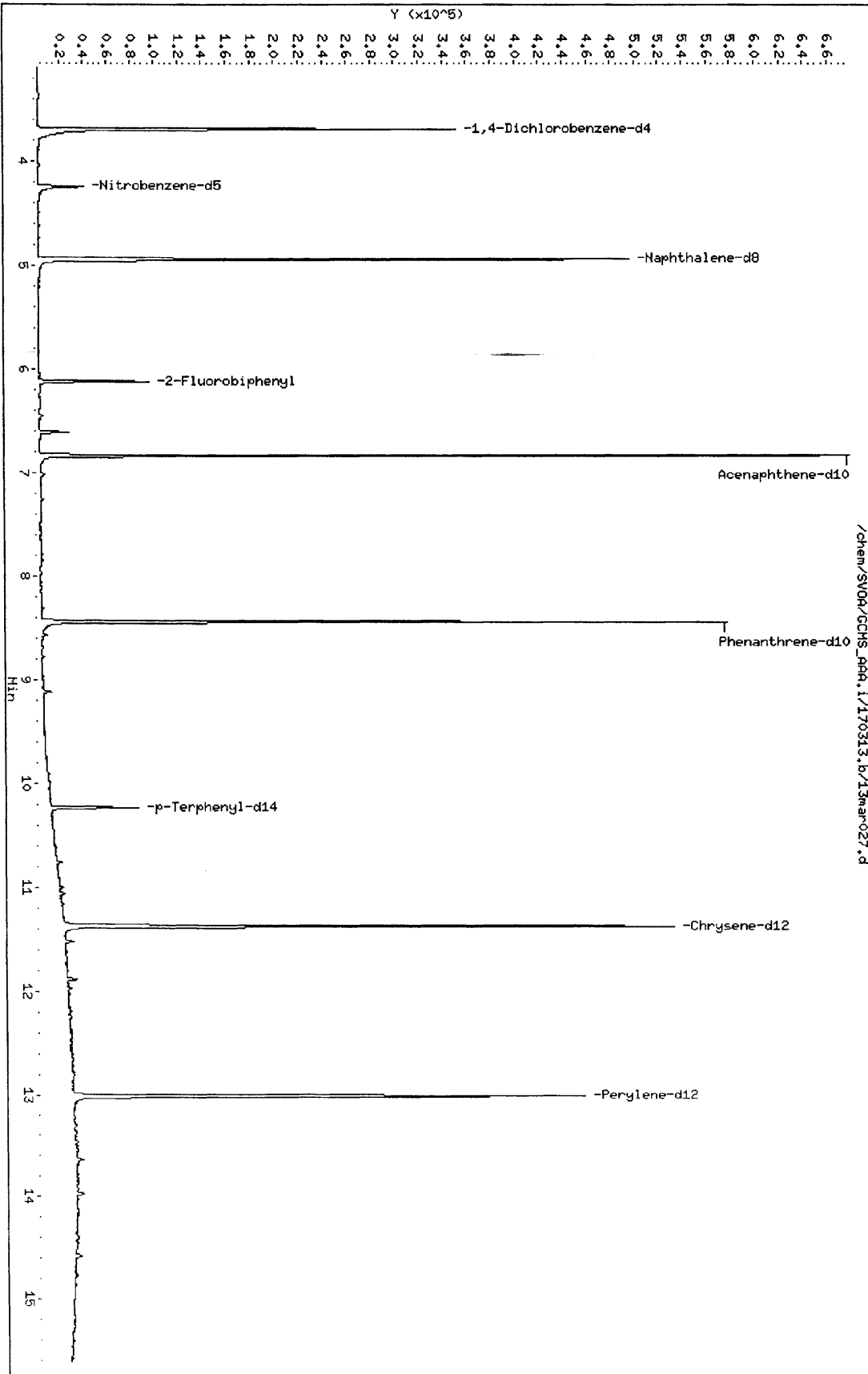
| Compounds                | I.S.<br>Ref. | RT    | QIon | Area | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|-------|------|------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 0.000 |      | 0    | N.D.                          |        |
| 29) Benzo (e) pyrene     | (6)          | 0.000 |      | 0D   | N.D.                          |        |
| 32) Perylene             | (6)          | 0.000 |      | 0    | N.D.                          |        |
| 13) Dibenzofuran         | (3)          | 0.000 |      | 0    | N.D.                          |        |

D = Compound was deleted.

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Data File: /chem/SV04/GCHS\_AAA.i/170313.b/13mar027.d  
Date: 13-Mar-2017 19:46  
Client ID:  
Sample Info: 17-03-0641-26  
Volume Injected (uL): 10.0  
Column phase: J&W DB-5MS

Instrument: GCHS\_AAA.i  
Operator: 907  
Column diameter: 0.18



# EPA METHOD 8270C PAHSIM

## Continuing Calibration

**CCV ASSOCIATION SUMMARY  
FOR METHOD: EPA 8270C SIM PAHs**

Page 359 of 404

**BATCH ID:** 170313A004  
**INSTRUMENT:** GC/MS AAA

**ANALYZED BY:** 907

**WORK ORDER:** 099-06-009  
**MATRIX:** Water

**REVIEWED BY:** 262  
**D/T REVIEWED:** 2017-03-13 16:33

| <u>CEL<br/>SAMPLE #</u> | <u>CLIENT SAMPLE ID</u> | <u>D/T ANALYZED</u> | <u>DATA FILE</u>                                            |
|-------------------------|-------------------------|---------------------|-------------------------------------------------------------|
| 4977                    | Daily Calibration       | 2017-03-13 14:31    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar011.d\13mar011.r |

**WORK ORDER:** 17-03-0590  
**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>                                            |
|-------------------------|-------------------------|---------------------|-------------------------------------------------------------|
| 25                      | D-DU1-ISM1-8            | 2017-03-13 22:05    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar034.d\13mar034.r |
| 26                      | D-DU1-ISM2-8            | 2017-03-13 22:24    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar035.d\13mar035.r |
| 27                      | D-DU1-ISM3-8            | 2017-03-13 22:44    | Z:\GCMS_AAA\GCMS_AAA_data\2017\170313\13mar036.d\13mar036.r |

  
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# CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHs

**CCV WORK ORDER:** 099-06-009-4977-4741

**INSTRUMENT:** GC/MS AAA

**BATCH ID:**

170313I002

170313A004

**ANALYZED BY:** 907

**D/T ANALYZED:**

INITIAL: 2017-03-13 13:34

CCV: 2017-03-13 14:31

REVIEWED BY: 262

D/T REVIEWED: 2017-03-13 16:33

**Data File:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar011.d\13mar011.rr

| COMPOUND                  | TYPE       | CALIB MODEL | MIN RF | AVG RF | CCV RF | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------------------|------------|-------------|--------|--------|--------|--------|----------|--------|-----------|--------|
| Naphthalene               | Avg Resp   |             | 0.00   | 1.052  | 1.066  |        |          | -1     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.686  | 0.704  |        |          | -3     | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp   |             | 0.00   | 0.679  | 0.690  |        |          | -2     | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp   |             | 0.00   | 2.270  | 2.288  |        |          | -1     | 0-20      | PASS   |
| Acenaphthene              | C Avg Resp |             | 0.00   | 1.310  | 1.328  |        |          | -1     | 0-20      | PASS   |
| Fluorene                  | Avg Resp   |             | 0.00   | 1.522  | 1.584  |        |          | -4     | 0-20      | PASS   |
| Phenanthrene              | Avg Resp   |             | 0.00   | 1.073  | 1.084  |        |          | -1     | 0-20      | PASS   |
| Anthracene                | Avg Resp   |             | 0.00   | 1.092  | 0.995  |        |          | 9      | 0-20      | PASS   |
| Fluoranthene              | C Avg Resp |             | 0.00   | 1.313  | 1.337  |        |          | -2     | 0-20      | PASS   |
| Pyrene                    | Avg Resp   |             | 0.00   | 1.414  | 1.409  |        |          | 0      | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp   |             | 0.00   | 1.315  | 1.264  |        |          | 4      | 0-20      | PASS   |
| Chrysene                  | Avg Resp   |             | 0.00   | 1.236  | 1.239  |        |          | 0      | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp   |             | 0.00   | 1.443  | 1.630  |        |          | -13    | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp   |             | 0.00   | 1.345  | 1.341  |        |          | 0      | 0-20      | PASS   |
| Benzo (a) Pyrene          | C Avg Resp |             | 0.00   | 1.281  | 1.291  |        |          | -1     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp   |             | 0.00   | 1.485  | 1.527  |        |          | -3     | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp   |             | 0.00   | 1.169  | 1.214  |        |          | -4     | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp   |             | 0.00   | 1.209  | 1.226  |        |          | -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: 170313I002

CCV BATCH ID: 170313A004

**ICAL MIDPOINT**

SAMPLE ID: 099-06-009-4976

D/T ANALYZED: 2017-03-13 12:55

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar006.d\13mar006.rr

| COMPOUND               | AREA   | RETENTION TIME |
|------------------------|--------|----------------|
| 1,4-Dichlorobenzene-d4 | 120202 | 3.69           |
| Naphthalene-d8         | 373417 | 4.94           |
| Acenaphthene-d10       | 184044 | 6.83           |
| Phenanthrene-d10       | 359556 | 8.44           |
| Chrysene-d12           | 345241 | 11.37          |
| Perylene-d12           | 295234 | 13.00          |

**ICV**

SAMPLE ID 099-06-009-4976

D/T ANALYZED: 2017-03-13 13:54

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar009.d\13mar009.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 97964  | 60101            | 240404           | 3.69           | PASS   |
| Naphthalene-d8         | 304263 | 186708           | 746834           | 4.93           | PASS   |
| Acenaphthene-d10       | 151183 | 92022            | 368088           | 6.83           | PASS   |
| Phenanthrene-d10       | 297682 | 179778           | 719112           | 8.44           | PASS   |
| Chrysene-d12           | 285311 | 172620           | 690482           | 11.37          | PASS   |
| Perylene-d12           | 253681 | 147617           | 590468           | 13.00          | PASS   |

**CCV**

SAMPLE ID 099-06-009-4977

D/T ANALYZED: 2017-03-13 14:31

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar011.d\13mar011.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 132361 | 60101            | 240404           | 3.69           | PASS   |
| Naphthalene-d8         | 400020 | 186708           | 746834           | 4.94           | PASS   |
| Acenaphthene-d10       | 198190 | 92022            | 368088           | 6.83           | PASS   |
| Phenanthrene-d10       | 397335 | 179778           | 719112           | 8.44           | PASS   |
| Chrysene-d12           | 392940 | 172620           | 690482           | 11.37          | PASS   |
| Perylene-d12           | 330656 | 147617           | 590468           | 13.01          | PASS   |

**MB**

SAMPLE ID 099-14-035-380

D/T ANALYZED: 2017-03-13 17:09

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar019.d\13mar019.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 128497 | 66180            | 264722           | 3.69           | PASS   |
| Naphthalene-d8         | 411882 | 200010           | 800040           | 4.93           | PASS   |
| Acenaphthene-d10       | 237794 | 99095            | 396380           | 6.83           | PASS   |
| Phenanthrene-d10       | 424517 | 198668           | 794670           | 8.44           | PASS   |
| Chrysene-d12           | 403685 | 196470           | 785880           | 11.37          | PASS   |
| Perylene-d12           | 371587 | 165328           | 661312           | 13.01          | PASS   |

SAMPLE ID 099-14-035-380

D/T ANALYZED: 2017-03-13 17:28

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar020.d\13mar020.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 121322 | 66180            | 264722           | 3.68           | PASS   |
| Naphthalene-d8         | 381080 | 200010           | 800040           | 4.93           | PASS   |
| Acenaphthene-d10       | 215883 | 99095            | 396380           | 6.83           | PASS   |
| Phenanthrene-d10       | 389406 | 198668           | 794670           | 8.44           | PASS   |
| Chrysene-d12           | 372921 | 196470           | 785880           | 11.37          | PASS   |
| Perylene-d12           | 338055 | 165328           | 661312           | 13.00          | PASS   |

MSD

SAMPLE ID 17-03-0641-26

D/T ANALYZED: 2017-03-13 18:08

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar022.d\13mar022.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 113728 | 66180            | 264722           | 3.69           | PASS   |
| Naphthalene-d8         | 353701 | 200010           | 800040           | 4.93           | PASS   |
| Acenaphthene-d10       | 198392 | 99095            | 396380           | 6.83           | PASS   |
| Phenanthrene-d10       | 352891 | 198668           | 794670           | 8.44           | PASS   |
| Chrysene-d12           | 324694 | 196470           | 785880           | 11.37          | PASS   |
| Perylene-d12           | 300339 | 165328           | 661312           | 13.00          | PASS   |

CS

SAMPLE ID 17-03-0590-25

D/T ANALYZED: 2017-03-13 22:05

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar034.d\13mar034.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 114886 | 66180            | 264722           | 3.69           | PASS   |
| Naphthalene-d8         | 363207 | 200010           | 800040           | 4.93           | PASS   |
| Acenaphthene-d10       | 207320 | 99095            | 396380           | 6.83           | PASS   |
| Phenanthrene-d10       | 366405 | 198668           | 794670           | 8.44           | PASS   |
| Chrysene-d12           | 341153 | 196470           | 785880           | 11.37          | PASS   |
| Perylene-d12           | 302923 | 165328           | 661312           | 13.00          | PASS   |

CS

SAMPLE ID 17-03-0590-26

D/T ANALYZED: 2017-03-13 22:24

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar035.d\13mar035.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 117986 | 66180            | 264722           | 3.69           | PASS   |
| Naphthalene-d8         | 370573 | 200010           | 800040           | 4.93           | PASS   |
| Acenaphthene-d10       | 210416 | 99095            | 396380           | 6.83           | PASS   |
| Phenanthrene-d10       | 371855 | 198668           | 794670           | 8.44           | PASS   |
| Chrysene-d12           | 345560 | 196470           | 785880           | 11.37          | PASS   |
| Perylene-d12           | 311334 | 165328           | 661312           | 13.01          | PASS   |

**SAMPLE ID** 17-03-0590-27**D/T ANALYZED:** 2017-03-13 22:44**DATA FILE:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar036.d\13mar036.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 | 116306      | 66180                   | 264722                  | 3.69                  | PASS          |
| Naphthalene-d8         | 370589      | 200010                  | 800040                  | 4.93                  | PASS          |
| Acenaphthene-d10       | 210755      | 99095                   | 396380                  | 6.83                  | PASS          |
| Phenanthrene-d10       | 372354      | 198668                  | 794670                  | 8.44                  | PASS          |
| Chrysene-d12           | 345845      | 196470                  | 785880                  | 11.37                 | PASS          |
| Perylene-d12           | 308525      | 165328                  | 661312                  | 13.00                 | 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\_AAA.i/170313.b/13mar011.d  
 Report Date: 03/13/2017 14:54

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_AAA.i Injection Date and Time: 13-MAR-2017 14:31  
 Sample Name: CCV S101716G 1PPM Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 17:28 13:34  
 Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m

| Target Compounds           | ICAL RRF or Amount | ICV RRF | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
|----------------------------|--------------------|---------|----------|-------------|---------------|------------|
| Naphthalene                | 1.052              | 1.066   | 0.00     | -1          | 20            | Averaged   |
| 2-Methylnaphthalene        | 0.686              | 0.704   | 0.00     | -3          | 20            | Averaged   |
| 1-Methylnaphthalene        | 0.679              | 0.690   | 0.00     | -2          | 20            | Averaged   |
| Acenaphthylene             | 2.270              | 2.288   | 0.00     | -1          | 20            | Averaged   |
| Acenaphthene               | 1.310              | 1.328   | 0.00     | -1          | 20            | Averaged   |
| Fluorene                   | 1.522              | 1.584   | 0.00     | -4          | 20            | Averaged   |
| Phenanthrene               | 1.073              | 1.084   | 0.00     | -1          | 20            | Averaged   |
| Anthracene                 | 1.092              | 0.995   | 0.00     | 9           | 20            | Averaged   |
| Fluoranthene               | 1.313              | 1.337   | 0.00     | -2          | 20            | Averaged   |
| Pyrene                     | 1.414              | 1.409   | 0.00     | 0           | 20            | Averaged   |
| Benzo (a) Anthracene       | 1.315              | 1.264   | 0.00     | 4           | 20            | Averaged   |
| Chrysene                   | 1.236              | 1.239   | 0.00     | 0           | 20            | Averaged   |
| Benzo (b) Fluoranthene     | 1.345              | 1.341   | 0.00     | 0           | 20            | Averaged   |
| Benzo (k) Fluoranthene     | 1.443              | 1.630   | 0.00     | -13         | 20            | Averaged   |
| Benzo (a) Pyrene           | 1.281              | 1.291   | 0.00     | -1          | 20            | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.485              | 1.527   | 0.00     | -3          | 20            | Averaged   |
| Dibenz (a,h) Anthracene    | 1.169              | 1.214   | 0.00     | -4          | 20            | Averaged   |
| Benzo (g,h,i) Perylene     | 1.209              | 1.226   | 0.00     | -1          | 20            | Averaged   |
| Biphenyl                   | 2.094              | 2.176   | 0.00     | -4          | 20            | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.512              | 1.549   | 0.00     | -2          | 20            | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.494              | 1.524   | 0.00     | -2          | 20            | Averaged   |
| Dibenzothiophene           | 2.817              | 2.929   | 0.00     | -4          | 20            | Averaged   |
| 1-Methylphenanthrene       | 1.091              | 1.077   | 0.00     | 1           | 20            | Averaged   |
| Benzo (e) pyrene           | 1.580              | 1.654   | 0.00     | -5          | 20            | Averaged   |
| Perylene                   | 1.565              | 1.607   | 0.00     | -3          | 20            | Averaged   |
| Dibenzofuran               | 1.917              | 2.008   | 0.00     | -5          | 20            | Averaged   |
| Surrogate Standards        | ICAL RRF or Amount | ICV RRF | Min. RRF | %D / %Drift | Max%D / Drift | Curve Type |
| Nitrobenzene-d5            | 0.374              | 0.385   | 0.00     | -3          | 20            | Averaged   |
| 2-Fluorobiphenyl           | 1.619              | 1.709   | 0.00     | -6          | 20            | Averaged   |
| p-Terphenyl-d14            | 0.743              | 0.743   | 0.00     | 0           | 20            | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar011.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 13-MAR-2017 14:31 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 13-MAR-2017 14:53  
 Date, time and analyst ID of latest file update: 13-Mar-2017 14:53 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170313A004  
 Response via Initial Calibration

| Compounds                      | I.S.<br>Ref.       | RT     | QIon | Area   | On-Column        | DEV (Min) |
|--------------------------------|--------------------|--------|------|--------|------------------|-----------|
|                                |                    |        |      |        | Amount<br>(mg/L) |           |
| =====                          |                    |        |      |        |                  |           |
| Internal Standards             |                    |        |      |        |                  |           |
| 1)*1,4-Dichlorobenzene-d4      | (1)                | 3.686  | 152  | 132361 | 5.000            | 0.00      |
| 3)*Naphthalene-d8              | (2)                | 4.937  | 136  | 400020 | 5.000            | 0.00      |
| 11)*Acenaphthene-d10           | (3)                | 6.831  | 164  | 198190 | 5.000            | 0.00      |
| 17)*Phenanthrene-d10           | (4)                | 8.437  | 188  | 397335 | 5.000            | 0.00      |
| 31)*Perylene-d12               | (6)                | 13.009 | 264  | 330656 | 5.000            | 0.00      |
| 25)*Chrysene-d12               | (5)                | 11.370 | 240  | 392940 | 5.000            | 0.00      |
| System Monitoring Compounds    |                    |        |      |        |                  |           |
| 2)\$Nitrobenzene-d5            | (2)                | 4.240  | 82   | 30834  | 1.031            | 0.00      |
| SpikedAmount 1.000             | Recovery = 103.136 |        |      |        |                  |           |
| 7)\$2-Fluorobiphenyl           | (3)                | 6.115  | 172  | 67751  | 1.055            | 0.00      |
| SpikedAmount 1.000             | Recovery = 105.548 |        |      |        |                  |           |
| 23)\$p-Terphenyl-d14           | (5)                | 10.228 | 244  | 58421  | 1.001            | 0.00      |
| SpikedAmount 1.000             | Recovery = 100.071 |        |      |        |                  |           |
| Target Compounds               |                    |        |      |        |                  | QValue    |
| 4) Naphthalene                 | (2)                | 4.956  | 128  | 85260  | 1.013            | 100       |
| 5) 2-Methylnaphthalene         | (2)                | 5.687  | 142  | 56339  | 1.026            | 100       |
| 6) 1-Methylnaphthalene         | (2)                | 5.803  | 142  | 55191  | 1.016            | 100       |
| 10) Acenaphthylene             | (3)                | 6.664  | 152  | 90699  | 1.008            | 100       |
| 12) Acenaphthene               | (3)                | 6.865  | 153  | 52628  | 1.014            | 100       |
| 15) Fluorene                   | (3)                | 7.417  | 166  | 62771  | 1.040            | 100       |
| 18) Phenanthrene               | (4)                | 8.461  | 178  | 86154  | 1.011            | 100       |
| 19) Anthracene                 | (4)                | 8.509  | 178  | 79073  | 0.912            | 100       |
| 21) Fluoranthene               | (4)                | 9.777  | 202  | 106232 | 1.018            | 100       |
| 22) Pyrene                     | (5)                | 10.015 | 202  | 110725 | 0.996            | 100       |
| 24) Benzo (a) Anthracene       | (5)                | 11.354 | 228  | 99352  | 0.962            | 100       |
| 26) Chrysene                   | (5)                | 11.399 | 228  | 97380  | 1.003            | 100       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.581 | 252  | 88690  | 0.997            | 100       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.609 | 252  | 107823 | 1.130            | 100       |
| 30) Benzo (a) Pyrene           | (6)                | 12.940 | 252  | 85351  | 1.008            | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.183 | 276  | 100951 | 1.028            | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.207 | 278  | 80292  | 1.039            | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.490 | 276  | 81076  | 1.014            | 100       |
| 8) Biphenyl                    | (3)                | 6.203  | 154  | 86237  | 1.039            | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.367  | 156  | 61381  | 1.024            | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.294  | 170  | 60424  | 1.020            | 100       |
| 16) Dibenzothiophene           | (3)                | 8.324  | 184  | 116112 | 1.040            | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

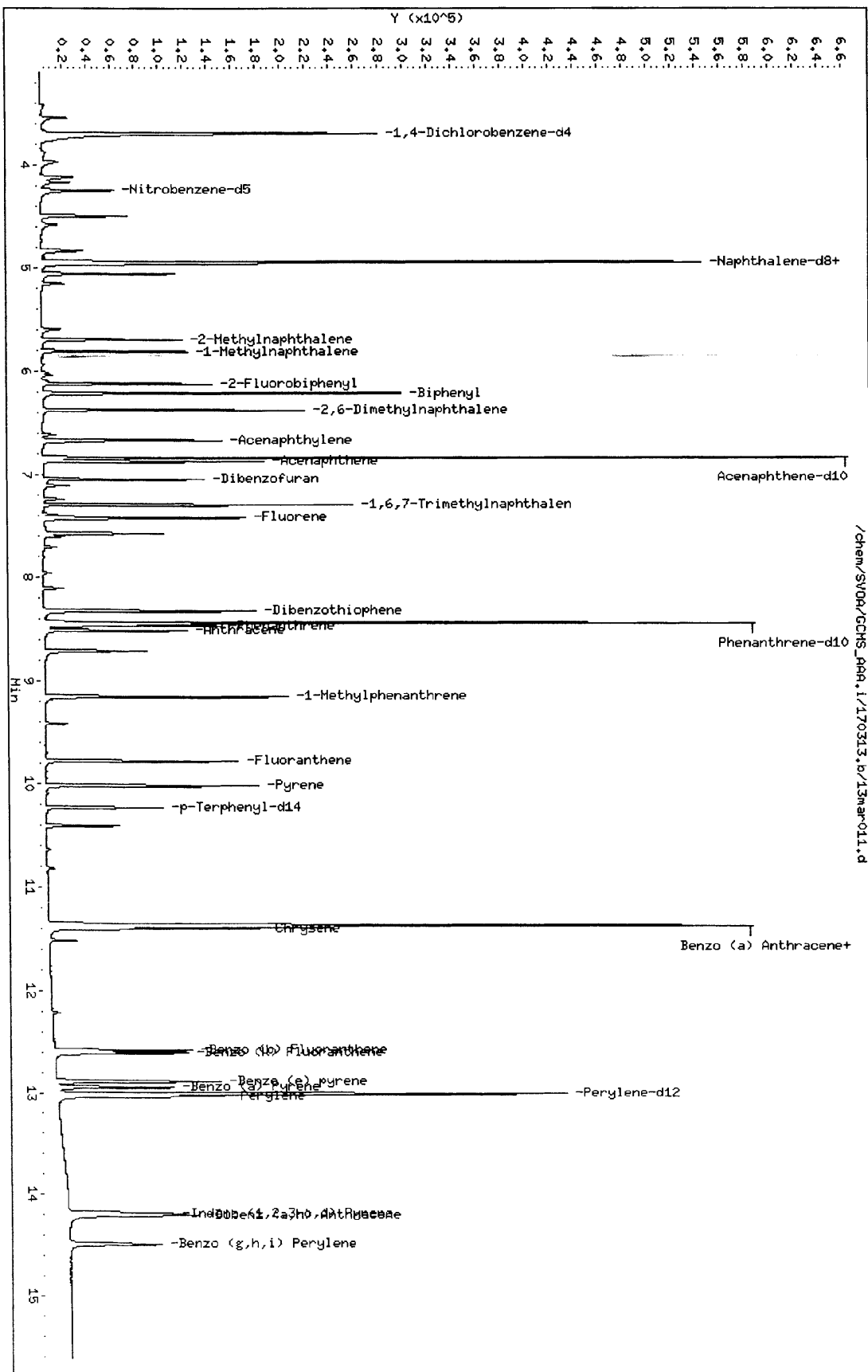
Data File: /chem/SVOA/GCMS\_AAA.i/170313.b/13mar011.d Instrument ID: GCMS\_AAA.i  
Injection date and time: 13-MAR-2017 14:31 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170313.b/simpah-extra.m Sublist used: all  
Calibration date and time: 13-MAR-2017 14:53  
Date, time and analyst ID of latest file update: 13-Mar-2017 14:53 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170313A004  
Response via Initial Calibration

| Compounds                | I.S.  |        | RT    | QIon   | Area  | On-Column        | QValue |
|--------------------------|-------|--------|-------|--------|-------|------------------|--------|
|                          | Ref.  |        |       |        |       | Amount<br>(mg/L) |        |
| =====                    | ===== | =====  | ===== | =====  | ===== | =====            | =====  |
| 20) 1-Methylphenanthrene | (5)   | 9.151  | 192   | 84636  | 0.987 | 100              |        |
| 29) Benzo (e) pyrene     | (6)   | 12.884 | 252   | 109380 | 1.047 | 100              |        |
| 32) Perylene             | (6)   | 13.033 | 252   | 106248 | 1.027 | 100              |        |
| 13) Dibenzofuran         | (3)   | 7.042  | 168   | 79598  | 1.048 | 100              |        |

page 2 of 2



Data File: /chem/SVOP/GCMS\_AAA.i/170313.b/13mar011.d  
 Date: 13-MAR-2017 14:31  
 Client ID:  
 Sample Info: CCV S101716C 1PPM  
 Volume Injected (uL): 10.0  
 Column phase: J&W DB-5MS

Instrument: GCMS\_AAA.i  
 Operator: 907  
 Column diameter: 0.18



# CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET

## FOR METHOD: EPA 8270C SIM PAHs

**CCV WORK ORDER:** 099-06-009-4982-4741  
**INSTRUMENT:** GC/MS AAA  
**BATCH ID:** 170313I002  
**INITIAL:** 170314A011  
**CCV:**

**ANALYZED BY:** 907  
**D/T ANALYZED:** 2017-03-13 13:34  
**INITIAL:** 2017-03-14 10:52  
**CCV:** 262  
**REVIEWED BY:** 2017-03-14 15:45  
**D/T REVIEWED:**

**Data File:** Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170314\14mar002.d\14mar002.rr

| COMPOUND                  | TYPE     | CALIB MODEL | MIN RF | AVG RF | CCV RF | AMOUNT | CCV CONC | CCV %D | CCV %D CL | STATUS |
|---------------------------|----------|-------------|--------|--------|--------|--------|----------|--------|-----------|--------|
| Naphthalene               | Avg Resp |             | 0.00   | 1.052  | 1.129  |        |          | -7     | 0-20      | PASS   |
| 2-Methylnaphthalene       | Avg Resp |             | 0.00   | 0.686  | 0.754  |        |          | -10    | 0-20      | PASS   |
| 1-Methylnaphthalene       | Avg Resp |             | 0.00   | 0.679  | 0.747  |        |          | -10    | 0-20      | PASS   |
| Acenaphthylene            | Avg Resp |             | 0.00   | 2.270  | 2.450  |        |          | -8     | 0-20      | PASS   |
| Acenaphthene              | Avg Resp | C           | 0.00   | 1.310  | 1.412  |        |          | -8     | 0-20      | PASS   |
| Fluorene                  | Avg Resp |             | 0.00   | 1.522  | 1.630  |        |          | -7     | 0-20      | PASS   |
| Phenanthrene              | Avg Resp |             | 0.00   | 1.073  | 1.149  |        |          | -7     | 0-20      | PASS   |
| Anthracene                | Avg Resp |             | 0.00   | 1.092  | 1.042  |        |          | 5      | 0-20      | PASS   |
| Fluoranthene              | Avg Resp | C           | 0.00   | 1.313  | 1.347  |        |          | -3     | 0-20      | PASS   |
| Pyrene                    | Avg Resp |             | 0.00   | 1.414  | 1.641  |        |          | -16    | 0-20      | PASS   |
| Benzo (a) Anthracene      | Avg Resp |             | 0.00   | 1.315  | 1.330  |        |          | -1     | 0-20      | PASS   |
| Chrysene                  | Avg Resp |             | 0.00   | 1.236  | 1.359  |        |          | -10    | 0-20      | PASS   |
| Benzo (k) Fluoranthene    | Avg Resp |             | 0.00   | 1.443  | 1.708  |        |          | -18    | 0-20      | PASS   |
| Benzo (b) Fluoranthene    | Avg Resp |             | 0.00   | 1.345  | 1.489  |        |          | -11    | 0-20      | PASS   |
| Benzo (a) Pyrene          | Avg Resp | C           | 0.00   | 1.281  | 1.374  |        |          | -7     | 0-20      | PASS   |
| Indeno (1,2,3-c,d) Pyrene | Avg Resp |             | 0.00   | 1.485  | 1.513  |        |          | -2     | 0-20      | PASS   |
| Dibenz (a,h) Anthracene   | Avg Resp |             | 0.00   | 1.169  | 1.180  |        |          | -1     | 0-20      | PASS   |
| Benzo (g,h,i) Perylene    | Avg Resp |             | 0.00   | 1.209  | 1.230  |        |          | -2     | 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: 170313I002

CCV BATCH ID: 170314A011

### ICAL MIDPOINT

SAMPLE ID: 099-06-009-4976

D/T ANALYZED: 2017-03-13 12:55

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar006.d\13mar006.rr

| COMPOUND               | AREA   | RETENTION TIME |
|------------------------|--------|----------------|
| 1,4-Dichlorobenzene-d4 | 120202 | 3.69           |
| Naphthalene-d8         | 373417 | 4.94           |
| Acenaphthene-d10       | 184044 | 6.83           |
| Phenanthrene-d10       | 359556 | 8.44           |
| Chrysene-d12           | 345241 | 11.37          |
| Perylene-d12           | 295234 | 13.00          |

### ICV

SAMPLE ID 099-06-009-4976

D/T ANALYZED: 2017-03-13 13:54

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170313\13mar009.d\13mar009.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 97964  | 60101            | 240404           | 3.69           | PASS   |
| Naphthalene-d8         | 304263 | 186708           | 746834           | 4.93           | PASS   |
| Acenaphthene-d10       | 151183 | 92022            | 368088           | 6.83           | PASS   |
| Phenanthrene-d10       | 297682 | 179778           | 719112           | 8.44           | PASS   |
| Chrysene-d12           | 285311 | 172620           | 690482           | 11.37          | PASS   |
| Perylene-d12           | 253681 | 147617           | 590468           | 13.00          | PASS   |

### CCV

SAMPLE ID 099-06-009-4982

D/T ANALYZED: 2017-03-14 10:52

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170314\14mar002.d\14mar002.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 108769 | 60101            | 240404           | 3.67           | PASS   |
| Naphthalene-d8         | 322404 | 186708           | 746834           | 4.92           | PASS   |
| Acenaphthene-d10       | 153007 | 92022            | 368088           | 6.82           | PASS   |
| Phenanthrene-d10       | 285156 | 179778           | 719112           | 8.42           | PASS   |
| Chrysene-d12           | 242173 | 172620           | 690482           | 11.36          | PASS   |
| Perylene-d12           | 192520 | 147617           | 590468           | 12.99          | PASS   |

### MS

SAMPLE ID 17-03-0641-26

D/T ANALYZED: 2017-03-14 12:30

DATA FILE: Z:\GCMS\_AAA\GCMS\_AAA\_data\2017\170314\14mar007.d\14mar007.rr

| COMPOUND               | AREA   | LOWER AREA LIMIT | UPPER AREA LIMIT | RETENTION TIME | STATUS |
|------------------------|--------|------------------|------------------|----------------|--------|
| 1,4-Dichlorobenzene-d4 | 98844  | 54384            | 217538           | 3.68           | PASS   |
| Naphthalene-d8         | 307556 | 161202           | 644808           | 4.92           | PASS   |
| Acenaphthene-d10       | 180156 | 76504            | 306014           | 6.82           | PASS   |
| Phenanthrene-d10       | 312346 | 142578           | 570312           | 8.42           | PASS   |
| Chrysene-d12           | 268408 | 121086           | 484346           | 11.36          | PASS   |
| Perylene-d12           | 232750 | 96260            | 385040           | 13.00          | PASS   |

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\_AAA.i/170314.b/14mar002.d  
 Report Date: 03/14/2017 12:58

Eurofins CalScience  
 Calibration Verification Report

Instrument ID: GCMS\_AAA.i Injection Date and Time: 14-MAR-2017 10:52  
 Sample Name: CCV S101716G 1PPM Initial Calibration Date(s): 06-DEC-2016 13-MAR-2017  
 Sublist used: all.sub Initial Calibration Time(s): 17:28 13:34  
 Method used: /chem/SVOA/GCMS\_AAA.i/170314.b/simpah-extra.m

| Target Compounds           | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift /Drift | Max%D<br> Drift | Curve Type |
|----------------------------|-----------------------|------------|-------------|-----------------------|-----------------|------------|
| Naphthalene                | 1.052                 | 1.129      | 0.00        | -7                    | 20              | Averaged   |
| 2-Methylnaphthalene        | 0.686                 | 0.754      | 0.00        | -10                   | 20              | Averaged   |
| 1-Methylnaphthalene        | 0.679                 | 0.747      | 0.00        | -10                   | 20              | Averaged   |
| Acenaphthylene             | 2.270                 | 2.450      | 0.00        | -8                    | 20              | Averaged   |
| Acenaphthene               | 1.310                 | 1.412      | 0.00        | -8                    | 20              | Averaged   |
| Fluorene                   | 1.522                 | 1.630      | 0.00        | -7                    | 20              | Averaged   |
| Phenanthrene               | 1.073                 | 1.149      | 0.00        | -7                    | 20              | Averaged   |
| Anthracene                 | 1.092                 | 1.042      | 0.00        | 5                     | 20              | Averaged   |
| Fluoranthene               | 1.313                 | 1.347      | 0.00        | -3                    | 20              | Averaged   |
| Pyrene                     | 1.414                 | 1.641      | 0.00        | -16                   | 20              | Averaged   |
| Benzo (a) Anthracene       | 1.315                 | 1.330      | 0.00        | -1                    | 20              | Averaged   |
| Chrysene                   | 1.236                 | 1.359      | 0.00        | -10                   | 20              | Averaged   |
| Benzo (b) Fluoranthene     | 1.345                 | 1.489      | 0.00        | -11                   | 20              | Averaged   |
| Benzo (k) Fluoranthene     | 1.443                 | 1.708      | 0.00        | -18                   | 20              | Averaged   |
| Benzo (a) Pyrene           | 1.281                 | 1.374      | 0.00        | -7                    | 20              | Averaged   |
| Indeno (1,2,3-c,d) Pyrene  | 1.485                 | 1.513      | 0.00        | -2                    | 20              | Averaged   |
| Dibenz (a,h) Anthracene    | 1.169                 | 1.180      | 0.00        | -1                    | 20              | Averaged   |
| Benzo (g,h,i) Perylene     | 1.209                 | 1.230      | 0.00        | -2                    | 20              | Averaged   |
| Biphenyl                   | 2.094                 | 2.332      | 0.00        | -11                   | 20              | Averaged   |
| 2,6-Dimethylnaphthalene    | 1.512                 | 1.644      | 0.00        | -9                    | 20              | Averaged   |
| 1,6,7-Trimethylnaphthalene | 1.494                 | 1.609      | 0.00        | -8                    | 20              | Averaged   |
| Dibenzothiophene           | 2.817                 | 2.878      | 0.00        | -2                    | 20              | Averaged   |
| 1-Methylphenanthrene       | 1.091                 | 1.285      | 0.00        | -18                   | 20              | Averaged   |
| Benzo (e) pyrene           | 1.580                 | 1.790      | 0.00        | -13                   | 20              | Averaged   |
| Perylene                   | 1.565                 | 1.734      | 0.00        | -11                   | 20              | Averaged   |
| Dibenzofuran               | 1.917                 | 2.070      | 0.00        | -8                    | 20              | Averaged   |
| Surrogate Standards        | ICAL RRF or<br>Amount | ICV<br>RRF | Min.<br>RRF | %D /<br>%Drift /Drift | Max%D<br> Drift | Curve Type |
| Nitrobenzene-d5            | 0.374                 | 0.436      | 0.00        | -17                   | 20              | Averaged   |
| 2-Fluorobiphenyl           | 1.619                 | 1.825      | 0.00        | -13                   | 20              | Averaged   |
| p-Terphenyl-d14            | 0.743                 | 0.836      | 0.00        | -13                   | 20              | Averaged   |

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170314.b/14mar002.d Instrument ID: GCMS\_AAA.i  
 Injection date and time: 14-MAR-2017 10:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170314.b/simpah-extra.m Sublist used: all  
 Calibration date and time: 14-MAR-2017 11:17  
 Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

Sample Name: CCV S101716G 1PPM Misc Info: 170314A011  
 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)                | 3.673  | 152   | 108769 | 5.000                         | 0.00      |
| 3) *Naphthalene-d8             | (2)                | 4.924  | 136   | 322404 | 5.000                         | 0.00      |
| 11) *Acenaphthene-d10          | (3)                | 6.821  | 164   | 153007 | 5.000                         | 0.00      |
| 17) *Phenanthrene-d10          | (4)                | 8.424  | 188   | 285156 | 5.000                         | 0.00      |
| 31) *Perylene-d12              | (6)                | 12.992 | 264   | 192520 | 5.000                         | 0.00      |
| 25) *Chrysene-d12              | (5)                | 11.358 | 240   | 242173 | 5.000                         | 0.00      |
| System Monitoring Compounds    |                    |        |       |        |                               |           |
| 2) \$Nitrobenzene-d5           | (2)                | 4.231  | 82    | 28123  | 1.167                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 116.716 |        |       |        |                               |           |
| 7) \$2-Fluorobiphenyl          | (3)                | 6.102  | 172   | 55851  | 1.127                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 112.705 |        |       |        |                               |           |
| 23) \$p-Terphenyl-d14          | (5)                | 10.220 | 244   | 40490  | 1.125                         | 0.00      |
| SpikedAmount 1.000             | Recovery = 112.535 |        |       |        |                               |           |
| Target Compounds               |                    |        |       |        |                               |           |
|                                |                    |        |       |        |                               | QValue    |
| 4) Naphthalene                 | (2)                | 4.946  | 128   | 72818  | 1.073                         | 100       |
| 5) 2-Methylnaphthalene         | (2)                | 5.677  | 142   | 48634  | 1.099                         | 100       |
| 6) 1-Methylnaphthalene         | (2)                | 5.790  | 142   | 48146  | 1.100                         | 100       |
| 10) Acenaphthylene             | (3)                | 6.651  | 152   | 74988  | 1.079                         | 100       |
| 12) Acenaphthene               | (3)                | 6.855  | 153   | 43218  | 1.078                         | 100       |
| 15) Fluorene                   | (3)                | 7.407  | 166   | 49865  | 1.070                         | 100       |
| 18) Phenanthrene               | (4)                | 8.449  | 178   | 65530  | 1.071                         | 100       |
| 19) Anthracene                 | (4)                | 8.501  | 178   | 59425  | 0.955                         | 100       |
| 21) Fluoranthene               | (4)                | 9.764  | 202   | 76834  | 1.026                         | 100       |
| 22) Pyrene                     | (5)                | 10.006 | 202   | 79475  | 1.160                         | 100       |
| 24) Benzo (a) Anthracene       | (5)                | 11.342 | 228   | 64434  | 1.012                         | 100       |
| 26) Chrysene                   | (5)                | 11.390 | 228   | 65844  | 1.100                         | 100       |
| 27) Benzo (b) Fluoranthene     | (6)                | 12.573 | 252   | 57318  | 1.107                         | 100       |
| 28) Benzo (k) Fluoranthene     | (6)                | 12.597 | 252   | 65767  | 1.184                         | 100       |
| 30) Benzo (a) Pyrene           | (6)                | 12.932 | 252   | 52897  | 1.073                         | 100       |
| 33) Indeno (1,2,3-c,d) Pyrene  | (6)                | 14.171 | 276   | 58267  | 1.019                         | 100       |
| 34) Dibenz (a,h) Anthracene    | (6)                | 14.191 | 278   | 45422  | 1.009                         | 100       |
| 35) Benzo (g,h,i) Perylene     | (6)                | 14.473 | 276   | 47373  | 1.018                         | 100       |
| 8) Biphenyl                    | (3)                | 6.194  | 154   | 71370  | 1.114                         | 100       |
| 9) 2,6-Dimethylnaphthalene     | (3)                | 6.358  | 156   | 50295  | 1.087                         | 100       |
| 14) 1,6,7-Trimethylnaphthalene | (3)                | 7.284  | 170   | 49224  | 1.077                         | 100       |
| 16) Dibenzothiophene           | (3)                | 8.315  | 184   | 88075  | 1.022                         | 100       |

\* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

## Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS\_AAA.i/170314.b/14mar002.d Instrument ID: GCMS\_AAA.i

Injection date and time: 14-MAR-2017 10:52

Analyst ID: 907

Method used: /chem/SVOA/GCMS\_AAA.i/170314.b/simpah-extra.m Sublist used: all

Calibration date and time: 14-MAR-2017 11:17

Date, time and analyst ID of latest file update: 14-Mar-2017 11:17 ev7p

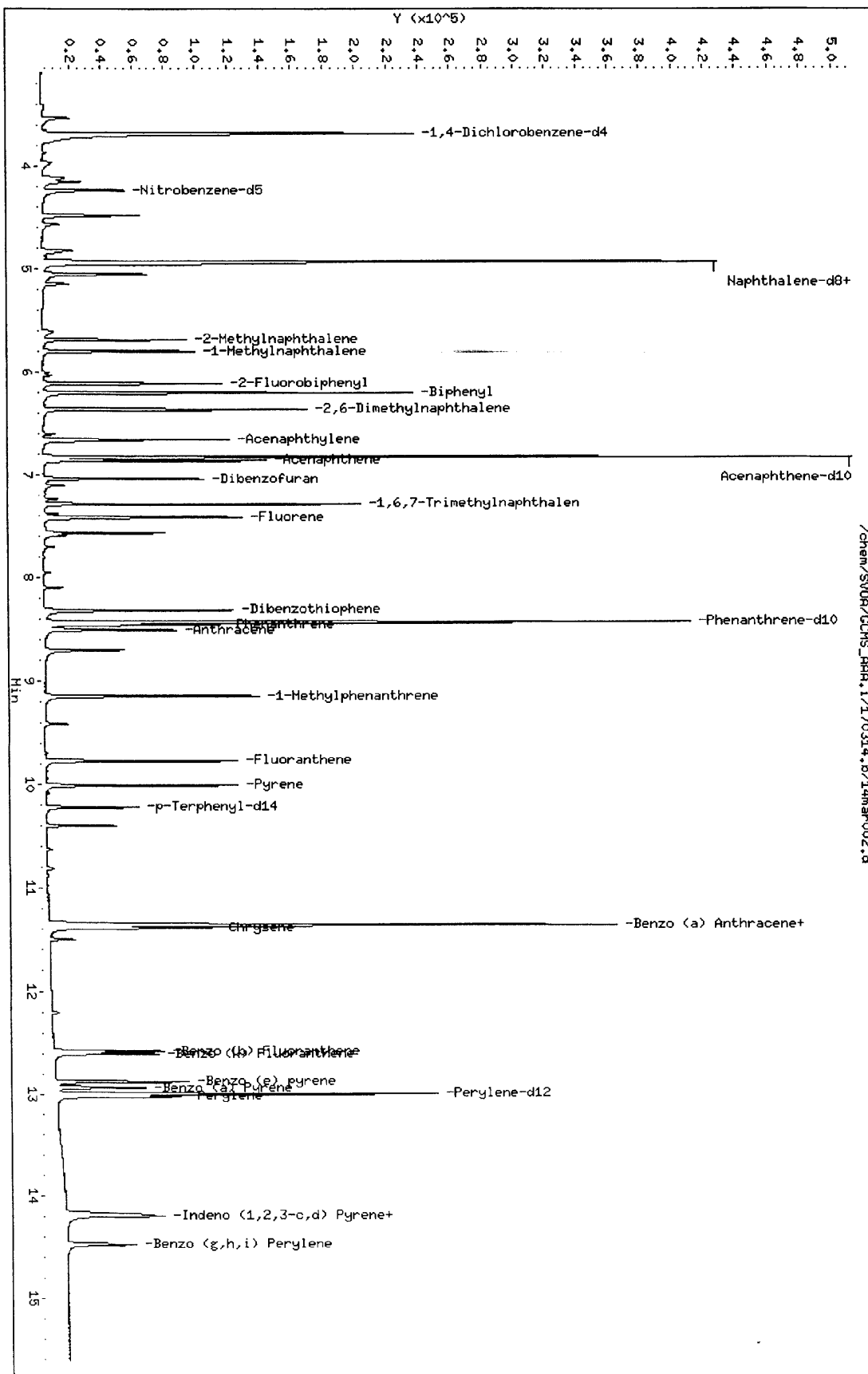
Sample Name: CCV S101716G 1PPM

Misc Info: 170314A011

Response via Initial Calibration

| Compounds                | I.S.<br>Ref. | RT     | QIon | Area  | On-Column<br>Amount<br>(mg/L) | QValue |
|--------------------------|--------------|--------|------|-------|-------------------------------|--------|
| 20) 1-Methylphenanthrene | (5)          | 9.143  | 192  | 62232 | 1.178                         | 100    |
| 29) Benzo (e) pyrene     | (6)          | 12.875 | 252  | 68923 | 1.133                         | 100    |
| 32) Perylene             | (6)          | 13.020 | 252  | 66773 | 1.108                         | 100    |
| 13) Dibenzofuran         | (3)          | 7.032  | 168  | 63348 | 1.080                         | 100    |

page 2 of 2



Data File: /chem/SV09/GCHS\_APP.i/170314.b/14mar002.d  
 Date: 14-MAR-2017 10:52  
 Client ID:  
 Sample Info: CCV S101716C 1PPH  
 Volume Injected (uL): 10.0  
 Column Phase: J&M DB-GMS

Instrument: GCHS\_APP.i  
 Operator: 907  
 Column diameter: 0.18

# EPA METHOD 8270C PAHSIM

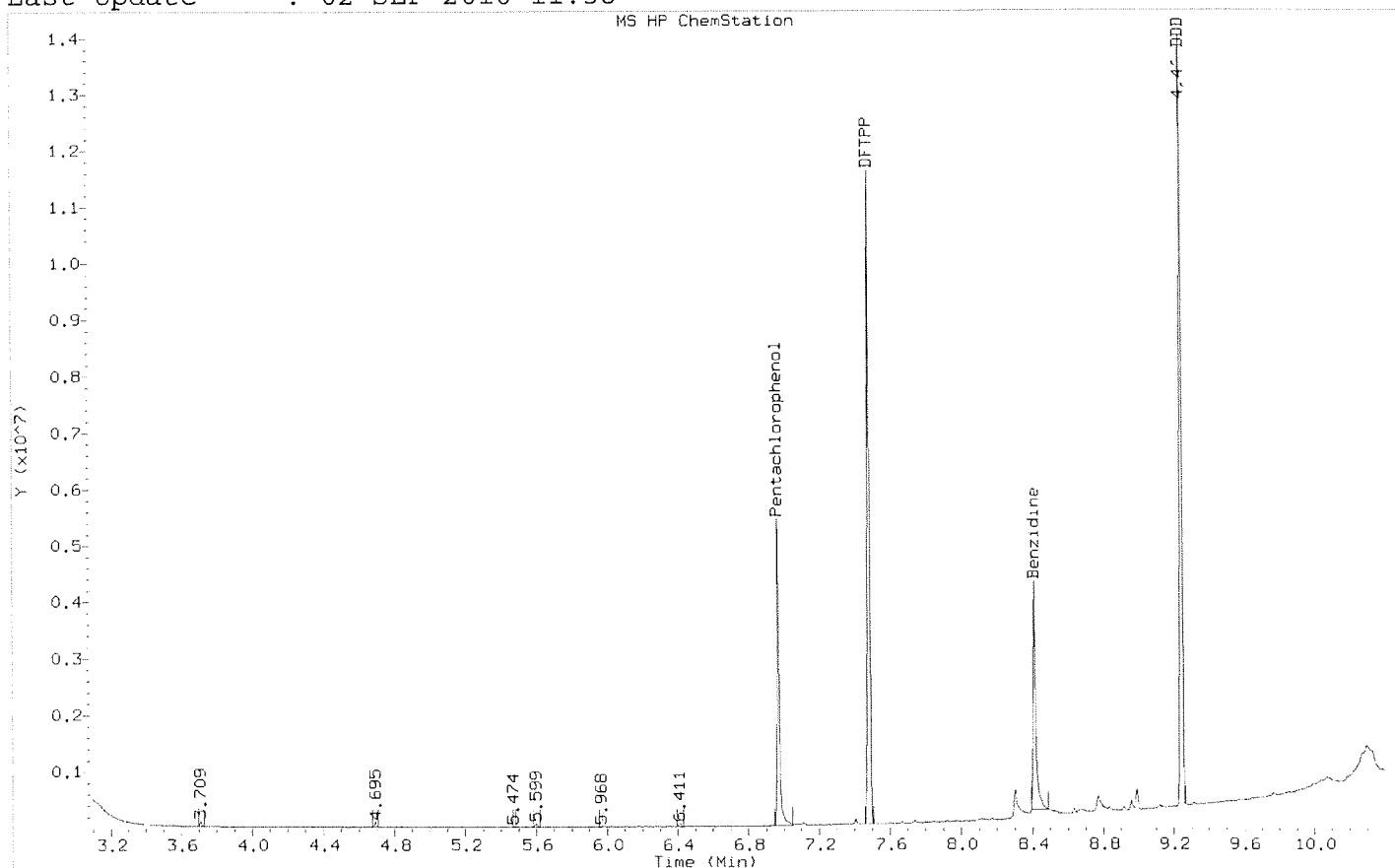
## Tuning Reports



## DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
ALS Vial : 1  
Acq on : 13-MAR-2017 10:50 Operator : 907  
Sample : DFTPP S101716A Inst : GCMS\_AAA  
Misc : Multiplier : 1  
Integrator Type : HP RTE  
Last Update : 02-SEP-2016 11:58

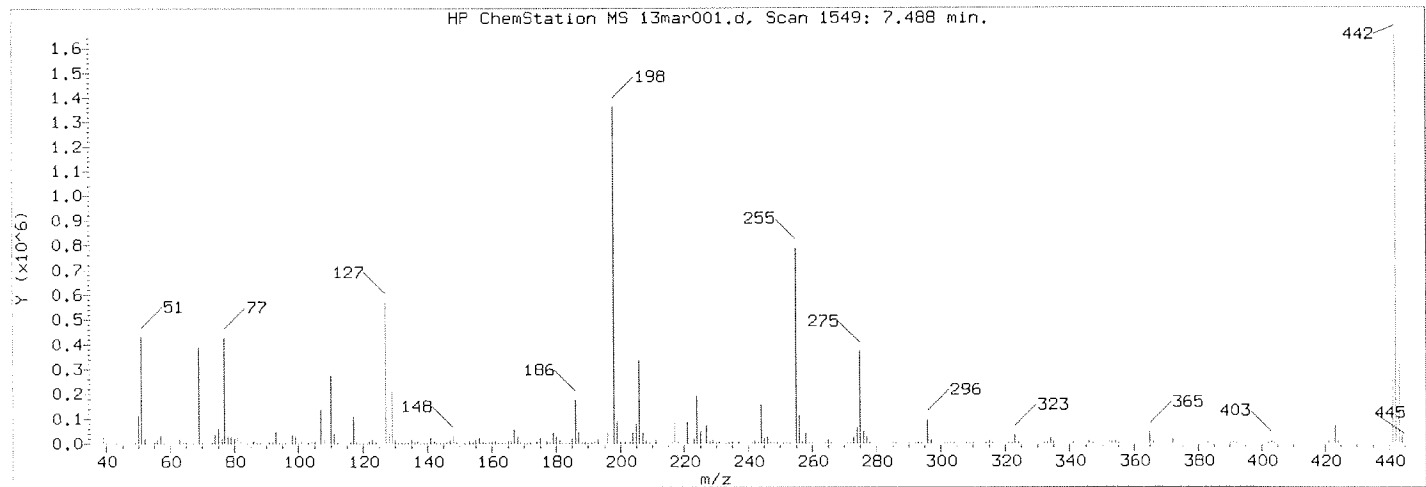
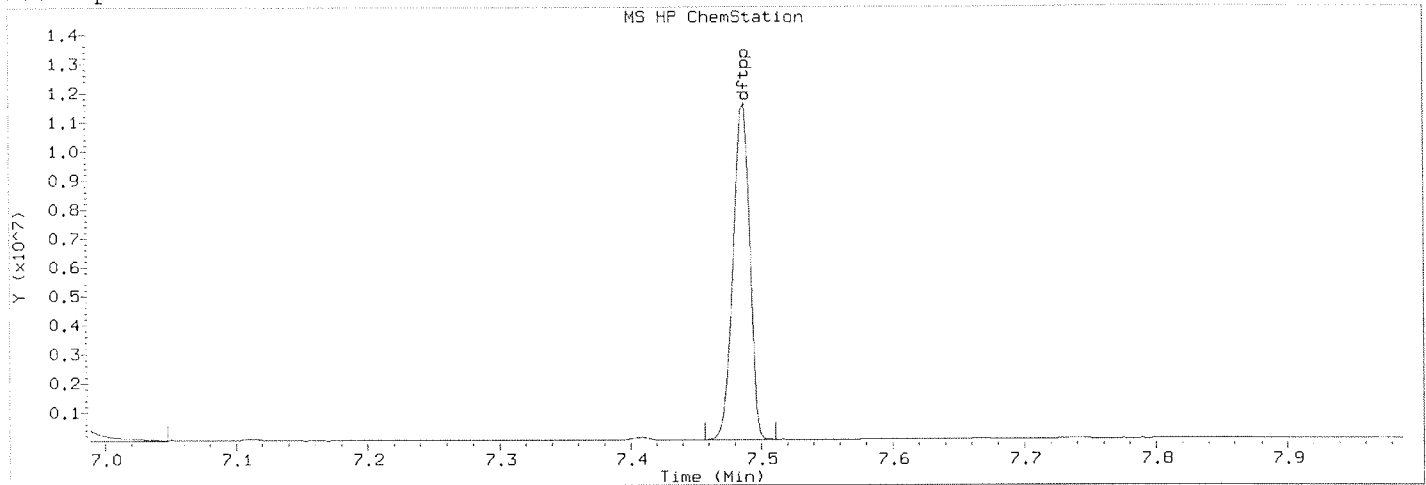


Tune \*\*\* PASSED \*\*\*  
Pentachlorophenol Tailing \*\*\* PASSED \*\*\*  
Benzidine Tailing \*\*\* PASSED \*\*\*  
DDT degradation \*\*\* PASSED \*\*\*

Tuning Sample, /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d , \*\*\* PASSED \*\*\*

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 1  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/dftpp tune.m  
 Last Update : 02-SEP-2016 11:58

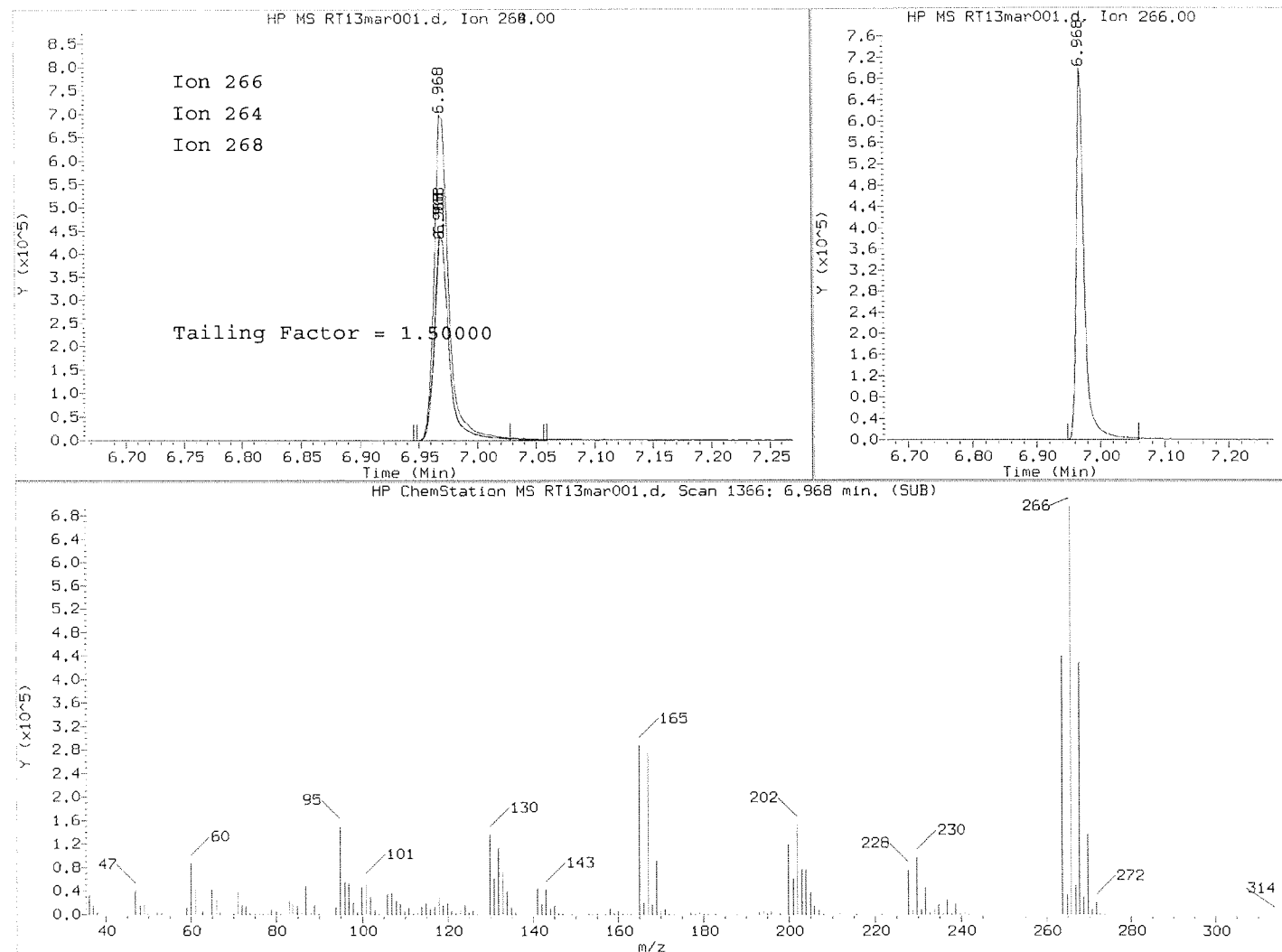


DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 1263156  | PASS |
| 51  | 30 - 60% of mass 198               | 31.54     | 398398   | PASS |
| 68  | Less than 2% of mass 69            | 0.00      | 0        | PASS |
| 69  | Less than mass 198                 | 28.69     | 362441   | PASS |
| 70  | Less than 2% of mass 69            | 0.45      | 1640     | PASS |
| 127 | 40 - 60% of mass 198               | 41.70     | 526678   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 6.76      | 85354    | PASS |
| 275 | 10 - 30% of mass 198               | 27.46     | 346858   | PASS |
| 365 | 1 - 100% of mass 198               | 3.26      | 41157    | PASS |
| 441 | Present, but less than mass 443    | 78.20     | 228864   | PASS |
| 442 | 40 - 200% of mass 198              | 118.36    | 1495040  | PASS |
| 443 | 17 - 23% of mass 442               | 19.57     | 292650   | PASS |

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d/resolut.m  
 Last Update : 13-MAR-2017 14:55



## Pentachlorophenol

=====  
 Exp. RT = 7.110  
 Found RT = 6.968

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 615097 | 100.00 |
| 264  | 388944 | 63.23  |
| 268  | 376091 | 61.14  |

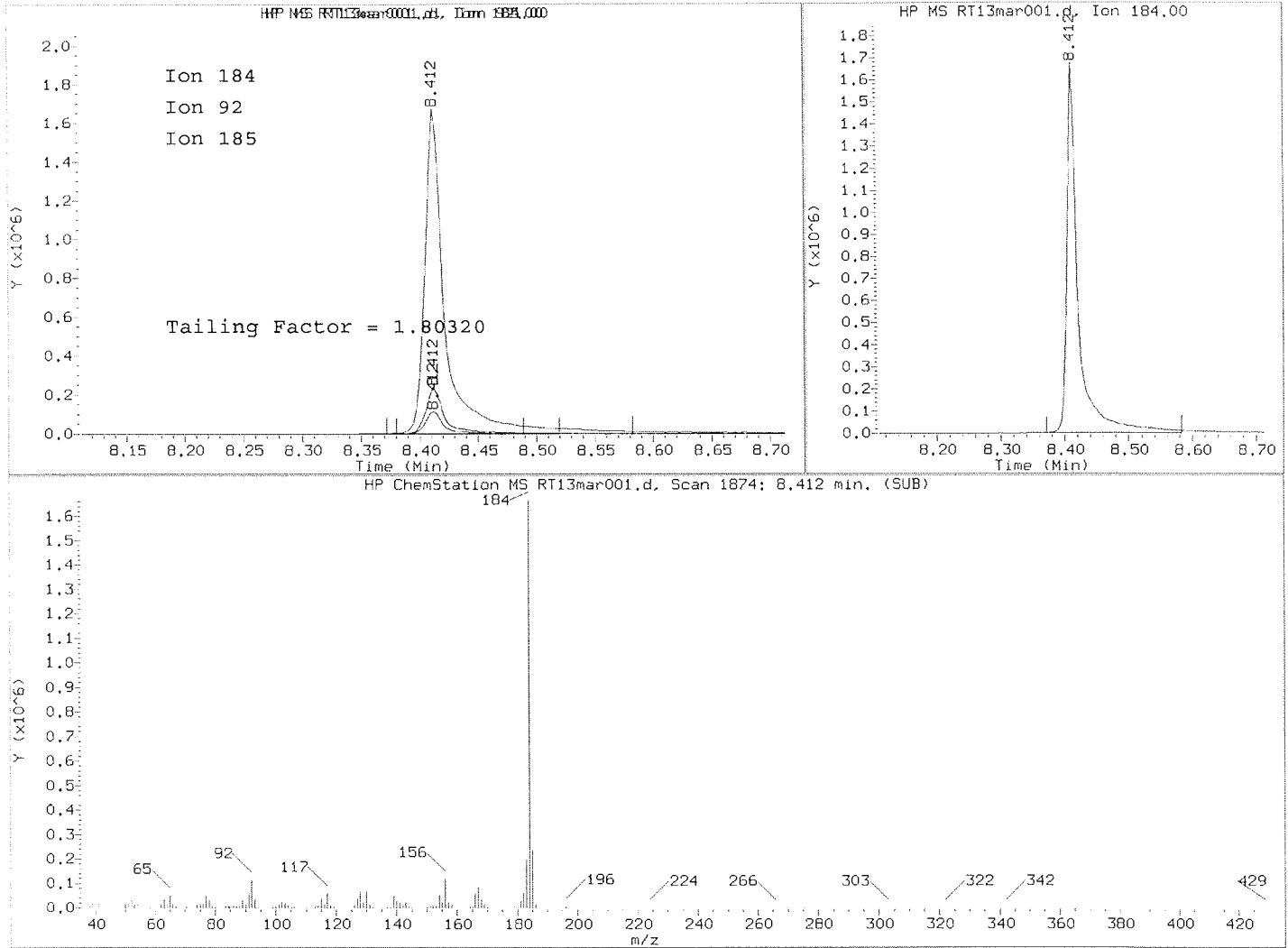
Peak baseline front width (sec) : 0.610  
 Peak baseline tail width (sec) : 0.915  
 Tail Factor = 0.915 / 0.610

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.500 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d/resolut.m  
 Last Update : 13-MAR-2017 14:55



Benzidine

=====

Exp. RT = 8.565

Found RT = 8.412

| Mass | Area    | Ratio  |
|------|---------|--------|
| 184  | 2056132 | 100.00 |
| 92   | 134562  | 6.54   |
| 185  | 279715  | 13.60  |

Peak baseline front width (sec) : 0.813

Peak baseline tail width (sec) : 1.466

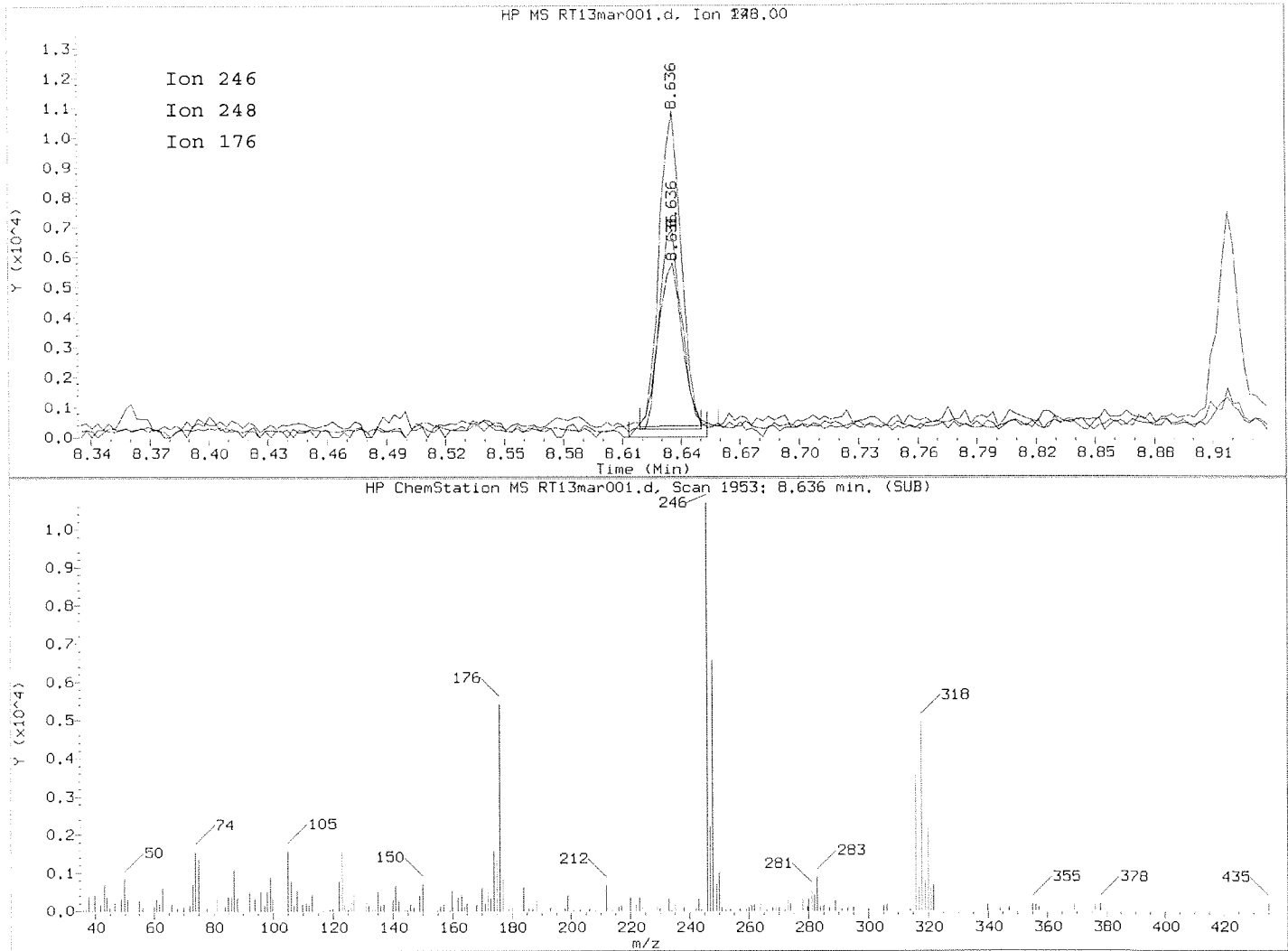
Tail Factor = 1.466/ 0.813

Tailing factor for Benzidine OK

Tail Factor = 1.803 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d/resolut.m  
 Last Update : 13-MAR-2017 14:55



4,4'-DDE

=====

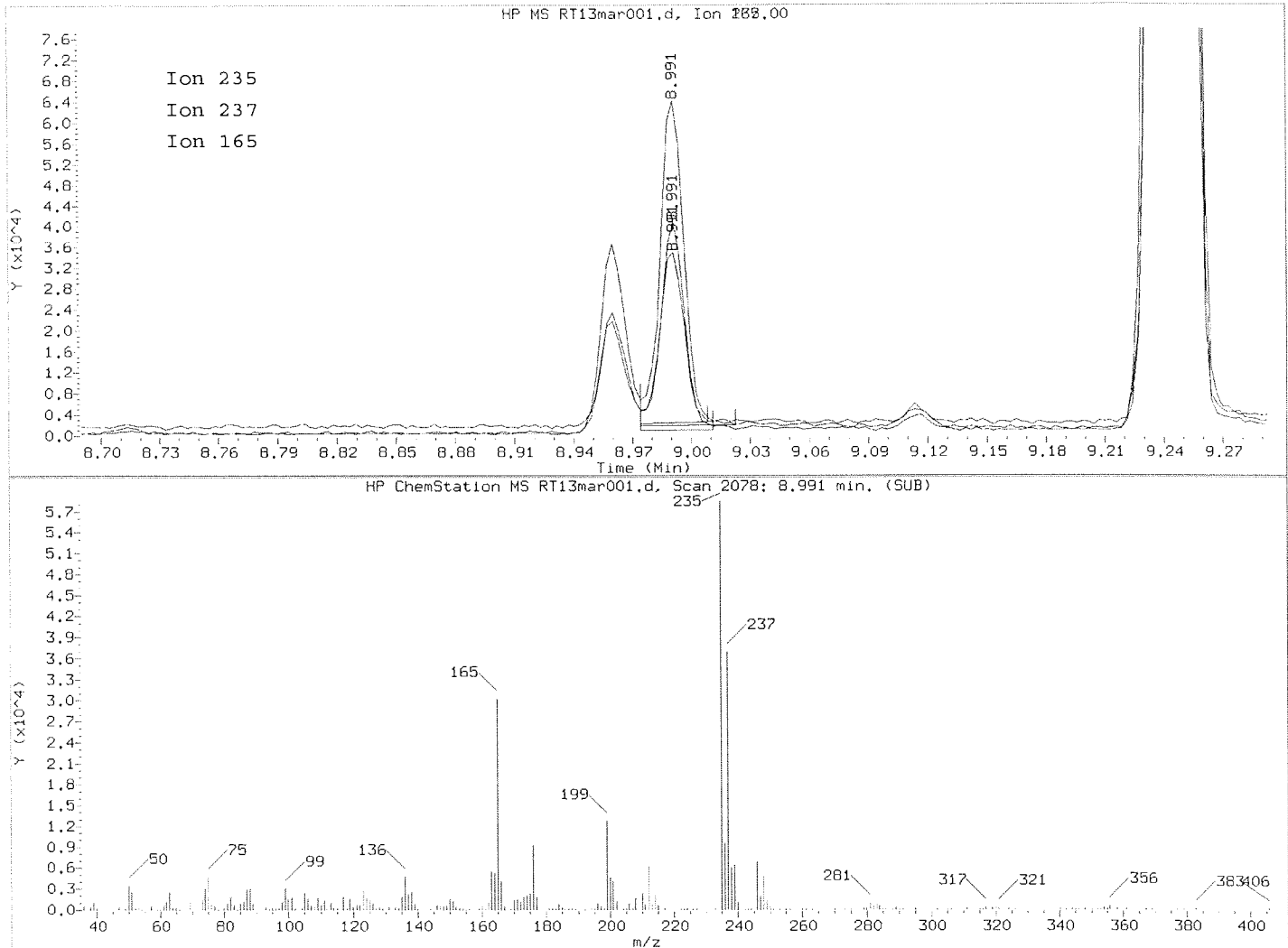
Exp. RT = 8.636

Found RT = 8.636

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 9077 | 100.00 |
| 248  | 5291 | 58.29  |
| 176  | 4633 | 51.04  |

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d/resolut.m  
 Last Update : 13-MAR-2017 14:55



4,4'-DDD

=====

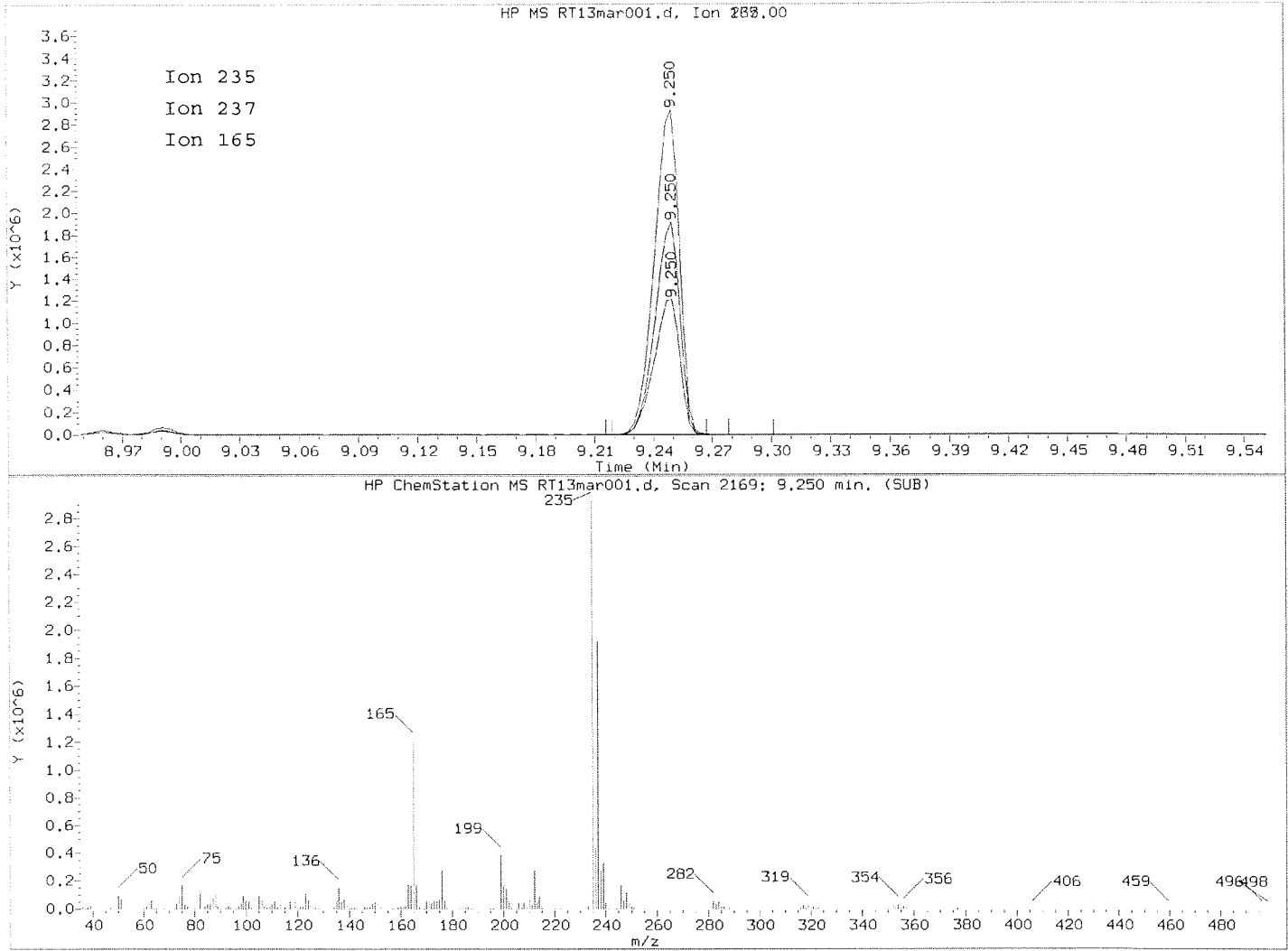
Exp. RT = 8.991

Found RT = 8.991

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 54109 | 100.00 |
| 237  | 34225 | 63.25  |
| 165  | 28483 | 52.64  |

Report Generated Time Mon Mar 13 14:56:03 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 10:50 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar001.d/resolut.m  
 Last Update : 13-MAR-2017 14:55



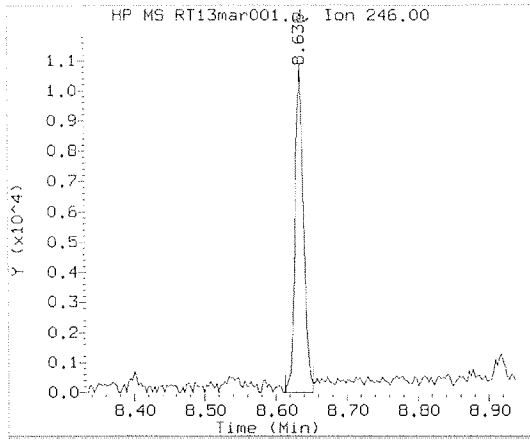
4,4'-DDT

=====

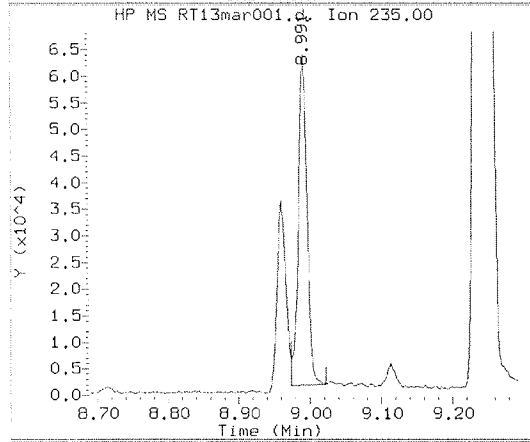
Exp. RT = 9.395

Found RT = 9.250

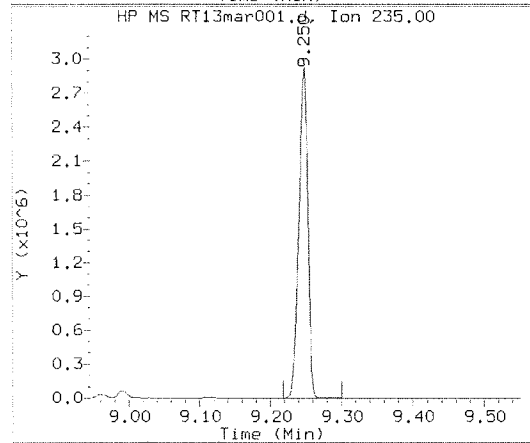
| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 2624611 | 100.00 |
| 237  | 1692228 | 64.48  |
| 165  | 1118106 | 42.60  |



Compound: 4,4'-DDE  
 Quant Mass: 246  
 RT: 8.636  
 Area: 9077



Compound: 4,4'-DDD  
 Quant Mass: 235  
 RT: 8.991  
 Area: 54109



Compound: 4,4'-DDT  
 Quant Mass: 235  
 RT: 9.250  
 Area: 2624611

#### DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

| Compound      | Response | %Breakdown | Max Allowed | Test |
|---------------|----------|------------|-------------|------|
| 4,4-DDT       | 2624611  |            |             | N/A  |
| 4,4-DDE       | 9077     | 0.34       | 20.0        | PASS |
| 4,4-DDD       | 54109    | 2.02       | 20.0        | PASS |
| 4,4-DDD + DDE | 63186    | 2.4        | 20.0        | PASS |

\*\*\*\*\*  
 TUNE SAMPLE \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST  
 \*\*\*\*\*

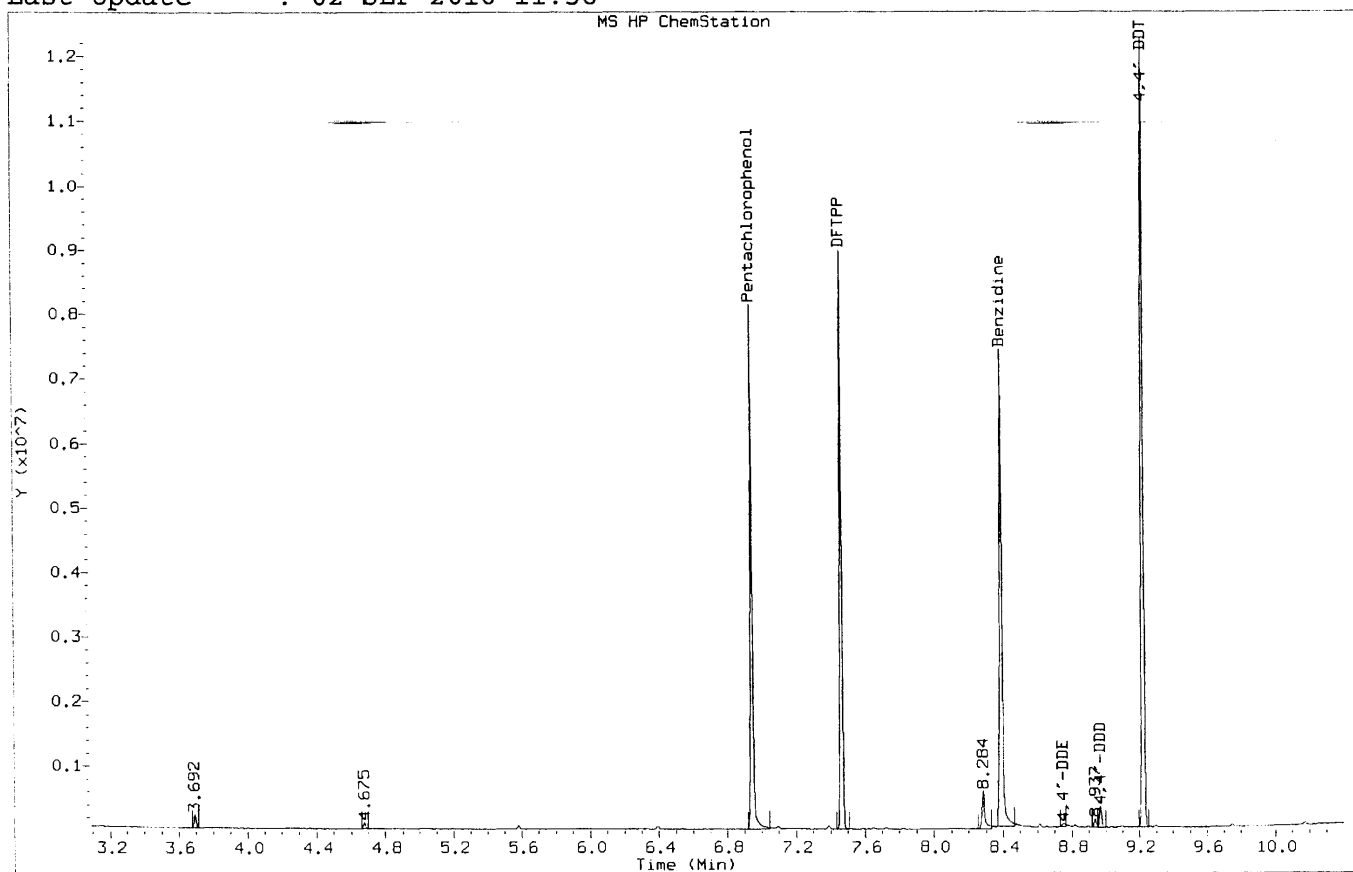


Report Generated Time Mon Mar 13 14:34:55 2017

```

Data File       : /chem/SVOA/GCMS_AAA.i/170313.b/13mar010.d
ALS Vial        : 1
Acq on          : 13-MAR-2017 14:16                      Operator   : 907
Sample          : DFTPP S101716A                        Inst        : GCMS_AAA
Misc            :                                         Multiplier  : 1
Integrator Type : HP RTE
Last Update     : 02-SEP-2016 11:58

```



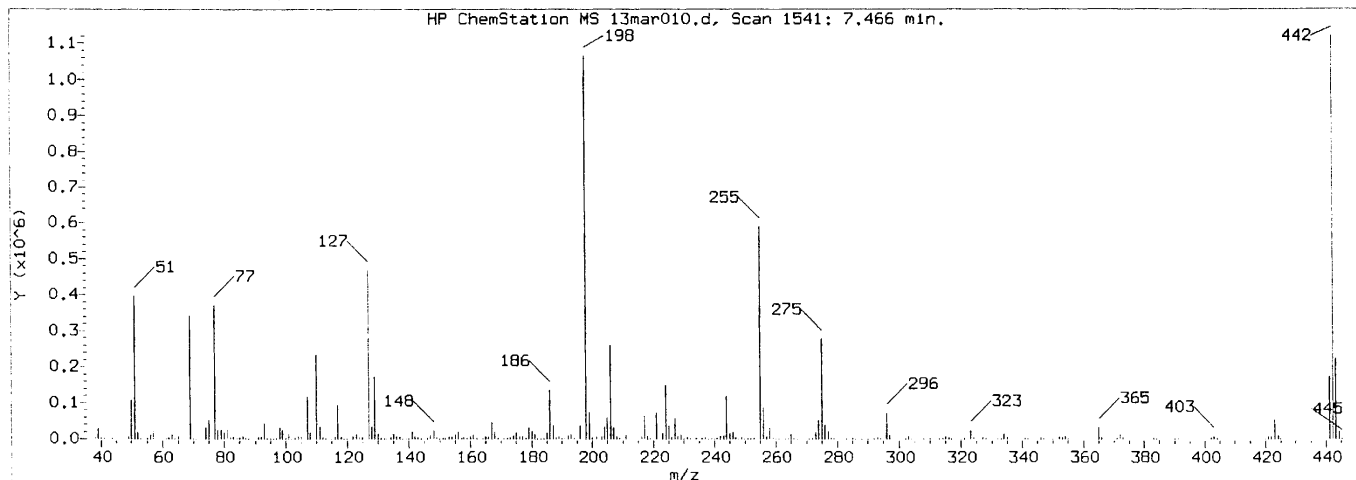
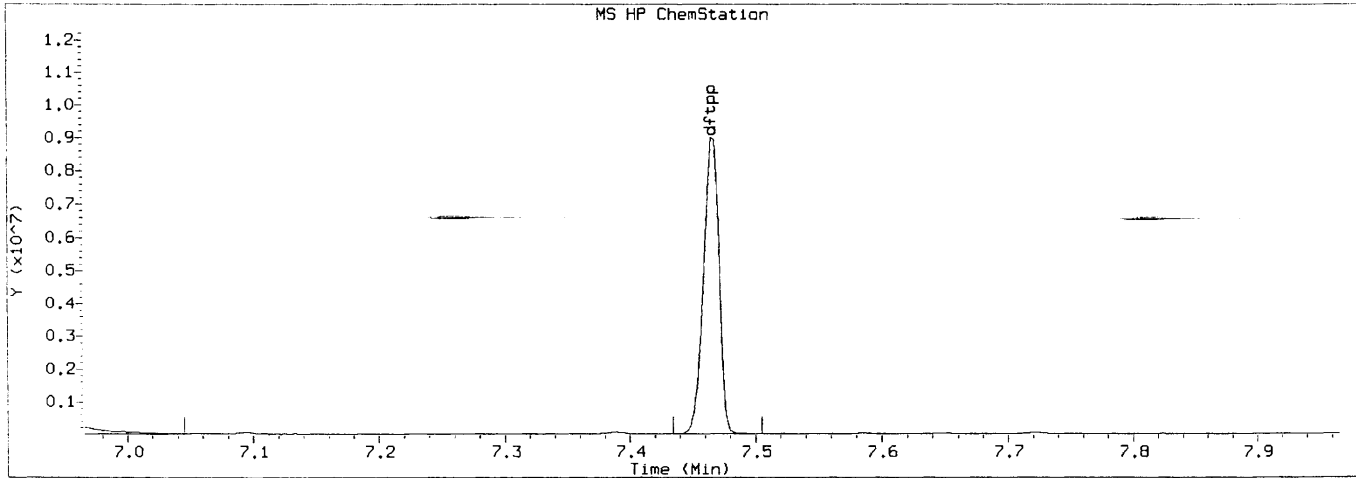
```
Tune *** PASSED ***
Pentachlorophenol Tailing *** PASSED ***
Benzidine Tailing *** PASSED ***
DDT degradation *** PASSED ***
```

Tuning Sample, /chem/SVOA/GCMS AAA.i/170313.b/13mar010.d ,\*\*\* PASSED \*\*\*

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
 ALS Vial : 1  
 Acq on : 13-MAR-2017 14:16  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/dftpptune.m  
 Last Update : 02-SEP-2016 11:58

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1



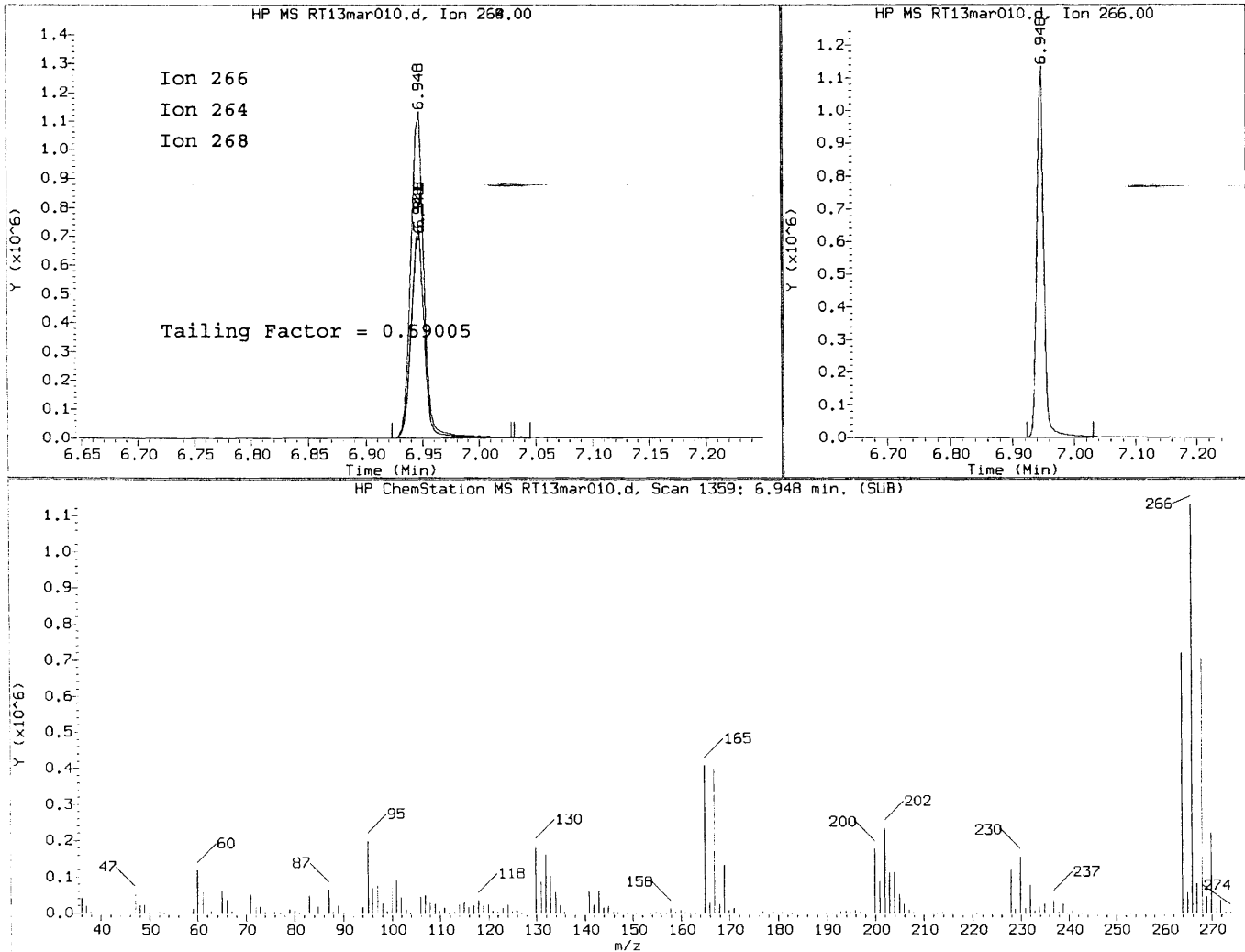
DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 1004202  | PASS |
| 51  | 30 - 60% of mass 198               | 36.93     | 370875   | PASS |
| 68  | Less than 2% of mass 69            | 0.00      | 0        | PASS |
| 69  | Less than mass 198                 | 32.13     | 322666   | PASS |
| 70  | Less than 2% of mass 69            | 0.50      | 1619     | PASS |
| 127 | 40 - 60% of mass 198               | 43.76     | 439424   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 6.88      | 69098    | PASS |
| 275 | 10 - 30% of mass 198               | 26.15     | 262613   | PASS |
| 365 | 1 - 100% of mass 198               | 2.95      | 29634    | PASS |
| 441 | Present, but less than mass 443    | 78.45     | 161962   | PASS |
| 442 | 40 - 200% of mass 198              | 104.85    | 1052906  | PASS |
| 443 | 17 - 23% of mass 442               | 19.61     | 206442   | PASS |

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 14:16  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d/resolut.m  
 Last Update : 13-MAR-2017 14:33

Operator : 907  
 Inst : GCMS AAA  
 Multiplier : 1



## Pentachlorophenol

=====  
 Exp. RT = 7.110  
 Found RT = 6.948

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 913684 | 100.00 |
| 264  | 584406 | 63.96  |
| 268  | 566684 | 62.02  |

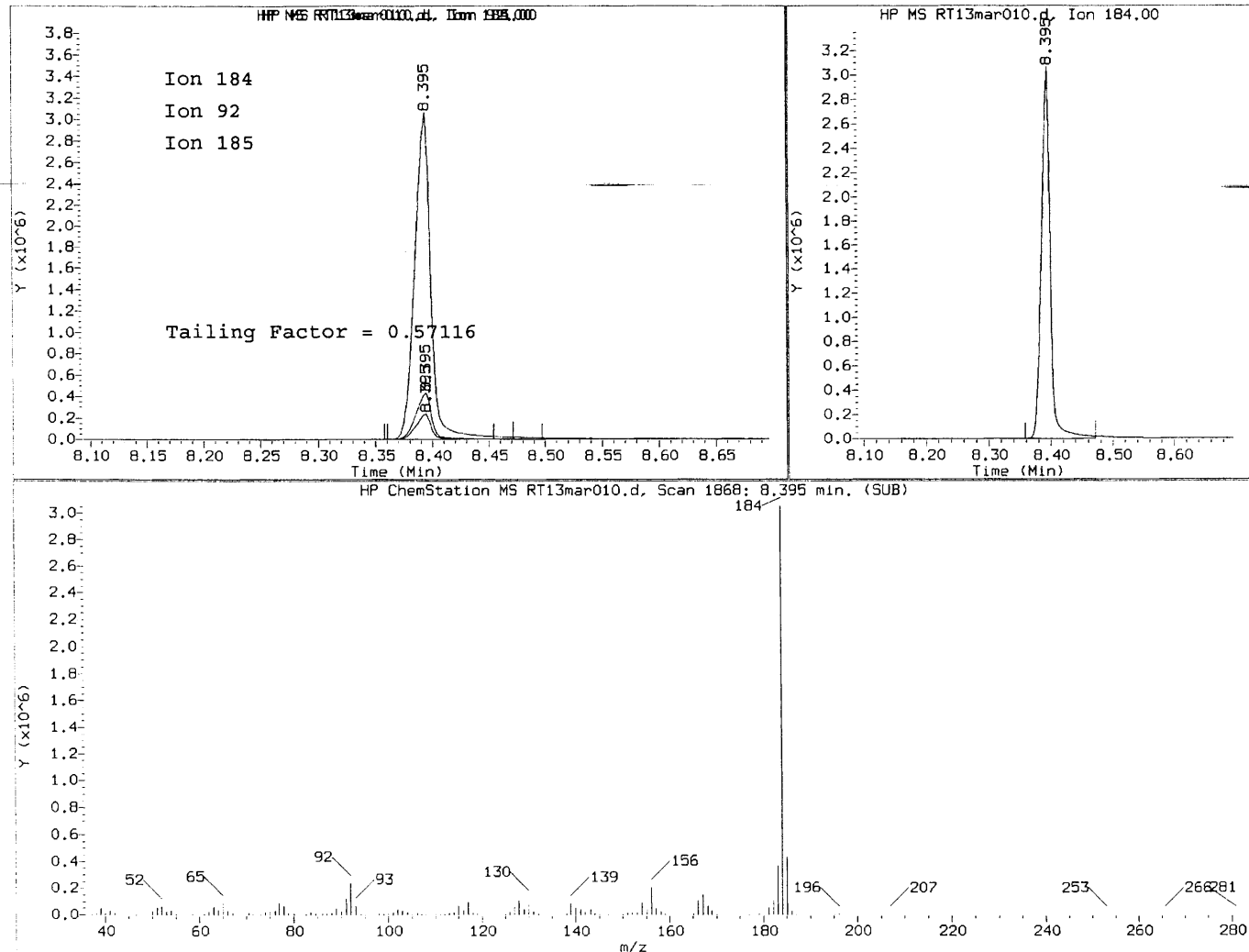
Peak baseline front width (sec) : 0.844  
 Peak baseline tail width (sec) : 0.498  
 Tail Factor = 0.498 / 0.844

Tailing factor for Pentachlorophenol OK

Tail Factor = 0.590 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 14:16 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d/resolut.m  
 Last Update : 13-MAR-2017 14:33



## Benzidine

=====

Exp. RT = 8.565  
 Found RT = 8.395

| Mass | Area    | Ratio  |
|------|---------|--------|
| 184  | 3047845 | 100.00 |
| 92   | 228654  | 7.50   |
| 185  | 435001  | 14.27  |

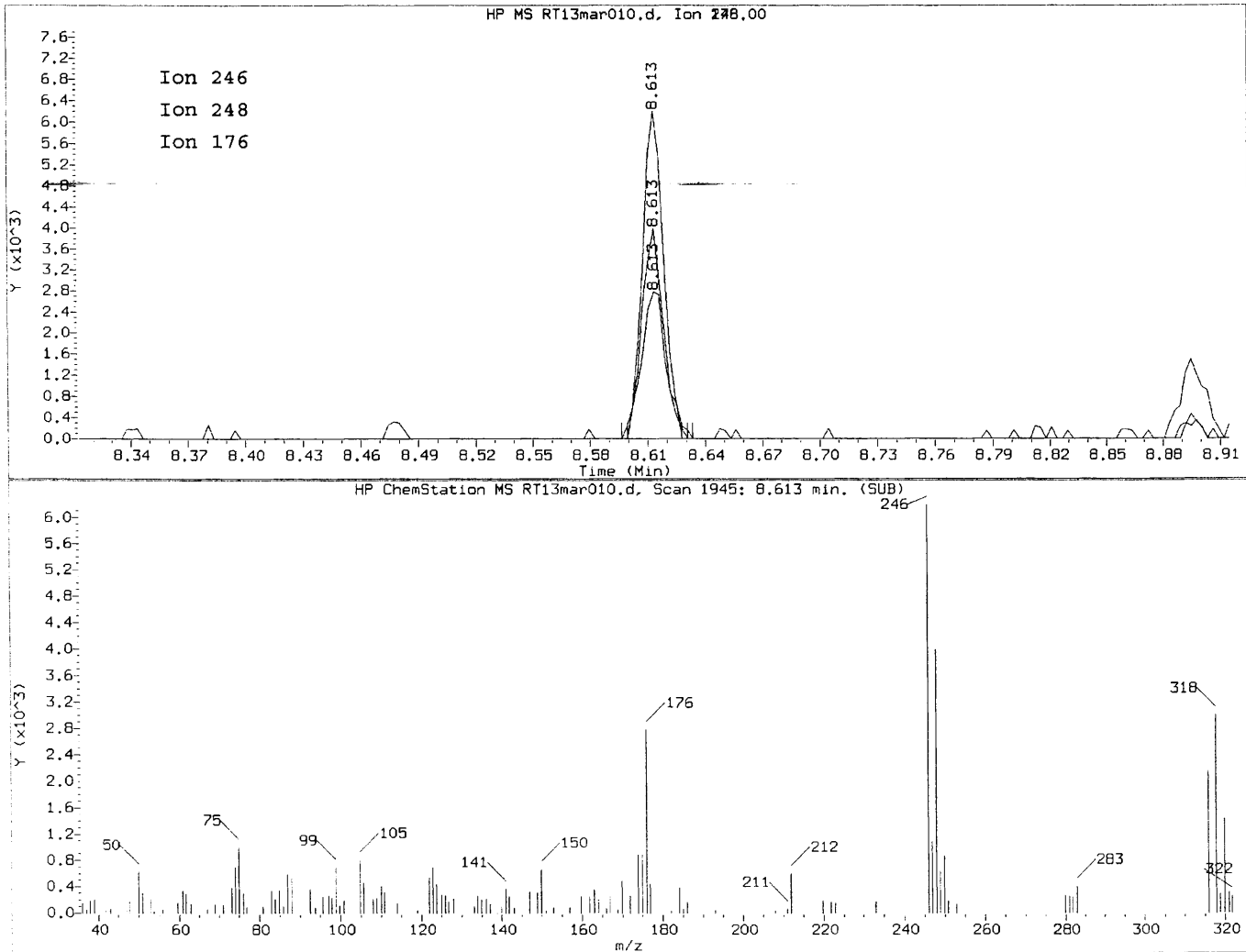
Peak baseline front width (sec) : 1.068  
 Peak baseline tail width (sec) : 0.610  
 Tail Factor = 0.610 / 1.068

Tailing factor for Benzidine OK

Tail Factor = 0.571 Maximum Allowed = 3.0

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
ALS Vial : 3  
Acq on : 13-MAR-2017 14:16 Operator : 907  
Sample : DFTPP S101716A Inst : GCMS\_AAA  
Misc : Multiplier : 1  
Integrator Type : HP RTE  
Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d/resolut.m  
Last Update : 13-MAR-2017 14:33



4,4'-DDE

=====

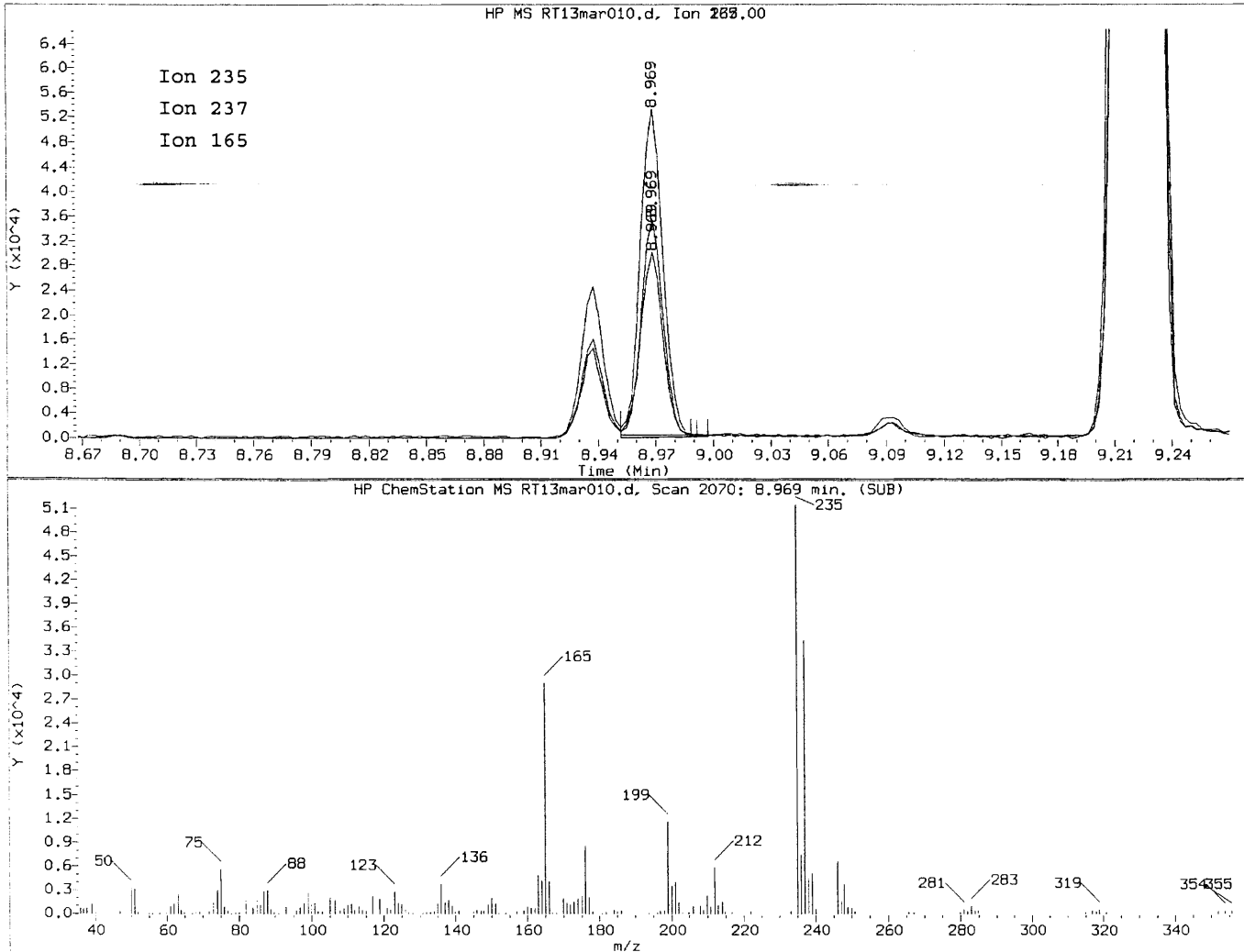
Exp. RT = 8.522

Found RT = 8.613

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 4873 | 100.00 |
| 248  | 3125 | 64.13  |
| 176  | 2417 | 49.61  |

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 14:16 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d/resolut.m  
 Last Update : 13-MAR-2017 14:33



4, 4'-DDD

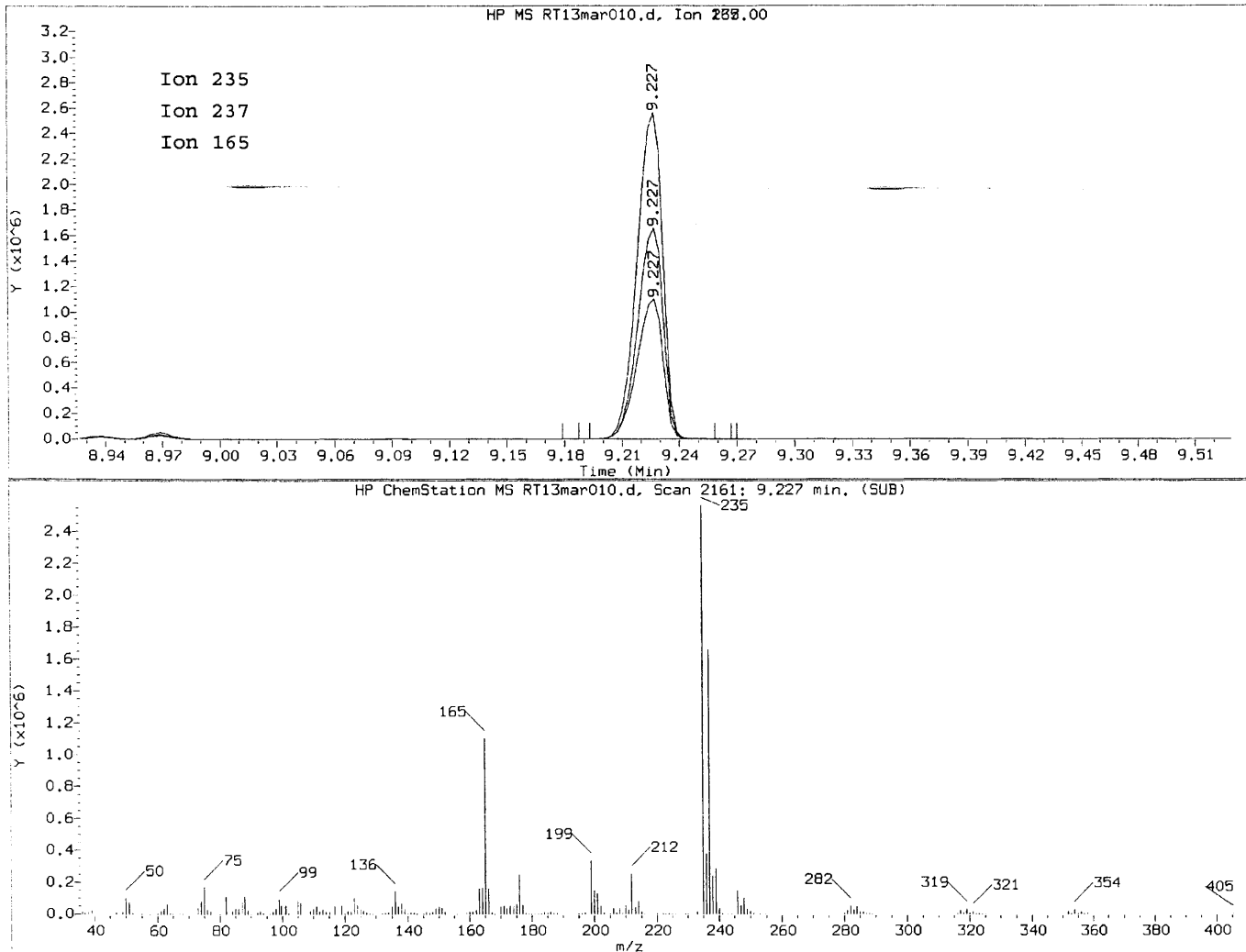
=====

Exp. RT = 8.875  
 Found RT = 8.969

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 44885 | 100.00 |
| 237  | 28720 | 63.99  |
| 165  | 23976 | 53.42  |

Report Generated Time Mon Mar 13 14:34:55 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d  
 ALS Vial : 3  
 Acq on : 13-MAR-2017 14:16 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS AAA  
 Misc : Multiplier : 1<sup>-</sup>  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170313.b/13mar010.d/resolut.m  
 Last Update : 13-MAR-2017 14:33



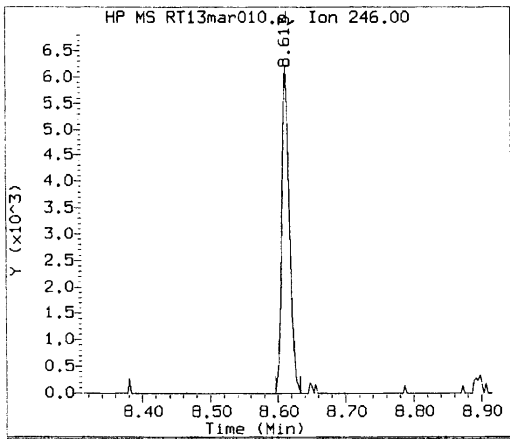
4,4'-DDT

=====

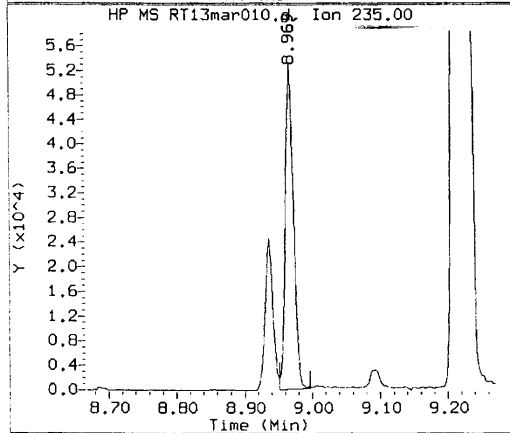
Exp. RT = 9.395

Found RT = 9.227

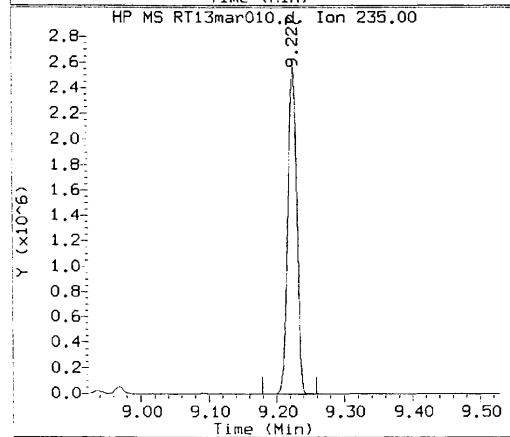
| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 2403086 | 100.00 |
| 237  | 1546943 | 64.37  |
| 165  | 1048928 | 43.65  |



Compound: 4,4'-DDE  
 Quant Mass: 246  
 RT: 8.613  
 Area: 4873



Compound: 4,4'-DDD  
 Quant Mass: 235  
 RT: 8.969  
 Area: 44885



Compound: 4,4'-DDT  
 Quant Mass: 235  
 RT: 9.227  
 Area: 2403086

#### DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

| Compound      | Response | %Breakdown | Max Allowed | Test |
|---------------|----------|------------|-------------|------|
| 4,4-DDT       | 2403086  |            |             | N/A  |
| 4,4-DDE       | 4873     | 0.20       | 20.0        | PASS |
| 4,4-DDD       | 44885    | 1.83       | 20.0        | PASS |
| 4,4-DDD + DDE | 49758    | 2.0        | 20.0        | PASS |

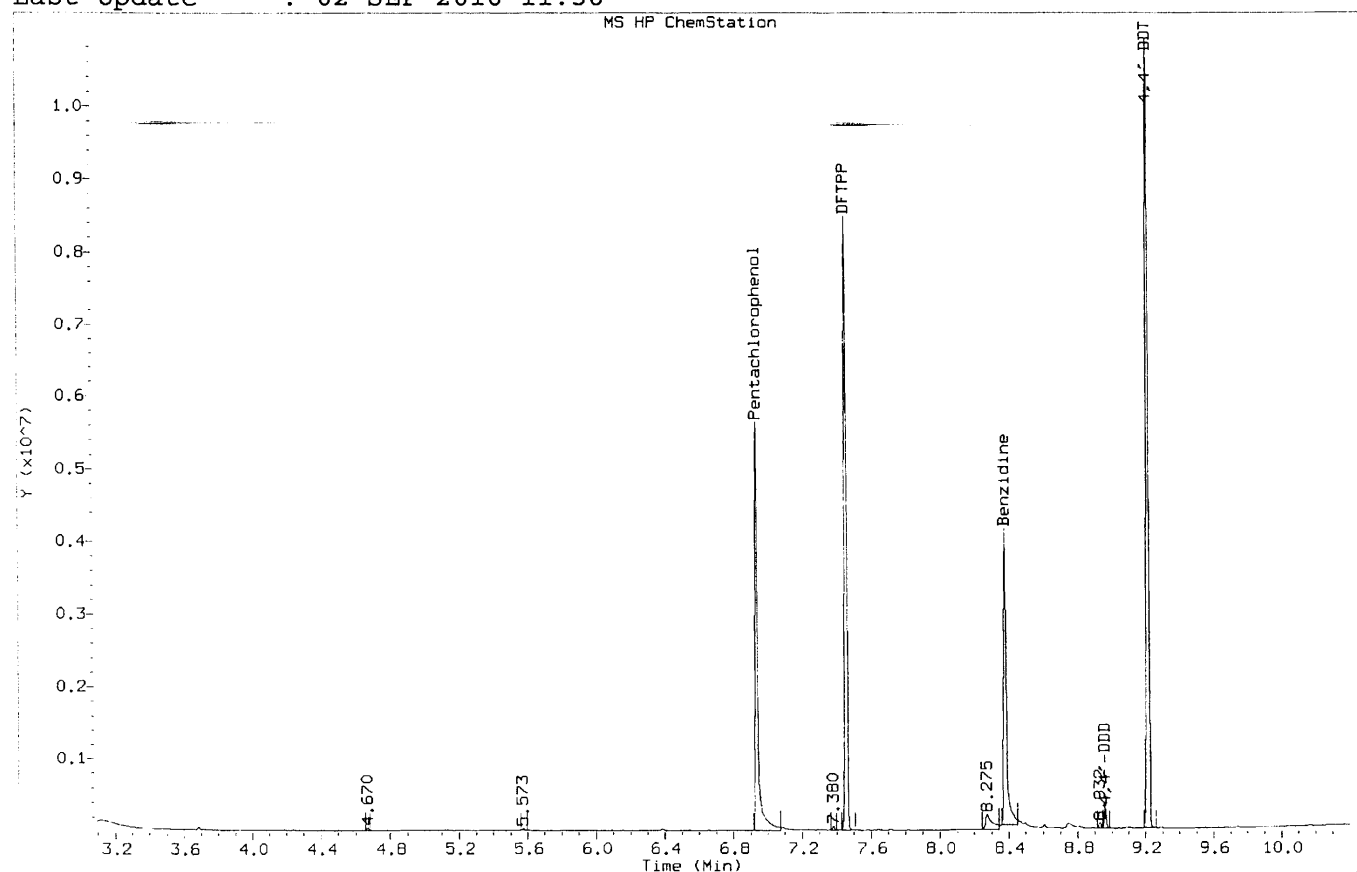
\*\*\*\*\*  
 TUNE SAMPLE \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST  
 \*\*\*\*\*



## DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
ALS Vial : 36  
Acq on : 14-MAR-2017 10:36 Operator : 907  
Sample : DFTPP S101716A Inst : GCMS\_AAA  
Misc : Multiplier : 1  
Integrator Type : HP RTE  
Last Update : 02-SEP-2016 11:58



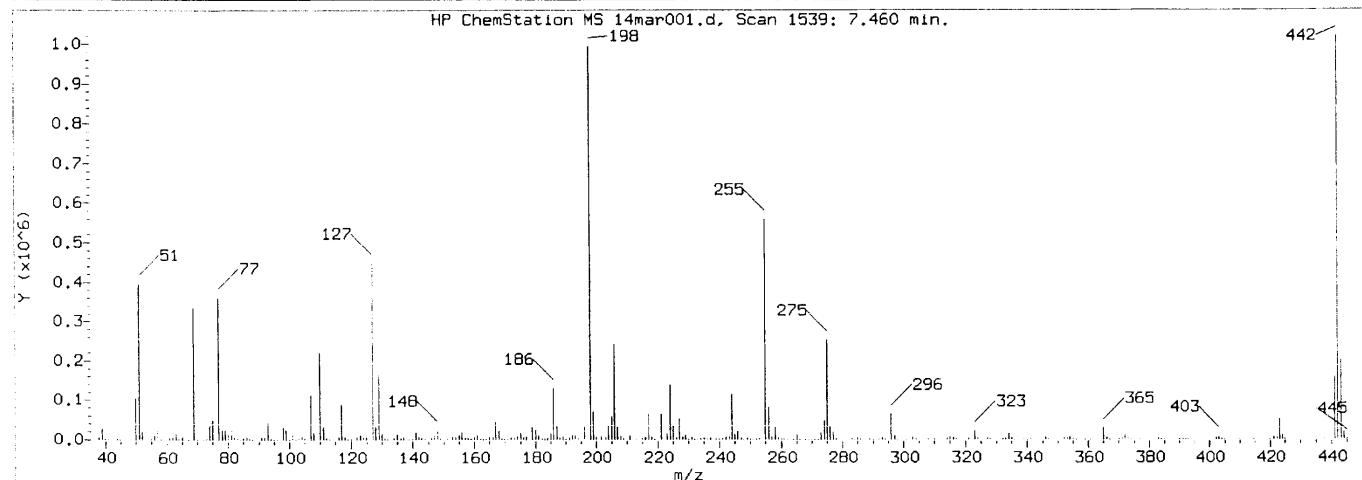
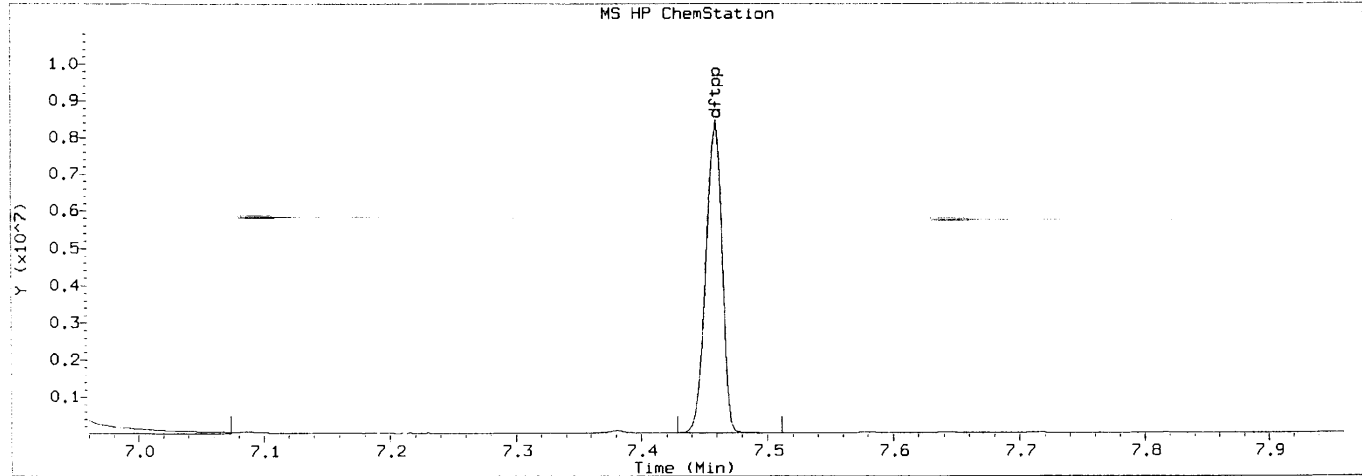
|                           |                |
|---------------------------|----------------|
| Tune                      | *** PASSED *** |
| Pentachlorophenol Tailing | *** PASSED *** |
| Benzidine Tailing         | *** PASSED *** |
| DDT degradation           | *** PASSED *** |

Tuning Sample, /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d ,\*\*\* PASSED \*\*\*

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 36  
 Acq on : 14-MAR-2017 10:36  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/dftpptune.m  
 Last Update : 02-SEP-2016 11:58

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1



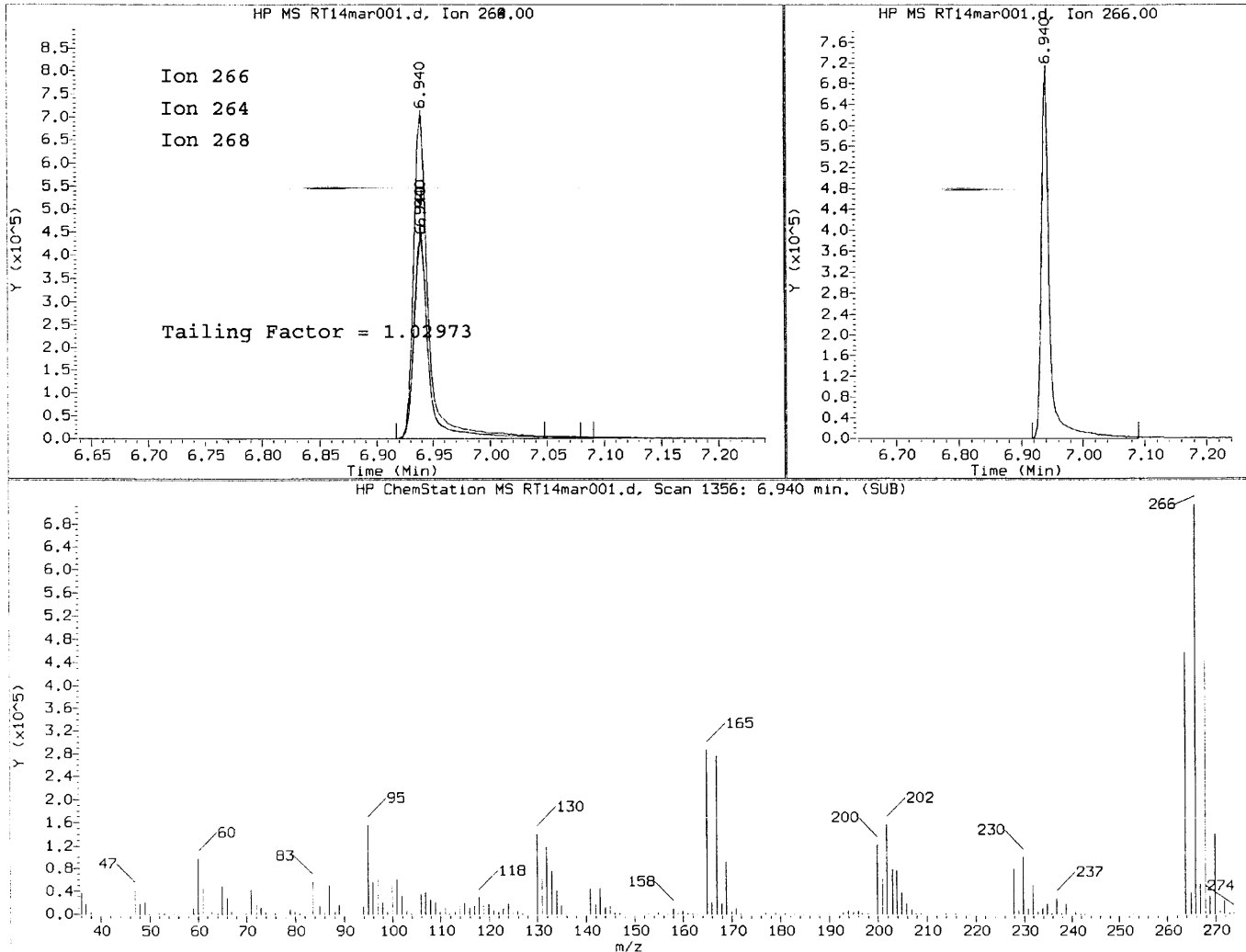
DFTPP Ion Abundance/Ratio Criteria Chart

| Ion | Abundance Criteria                 | Base Peak | Response | Test |
|-----|------------------------------------|-----------|----------|------|
| 198 | Base Peak, 100% relative abundance | 100.00    | 920597   | PASS |
| 51  | 30 - 60% of mass 198               | 39.76     | 366033   | PASS |
| 68  | Less than 2% of mass 69            | 0.00      | 0        | PASS |
| 69  | Less than mass 198                 | 33.51     | 308484   | PASS |
| 70  | Less than 2% of mass 69            | 0.54      | 1674     | PASS |
| 127 | 40 - 60% of mass 198               | 44.33     | 408128   | PASS |
| 197 | 0 - 1% of mass 198                 | 0.00      | 0        | PASS |
| 199 | 5 - 9% of mass 198                 | 6.90      | 63517    | PASS |
| 275 | 10 - 30% of mass 198               | 25.58     | 235456   | PASS |
| 365 | 1 - 100% of mass 198               | 2.92      | 26861    | PASS |
| 441 | Present, but less than mass 443    | 78.44     | 145416   | PASS |
| 442 | 40 - 200% of mass 198              | 102.69    | 945365   | PASS |
| 443 | 17 - 23% of mass 442               | 19.61     | 185386   | PASS |

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 3  
 Acq on : 14-MAR-2017 10:36  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d/resolut.m  
 Last Update : 14-MAR-2017 10:53

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1<sup>-</sup>



## Pentachlorophenol

=====  
 Exp. RT = 7.110  
 Found RT = 6.940

| Mass | Area   | Ratio  |
|------|--------|--------|
| 266  | 667286 | 100.00 |
| 264  | 415158 | 62.22  |
| 268  | 407437 | 61.06  |

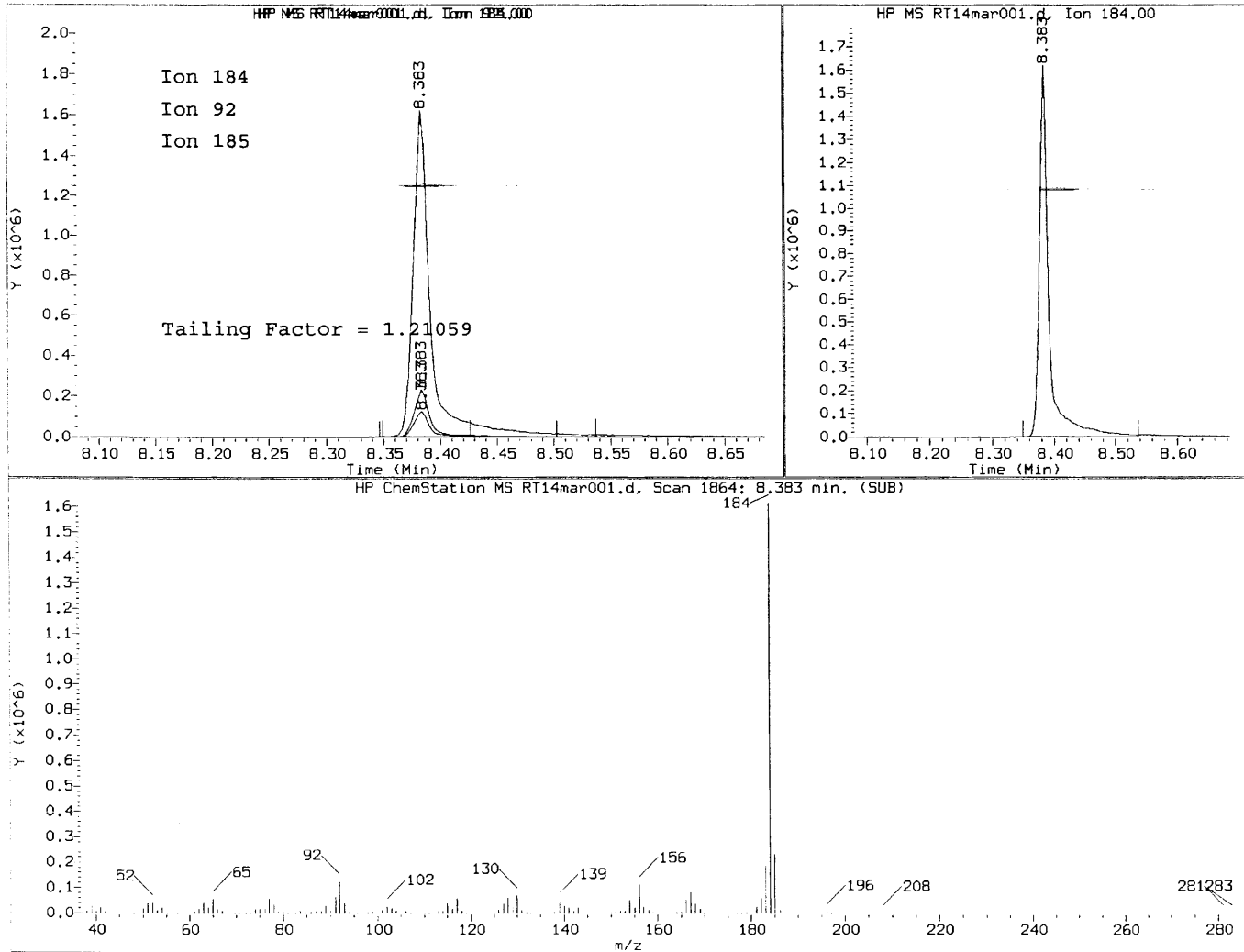
Peak baseline front width (sec) : 0.740  
 Peak baseline tail width (sec) : 0.762  
 Tail Factor = 0.762 / 0.740

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.030 Maximum Allowed = 3.0

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 3  
 Acq on : 14-MAR-2017 10:36 Operator : 907  
 Sample : DFTPP S101716A Inst : GCMS\_AAA  
 Misc : Multiplier : 1  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d/resolut.m  
 Last Update : 14-MAR-2017 10:53



## Benzidine

=====

Exp. RT = 8.565

Found RT = 8.383

| Mass | Area    | Ratio  |
|------|---------|--------|
| 184  | 1763533 | 100.00 |
| 92   | 124152  | 7.04   |
| 185  | 242738  | 13.76  |

Peak baseline front width (sec) : 0.812

Peak baseline tail width (sec) : 0.983

Tail Factor = 0.983 / 0.812

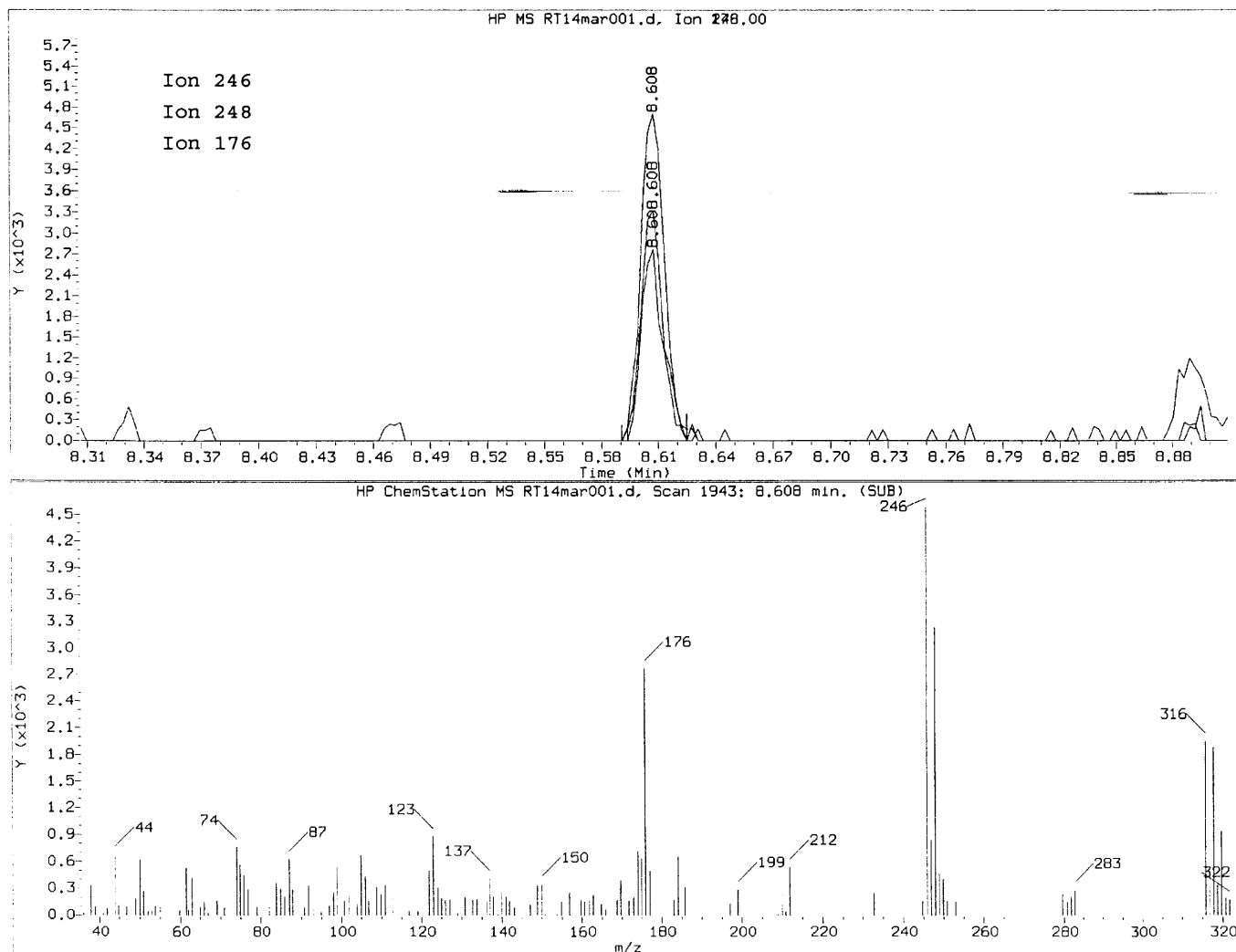
Tailing factor for Benzidine OK

Tail Factor = 1.211 Maximum Allowed = 3.0

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 3  
 Acq on : 14-MAR-2017 10:36  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d/resolut.m  
 Last Update : 14-MAR-2017 10:53

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1<sup>-</sup>



4,4'-DDE

=====

Exp. RT = 8.636

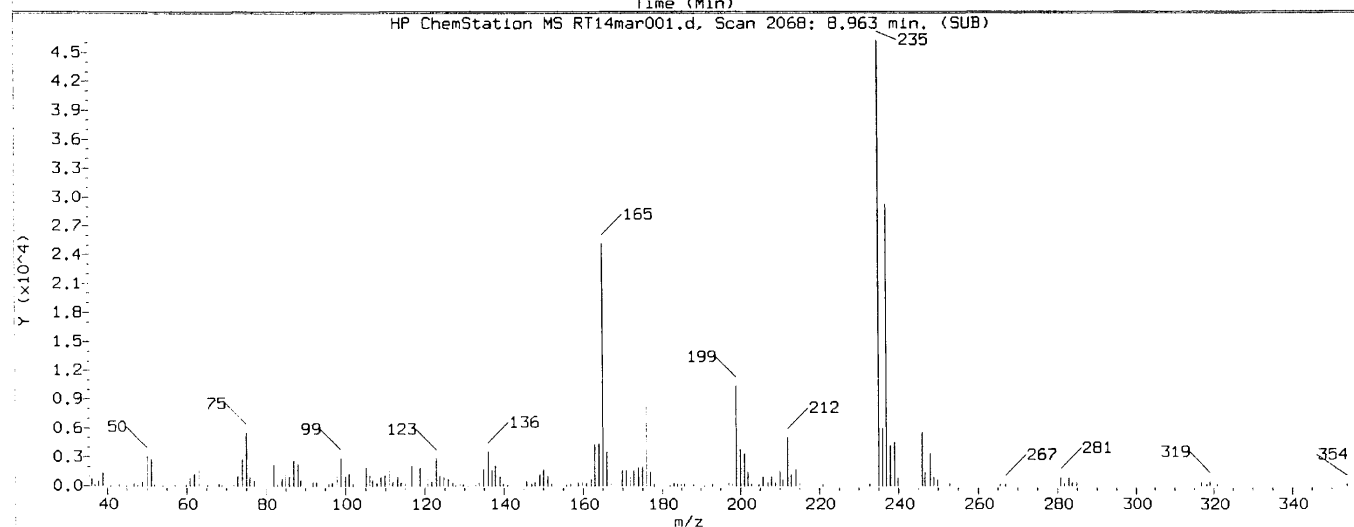
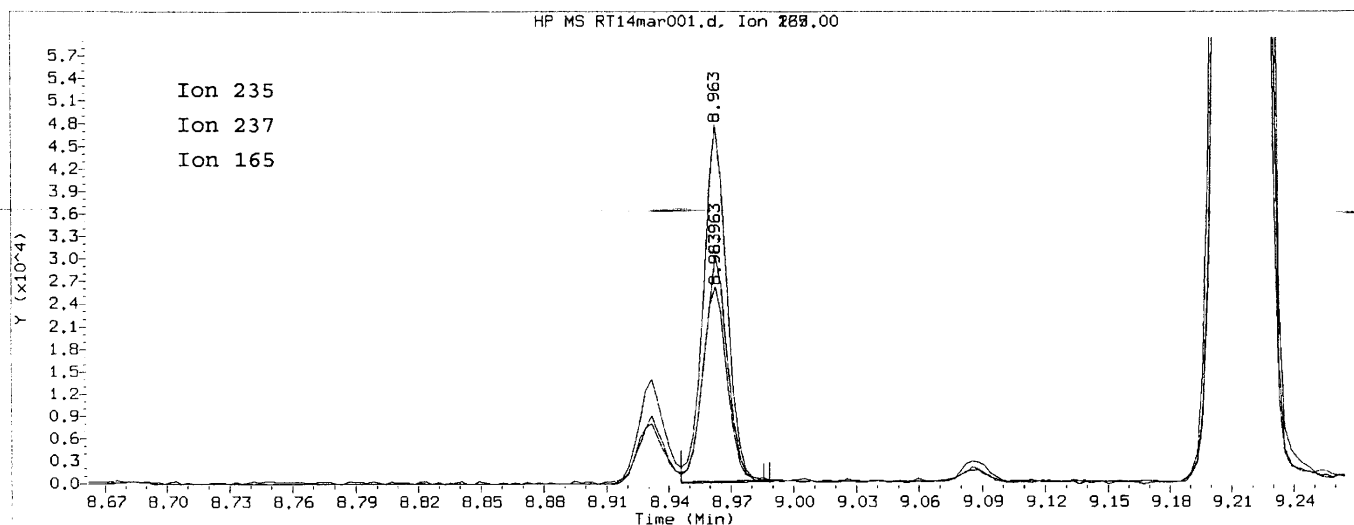
Found RT = 8.608

| Mass | Area | Ratio  |
|------|------|--------|
| 246  | 4116 | 100.00 |
| 248  | 2813 | 68.35  |
| 176  | 2199 | 53.44  |

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 3  
 Acq on : 14-MAR-2017 10:36  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d/resolut.m  
 Last Update : 14-MAR-2017 10:53

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1<sup>-</sup>



4,4'-DDD

=====

Exp. RT = 8.991

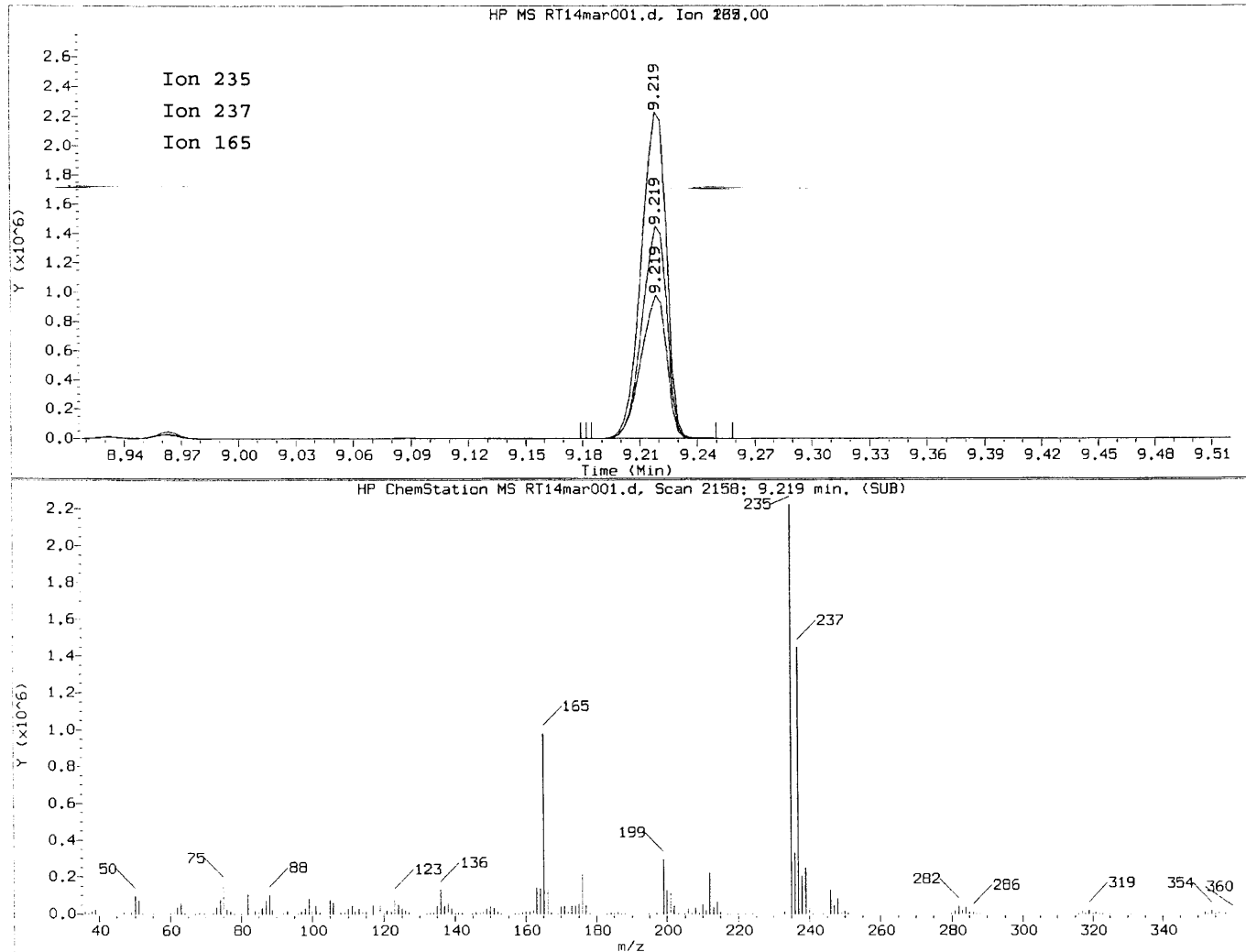
Found RT = 8.963

| Mass | Area  | Ratio  |
|------|-------|--------|
| 235  | 37618 | 100.00 |
| 237  | 24330 | 64.68  |
| 165  | 21821 | 58.01  |

Report Generated Time Tue Mar 14 10:56:43 2017

Data File : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d  
 ALS Vial : 3  
 Acq on : 14-MAR-2017 10:36  
 Sample : DFTPP S101716A  
 Misc :  
 Integrator Type : HP RTE  
 Method : /chem/SVOA/GCMS\_AAA.i/170314.b/14mar001.d/resolut.m  
 Last Update : 14-MAR-2017 10:53

Operator : 907  
 Inst : GCMS\_AAA  
 Multiplier : 1<sup>-</sup>



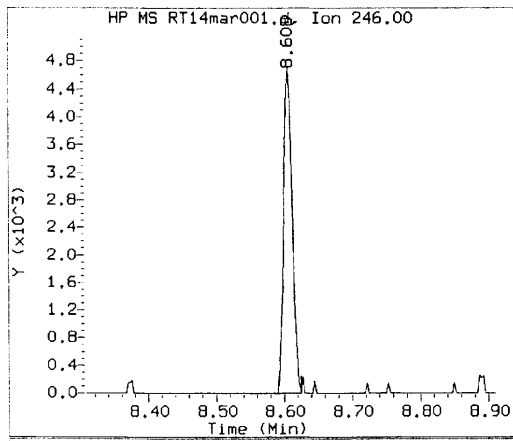
4,4'-DDT

=====

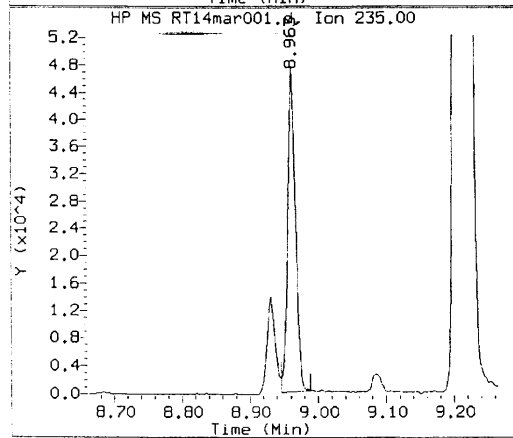
Exp. RT = 9.395

Found RT = 9.219

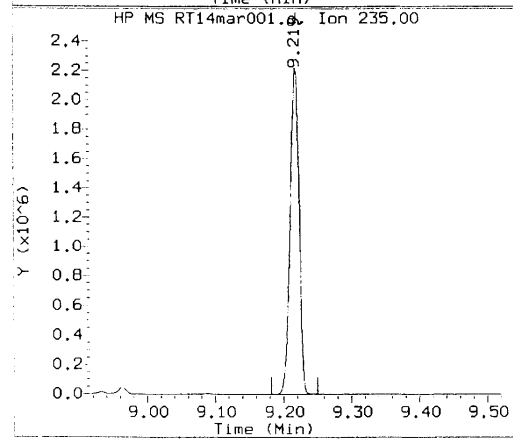
| Mass | Area    | Ratio  |
|------|---------|--------|
| 235  | 2052488 | 100.00 |
| 237  | 1322608 | 64.44  |
| 165  | 921440  | 44.89  |



Compound: 4,4'-DDE  
 Quant Mass: 246  
 RT: 8.608  
 Area: 4116



Compound: 4,4'-DDD  
 Quant Mass: 235  
 RT: 8.963  
 Area: 37618



Compound: 4,4'-DDT  
 Quant Mass: 235  
 RT: 9.219  
 Area: 2052488

#### DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

| Compound       | Response | %Breakdown | Max Allowed | Test |
|----------------|----------|------------|-------------|------|
| 4,4-DDT        | 2052488  |            |             | N/A  |
| 4,4'-DDE       | 4116     | 0.20       | 20.0        | PASS |
| 4,4'-DDD       | 37618    | 1.80       | 20.0        | PASS |
| 4,4'-DDD + DDE | 41734    | 2.0        | 20.0        | PASS |

\*\*\*\*\*  
 TUNE SAMPLE \*\*\* PASSED \*\*\* DDT BREAKDOWN TEST  
 \*\*\*\*\*



# EPA METHOD 8270C PAHSIM

## Run Logs

## Injection Log

Directory: W:\GCMS\_AAA\GCMS\_AAA\_DATA\2017\170313

| Line | Vial | FileName   | Multiplier | SampleName             | Misc Info     | Injected          |
|------|------|------------|------------|------------------------|---------------|-------------------|
| 1    | 1    | 13mar001.d | 1.         | DFTPP S101716A         |               | 13 Mar 2017 10:50 |
| 2    | 2    | 13mar002.d | 1.         | CCV S101716G 1PPM      | 170313A004    | 13 Mar 2017 11:36 |
| 3    | 3    | 13mar003.d | 1.         | BLANK                  | S101716B 10UL | 13 Mar 2017 11:56 |
| 27   | 27   | 13mar004.d | 1.         | ICAL-1 S010317D 5PPM   | 170313I002    | 13 Mar 2017 12:16 |
| 28   | 28   | 13mar005.d | 1.         | ICAL-2 S010317E 2PPM   |               | 13 Mar 2017 12:35 |
| 29   | 29   | 13mar006.d | 1.         | ICAL-3 S010317F 1PPM   |               | 13 Mar 2017 12:55 |
| 30   | 30   | 13mar007.d | 1.         | ICAL-4 S010317G 0.5PPM |               | 13 Mar 2017 13:15 |
| 31   | 31   | 13mar008.d | 1.         | ICAL-5 S010317H 0.1PPM |               | 13 Mar 2017 13:34 |
| 32   | 32   | 13mar009.d | 1.         | ICV S010317I 1PPM      |               | 13 Mar 2017 13:54 |
| 0    | 1    | 13mar010.d | 1.         | DFTPP S101716A         |               | 13 Mar 2017 14:16 |
| 1    | 2    | 13mar011.d | 1.         | CCV S101716G 1PPM      | 170313A004    | 13 Mar 2017 14:31 |
| 2    | 21   | 13mar012.d | 1.         | MB 170310 L13          | S101716B 10UL | 13 Mar 2017 14:51 |
| 3    | 22   | 13mar013.d | 1.         | LCS 170310 L13         | S101716B 10UL | 13 Mar 2017 15:11 |
| 4    | 23   | 13mar014.d | 1.         | LCSD 170310 L13        | S101716B 10UL | 13 Mar 2017 15:30 |
| 5    | 24   | 13mar015.d | 1.         | 17-03-0761-1           | S101716B 10UL | 13 Mar 2017 15:50 |
| 6    | 35   | 13mar016.d | 1.         | 17-03-0761-1 10X       | S101716B 10UL | 13 Mar 2017 16:10 |
| 7    | 25   | 13mar017.d | 1.         | 16-12-1370-12 50X      | S101716B 10UL | 13 Mar 2017 16:29 |
| 8    | 26   | 13mar018.d | 1.         | 16-12-1370-13 50X      | S101716B 10UL | 13 Mar 2017 16:49 |
| 9    | 3    | 13mar019.d | 1.         | MB 170310 L04          | S101716B 10UL | 13 Mar 2017 17:09 |
| 0    | 4    | 13mar020.d | 1.         | LCS 170310 L04         | S101716B 10UL | 13 Mar 2017 17:28 |
| 1    | 5    | 13mar021.d | 1.         | 17-03-0641-26 MS       | S101716B 10UL | 13 Mar 2017 17:48 |
| 2    | 6    | 13mar022.d | 1.         | 17-03-0641-26 MSD      | S101716B 10UL | 13 Mar 2017 18:08 |
| 3    | 7    | 13mar023.d | 1.         | 17-03-0642-26          | S101716B 10UL | 13 Mar 2017 18:28 |
| 4    | 8    | 13mar024.d | 1.         | 17-03-0642-27          | S101716B 10UL | 13 Mar 2017 18:47 |
| 5    | 9    | 13mar025.d | 1.         | 17-03-0642-28          | S101716B 10UL | 13 Mar 2017 19:07 |
| 6    | 10   | 13mar026.d | 1.         | 17-03-0642-29          | S101716B 10UL | 13 Mar 2017 19:27 |
| 7    | 11   | 13mar027.d | 1.         | 17-03-0641-26          | S101716B 10UL | 13 Mar 2017 19:46 |
| 8    | 12   | 13mar028.d | 1.         | 17-03-0641-27          | S101716B 10UL | 13 Mar 2017 20:06 |
| 9    | 13   | 13mar029.d | 1.         | 17-03-0641-28          | S101716B 10UL | 13 Mar 2017 20:26 |
| 0    | 14   | 13mar030.d | 1.         | 17-03-0641-29          | S101716B 10UL | 13 Mar 2017 20:46 |
| 1    | 15   | 13mar031.d | 1.         | 17-03-0589-25          | S101716B 10UL | 13 Mar 2017 21:05 |
| 2    | 16   | 13mar032.d | 1.         | 17-03-0589-26          | S101716B 10UL | 13 Mar 2017 21:25 |
| 3    | 17   | 13mar033.d | 1.         | 17-03-0589-27          | S101716B 10UL | 13 Mar 2017 21:45 |
| 4    | 18   | 13mar034.d | 1.         | 17-03-0590-25          | S101716B 10UL | 13 Mar 2017 22:05 |
| 5    | 19   | 13mar035.d | 1.         | 17-03-0590-26          | S101716B 10UL | 13 Mar 2017 22:24 |
| 6    | 20   | 13mar036.d | 1.         | 17-03-0590-27          | S101716B 10UL | 13 Mar 2017 22:44 |
| 7    | 33   | 13mar037.d | 1.         | 17-03-0153-1 MSD RB    | S101716B 10UL | 13 Mar 2017 23:04 |
| 8    | 34   | 13mar038.d | 1.         | 17-03-0153-1 RB        | S101716B 10UL | 13 Mar 2017 23:24 |

**Injection Log**

Directory: W:\GCMS\_AAA\GCMS\_AAA\_DATA\2017\170314

| ine | Vial       | FileName | Multiplier              | SampleName | Misc Info     | Injected          |
|-----|------------|----------|-------------------------|------------|---------------|-------------------|
| 36  | 14mar001.d | 1.       | DFTPP S101716A          |            |               | 14 Mar 2017 10:36 |
| 37  | 14mar002.d | 1.       | CCV S101716G 1PPM       |            | 170314A011    | 14 Mar 2017 10:52 |
| 38  | 14mar003.d | 1.       | 16-12-1370-12 MS 5X RB  |            | S101716B 10UL | 14 Mar 2017 11:11 |
| 39  | 14mar004.d | 1.       | 16-12-1370-12 MSD 5X RB |            | S101716B 10UL | 14 Mar 2017 11:31 |
| 40  | 14mar005.d | 1.       | 16-12-1370-12 5X RB     |            | S101716B 10UL | 14 Mar 2017 11:51 |
| 41  | 14mar006.d | 1.       | 16-12-1370-13 5X RB     |            | S101716B 10UL | 14 Mar 2017 12:11 |
| 42  | 14mar007.d | 1.       | 17-03-0641-26 MS RB     |            | S101716B 10UL | 14 Mar 2017 12:30 |

# EPA METHOD 8270C PAHSIM

## Sample Preparation Logs

✓ 8270 ( ) Soil ☐ Soil SIM SUPER ☐ PAH ☒ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL )Extraction Method (EPA Method): ☐ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☒ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 285 Start Extraction- 610/787 Blow Down- 1084 Clean Up-

Matrix: ☒ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 53 Filter ID#: 507-17-13 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/10/17 7:45 Ext. End Date/Time: 03/10/17 12:45

Sand or Wipe ID#:

507-19-19

Drying Agent: ☒ Na<sub>2</sub>SO<sub>4</sub> ☒ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18 / 507-22-03

Surrogate Std ID# &amp; Volume Added (mL): 5020117C 0.5

Spike Std ID# & Volume Added (mL): 8100716A 0.5 Spike Added to: ☒ LCS ☐ LCSD ☒ MS ☒ MSDExtraction Solvent: ☐ MeCl<sub>2</sub> ☐ 1:1 Hexane-Acetone ☒ 1:1 MeCl<sub>2</sub>-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ AcetonitrileExtraction Solvent ID#: 507-55-01 / 507-44-08 Exchange Solvent (☐ Hexane ☐ Acetonitrile) ID#:

Clean Up Start Date &amp; Time:

Clean Up End Date &amp; Time:

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☐ 3665 Acid ☐ Other

Cartridge ID#:

Clean Up Reagent ID#:

Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #:

170310204

Sample W<sub>(g)</sub> V (mL)

Cel ID#:

Initial

Final

Clean Up  
Performed

Comments

MB

20.0

2

☐

LCS

20.0

2

☐

LCSD

NA

—

—

☐

MS 17-03-0641-26 ms A

20.0

2

☐

MSD 1 26 ms A

20.1

2

☐

17-03-0641-26 A

20.1

2

☐

27 A

20.0

2

☐

28 A

20.0

2

☐

29 A

20.1

2

☐

17-03-0589-25 A

20.1

2

☐

26 A

20.2

2

☐

27 A

20.0

2

☐

17-03-0590-25 A

20.1

2

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26 A

20.0

2

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27 A

20.1

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17-03-0642-26 A

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28 A

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29 A

20.0

2

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Peer Reviewed by: 287

Peer Reviewed Date: 03/10/17

Revision Date: 10/20/16