

David Szymanski
New York State Department of Environmental Conservation
Division of Environmental Remediation – Region 9
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Subject:
Tennessee Gas Pipeline Station 229
Site No.: 915140
Site Address: 7586 East Eden Road – Eden, NY 14057

Date:
December 20, 2018

Dear Mr. Szymanski:

Enclosed please find the Periodic Review Report and IC/EC Certification submittal and the Operations and Maintenance (O&M) Annual Report for 2018 activities for Tennessee Gas Pipeline Company's (TGP's) Compressor Station 229 located in Eden, NY.

Contact:
Todd Cridge

Phone:
315.671.9271

During the December 1, 2017 to December 1, 2018 reporting period, TGP conducted the annual site inspection with NYSDEC, sediment sampling, and resident fish sampling in May 2018.

Email:
Todd.Cridge@arcadis.com

Please do not hesitate to contact me with any questions as 315.671.9271.

Our ref:
B0051341

Sincerely,

Arcadis of New York, Inc.



Todd Cridge

Copies:
Scott Lewis, Kinder Morgan
Ray Sauvage, Kinder Morgan
Elizabeth Hover, Arcadis

Enclosures:
Attachments:
Enclosure 2 IC/EC and PRR Certification Forms
Attachment 1 Periodic Review Report
Attachment 2 Operations and Maintenance (O&M) Annual Report – 2018 Activities



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. 915140

Site Details

Box 1

Site Name Tennessee Gas Pipeline Station 229

Site Address: 7586 East Eden Road **Zip Code:** 14057

City/Town: Eden

County: Erie

Site Acreage: 50.500

Reporting Period: December 01, 2017 to December 01, 2018

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☒	☐
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control**210.00-2-30.11**

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Ground Water Use Restriction
Landuse Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; groundwater use restriction; restrictions on future maintenance and modification activities.

210.00-2-32.12

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Ground Water Use Restriction
Landuse Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; groundwater use restriction; restrictions on future maintenance and modification activities.

210.00-2-33.12

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Ground Water Use Restriction
Landuse Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; groundwater use restriction; restrictions on future maintenance and modification activities.

210.00-2-35.12

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Landuse Restriction
Ground Water Use Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; groundwater use restriction; restrictions on future maintenance and modification activities.

224.00-3-5.2

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Ground Water Use Restriction
Landuse Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; groundwater use restriction; restrictions on future maintenance and modification activities.

225.01-1-12.1

Tenn. Gas Pipeline, LLC (Kinder Morgan)

Ground Water Use Restriction

O&M Plan

Landuse Restriction

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk on August 22, 1995, November 5, 1997, and an amendment filed on June 10, 1999, the following controls are in place at the site and must be maintained and certified: landuse restriction; restrictions on future maintenance and modification activities; access-restricting fencing and posted signage; a cap and cover system; erosion control.

Description of Engineering ControlsParcelEngineering Control**225.01-1-12.1**Fencing/Access Control
Cover System

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO



2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 915140

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I SCOTT J. LEWIS at 1211 GREENVILLE MERCER ROAD - MERCER, PA 16137
print name print business address

am certifying as OWNER/EMPLOYEE REPRESENTATIVE (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Scott J. Lewis
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

11/28/18
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I SCOTT J. LEWIS at 1211 GREENVILLE MERCER ROAD - MERCER, PA 16137
print name print business address

am certifying as a Qualified Environmental Professional for the OWNER
(Owner or Remedial Party)

Scott J. Lewis
Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

11/28/18
Date

ATTACHMENT 1

Periodic Review Report - TGP Compressor Station 229 NYSDEC Site # 915140 Town of Eden, New York

I. Introduction

During August through November 1997, and between June and September 1998, Tennessee Gas Pipeline Company (TGP) performed remedial activities at Compressor Station 229 located near the town of Eden, Erie County, New York. As required by the Order on Consent (A9-0357-9706 dated September 2, 1997) between TGP and the New York State Department of Environmental Conservation (NYSDEC), the document entitled Remedial Design Work Plan [the "Work Plan"; BBL, July 1997 (revised)] was prepared to identify the proposed scope and implementation plans for remediation activities at the site. As specified in the Work Plan, six primary remediation components were to be performed, including: 1) excavation and off-site disposal of certain polychlorinated biphenyl-(PCB-) containing soils and sediments (followed by erosion control stabilization in certain areas); 2) construction of a sedimentation basin and trap; 3) placement of several discrete soil covers; 4) abandonment of five and installation of one groundwater monitoring well; 5) removal of fish from Station Lake; and 6) installation of perimeter fencing.

Remediation activities were performed in the following five areas of the site:

- Station Lake;
- Upper Tributary;
- Bog Area;
- Sedimentation Basin and Sediment Trap Area; and
- North Boston Road Properties.

The estimated volume of soils/sediment removed from the site and disposed of is approximately 2,485 in-place cubic yards (cy). Solid waste materials containing greater than or equal to 50 ppm PCBs were disposed of at the CWM Chemical Services, Inc. (CWM) landfill in Model City, New York as Toxic Substance Control Act-(TSCA-) regulated materials (approximately 901 cy). In addition, CWM arranged for waste transportation services for both TSCA-and non-TSCA-regulated materials (approximately 1,584 cy disposed of at High Acres Landfill). Liquids generated during remediation activities (approximately 65,082 gallons) were disposed of as non-TSCA materials at the High Acres Landfill in Fairport, New York. Excavation areas were subsequently restored in accordance with the Work Plan.

Additional remediation activities included the installation of one monitoring well (MW-12) and the abandonment of five existing monitoring wells (MW-1, MW-3, MW-5, MW-7S and MW-7D).

Certain post-remediation activities also have been or will be implemented at Station 229 to provide for the long-term operation, maintenance, and monitoring of the remediated site. These activities include long-term site management activities such as operations, maintenance, groundwater monitoring, and management of data collected as part of remediation activities. .

The Final Documentation Report summarized the remediation activities performed at Compressor Station 229, and demonstrated that the completed activities satisfy the requirements established in the Work Plan, and provides documentation of any variances from the Plan, in accordance with the requirements of the Order on Consent. To this end, the Final Documentation Report provides a summary of the pertinent background information, area-specific summaries of soil and sediment remediation activities, quality assurance/quality control (QA/QC) information, and a description of post remediation activities.

II. Site Overview

TGP owns and operates a natural gas pipeline system that extends from Texas to New England. Compressor stations are located at various points along the pipeline to pressurize the natural gas in the pipeline and facilitate its transmission. Several of these compressor stations are located throughout New York State, including Compressor Station 229, which occupies 50.5 acres along East Eden Road, approximately 4 miles south of the Village of Hamburg in the Town of Eden, Erie County, New York. The features at the facility and surrounding area are characterized below.

The station is situated at an elevation of approximately 1,000 feet above mean sea level. In the immediate vicinity of the Compressor Building and the Auxiliary Building, the topography is generally flat. A surface water drainage divide is located north of the operations area of the station, the topography of which slopes steeply from south to north; storm water runoff from this limited portion of the station discharges to a roadside culvert near North Boston Road, which eventually discharges to Hampton Brook. All surface water from the operations area and southward flows down moderately steep topography south and west toward Station Lake.

Soil in the area is composed primarily of glacial till with clay and shale. Groundwater occurs primarily within the upper, weathered shale bedrock and to a significantly lesser degree in deeper, more competent shale bedrock formation. The topography of the bedrock surface dips to the southwest across the station property. The groundwater flow direction is southwest, toward Station Lake, generally following surface topography, although the fractures present in the upper bedrock may result in localized variations in flow direction. There are no apparent potential downgradient receptors of the shallow fractured bedrock water-bearing zone within the approximately 1,500-foot distance between the main portion of the station and the local surface water discharge points (i.e., Station Lake and the tributary described below). The overburden deposits range in thickness from approximately 4 feet in the northwest to approximately 12 feet at Station Lake. Depth to groundwater ranges from 10 to 16.5 feet below ground surface (bgs) across the station from the east at MW-2 to the west at MW-11, as measured in August 1994 and during subsequent monitoring events.

All of the surface drainage from the operations area of the site flows to the southwest into Station Lake, a 1-acre lake up to 17 feet in depth, which discharges to an unnamed tributary of Hunt Creek. The tributary is typically 3-6 feet wide with limited flow in its upper reaches. The tributary flows west-northwest for 1.5 to 2 miles before entering Hunt Creek, which discharges to Eighteen mile Creek, which in turn travels approximately 5 miles before discharging into Lake Erie. A breached farm pond is on the tributary east of Highway 75. Land use in the vicinity of the tributary is primarily agricultural and partly residential.

III. Remedy Performance, Effectiveness and Protectiveness

Results of post-remediation activities have demonstrated compliance with remedial goals and action levels.

IV. Operation and Maintenance Plan Compliance Report

Operation and maintenance activities at Compressor Station 229 have included implementation of institutional controls and engineering controls including monitoring of erosion controls, and sediment, fish and groundwater monitoring.

a. Institutional Controls

Prior to performing excavation activities in the vicinity of drainlines or capped areas, site figures (and any other available information) will be reviewed by station personnel to determine in the subject drain line or capped area may be encountered. In the event that excavation in the immediate vicinity is necessary, the NYSDEC and TGP Northern Division Environmental Representative will be notified prior to excavation (unless there is an emergency). Notification includes the scope, nature, status and location of the proposed work.

In accordance with the Declaration of Covenants and Restrictions filed with the Erie County Clerk, the following controls are in place at this site and must be maintained and certified: land use restrictions; restrictions on future maintenance and modification activities; groundwater use restriction

All station personnel have been informed of the presence of PCBs in the ART area, as well as the procedures to be implemented during future work activities at the site.

b. Engineering Controls

A low permeability cap was installed at the ART area to isolate PCBs above action levels

Two holes were drilled in the existing overflow pipes at Station Lake to equalize flows to the tributary

Erosion control measures were installed within the tributary and banks of the tributary including geotextile fabric and rip rap along the banks and geotextile and soil cover in the tributary

A 12 inch soil cover was placed on 3 private properties

A sediment basin and trap were installed at the downstream end of the tributary to limit downstream transport of suspended sediments

Annual inspections are conducted with NYSDEC personnel to verify engineering controls are maintained and functioning properly

V. Overall PRR Conclusions and Recommendations

Results of post-remediation activities have demonstrated compliance with remedial goals and action levels. As a result, remedial activities conducted at the Site are performing effectively and functioning as designed.

On May 2, 2018; TGP and NYSDEC conducted the annual site inspection and no significant issues were noted.

TGP believes that annual submittal of the PRR report and IC/EC certification is adequate and appropriate at this time.

ATTACHMENT A

OPERATIONS AND MAINTENANCE PLAN
TENNESSEE GAS PIPELINE COMPANY
COMPRESSOR STATION 229 (Site No. 9-15-140)
ERIE COUNTY, NEW YORK

O&M ACTIVITY LOG FORM

Personnel Performing O&M Activity: Scott Lewis (KM/TGP), Dave Szymanski (NYSDEC)

Date: May 2, 2018

Drainline D Excavation – Provide Description of Activity (include sketch as attachment)

No drain line "D" excavations during the reporting year.

Drainline Component Removed? (Yes/No)

Drainline Component Disposed? (Yes/No)

Repairs Made to Exposed Drainlines? (Yes/No)

Describe:

No drain line components removed, disposed, or exposed for repairs during the reporting year.

Air Tank Receiver Area Excavation – Provide Description of Activity (include sketch as attachment)

No excavations in the air tank receiver area during the reporting year.

Excavation Below Geo-Textile Fabric Layer of Low-Permeability Cap Performed? (Yes/No)

Excavated Materials Disposed Off-Site (Yes/No) (Attach Manifest)

Cap restored to Original Conditions (Yes/No)

Describe:

No excavations performed during the reporting year.

ATTACHMENT A

OPERATIONS AND MAINTENANCE PLAN TENNESSEE GAS PIPELINE COMPANY COMPRESSOR STATION 229 (Site No. 9-15-140) ERIE COUNTY, NEW YORK

O&M ACTIVITY LOG FORM

Tributary Areas Inspections – Monitor Covered/Stabilized Areas for integrity and monitor outlet structures for proper operation

Maintenance necessary? (Yes/No)

Describe:

Areas inspected were: access roads, restriction fencing, and the permanent erosion control measures along the upper tributary, bog area, and sedimentation trap areas. All areas were in satisfactory condition. Accumulated sediment will be removed from the fish ladder and analytical results will be communicated upon receipt to the NYSDEC for guidance on proper disposal. Restriction fencing located adjacent to the fish ladder will also require minor repairs to fix damage from the winter.

Observations at Fiery, Skura, and Zulawski properties – Observe Covered/Stabilized Areas for integrity (to be performed from public rights-of-way (e.g., North Boston Road))

Describe:

Soil covers at the Fiery, Skura, & Zulawski properties were observed to the extent possible from North Boston Road. All areas appeared to be in good condition.

Station Lake Inspection – Monitoring outlet structure for proper operation

Describe:

A visual inspection of the outlet structure at the station lake was done to confirm the integrity and effectiveness of the structure to equalize flow to the tributary. The outlet structure was operating properly.

Fish Monitoring – Fish Tissue Sampling Performed? (~~Yes~~/No) – Performed in May 2018. A summary report and analytical results were submitted under separate cover in the fourth quarter of 2018. (Attach Summary Report and Analytical Results)

Sediment Monitoring – Sediment Sampling Performed (~~Yes~~/No) – Performed in the second quarter of 2018 and submitted under separate cover the fourth quarter of 2018. (Attach Summary Report and Analytical Results)

Groundwater Monitoring – Groundwater Sampling Performed (Yes/~~No~~) – To be conducted in 2019. (Attach Summary Report and Analytical Results)

Notes:

1. Figures 1, 2, and 3 show the general areas subject to Operation and Maintenance activities.
2. See Operations and Maintenance Plan (O&M Plan) text for additional details regarding inspection/monitoring activities, frequency, and duration. Also, see O&M Plan for additional sampling information.

Tennessee Gas Pipeline (a Kinder Morgan
Company)

OPERATIONS AND MAINTENANCE (O&M) ANNUAL REPORT – 2018 ACTIVITIES

Compressor Station 229
Eden, Erie County, New York
Site No. 9-15-140

December 2018

A large, solid orange geometric shape, resembling a stylized triangle or a section of a larger triangle, is positioned in the bottom right corner of the page. It is composed of two overlapping triangles, creating a complex, angular form. A thin white line runs diagonally through the shape, and a horizontal white line intersects it near the bottom.

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TABLES

Table 1	Summary of Sediment Sampling Analytical Results - 2018 Activities
Table 2	Comparison of Sediment PCB Concentrations per Location (in text)
Table 3	Summary of Fish Sampling Analytical Results - 2018 Activities
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FIGURES

Figure 1	Groundwater Monitoring, Sediment, and Fish Sampling Locations
Figure 2	Sediment Sampling Locations and Results
Figure 3	2018 Fish Data
Figure 4	Historic Fish Data

ATTACHMENTS

Attachment A O&M Activity Log Form

Attachment B Analytical Data Sheets and Chain of Custody Forms

Attachment C NYSDEC Fish and Wildlife Permit to Collect or Possess

1 INTRODUCTION

This Operations and Maintenance (O&M) Annual Report documents inspection, sampling, and monitoring activities that were performed in 2018 at the Tennessee Gas Pipeline Company's (TGP's) Compressor Station 229 near the town of Eden, Erie County, New York. These activities were conducted in accordance with guidelines and procedures stipulated in the Record of Decision (March 1997) issued by the New York State Department of Environmental Conservation (NYSDEC), and TGP's O&M Plan (November 1999).

Inspection activities and Station Lake dam repair activities were performed in 2018 by TGP, with sediment sampling, fish sampling, and surface water monitoring activities performed by Arcadis of New York, Inc. (Arcadis). Further details pertaining to inspections and sampling activities are provided in the following sections.

2 INSPECTIONS

In accordance with TGP's O&M Plan (November 1999), inspections were performed quarterly for two years starting in 2000 (with unscheduled inspections to be performed if a storm event occurs which could potentially have impacted the permanent erosion control measures). The 2001 inspection activities were the end of the first two years of quarterly inspections; thereafter, and starting with the 2002 inspection, inspections in subsequent years have been scheduled to be performed annually.

On May 2, 2018, TGP in conjunction with the NYSDEC performed inspection activities (see Attachment A). In accordance with TGP's O&M Plan (November 1999), inspection activities included observation of the access roads, restriction fencing and permanent erosion control measures (e.g., cable concrete, rip rap) along the Upper Tributary, Bog Area, and Sediment Trap Areas; the soil covers at the Fiery, Skura, and Zulawski properties; and the outlet structure at Station Lake.

Specifically, a visual inspection of the access roads, restriction fencing and permanent erosion control measures along the Upper Tributary, Bog Area, and Sediment Trap Areas was performed to confirm the integrity and verify the effectiveness of the geotextile and rip rap stabilization. At the time of inspection, all areas appeared to be in satisfactory condition. Sediments were removed from the fish ladder, and restriction fencing was repaired to fix damage encountered over the winter. Soil covers at the Fiery, Skura, and Zulawski properties were observed to the extent possible from public rights-of-way (e.g., North Boston Road); no signs of erosion or wear were noted (see Attachment A). Also, a visual inspection of the Station Lake outlet structure was performed to confirm the integrity and to verify the effectiveness of the outlet structure to equalize flow to the tributary. No issues were noted at the time of the inspection of the Station Lake outlet structure (see Attachment A).

3 SEDIMENT

3.1 Sediment Collection

The 2018 PCB sediment sampling activities in Station Lake Tributary were completed as part of the downstream tributary sediment monitoring program specified in the O&M Plan (November 1999). Sediment sampling in 2018 for analysis of PCBs was performed to characterize current sediment conditions, and although not intended to duplicate the 1994 sediment program conducted between Highways 75 and 62 by Woodward-Clyde, a comparison of the sediment data collected between 1994 and 2018 is included in the discussion that follows.

On May 24, 2018, Arcadis, on behalf of TGP, performed sediment sampling activities at three downstream locations along the Station Lake Tributary between Farm Road and North Boston Road (see Figure 1, sediment sampling locations #1, #2, and #3). In general, sediment samples in 2018 were collected from depositional areas in Station Lake Tributary having sediment depths of 0 to 6 inches, with a bias towards areas of more significant sediment accumulation. Additionally, to support future evaluations of sediment PCB data, sediment samples were also collected for analysis of TOC. A summary of activities specific to this sampling effort is presented below.

Using disposable sediment sampling equipment, surface sediment samples were collected moving from downstream to upstream locations. All three sediment sampling locations were located in the vicinity of rebar stakes placed during previous sediment sampling events to allow replication of the locations during subsequent sampling events. After completion of sediment sampling, the samples were placed on ice and shipped by overnight courier to Accutest Laboratories (Accutest), in Dayton, New Jersey for analysis of PCBs utilizing Method REI-111-01-04 (USEPA SW-846 Method 8082) and analysis of TOC utilizing the Lloyd Kahn method. In accordance with the procedures specified in the Quality Assurance Project Plan for Soil/Drainline Remediation, New York State Compressor Stations (“the QAPP”; BBL, May 1995 and TGP, February 1996), a field duplicate sample was also analyzed by Accutest. Rinse blank samples were not collected and subject to laboratory analyses because sediment samples were collected with disposable sediment sampling equipment.

3.2 Analytical Results

Field and laboratory data describing the sediment samples collected in 2018, including total PCBs and TOC are presented in Table 1; analytical data sheets and chain-of-custody forms are included in Attachment B.

PCB data ranged from 0.054 milligrams per kilogram (mg/kg) to 0.31 mg/kg, while TOC data ranged from 8,440 mg/kg to 45,300 mg/kg. A comparison of the 2016 and 2018 data indicates that total PCB concentrations decreased slightly at locations #1 and #2 and increased slightly at location #3; however, since 2003, observed PCB concentrations at all three locations have generally been below 1.0 mg/kg. A tabular comparison of total PCB concentrations from each location collected between 1994 and 2018 is provided in Table 2 below.

Table 2 – Comparison of Sediment PCB Concentrations per Location

Sample Time Period (Month/Year)	Total PCBs (mg/kg)		
	Location #1	Location #2	Location #3
12/1994	0.64 – 1.0	0.30 – 0.49	0.98 – 1.8
9/1998	0.35	0.48	ND(0.12)
12/1999	0.43	0.68 [0.68]	0.80
5/2001	0.40 [0.40]	0.68	1.30
5/2003	ND(0.10) [ND(0.10)]	0.22	0.14
5/2005	0.57 [0.45]	0.30	0.30
5/2007	1.03 [0.79]	0.68	0.74 J
5/2009	0.37	0.29	0.24 [0.24]
5/2011	0.21 [0.28]	0.26	0.54
5/2013	0.30	0.27	0.094 [ND(0.044)]
5/2016	0.34	0.38	0.13 [0.16]
5/2018	0.11 [0.054]	0.31	0.24

Notes:

1. ND – non-detect; detection limit presented in parentheses
2. J – estimated value
3. Values in brackets represent a duplicate sample

Note that sediment sampling events conducted after 1994 were not intended to duplicate the 1994 effort performed by Woodward-Clyde; therefore, comparisons between the data collected during sediment events which have been conducted between 1994 and 2018 are based on adjacent or nearby sample locations and results. Figure 2 shows sediment sampling locations and associated PCB analytical results for all sampling events performed since 1994.

3.3 Proposed Future Activities

In accordance with TGP's O&M Plan (November 1999) and the 2013 Activities Report (Arcadis, December 2013), sediment sampling activities are scheduled to be performed again in 2020. O&M documentation will be submitted upon completion of the sediment sampling event. In addition, results of the sediment sampling event will be provided in the O&M Annual Report due to the NYSDEC no later than March 1, 2021; however, all attempts will be made to submit the report to NYSDEC by December 31, 2020.

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4 RESIDENT FISH

4.1 Sample Collection

In accordance with TGP's O&M Plan (November 1999) the 2018 resident fish sampling event targeted blacknose dace (*Rhinichthys atratulus*) and creek chub (*Semotilus atromaculatus*) from Station Lake Tributary (Figure 1) for analysis of PCBs and percent lipids in whole-body composite samples. Fish were collected from three locations: 1) between Hickman Road and Highway 75 (historic location sampled since 1994), 2) from North Boston Road to the Sediment Basin (sampled in 2013 and 2016 at the request of NYSDEC), and 3) from the inlet to Breached Pond upstream to North Boston Road (first sampled in 2016 at the request of NYSDEC) (Figure 1). This last location replaced fish sampling in Breached Pond as approved by NYSDEC. In 2016 NYSDEC also requested that, in addition to whole-body composite samples of blacknose dace and creek chub (typically <6 inches in length), whole-body individual fish of the largest size available at each stream location, regardless of species, be collected and submitted for analysis of PCBs and percent lipids.

This work was performed in accordance with the NYSDEC-approved Fish Tissue Sampling Proposal Response letter (Arcadis, April 2016) and under a NYSDEC-issued Fish and Wildlife License to Collect or Possess (Attachment C). Whole-body composite and whole-body individual fish samples were field-processed and shipped on ice via overnight carrier to Pace Analytical in Green Bay, WI for analysis of PCB Aroclors, following USEPA Method 8082, and percent lipids.

The scope of the 2018 work is briefly outlined below, followed by a discussion of the sampling effort and presentation of the 2018 analytical data. The 2018 data are also compared to the historic data, where applicable, to assess PCB levels in fish tissue prior to and following remediation. Pre-remediation fish data were collected in 1994 by Woodward-Clyde from Station Lake Tributary between Hickman Road and Highway 75 (historic location); post-remediation fish data have been collected biennially, approximately, from the historic tributary location since 1998, and the two newer tributary locations since 2013 and 2016, respectively. In some years, fish were not collected or sample size was not filled due to lack of fish availability. The table below summarizes the fish sample collection activities performed in 2018.

2018 Station Lake Tributary Sampling Scope	
Sample Design	Monitoring Scope
Sample Date	May 14, 2018
Sample Area	Three sample areas total on Station Lake Tributary: 1. North Boston Road to Sediment Basin, 2. Breached Pond to North Boston Road, and 3. Hickman Road to Highway 75 (historic location) (Figure 1).
Sampling Locations	Three sampling locations total: The three areas listed above are considered one location each (three tributary reaches). Within each location, fish are collected across the entire area.
Target Species	Blacknose dace (60-100mm) and creek chub (60-130mm) for composite samples. Largest size fish species available for individual samples. Notes: Fish outside the specified size range are collected to fill sample size as needed. At the request of NYSDEC, non-target fish species are collected to fill sample size in the absence of available target species.
Sample Number / Preparation	Up to 16 whole-body samples of blacknose dace, creek chub, and largest size fish available per location. For example, 5 samples of whole-body composite blacknose dace, 5 samples of whole-body composite creek chub, and 6 samples whole-body individual largest size fish available, for a total of 16 samples. For composite samples, 5 or more fish typically included per sample, as available. For individual samples, 1 fish included per sample. 20 or more grams of tissue included per sample, as available. Note: Larger fish, and/or solitary individuals of a single species, may be prepared as individual whole-body samples in place of composite samples if fish are limited in availability.

ARCADIS completed fish collections on May 14, 2018 using backpack electrofishing units by performing one complete pass of each location, working downstream to upstream. As in recent years (i.e., since 2004) ARCADIS performed the 2018 fish collections in spring/early summer when more water might be available to fill the small and often shallow tributary channel.

In 2018, Creek chub were the largest fish species encountered at all three locations in Station Lake Tributary, and as such, were processed as individual whole-body samples, in addition to whole-body composite samples. In summary, Arcadis collected the following whole-body and individual composite fish samples:

- Station Lake Tributary (North Boston Road to Sediment Basin) – 5 whole-body composite blacknose dace samples (42 fish), 5 whole-body composite creek chub samples (25 fish), and 6 individual whole-body creek chub samples (6 fish).

- Station Lake Tributary (Breached Pond to North Boston Road) – 5 whole-body composite blacknose dace samples (37 fish), 5 whole-body composite creek chub samples (25 fish), and 6 individual whole-body creek chub samples (6 fish).
- Station Lake Tributary (Hickman Road to Highway 75) – 5 whole-body composite blacknose dace samples (44 fish), 5 whole-body composite creek chub samples (25 fish), and 6 individual whole-body creek chub samples (6 fish).

All sampling activities were completed in accordance with TGP's O&M Plan (November 1999) and the Fish Tissue Sampling Proposal Response letter (Arcadis, April 2016).

4.2 Analytical Results

Field and laboratory data describing the number of whole-body fish composite and individual samples collected in 2018, including number of individuals contained in each sample, fish length range, sample weight, percent lipid, and the results of chemical analyses for total PCB Aroclors and lipid-normalized PCBs, are presented in Table 3. Chain-of-custody (COC) forms, analytical data sheets, and data validation reports are presented in Attachment B. Aroclor 1254, and to a lesser extent, Aroclor 1260, were the Aroclors most often quantified by the analytical laboratory in the samples in 2018. This is consistent with previous years, where Aroclor 1254 was the primary Aroclor present, and Aroclors 1248 and/or 1260 were present in smaller quantities.

A spatial comparison of PCB concentrations for all fish collected in 2018 is presented in the following section. A temporal comparison of PCB concentrations in fish collected since 1994 at the historic Station Lake Tributary location (Hickman Road to Highway 75) is presented in Table 4 and also in the following section. The analytical results from these efforts serve to illustrate spatial trends in PCB levels in fish in 2018, from upstream to downstream, and as a reference for comparison of pre-remediation to post-remediation PCB levels in fish. However, it should be noted that temporal comparisons apply only to the results from the historic Station Lake Tributary location (Highway 75 to Hickman Road) where data have been collected consistently prior to (1994) and following remediation (1998 and on).

2018 Fish PCB Results

Station Lake Tributary (North Boston Road to the Sediment Basin) – Total PCB concentrations in blacknose dace from this Station Lake Tributary location ranged from 2.7 to 3.9 mg/kg with a mean concentration of 3.6 mg/kg. Total PCB concentrations in creek chub ranged from 1.5 to 2.0 mg/kg with a mean concentration of 1.8 mg/kg. Mean lipid-normalized PCB concentrations were also somewhat higher for blacknose dace than creek chub from this Station Lake Tributary location at 86 and 45 mg/kg-lipid, respectively (Table 3). Total PCB concentrations in individual larger-size whole-body creek chub ranged from 1.1 to 2.1 mg/kg with a mean concentration of 1.4 mg/kg. Mean lipid-normalized PCB concentrations were 65 mg/kg-lipid (Table 3).

Station Lake Tributary (Breached Pond to North Boston Road) – Total PCB concentrations in blacknose dace sample from this Station Lake Tributary location ranged from 0.53 to 2.1 mg/kg with a mean concentration of 1.2 mg/kg. Total PCB concentrations in creek chub ranged from 0.94 to 1.4 mg/kg with a mean concentration of 1.1 mg/kg. Mean lipid-normalized PCB concentrations were the same for

blacknose dace and creek chub from this Station Lake Tributary location at 23 mg/kg-lipid, (Table 3). Total PCB concentrations in individual larger-size whole-body creek chub ranged from 0.029 to 0.65 mg/kg with a mean concentration of 0.19 mg/kg. Mean lipid-normalized PCB concentrations were 16 mg/kg-lipid (Table 3).

Station Lake Tributary (Hickman Road to Highway 75) – Total PCB concentrations in blacknose dace from this Station Lake Tributary location ranged from 0.31 to 0.39 mg/kg with a mean concentration of 0.37 mg/kg. Total PCB concentrations in creek chub ranged from 0.28 to 0.52 mg/kg with a mean concentration of 0.41 mg/kg. Mean lipid-normalized PCB concentrations were similar for blacknose dace and creek chub from this Station Lake Tributary location at 7.3 and 7.9 mg/kg-lipid, respectively (Table 3). Total PCB concentrations in individual larger-size whole-body creek chub ranged from 0.058 to 0.39 mg/kg with a mean concentration of 0.18 mg/kg. Mean lipid-normalized PCB concentrations were 15 mg/kg-lipid (Table 3).

As shown above, PCB concentrations in composite blacknose dace (3.6 mg/kg) were higher than composite creek chub (1.8 mg/kg) at the most upstream location but were similar at the downstream Station Lake Tributary locations (Table 3). The reason for blacknose dace having somewhat higher concentrations than creek chub at the most upstream location in 2018, and even in the historic dataset for this location (Table 4), is unclear, but may be related to feeding and/or habitat/location preferences.

Also noted above are higher PCB concentrations in composite creek chub than in individual larger-size creek chub (Table 3). Often, larger fish of the same species tend to be older and have higher PCB levels due to greater bioaccumulation times. However, in this instance, the larger individual creek chub have lower PCB levels than the smaller creek chub in the composite samples. The reason for this is unclear but may be due to the low lipid levels in larger-size creek chub (i.e. PCBs are lipophilic, and less lipids often mean less PCB bioaccumulation). For all locations, lipid levels were 1.6 to 4.3 times lower in larger creek chub than in smaller creek chub (Table 3). The reason for this is unclear but may be related to post-spawn conditions of the larger-size, sexually mature creek chub, which would have just spawned in the spring, versus the smaller-size juvenile creek chub, which would not have spawned. Spawning fish tend to eat less and use more energy/expend lipids during reproduction.

2018 Spatial Trends

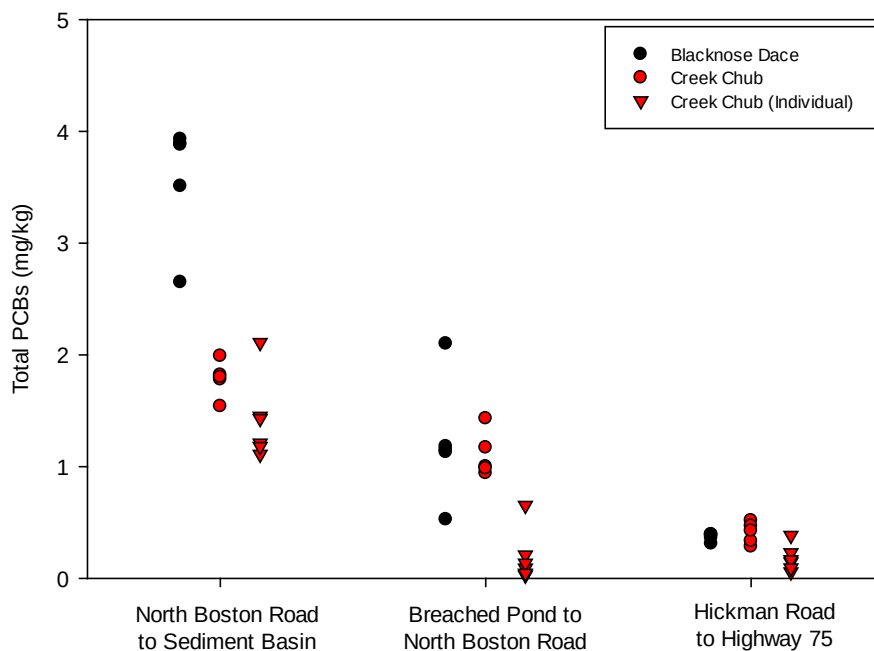
PCB concentrations in fish in Station Lake Tributary in 2018 generally decreased upstream to downstream with each location and were highest at the most upstream location extending from North Boston Road to the Sediment Basin, and then decreased to their lowest levels at the most downstream location extending from Hickman Road to Highway 75 (Table 3, Figure 1 and Figure 3). Overall mean total (and lipid-normalized) PCB levels in fish from each of the three Station Lake Tributary locations, upstream to downstream, were as follows for blacknose dace 3.6, 1.2 and 0.37 mg/kg (86, 23 and 7.3 mg/kg-lipid), creek chub 1.8, 1.1 and 0.41 mg/kg (45, 23 and 7.9 mg/kg-lipid) and creek chub individuals 1.4, 0.19, and 0.18 mg/kg (65, 16 and 15 mg/kg-lipid), respectively.

The reason for the higher PCB concentrations in fish in 2018 in the most upstream Station Lake Tributary location may be due to its proximity to the Sediment Basin. Overall the Sediment Basin is operating as intended providing a location for sediments to settle. In accordance with the requirements of the O&M Plan TGP cleaned out the Sediment Basin in 2015 to restore it to its full sedimentation capacity. PCB levels in fish rapidly decrease downstream with distance from the Sediment Basin, with levels in fish at

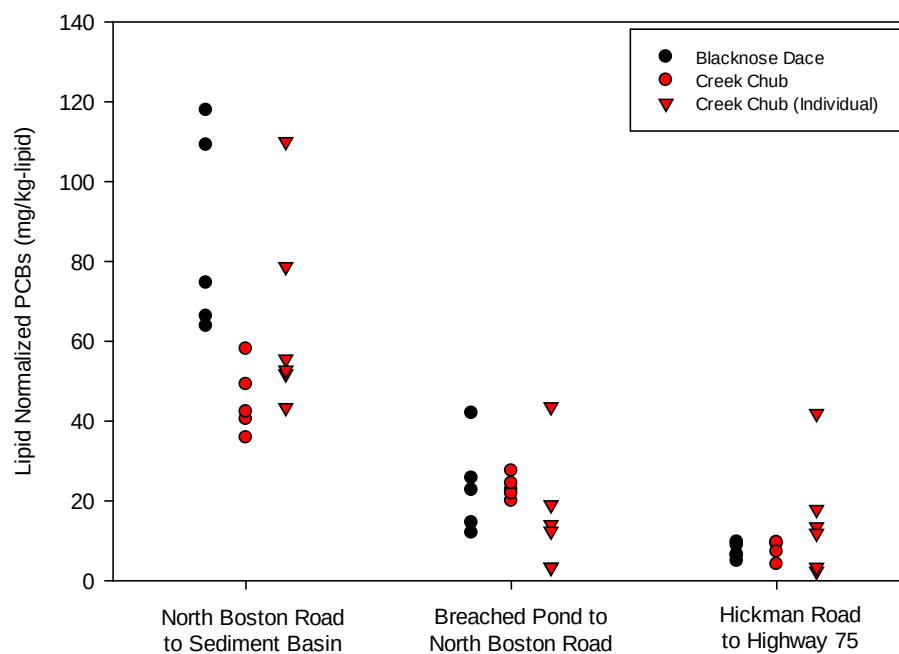
the most downstream historic Station Lake Tributary location (approximately 3,000 linear feet away) being almost an order of magnitude lower, and comparable to the lowest levels observed since remediation (Table 4).

Figure 3 – 2018 Fish Data

2018 Fish Total PCBs



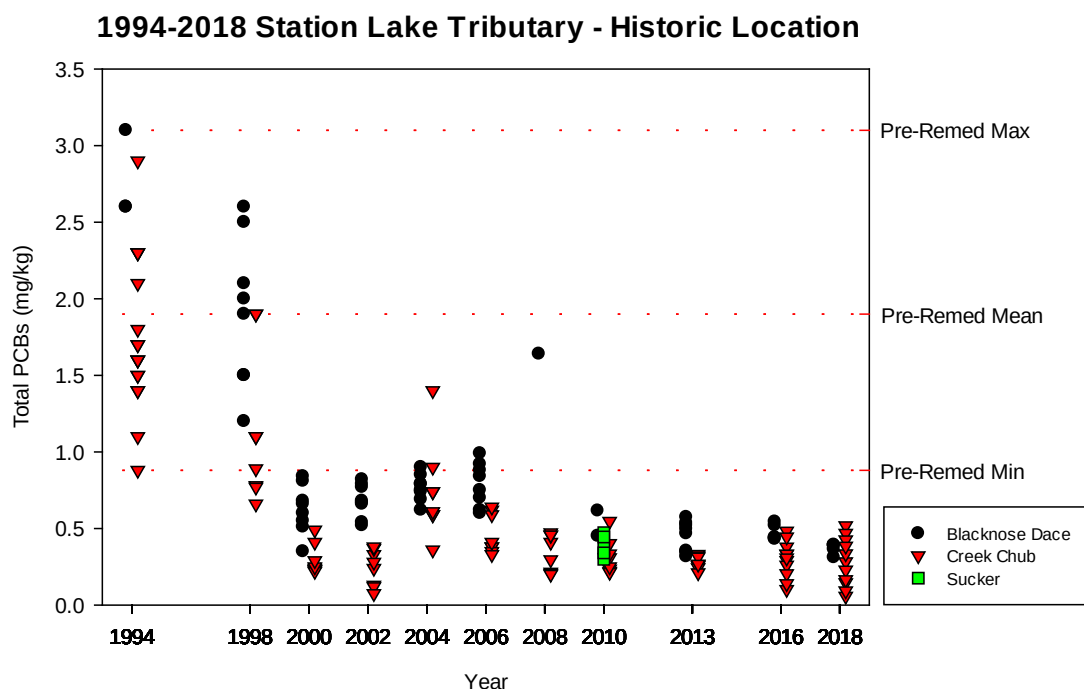
2018 Fish Lipid-Normalized PCBs



1994 to 2018 Temporal Trends

Over time, PCB concentrations (total and lipid-normalized) in fish have generally decreased, and/or have remained consistently low in more recent years, in the historic Station Lake Tributary location extending from Hickman Road to Highway 75 (Table 4 and Figure 4). Immediately following remediation in 1998, PCB concentrations were still somewhat elevated in Station Lake Tributary. Since then, a general decrease in PCB levels in fish has been observed, and/or has remained consistent at lower concentrations and below pre-remediation conditions. The exceptions are a single creek chub and blacknose dace sample from Station Lake Tributary in 2004 and 2008, respectively. These are statistical outliers in relation to the remainder of the results. The reason for these anomalies is unclear, but may be due to fish migrating downstream from the Sediment Basin area where observed PCB levels have been slightly higher than other reaches. No anomalies were observed in the historic Station Lake Tributary location in 2018, and all fish samples from these locations were below pre-remediation levels and are some of the lowest PCB levels observed.

Figure 4 – Historic Fish Data



4.3 Proposed Future Activities

Results of the 2018 fish sampling indicate relatively low PCB concentrations in most Station Lake Tributary locations with somewhat higher levels in the vicinity of the Sediment Basin. Mean PCB levels in fish in Station Lake Tributary, upstream to downstream, ranged from 1.4 to 3.6 mg/kg at the North Boston Road to the Sediment Basin location, 0.19 to 1.2 mg/kg at the Breached Pond to North Boston Road location, and 0.18 to 0.41 mg/kg at the Hickman Road to Highway 75 location. Additionally, mean PCB levels in fish are approaching the NYSDEC whole-body fish-tissue standard of 0.11 mg/kg PCBs (TGP,

November 1999) for the downstream historic Station Lake Tributary location (0.37 mg/kg for blacknose dace, 0.41 mg/kg for creek chub, and 0.18 mg/kg for creek chub individuals).

These findings suggest somewhat greater PCB bioavailability in Station Lake Tributary in the proximity of the Sediment Basin with diminishing concentrations and bioavailability with increased distance downstream.

They also suggest that PCBs are less present and available to fish further downstream of the Sediment Basin at the historic Station Lake Tributary location. To meet the objectives of the O&M Plan (November 1999), TGP proposes to continue fish collection efforts at the three locations in Station Lake Tributary consistent with the 2018 effort. This work would next be conducted in 2020 and would occur every other year (or less) as outlined in the O&M Plan (November 1999).

5 GROUNDWATER

In accordance with the 2013 Activities Report (Arcadis, December 2013), groundwater sampling activities will be conducted in 2019. Sampling will be conducted in accordance with TGP's O&M Plan (November 1999). Details regarding the sampling is provided in Section 6.

6 FUTURE ACTIVITIES

Following review of the data collected during the 2018 sampling events, in conjunction with data previously collected at the site, there is no indication that there are any remaining sources existing at the site. PCB data are trending in a downward direction and/or have remained relatively consistent and low in all media where comparable data exists, and all components of the remedial action at the site appear to be functioning as originally intended. Aside from the presence of a small number of anomalous data points, all data is indicative that natural recovery is occurring at the site.

As such, TGP proposes to resume monitoring activities per the O&M Plan (November 1999) with modifications outlined in the 2013 Activities Report (December 2013). A summary of the proposed future activities is provided below.

- Inspections will continue to be performed annually (with unscheduled inspections to be performed if a storm event occurs which could potentially have impacted the permanent erosion control measures).
- Sediment sampling activities at the three historic locations will be performed in 2020.
- Resident fish sampling will be performed in 2020 in Station Lake Tributary consistent with the 2018 effort. This includes the most upstream location closest to the Sediment Basin first sampled in 2013 then again in 2016, the historic most downstream location which has been sampled since 1994, and the newest location first sampled in 2016 that lies in-between these other two (Figure 1).
- Groundwater monitoring activities (proposed analysis for VOCs in wells MW-2, MW-6S, MW-9, and MW-11 and proposed analysis for PCBs in wells MW-9 and MW-12) will be performed in 2019.

O&M documentation will be submitted upon completion of the inspection, sediment sampling, resident fish sampling, and groundwater monitoring events, as appropriate for the year performed.

TABLES



Table 1
Summary of Sediment Sampling Analytical Results - 2018 Activities
(Collection Date: 5/24/18)

Operations and Maintenance Activities
Compressor Station 229 - Erie County, New York

Tennessee Gas Pipeline Company - A Kinder Morgan Company
Houston, Texas

Sample Location #	Sample ID (Month/Year)	Sediment Depth Interval (inches)	Total PCBs (mg/kg)	Total Organic Carbon (mg/kg)
Station Lake Tributary				
1	229-OC-DD10-001-10 (5/16)	0-6	0.11 [0.05]	8,400 [21,200]
2	229-OC-DD10-002-10 (5/16)	0-6	0.31	45,300
3	229-OC-DD10-003-10 (5/16)	0-6	0.24	14,400

Notes:

1. All data is represented in milligrams per kilogram (mg/kg or parts per million [ppm]).
2. Samples were analyzed by Accutest Laboratories in Dayton, NJ.
3. 0.11 [0.54] - A sample with a blind duplicate. The associated value in brackets is the blind duplicate.
4. Total Organic Carbon (TOC) analysis was added to 5/05 sampling plan.

Table 3

Operations and Maintenance Activities
Compressor Station 229 - Erie County, New York

Tennessee Gas Pipeline Company - An El Paso Energy Company
Houston, Texas

Summary of Fish Sampling Analytical Results - 2018 Activities
Station Lake Tributary
(Collection Date: 5/14/2018)

Location/ Species/ Sample ID	Number of Fish ¹	Length Range	Sample Weight ²	Lipid	Total PCB ³ (mg/kg)	Lipid-Normalized PCB ³ (mg/kg-lipid)
STATION LAKE TRIBUTARY (North Boston Road to Sediment Basin)						
Blacknose Dace						
SLT-BD-234	8	70 - 78	37.9	3.6	3.9	109
SLT-BD-235	8	64 - 70	26.6	5.2	3.9 J	75
SLT-BD-236	8	65 - 73	24.1	4.0	2.7	66
SLT-BD-237	11	57 - 67	28.6	5.5	3.5 J	64
SLT-BD-238	7	69 - 74	28.1	3.3	3.9 J	118
Mean	--	65 - 72	29.1	4.3	3.6	86
Standard Deviation	--	4.2 - 5.1	5.2	1.0	0.54	25
Creek Chub						
SLT-CC-268	5	73 - 81	33.1	4.4	1.8 J	40
SLT-CC-269	5	100 - 112	73.2	3.7	1.8	49
SLT-CC-270	5	92 - 98	58.2	4.7	2.0 J	42
SLT-CC-271	5	92 - 107	65.9	4.3	1.5	36
SLT-CC-272	5	113 - 115	91.8	3.1	1.8 J	58
Mean	--	94 - 103	64.4	4.0	1.8	45
Standard Deviation	--	14 - 15	21.5	0.64	0.16	8.7
Creek Chub						
SLT-CC-262	1	138	36.3	2.0	1.1	56
SLT-CC-263	1	138	32.6	2.8	1.5	52
SLT-CC-264	1	155	39.0	1.1	1.2	110
SLT-CC-265	1	142	29.1	1.5	1.2	79
SLT-CC-266	1	125	23.4	3.3	1.4	43
SLT-CC-267	1	126	19.7	4.0	2.1	53
Mean	--	137	30.0	2.5	1.4	65
Standard Deviation	--	11	7.5	1.1	0.37	25
STATION LAKE TRIBUTARY (Breached Pond to North Boston Road)						
Blacknose Dace						
SLT-BD-230	4	72 - 79	19.0	4.4	0.53	12
SLT-BD-231	4	78 - 82	20.1	5.0	2.1	42
SLT-BD-232	5	65 - 78	19.6	5.2	1.2	23
SLT-BD-233	19	45 - 63	30.1	7.9	1.2	15
SLT-BD-261	5	65 - 78	22.2	4.4	1.1	26
Mean	--	65 - 76	22.2	5.4	1.2	23
Standard Deviation	--	7.4 - 12	4.6	1.5	0.56	12
Creek Chub						
SLT-CC-256	5	78 - 98	42.5	4.4	1.0	23
SLT-CC-257	5	102 - 105	67.8	4.7	0.94	20
SLT-CC-258	5	103 - 113	81.7	5.2	1.4	28
SLT-CC-259	5	98 - 109	74.7	4.5	1.0 J	22
SLT-CC-260	5	106 - 118	96.1	4.8	1.2	24
Mean	--	97 - 109	72.6	4.7	1.1	23
Standard Deviation	--	7.6 - 11	19.8	0.31	0.20	2.8
Creek Chub						
SLT-CC-250	1	157	52.1	1.1	0.21	19
SLT-CC-251	1	159	55.3	1.5	0.65 J	44
SLT-CC-252	1	170	59.9	0.7	0.093 J	14
SLT-CC-253	1	157	46.1	1.1	0.14	12
SLT-CC-254	1	156	42.0	0.9	0.029	3.4
SLT-CC-255	1	139	31.5	1.4	0.046	3.3
Mean	--	156	47.8	1.1	0.19	16
Standard Deviation	--	10	10.2	0.32	0.23	15

Table 3

Operations and Maintenance Activities
Compressor Station 229 - Erie County, New York

Tennessee Gas Pipeline Company - An El Paso Energy Company
Houston, Texas

Summary of Fish Sampling Analytical Results - 2018 Activities
Station Lake Tributary
(Collection Date: 5/14/2018)

Location/ Species/ Sample ID	Number of Fish ¹	Length Range	Sample Weight ²	Lipid	Total PCB ³ (mg/kg)	Lipid-Normalized PCB ³ (mg/kg-lipid)
STATION LAKE TRIBUTARY (Hickman Road to Highway 75)						
Blacknose Dace						
SLT-BD-225	5	73 - 82	29.8	4.1	0.37	8.9
SLT-BD-226	7	65 - 71	26.2	6.2	0.39	6.3
SLT-BD-227	5	69 - 80	24.3	3.2	0.31	10
SLT-BD-228	7	63 - 71	26.5	6.0	0.39	6.6
SLT-BD-229	20	49 - 63	30.7	7.9	0.39	4.9
Mean	--	64 - 73	27.5	5.5	0.37	7.3
Standard Deviation	--	7.7 - 9.1	2.7	1.9	0.034	2.0
Creek Chub						
SLT-CC-245	5	83 - 88	40.6	6.9	0.28	4.1
SLT-CC-246	5	92 - 105	49.3	5.4	0.52	10
SLT-CC-247	5	93 - 99	50.1	5.1	0.47	9.2
SLT-CC-248	5	98 - 117	80.7	3.5	0.34	10
SLT-CC-249	5	91 - 109	62.5	5.9	0.43	7.2
Mean	--	91 - 104	56.6	5.4	0.41	7.9
Standard Deviation	--	5.4 - 11	15.5	1.2	0.10	2.4
Creek Chub						
SLT-CC-239	1	138	32.7	2.5	0.058	2.3
SLT-CC-240	1	149	37.0	0.8	0.15	18
SLT-CC-241	1	151	41.7	1.7	0.23	13
SLT-CC-242	1	152	39.4	1.4	0.17	12
SLT-CC-243	1	158	41.3	0.9	0.39	42
SLT-CC-244	1	137	25.7	2.8	0.094	3.4
Mean	--	148	36.3	1.7	0.18	15
Standard Deviation	--	8.3	6.2	0.82	0.12	14

Abbreviations:

g = grams

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

mg/kg = milligram(s) per kilogram

mg/kg-lipid = milligram(s) per kilogram per lipid

mm = millimeter(s)

PCBs = polychlorinated biphenyls

-- = not applicable

Notes:

1. Fish samples prepared as individual and whole-body composites.
2. Total weight of composite sample.
3. Total PCB and lipid-normalized PCB concentrations reported on a wet-weight basis.

Table 4

Operations and Maintenance Activities
Compressor Station 229 - Erie County, New York

Tennessee Gas Pipeline Company - An El Paso Energy Company
Houston, Texas

Comparison of Mean PCB Concentrations in Fish Tissue
From Station Lake Tributary
(Collection dates are footnoted)

Location/ Species/ Year	Type of Whole- Body Sample	Number of Samples	Lipid (%)	Total PCB ^{1,2,3} (mg/kg)	Lipid-Normalized PCB ^{1,2,3} (mg/kg-lipid)
STATION LAKE TRIBUTARY (North Boston Road to Sediment Basin)					
Blacknose Dace					
2013	composite	8	8.6 (1.6)	4.2 (0.60)	52 (15)
2016	composite	5	7.5 (0.51)	3.5 (0.42)	47 (4.8)
2018	composite	5	4.3 (1.0)	3.6 (0.54)	86 (25)
Creek Chub					
2013	composite	8	8.3 (1.0)	1.7 (0.23)	21 (3.5)
2016	composite	5	5.5 (0.63)	2.1 (0.13)	39 (4.4)
2018	composite	5	4.0 (0.64)	1.8 (0.16)	45 (8.7)
Creek Chub					
2016	individual	6	4.3 (2.0)	1.7 (0.82)	47 (22)
2018	individual	6	2.5 (1.1)	1.4 (0.37)	65 (25)
STATION LAKE TRIBUTARY (Breached Pond to North Boston Road)					
Blacknose Dace					
2016	composite	1	5.2 (NA)	2.6 (NA)	50 (NA)
2018	composite	5	5.4 (1.5)	1.2 (0.56)	23 (12)
Creek Chub					
2016	composite	9	4.6 (0.80)	0.84 (0.18)	19 (4.4)
2018	composite	5	4.7 (0.31)	1.1 (0.20)	23 (2.8)
Creek Chub					
2016	individual	6	3.3 (1.9)	0.70 (0.56)	30 (38)
2018	individual	6	1.1 (0.32)	0.19 (0.23)	16 (15)
STATION LAKE TRIBUTARY (Hickman Road to Highway 75)					
Blacknose Dace					
1994	composite	3	6.4 (1.1)	2.8 (0.29)	44 (12)
1998	composite	8	3.8 (0.39)	1.9 (0.49)	51 (14)
2000	composite	8	6.4 (0.59)	0.63 (0.16)	9.7 (2.1)
2002	composite	8	6.8 (0.98)	0.68 (0.11)	10 (0.88)
2004	composite	8	7.3 (0.65)	0.77 (0.088)	10 (1.3)
2006	composite	8	6.1 (0.91)	0.79 (0.14)	13 (2.8)
2008	composite	1	6.1 (NA)	1.6 (NA)	27 (NA)
2010	composite	2	8.9 (0.0)	0.53 (0.12)	6.0 (1.3)
2013	composite	8	9.6 (2.0)	0.45 (0.099)	5.1 (2.0)
2016	composite	5	7.3 (1.1)	0.47 (0.053)	6.6 (1.0)
2018	composite	5	5.5 (1.9)	0.37 (0.034)	7.3 (2.0)
Creek Chub					
1994	composite	17	6.4 (1.4)	1.7 (0.50)	28 (9.0)
1998	composite	8	3.0 (0.92)	1.1 (0.50)	37 (9.5)
2000	composite	8	4.2 (1.1)	0.30 (0.10)	7.0 (1.2)
2002	composite	8	4.1 (1.8)	0.24 (0.12)	5.6 (1.4)
2004	composite	8	8.1 (1.1)	0.74 (0.31)	9.4 (4.4)
2006	composite	8	5.3 (1.1)	0.46 (0.13)	9.2 (3.6)
2008	composite	8	6.1 (1.5)	0.34 (0.12)	5.4 (0.81)
2010	composite	8	6.3 (0.66)	0.31 (0.11)	5.0 (1.8)
2013	composite	8	9.0 (0.66)	0.28 (0.042)	3.1 (0.37)
2016	composite	5	4.7 (1.2)	0.32 (0.045)	7.2 (2.2)
2018	composite	5	5.4 (1.2)	0.41 (0.10)	7.9 (2.4)
Creek Chub					
2016	individual	6	2.9 (1.7)	0.28 (0.16)	11.4 (5.0)
2018	individual	6	1.7 (0.82)	0.18 (0.12)	15 (14)

Abbreviations:

mg/kg = milligram(s) per kilogram

mg/kg-lipid = milligram(s) per kilogram per lipid

NA = not applicable due to sample size

PCBs = polychlorinated biphenyls

Notes:

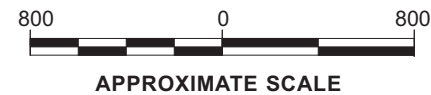
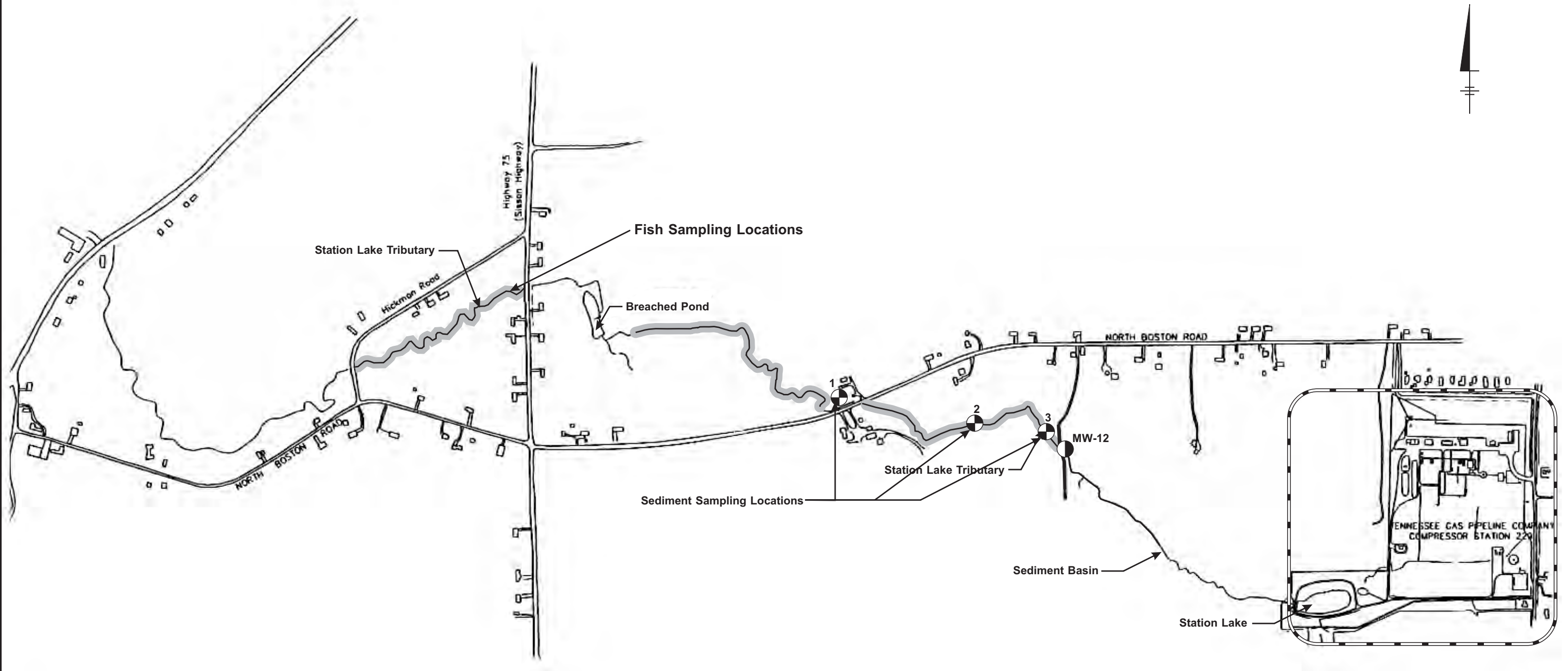
Collection dates are: 7/19-21/94, 9/30-10/1/98, 10/5-6/00, 9/5-6/02, 5/13/04, 5/16/06, 7/1/08, 5/19/10, 6/18-20/13, 5/26/16 and 5/14/18.

1. Arithmetic mean concentrations (and standard deviation) for whole-body fish samples.
2. Total PCBs represented by Aroclor 1254 with some 1248 and/or 1260 present in certain years.
3. Mean total PCB and lipid-normalized PCB concentrations reported on a wet-weight basis.

FIGURES



12/14/2018 SYRACUSE, NY-ENV/CAD-DJHOWES, K.SARTORI
KINDER MORGAN ENERGY PARTNERS, L.P./KM COMPRESSOR STATION 229 ERIE COUNTY2018B0051341_1901/TGP-fig 1-S&FSLoc.cdr



REFERENCES:
BASE MAP REFERENCE STATION 229 TRIBUTARY MAP,
DATED 9/16/96, DRAFTED BY HFZ, FROM ENVIRON.

LEGENDS:

-  FISH SAMPLING LOCATION
-  GROUNDWATER MONITORING LOCATION
-  SEDIMENT SAMPLING LOCATION

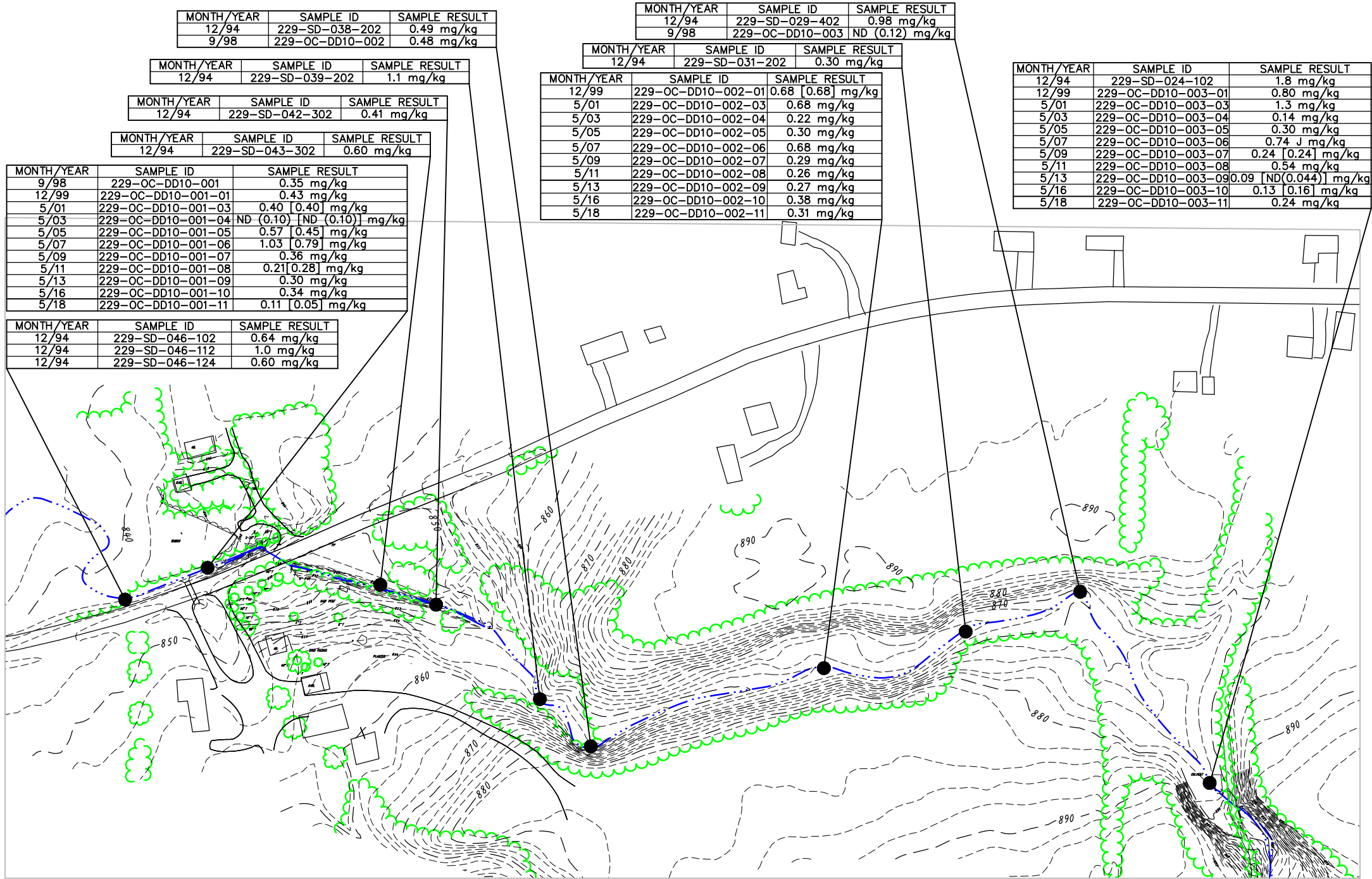
TENNESSEE GAS PIPELINE COMPANY
OPERATIONS AND MAINTENANCE REPORT
COMPRESSOR STATION 229
ERIE COUNTY, NEW YORK

**SEDIMENT AND FISH SAMPLING
LOCATIONS**

 **ARCADIS** | Design & Consultancy
for natural and built assets

**FIGURE
1**

For best plotting use Window and select the two circle centers, or use predefined page setups STB-DWFLB or CTB-DWFLB as starters.
Key: CITY-office_location: DIVGROUP-div_group DB=drawn_by LD=lead_drafter AM=area_manager PD=project_director TR=task_manager TR=technical_review LYP=layer_settings(turn all on, then turn all RFP off)
CITY:SYR DIVGROUP:85 DE:RLP GMS TJR LD: AM: PD: TM: LYRON*OFF=REF*
C:\Users\mckee\OneDrive - ARCADIS\BIM 360 Docs\KINDER MORGAN ENERGY PARTNERS, LP\KIM COMPRESSOR STATION 229\B0051241.190101-DWG\51341X03.DWG LAYOUT:2 ACADVER: 21.05 (LMS TECH) PAGES:SETUP: PDF-LB
PLOTSTYLETABLE: PLT\FULL CTB PLOTTED: 12/14/2018 9:36 AM BY: MCKEOUGH, CAROL
XFERS: IMAGES: PROJECTNAME: -
51341X03
51341X02

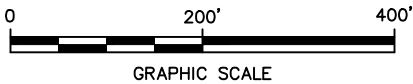


NOTES:

1. ALL SEDIMENT SAMPLE LOCATIONS ARE APPROXIMATE.
2. SEDIMENT SAMPLE LOCATIONS FROM 12/94 WERE OBTAINED FROM A DOCUMENT ENTITLED SOIL AND SEDIMENT SAMPLING RESULTS FROM A TRIBUTARY AND A BREACHED POND BETWEEN TENNESSEE GAS COMPRESSOR STATION 229 AND HIGHWAY 62 NEAR EDEN, NEW YORK DECEMBER 1994 (WOODWARD-CLYDE, MAY 1995).
3. BASE MAP INFORMATION DEPICTED ON THIS PLAN OBTAINED FROM AUTOCAD DRAWING PREPARED BY ERDMAN ANTHONY CONSULTING ENGINEERS (DRAWING FILE NUMBERS CREKS1.DWG, CREKS2.DWG, CREKS3.DWG, AND S2291996.DWG) AND FROM AUTOCAD DRAWING PREPARED BY LABELLA ASSOCIATES (DRAWING FILE NUMBER S2291996.DWG, CONTOURS SHOWN AT 2-FOOT INTERVALS).
4. MAP INFORMATION WAS PRODUCED ENTIRELY BY PHOTOGRAMMETRIC METHODS (PHOTOGRAPHY TAKEN ON APRIL 27, 1993). THE USER OF THIS MAP IS CAUTIONED THAT CERTAIN AREAS OBSCURED BY SHADOWS AND HEAVY VEGETATION MAY REQUIRE FIELD VERIFICATION. THE OUTLINE OF ALL BUILDINGS REPRESENT ROOF LINES.
5. VERTICAL ACCURACIES CAN BE EXPECTED TO BE +/- ONE HALF OF A CONTOUR INTERVAL FOR CONTOUR LINES, SPOT ELEVATIONS +/- ONE QUARTER OF A CONTOUR INTERVAL IN 90% OF THE AREAS WHICH WERE CLEARLY VISIBLE PHOTOGRAMMETRICALLY.
6. FIELD DUPLICATE RESULTS SHOWN IN BRACKETS.
7. ADDITIONAL INFORMATION REGARDING SEDIMENT SAMPLING AND ANALYTICAL RESULTS ARE PRESENTED IN O&M REPORTS.

LEGEND:

- 890 — INDEX ELEVATION CONTOUR
- - - 2 FOOT ELEVATION CONTOUR
~~~~~ TREES/SHRUBS



TENNESSEE GAS PIPELINE COMPANY  
OPERATIONS AND MAINTENANCE REPORT  
COMPRESSOR STATION 229  
ERIE COUNTY, NEW YORK

SEDIMENT SAMPLING LOCATIONS  
AND RESULTS

# ATTACHMENT A

O&M Activity Log Form



**ATTACHMENT A**

**OPERATIONS AND MAINTENANCE PLAN  
TENNESSEE GAS PIPELINE COMPANY  
COMPRESSOR STATION 229 (Site No. 9-15-140)  
ERIE COUNTY, NEW YORK**

**O&M ACTIVITY LOG FORM**

Personnel Performing O&M Activity: Scott Lewis (KM/TGP), Dave Szymanski (NYSDEC)

Date: May 2, 2018

Drainline D Excavation – Provide Description of Activity (include sketch as attachment)

No drain line “D” excavations during the reporting year.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Drainline Component Removed? (Yes/No)

Drainline Component Disposed? (Yes/No)

Repairs Made to Exposed Drainlines? (Yes/No)

Describe:

No drain line components removed, disposed, or exposed for repairs during the reporting year.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Air Tank Receiver Area Excavation – Provide Description of Activity (include sketch as attachment)

No excavations in the air tank receiver area during the reporting year.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Excavation Below Geo-Textile Fabric Layer of Low-Permeability Cap Performed? (Yes/No)

Excavated Materials Disposed Off-Site (Yes/No) (Attach Manifest)

Cap restored to Original Conditions (Yes/No)

Describe:

No excavations performed during the reporting year.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## ATTACHMENT A

### OPERATIONS AND MAINTENANCE PLAN TENNESSEE GAS PIPELINE COMPANY COMPRESSOR STATION 229 (Site No. 9-15-140) ERIE COUNTY, NEW YORK

#### O&M ACTIVITY LOG FORM

Tributary Areas Inspections – Monitor Covered/Stabilized Areas for integrity and monitor outlet structures for proper operation

Maintenance necessary? (Yes/No)

Describe:

Areas inspected were: access roads, restriction fencing, and the permanent erosion control measures along the upper tributary, bog area, and sedimentation trap areas. All areas were in satisfactory condition. Accumulated sediment will be removed from the fish ladder and analytical results will be communicated upon receipt to the NYSDEC for guidance on proper disposal. Restriction fencing located adjacent to the fish ladder will also require minor repairs to fix damage from the winter.

Observations at Fiery, Skura, and Zulawski properties – Observe Covered/Stabilized Areas for integrity (to be performed from public rights-of-way (e.g., North Boston Road))

Describe:

Soil covers at the Fiery, Skura, & Zulawski properties were observed to the extent possible from North Boston Road. All areas appeared to be in good condition.

Station Lake Inspection – Monitoring outlet structure for proper operation

Describe:

A visual inspection of the outlet structure at the station lake was done to confirm the integrity and effectiveness of the structure to equalize flow to the tributary. The outlet structure was operating properly.

Fish Monitoring – Fish Tissue Sampling Performed? (Yes/No) – Performed in May 2018. A summary report and analytical results were submitted under separate cover in the fourth quarter of 2018. (Attach Summary Report and Analytical Results)

Sediment Monitoring – Sediment Sampling Performed (Yes/No) – Performed in the second quarter of 2018 and submitted under separate cover the fourth quarter of 2018. (Attach Summary Report and Analytical Results)

Groundwater Monitoring – Groundwater Sampling Performed (Yes/No) – To be conducted in 2019. (Attach Summary Report and Analytical Results)

Notes:

1. Figures 1, 2, and 3 show the general areas subject to Operation and Maintenance activities.
2. See Operations and Maintenance Plan (O&M Plan) text for additional details regarding inspection/monitoring activities, frequency, and duration. Also, see O&M Plan for additional sampling information.

# ATTACHMENT B

Analytical Data Sheets and Chain of Custody Forms



# Tennessee Gas Pipeline – TGP Station 229

## DATA REVIEW

### Eden, New York

Polychlorinated Biphenyl (PCB) Analysis

SDG #40169156

Analyses Performed By:  
Pace Analytical, Inc.  
Green Bay, Wisconsin

Report #29638R  
Review Level: Tier III  
Project: B0051341.1501.00001



## DATA REVIEW REPORT

### SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #40169156 for samples collected in association with the TGP Station 229, Eden, New York site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

| Sample ID  | Lab ID      | Matrix | Sample Collection Date | Parent Sample | Analysis |     |     |      |
|------------|-------------|--------|------------------------|---------------|----------|-----|-----|------|
|            |             |        |                        |               | SVOC     | PCB | MET | MISC |
| SLT-BD-225 | 40169156001 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-226 | 40169156002 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-227 | 40169156003 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-228 | 40169156004 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-229 | 40169156005 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-230 | 40169156006 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-231 | 40169156007 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-232 | 40169156008 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-233 | 40169156009 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-234 | 40169156010 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-235 | 40169156011 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-236 | 40169156012 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-237 | 40169156013 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-238 | 40169156014 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-239 | 40169156015 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-240 | 40169156016 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-241 | 40169156017 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-242 | 40169156018 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-243 | 40169156019 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-244 | 40169156020 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-245 | 40169156021 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-246 | 40169156022 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-247 | 40169156023 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-248 | 40169156024 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-249 | 40169156025 | Tissue | 5/14/2018              |               |          | X   |     |      |

## DATA REVIEW REPORT

| Sample ID  | Lab ID      | Matrix | Sample Collection Date | Parent Sample | Analysis |     |     |      |
|------------|-------------|--------|------------------------|---------------|----------|-----|-----|------|
|            |             |        |                        |               | SVOC     | PCB | MET | MISC |
| SLT-CC-250 | 40169156026 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-251 | 40169156027 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-252 | 40169156028 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-253 | 40169156029 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-254 | 40169156030 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-255 | 40169156031 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-256 | 40169156032 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-257 | 40169156033 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-258 | 40169156034 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-259 | 40169156035 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-260 | 40169156036 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-262 | 40169156038 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-263 | 40169156039 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-264 | 40169156040 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-265 | 40169156041 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-266 | 40169156042 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-267 | 40169156043 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-268 | 40169156044 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-269 | 40169156045 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-270 | 40169156046 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-271 | 40169156047 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-CC-272 | 40169156048 | Tissue | 5/14/2018              |               |          | X   |     |      |
| SLT-BD-261 | 40169156049 | Tissue | 5/14/2018              |               |          | X   |     |      |

**Note:**

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample locations SLT-CC-248 and SLT-CC-260.



## DATA REVIEW REPORT

### ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

| Items Reviewed                                          | Reported |     | Performance Acceptable |     | Not Required |
|---------------------------------------------------------|----------|-----|------------------------|-----|--------------|
|                                                         | No       | Yes | No                     | Yes |              |
| 1. Sample receipt condition                             |          | X   |                        | X   |              |
| 2. Requested analyses and sample results                |          | X   |                        | X   |              |
| 3. Master tracking list                                 |          | X   |                        | X   |              |
| 4. Methods of analysis                                  |          | X   |                        | X   |              |
| 5. Reporting limits                                     |          | X   |                        | X   |              |
| 6. Sample collection date                               |          | X   |                        | X   |              |
| 7. Laboratory sample received date                      |          | X   |                        | X   |              |
| 8. Sample preservation verification (as applicable)     |          | X   |                        | X   |              |
| 9. Sample preparation/extraction/analysis dates         |          | X   |                        | X   |              |
| 10. Fully executed Chain-of-Custody (COC) form          |          | X   |                        | X   |              |
| 11. Narrative summary of QA or sample problems provided |          | X   |                        | X   |              |
| 12. Data Package Completeness and Compliance            |          | X   |                        | X   |              |

Note:

QA - Quality Assurance

## DATA REVIEW REPORT

### ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8082. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

## DATA REVIEW REPORT

### POLYCHLORINATED BIPHENYLS (PCBs) ANALYSES

#### 1. Holding Times

The specified holding times for the following methods are presented in the following table.

| Method      | Matrix      | Holding Time                                                                  | Preservation  |
|-------------|-------------|-------------------------------------------------------------------------------|---------------|
| SW-846 8082 | Soil/Tissue | 14 days from collection to extraction and 40 days from extraction to analysis | Cool to <6 °C |

Note:

< = less than

°C = degrees Celsius

The holding time above is a recommendation. PCBs are very stable in a variety of matrices, and holding times, under the conditions listed above, may be as long as a year per SW-846 8082A (February 2007).

All samples were stored frozen (< -10°C) until time of extraction. All samples were analyzed within the specified holding time criteria

#### 2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

#### 3. System Performance

System performance and column resolution were acceptable.

#### 4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

##### 4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99. Multiple-point calibrations were performed for Aroclor 1016, 1242, 1248, 1254, and 1260 only. Single-point calibrations were performed for the remaining Aroclors.

## DATA REVIEW REPORT

### 4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All calibration criteria were within the control limits.

### 5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. PCB analysis requires that one of the two PCB surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

| Sample Locations | Surrogate            | Recovery       |
|------------------|----------------------|----------------|
| SLT-BD-227       | Tetrachloro-m-xylene | <LL but >10%   |
|                  | Decachlorobiphenyl   | AC             |
| SLT-BD-234       | Tetrachloro-m-xylene | >UL            |
|                  | Decachlorobiphenyl   | AC             |
| SLT-CC-258       | Tetrachloro-m-xylene | AC             |
|                  | Decachlorobiphenyl   | >UL            |
| SLT-BD-235       | Tetrachloro-m-xylene | D <sup>1</sup> |
| SLT-BD-237       |                      |                |
| SLT-BD-238       |                      |                |
| SLT-CC-270       |                      |                |
|                  | Decachlorobiphenyl   | D <sup>1</sup> |

Notes:

> = greater than

Lower control limit (LL)

Upper control limit (UL)

Diluted (D)

Acceptable (AC)

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results are qualified as documented in the table below.

| Control Limit  | Sample Result | Qualification |
|----------------|---------------|---------------|
| > UL           | Non-detect    | No Action     |
|                | Detect        | J             |
| < LL but > 10% | Non-detect    | UJ            |
|                | Detect        | J             |
| < 10%          | Non-detect    | R             |
|                | Detect        | J             |

## DATA REVIEW REPORT

|                                                                                                    |            |                   |
|----------------------------------------------------------------------------------------------------|------------|-------------------|
| One surrogate exhibiting recovery outside the control limits but > 10%                             | Non-detect | No Action         |
|                                                                                                    | Detect     |                   |
| Surrogates diluted below the calibration curve due to the high concentration of a target compound. | Non-detect | UJ/J <sup>1</sup> |
|                                                                                                    | Detect     |                   |

### Note:

- <sup>1</sup> A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

## 6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

## 7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits. The LCSD was not performed inadvertently by the laboratory. The L2 note was removed from Form 1s and no additional qualification was necessary.

## 8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for tissue matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for tissue matrices.

Field duplicate analysis was not performed on a sample location within this SDG.

## 9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns. When dual column analysis is performed the relative percent difference (%RPD) of detected sample results must be less than 40%.

The dual column analysis was used for confirmation only.

## 10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

## DATA REVIEW REPORT

### DATA VALIDATION CHECKLIST FOR PCBs

| PCBs; SW-846 8082                                                         | Reported |     | Performance Acceptable |     | Not Required |  |
|---------------------------------------------------------------------------|----------|-----|------------------------|-----|--------------|--|
|                                                                           | No       | Yes | No                     | Yes |              |  |
| GAS CHROMATOGRAPHY (GC/ECD)                                               |          |     |                        |     |              |  |
| <b>Tier II Validation</b>                                                 |          |     |                        |     |              |  |
| Holding times                                                             |          | X   |                        | X   |              |  |
| Reporting limits (units)                                                  |          | X   |                        | X   |              |  |
| Blanks                                                                    |          |     |                        |     |              |  |
| A. Method blanks                                                          |          | X   |                        | X   |              |  |
| B. Equipment blanks                                                       |          |     |                        |     | X            |  |
| Laboratory Control Sample (LCS) %R                                        |          | X   |                        | X   |              |  |
| Laboratory Control Sample Duplicate(LCSD) %R                              |          |     |                        |     | X            |  |
| LCS/LCSD Precision (RPD)                                                  |          |     |                        |     | X            |  |
| Matrix Spike (MS) %R                                                      |          | X   |                        | X   |              |  |
| Matrix Spike Duplicate(MSD) %R                                            |          | X   |                        | X   |              |  |
| MS/MSD Precision (RPD)                                                    |          | X   |                        | X   |              |  |
| Field/Lab Duplicate (RPD)                                                 |          |     |                        |     | X            |  |
| Surrogate Spike Recoveries                                                |          | X   | X                      |     |              |  |
| Column (RPD) (If dual column is performed-not confirmation purposes only) |          |     |                        |     | X            |  |
| Dilution Factor                                                           |          | X   |                        | X   |              |  |
| Moisture Content                                                          |          | X   |                        | X   |              |  |
| <b>Tier III Validation</b>                                                |          |     |                        |     |              |  |
| Initial calibration %RSDs                                                 |          | X   |                        | X   |              |  |
| Continuing calibration %Ds                                                |          | X   |                        | X   |              |  |
| System performance and column resolution                                  |          | X   |                        | X   |              |  |
| Compound identification and quantitation                                  |          |     |                        |     |              |  |
| A. Quantitation Reports                                                   |          | X   |                        | X   |              |  |
| B. RT of sample compounds within the established RT windows               |          | X   |                        | X   |              |  |
| C. Pattern identification                                                 |          | X   |                        | X   |              |  |
| D. Transcription/calculation errors present                               |          | X   |                        | X   |              |  |
| E. Reporting limits adjusted to reflect sample dilutions                  |          | X   |                        | X   |              |  |

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference,

%D – difference

## DATA REVIEW REPORT

VALIDATION PERFORMED BY: Todd Church

SIGNATURE:



DATE: August 9, 2018

PEER REVIEW: Dennis Capria

DATE: August 15, 2018

# CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS





ID#:

## CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 4

Lab Work Order #

**Contact & Company Name:** Dave Buys Arcadis  
**Address:** 110 West Fayette St. Suite 300  
**City:** Syracuse **State:** NY **Zip:** 13202  
**Telephone:** 315.263.6192  
**Fax:**  
**E-mail Address:** dave.buys@arcadis.com

**Project Name/Location (City, State):** TEP 229 Fish Sampling  
**Project #:** BOOS1341.1001.00001  
**Sample's Printed Name:** Dave Buys  
**Sample's Signature:** *DB*

**Preservative:** Ice  
**Filtered (✓):**  
**# of Containers:** 1 per sample  
**Container Information:** 401 + Freezer Paper  
**PARAMETER ANALYSIS & METHOD**

**Sample ID**

**Collection Date/Time**  
**Wt Type (✓)**  
**Comp**  
**Grab**  
**Matrix**

**REMARKS**

|            |               |   |   |   |   |     |                                                                                                                                                           |
|------------|---------------|---|---|---|---|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| SLT-BD-225 | 5/14/18 12:00 | X | T | X | X | 001 | Analyze whole body samples for PCB Aroclors and o/p lipids following the procedures listed in the O&M Plan (1999) and QAPP (2013). Include QA/QC samples. |
| 226        |               |   |   |   |   | 002 |                                                                                                                                                           |
| 227        |               |   |   |   |   | 003 |                                                                                                                                                           |
| 228        |               |   |   |   |   | 004 |                                                                                                                                                           |
| 229        |               |   |   |   |   | 005 |                                                                                                                                                           |
| 230        |               |   |   |   |   | 006 |                                                                                                                                                           |
| 231        |               |   |   |   |   | 007 |                                                                                                                                                           |
| 232        |               |   |   |   |   | 008 |                                                                                                                                                           |
| 233        |               |   |   |   |   | 009 |                                                                                                                                                           |
| 234        |               |   |   |   |   | 010 |                                                                                                                                                           |
| 235        |               |   |   |   |   | 011 |                                                                                                                                                           |
| 236        |               |   |   |   |   | 012 |                                                                                                                                                           |
| 237        |               |   |   |   |   | 013 |                                                                                                                                                           |
| 238        |               |   |   |   |   | 014 |                                                                                                                                                           |

☐ Special QA/QC Instructions (✓):

**Laboratory Information and Receipt**

**Lab Name:** Pace Analytical  
**Cooler Custody Seal (✓):**  
☒ Intact ☐ Not Intact

**Specify Turnaround Requirements:** Standard  
**Shipping Tracking #:** —

**Condition/Cooler Temp:** —

**Relinquished By:** Nick Firman  
**Signature:** *NF*  
**Date/Time:** 5/15/18 1500

**Received By:** Ted G4  
**Signature:** *TG*  
**Date/Time:** 5/16/18 0810

**Relinquished By:** Duane Kille  
**Signature:** *DK*  
**Date/Time:** 5/16/18 0810

**Laboratory Received By:**

Distribution:

WHITE - Laboratory returns with results

YELLOW - Lab copy

PINK - Retained by Arcadis

ID#:

## CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 4

Lab Work Order #

40169156

Contact & Company Name:

Telephone:

Address: See page 1

Fax:

City:

State:

Zip:

E-mail Address:

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Sample ID

Collection Date

Time

WBS Type (✓)  
Comp Grab

Matrix

PCB Analytals  
o/p lipids

### REMARKS

SLT-CC-239

5/14/18 1200

X

T

X

X

015

See page 1

240

5/14/18 1200

X

T

X

X

016

241

5/14/18 1200

X

T

X

X

017

242

5/14/18 1200

X

T

X

X

018

243

5/14/18 1200

X

T

X

X

019

244

5/14/18 1200

X

T

X

X

020

245

5/14/18 1200

X

T

X

X

021

246

5/14/18 1200

X

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X

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022

247

5/14/18 1200

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023

248

5/14/18 1200

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024

249

5/14/18 1200

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X

X

025

250

5/14/18 1200

X

T

X

X

026

251

5/14/18 1200

X

T

X

X

027

252

5/14/18 1200

X

T

X

X

028

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓):

### Laboratory Information and Receipt

Lab Name:

Cooler Custody Seal (✓)

☐ Cooler packed with ice (✓)

☐ Intact

☐ Not Intact

Specify Turnaround Requirements:

Sample Receipt:

Shipping Tracking #:

Condition/Cooler Temp: \_\_\_\_\_

### Relinquished By

Printed Name:

Nick Firman

Signature:

*Nick Firman*

Date/Time:

5/15/18 1500

### Received By

Printed Name:

Ted G

Signature:

*Ted G*

Date/Time:

5-16-18 0800

### Relinquished By

Printed Name:

Quentin Lyle

Signature:

*Quentin Lyle*

Date/Time:

5/16/18 0800

### Laboratory Received By

Printed Name:

Signature:

Date/Time:

ID#:

## CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # 40164156

**Send Results to:**

Contact & Company Name: See page 1

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

**PARAMETER ANALYSIS & METHOD**

| Preservative | Filtered (✓) | # of Containers | Container Information |
|--------------|--------------|-----------------|-----------------------|
| See page 1   |              |                 |                       |

**Keys**

**Preservation Key:**

- A. H<sub>2</sub>SO<sub>4</sub>
- B. HCl
- C. HNO<sub>3</sub>
- D. NaOH
- E. None
- F. Other: \_\_\_\_\_
- G. Other: \_\_\_\_\_
- H. Other: \_\_\_\_\_
- I. Other: \_\_\_\_\_
- 10. Other: \_\_\_\_\_

**Container Information Key:**

- 1. 40 ml Vial
- 2. 1 L Jar
- 3. 250 ml Plastic
- 4. 500 ml Plastic
- 5. Encore
- 6. 2 oz Glass
- 7. 4 oz Glass
- 8. 8 oz Glass
- 9. Other: \_\_\_\_\_
- 10. Other: \_\_\_\_\_

Project Name/Location (City, State): \_\_\_\_\_

Project #: \_\_\_\_\_

Sampler's Printed Name: \_\_\_\_\_

Sampler's Signature: DLB

**REMARKS**

See page 1

**Matrix Key:**

- SE - Sediment
- SO - Soil
- W - Water
- T - Tissue
- NL - NAPL/Oil
- SL - Sludge
- SW - Sample Wipe
- Other: \_\_\_\_\_

| Sample ID  | Collection Date | Time | Type (✓) | Matrix | PLB | Aradors | o/o lipids | Remarks    |
|------------|-----------------|------|----------|--------|-----|---------|------------|------------|
| SLT-CC-253 | 6/14/18         | 1700 | X        | T      | X   | X       |            | See page 1 |
| 254        |                 |      |          |        |     |         |            | 039        |
| 255        |                 |      |          |        |     |         |            | 030        |
| 256        |                 |      |          |        |     |         |            | 031        |
| 257        |                 |      |          |        |     |         |            | 032        |
| 258        |                 |      |          |        |     |         |            | 033        |
| 259        |                 |      |          |        |     |         |            | 034        |
| 260        |                 |      |          |        |     |         |            | 035        |
| SLT-PS-261 |                 |      |          |        |     |         |            | 036        |
| SLT-CC-262 |                 |      |          |        |     |         |            | 037        |
| 263        |                 |      |          |        |     |         |            | 038        |
| 264        |                 |      |          |        |     |         |            | 039        |
| 265        |                 |      |          |        |     |         |            | 040        |
| 266        |                 |      |          |        |     |         |            | 041        |
|            |                 |      |          |        |     |         |            | 042        |

Special Instructions/Comments: \_\_\_\_\_

☐ Special QA/QC Instructions (✓): \_\_\_\_\_

**Laboratory Information and Receipt**

Lab Name: See page 1

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt: \_\_\_\_\_

Condition/Cooler Temp: \_\_\_\_\_

Shipping Tracking #: \_\_\_\_\_

**Relinquished By**

Printed Name: Nick Fyman

Signature: [Signature]

Date/Time: 5/15/18 1500

**Received By**

Printed Name: \_\_\_\_\_

Signature: [Signature]

Date/Time: 5/16/18 0810

**Relinquished By**

Printed Name: \_\_\_\_\_

Signature: [Signature]

Date/Time: 5/16/18 0810

**Laboratory Received By**

Printed Name: \_\_\_\_\_

Signature: [Signature]

Date/Time: \_\_\_\_\_

|                         |        |      |                 |
|-------------------------|--------|------|-----------------|
| Contact & Company Name: |        |      | Telephone:      |
| Address:                |        |      | Fax:            |
| City:                   | State: | Zip: | E-mail Address: |

|                       |              |            |
|-----------------------|--------------|------------|
| Preservative          | Filtered (✓) | See Page 1 |
| # of Containers       |              |            |
| Container Information |              |            |

|                                   |                   |
|-----------------------------------|-------------------|
| Preservation Key:                 | Keys              |
| A. H <sub>2</sub> SO <sub>4</sub> | 1. 40 ml Vial     |
| B. HCl                            | 2. 1 L Amber      |
| C. HNO <sub>3</sub>               | 3. 250 ml Plastic |
| D. NaOH                           | 4. 500 ml Plastic |
| E. None                           | 5. Encore         |
| F. Other:                         | 6. 2 oz Glass     |
| G. Other:                         | 7. 4 oz Glass     |
| H. Other:                         | 8. 8 oz Glass     |
|                                   | 9. Other:         |
|                                   | 10. Other:        |

|                                      |                      |
|--------------------------------------|----------------------|
| Project Name/Location (City, State): | Project #:           |
| Sampler's Printed Name:              | Sampler's Signature: |

|                             |  |
|-----------------------------|--|
| PARAMETER ANALYSIS & METHOD |  |
|-----------------------------|--|

|             |               |               |
|-------------|---------------|---------------|
| Matrix Key: | SE - Sediment | NL - NAPL/Oil |
| SO - Soil   | W - Water     | SL - Sludge   |
| T - Tissue  | A - Air       | Other:        |

| Sample ID | Collection Date | Time | W-type (✓) | Comp | Grab | Matrix |
|-----------|-----------------|------|------------|------|------|--------|
|-----------|-----------------|------|------------|------|------|--------|

|           |         |      |   |  |  |   |
|-----------|---------|------|---|--|--|---|
| 51-44-267 | 5/14/18 | 1500 | X |  |  | I |
| 268       |         |      |   |  |  | X |
| 269       |         |      |   |  |  | X |
| 270       |         |      |   |  |  |   |
| 271       |         |      |   |  |  |   |
| 272       |         |      |   |  |  |   |

|         |
|---------|
| REMARKS |
|---------|

|                                |
|--------------------------------|
| Special Instructions/Comments: |
|--------------------------------|

|                                    |                 |             |                 |                        |
|------------------------------------|-----------------|-------------|-----------------|------------------------|
| Laboratory Information and Receipt | Relinquished By | Received By | Relinquished By | Laboratory Received By |
|------------------------------------|-----------------|-------------|-----------------|------------------------|

|           |                         |               |            |               |            |               |            |
|-----------|-------------------------|---------------|------------|---------------|------------|---------------|------------|
| Lab Name: | Cooler Custody Seal (✓) | Printed Name: | Signature: | Printed Name: | Signature: | Printed Name: | Signature: |
|-----------|-------------------------|---------------|------------|---------------|------------|---------------|------------|

|                                  |                |                        |            |            |            |            |
|----------------------------------|----------------|------------------------|------------|------------|------------|------------|
| Specify Turnaround Requirements: | Sample Receipt | Condition/Cooler Temp: | Date/Time: | Date/Time: | Date/Time: | Date/Time: |
|----------------------------------|----------------|------------------------|------------|------------|------------|------------|

|                     |               |                                         |                   |                            |
|---------------------|---------------|-----------------------------------------|-------------------|----------------------------|
| Shipping Tracking # | Distribution: | WHITE - Laboratory returns with results | YELLOW - Lab copy | PINK - Retained by Arcadis |
|---------------------|---------------|-----------------------------------------|-------------------|----------------------------|

## QUALIFIERS

Project: B0051341.1601.00001 TGP 229 FI  
Pace Project No.: 40169156

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: 293178

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

S0 Surrogate recovery outside laboratory control limits.  
S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-225 **Lab ID:** 40169156001 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>365</b> | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>365</b> | ug/kg | 54.4   | 27.2 | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 88         | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 95         | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 10:40 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.1</b> | %     |        |      | 1  |                | 06/29/18 07:26 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-226 **Lab ID:** 40169156002 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>389</b> | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>389</b> | ug/kg | 32.0   | 16.0 | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 81         | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 90         | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 10:58 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>6.2</b> | %     |        |      | 1  |                | 06/29/18 07:26 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-227 **Lab ID:** 40169156003 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>311</b> | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>311</b> | ug/kg | 68.9   | 34.4 | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 52         | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 877-09-8   | S0   |
| Decachlorobiphenyl (S)                                                               | 61         | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 11:17 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>3.2</b> | %     |        |      | 1  |                | 06/29/18 07:26 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-228**      **Lab ID: 40169156004**      Collected: 05/14/18 12:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>393</b> | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND         | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>393</b> | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 82         | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 90         | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 11:35 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>6.0</b> | %     |        |      | 1  |                | 06/29/18 07:27 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-229**      **Lab ID: 40169156005**      Collected: 05/14/18 12:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>389</b> | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND         | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>389</b> | ug/kg | 56.4   | 28.2 | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 80         | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 93         | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 11:53 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>7.9</b> | %     |        |      | 1  |                | 06/29/18 07:27 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-230 **Lab ID:** 40169156006 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>528</b> | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>528</b> | ug/kg | 65.3   | 32.6 | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 89         | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 99         | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 12:11 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.4</b> | %     |        |      | 1  |                | 06/29/18 07:27 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-231**      **Lab ID: 40169156007**      Collected: 05/14/18 17:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>2100</b> | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND          | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>2100</b> | ug/kg | 289    | 145 | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 85          | %     | 61-102 |     | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 103         | %     | 60-112 |     | 10 | 06/25/18 08:47 | 06/27/18 12:30 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |             |       |        |     |    |                |                |            |      |
| Lipid                                                                                     | <b>5.0</b>  | %     |        |     | 1  |                | 06/29/18 07:27 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-232 **Lab ID:** 40169156008 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1180</b> | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND          | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>1180</b> | ug/kg | 92.3   | 46.2 | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 90          | %     | 61-102 |      | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 97          | %     | 60-112 |      | 3  | 06/25/18 08:47 | 06/27/18 12:48 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>5.2</b>  | %     |        |      | 1  |                | 06/29/18 07:27 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-233**      **Lab ID: 40169156009**      Collected: 05/14/18 17:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>1150</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>1150</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 84          | %     | 61-102 |      | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 100         | %     | 60-112 |      | 5  | 06/25/18 08:47 | 06/27/18 13:25 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>7.9</b>  | %     |        |      | 1  |                | 06/29/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-234 **Lab ID:** 40169156010 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>3930</b> | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>3930</b> | ug/kg | 250    | 125 | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 96          | %     | 61-102 |     | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 119         | %     | 60-112 |     | 10 | 06/25/18 08:47 | 06/27/18 13:44 | 2051-24-3  | S0   |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |     |    |                |                |            |      |
| Lipid                                                                                | <b>3.6</b>  | %     |        |     | 1  |                | 06/29/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-235 **Lab ID:** 40169156011 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 12674-11-2 | J    |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>3880</b> | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND          | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>3880</b> | ug/kg | 375    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 0           | %     | 61-102 |     | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 877-09-8   | S4   |
| Decachlorobiphenyl (S)                                                               | 0           | %     | 60-112 |     | 15 | 06/25/18 08:47 | 06/27/18 14:03 | 2051-24-3  | S4   |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |     |    |                |                |            |      |
| Lipid                                                                                | <b>5.2</b>  | %     |        |     | 1  |                | 06/29/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-236 **Lab ID:** 40169156012 **Collected:** 05/14/18 15:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |     |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>2650</b> | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 11096-82-5 |      |
| PCB, Total                                               | <b>2650</b> | ug/kg | 294    | 147 | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 81          | %     | 61-102 |     | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 78          | %     | 60-112 |     | 10 | 06/25/18 08:47 | 06/28/18 11:27 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |     |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |     |    |                |                |            |      |
| Lipid                                                    | <b>4.0</b>  | %     |        |     | 1  |                | 06/29/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-BD-237 **Lab ID:** 40169156013 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual   |
|--------------------------------------------------------------------------------------|---------|-------|--------|-----|----|----------------|----------------|------------|--------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |         |       |        |     |    |                |                |            |        |
| PCB-1016 (Aroclor 1016)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 12674-11-2 | J<br>↓ |
| PCB-1221 (Aroclor 1221)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 11104-28-2 |        |
| PCB-1232 (Aroclor 1232)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 11141-16-5 |        |
| PCB-1242 (Aroclor 1242)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 53469-21-9 |        |
| PCB-1248 (Aroclor 1248)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 12672-29-6 |        |
| PCB-1254 (Aroclor 1254)                                                              | 3510    | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 11097-69-1 |        |
| PCB-1260 (Aroclor 1260)                                                              | ND      | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 11096-82-5 |        |
| PCB, Total                                                                           | 3510    | ug/kg | 400    | 200 | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 1336-36-3  |        |
| <b>Surrogates</b>                                                                    |         |       |        |     |    |                |                |            |        |
| Tetrachloro-m-xylene (S)                                                             | 0       | %     | 61-102 |     | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 877-09-8   | S4     |
| Decachlorobiphenyl (S)                                                               | 0       | %     | 60-112 |     | 15 | 06/25/18 08:47 | 06/27/18 14:39 | 2051-24-3  | S4     |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |         |       |        |     |    |                |                |            |        |
| Lipid                                                                                | 5.5     | %     |        |     | 1  |                | 06/29/18 07:29 |            |        |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-238**      **Lab ID: 40169156014**      Collected: 05/14/18 15:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual                      |
|-------------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|---------------------------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |                           |
| PCB-1016 (Aroclor 1016)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 12674-11-2 | <div>J</div> <div>↓</div> |
| PCB-1221 (Aroclor 1221)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 11104-28-2 |                           |
| PCB-1232 (Aroclor 1232)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 11141-16-5 |                           |
| PCB-1242 (Aroclor 1242)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 53469-21-9 |                           |
| PCB-1248 (Aroclor 1248)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 12672-29-6 |                           |
| PCB-1254 (Aroclor 1254)                                                                   | <b>3890</b> | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 11097-69-1 |                           |
| PCB-1260 (Aroclor 1260)                                                                   | ND          | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 11096-82-5 |                           |
| PCB, Total                                                                                | <b>3890</b> | ug/kg | 374    | 187 | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 1336-36-3  |                           |
| <b>Surrogates</b>                                                                         |             |       |        |     |    |                |                |            |                           |
| Tetrachloro-m-xylene (S)                                                                  | 0           | %     | 61-102 |     | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 877-09-8   | S4                        |
| Decachlorobiphenyl (S)                                                                    | 0           | %     | 60-112 |     | 15 | 06/25/18 08:47 | 06/27/18 14:58 | 2051-24-3  | S4                        |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |             |       |        |     |    |                |                |            |                           |
| Lipid                                                                                     | <b>3.3</b>  | %     |        |     | 1  |                | 06/29/18 07:29 |            |                           |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-CC-239**      **Lab ID: 40169156015**      Collected: 05/14/18 12:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>58.4</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>58.4</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 89          | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 97          | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 15:16 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>2.5</b>  | %     |        |      | 1  |                | 06/29/18 07:29 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-240 **Lab ID:** 40169156016 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>146</b>  | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 11096-82-5 |      |
| PCB, Total                                               | <b>146</b>  | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 91          | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 100         | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 15:34 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>0.82</b> | %     |        |      | 1  |                | 06/29/18 07:29 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-241 **Lab ID:** 40169156017 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |            |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>229</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 11096-82-5 |      |
| PCB, Total                                               | <b>229</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 89         | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 99         | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 15:52 | 2051-24-3  |      |
| <b>Lipid</b>                                             |            |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |            |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>1.7</b> | %     |        |      | 1  |                | 06/29/18 07:29 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-242 **Lab ID:** 40169156018 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>166</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>166</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 82         | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 96         | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 16:10 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>1.4</b> | %     |        |      | 1  |                | 06/29/18 07:30 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-243 **Lab ID:** 40169156019 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>385</b>  | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 11096-82-5 |      |
| PCB, Total                                               | <b>385</b>  | ug/kg | 49.9   | 25.0 | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 83          | %     | 61-102 |      | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 96          | %     | 60-112 |      | 2  | 06/25/18 08:47 | 06/27/18 16:29 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>0.92</b> | %     |        |      | 1  |                | 06/29/18 07:30 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-244 **Lab ID:** 40169156020 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>93.8</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>93.8</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 83          | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 87          | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 00:50 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>2.8</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-245 **Lab ID:** 40169156021 **Collected:** 05/14/18 12:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |            |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>283</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 11096-82-5 |      |
| PCB, Total                                               | <b>283</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 83         | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 90         | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 01:08 | 2051-24-3  |      |
| <b>Lipid</b>                                             |            |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |            |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>6.9</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-246 **Lab ID:** 40169156022 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>458</b>  | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>59.5</b> | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 11096-82-5 |      |
| PCB, Total                                               | <b>518</b>  | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 82          | %     | 61-102 |      | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 89          | %     | 60-112 |      | 2  | 06/25/18 09:48 | 06/29/18 01:26 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>5.4</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-247 **Lab ID:** 40169156023 **Collected:** 05/14/18 12:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>411</b>  | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>57.5</b> | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 11096-82-5 |      |
| PCB, Total                                               | <b>469</b>  | ug/kg | 50.1   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 83          | %     | 61-102 |      | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 92          | %     | 60-112 |      | 2  | 06/25/18 09:48 | 06/29/18 01:44 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>5.1</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-248 **Lab ID:** 40169156024 Collected: 05/14/18 12:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |            |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>335</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 11096-82-5 |      |
| PCB, Total                                               | <b>335</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 85         | %     | 61-102 |      | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 95         | %     | 60-112 |      | 1  | 06/25/18 08:47 | 06/27/18 16:47 | 2051-24-3  |      |
| <b>Lipid</b>                                             |            |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |            |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>3.5</b> | %     |        |      | 1  |                | 06/29/18 07:30 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-CC-249**      **Lab ID: 40169156025**      Collected: 05/14/18 12:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>426</b> | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | ND         | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>426</b> | ug/kg | 50.0   | 25.0 | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 87         | %     | 61-102 |      | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 92         | %     | 60-112 |      | 2  | 06/25/18 09:48 | 06/29/18 02:03 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>5.9</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-250 **Lab ID:** 40169156026 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>209</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>209</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 93         | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 91         | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 02:21 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>1.1</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-251 **Lab ID:** 40169156027 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results      | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|--------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |              |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND           | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND           | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND           | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND           | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND           | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>566</b>   | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>87.2J</b> | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>653</b>   | ug/kg | 99.9   | 49.9 | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 1336-36-3  | J    |
| <b>Surrogates</b>                                                                    |              |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 88           | %     | 61-102 |      | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 93           | %     | 60-112 |      | 4  | 06/25/18 09:48 | 06/29/18 02:39 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |              |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>1.5</b>   | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-252 **Lab ID:** 40169156028 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results              | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|----------------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |                      |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND                   | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND                   | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND                   | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND                   | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND                   | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>72.0</b>          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>20.5J</b>         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 11096-82-5 |      |
| PCB, Total                                                                           | 92.5 <del>92.6</del> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 1336-36-3  | J    |
| <b>Surrogates</b>                                                                    |                      |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 95                   | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 94                   | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 02:57 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |                      |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>0.66</b>          | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-253 **Lab ID:** 40169156029 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>136</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | ND         | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>136</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 100        | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 97         | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 03:52 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>1.1</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-254 **Lab ID:** 40169156030 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>29.0</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 11096-82-5 |      |
| PCB, Total                                               | <b>29.0</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 92          | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 94          | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 04:10 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>0.86</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-255 **Lab ID:** 40169156031 **Collected:** 05/14/18 17:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>46.0</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 11096-82-5 |      |
| PCB, Total                                               | <b>46.0</b> | ug/kg | 25.0   | 12.5 | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 98          | %     | 61-102 |      | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 99          | %     | 60-112 |      | 1  | 06/25/18 09:48 | 06/29/18 04:28 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>1.4</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-256 **Lab ID:** 40169156032 **Collected:** 05/14/18 17:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>1000</b> | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | ND          | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 11096-82-5 |      |
| PCB, Total                                               | <b>1000</b> | ug/kg | 100    | 50.0 | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 97          | %     | 61-102 |      | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 99          | %     | 60-112 |      | 4  | 06/25/18 09:48 | 06/29/18 04:47 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>4.4</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-257 **Lab ID:** 40169156033 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results    | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |            |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND         | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND         | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND         | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND         | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND         | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>828</b> | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>112</b> | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>940</b> | ug/kg | 100    | 50.1 | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |            |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 88         | %     | 61-102 |      | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 95         | %     | 60-112 |      | 4  | 06/25/18 09:48 | 06/29/18 05:05 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |            |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.7</b> | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-258 **Lab ID:** 40169156034 Collected: 05/14/18 17:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1270</b> | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>165</b>  | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>1430</b> | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 96          | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 114         | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 05:23 | 2051-24-3  | S0   |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>5.2</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-259 **Lab ID:** 40169156035 **Collected:** 05/14/18 17:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>869</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>114J</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>983</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 1336-36-3  | J    |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 90          | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 101         | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 05:41 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.5</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-260 **Lab ID:** 40169156036 **Collected:** 05/14/18 17:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results              | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|----------------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |                      |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1030</b>          | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>138</b>           | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 11096-82-5 |      |
| PCB, Total                                                                           | 1170 <del>1160</del> | ug/kg | 125    | 62.4 | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |                      |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 86                   | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 95                   | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 06:00 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |                      |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.8</b>           | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-262 **Lab ID:** 40169156038 **Collected:** 05/14/18 15:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>982</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>131</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 11096-82-5 |      |
| PCB, Total                                               | <b>1110</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 86          | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 91          | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 06:18 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>2.0</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-263 **Lab ID:** 40169156039 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>1270</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>180</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 11096-82-5 |      |
| PCB, Total                                               | <b>1450</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 87          | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 94          | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 06:36 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>2.8</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-264 **Lab ID:** 40169156040 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>1070</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>142</b>  | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 11096-82-5 |      |
| PCB, Total                                               | <b>1210</b> | ug/kg | 125    | 62.5 | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 85          | %     | 61-102 |      | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 93          | %     | 60-112 |      | 5  | 06/25/18 09:48 | 06/29/18 06:54 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>1.1</b>  | %     |        |      | 1  |                | 06/27/18 07:28 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-265 **Lab ID:** 40169156041 **Collected:** 05/14/18 15:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results              | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|----------------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |                      |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND                   | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1050</b>          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>129</b>           | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 11096-82-5 |      |
| PCB, Total                                                                           | 1180 <del>1170</del> | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |                      |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 81                   | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 90                   | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 01:53 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |                      |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>1.5</b>           | %     |        |      | 1  |                | 06/29/18 08:45 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-266 **Lab ID:** 40169156042 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1280</b> | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>150</b>  | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>1430</b> | ug/kg | 141    | 70.7 | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 81          | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 90          | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 02:20 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>3.3</b>  | %     |        |      | 1  |                | 06/29/18 08:45 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-267 **Lab ID:** 40169156043 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1910</b> | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>202</b>  | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>2110</b> | ug/kg | 157    | 78.4 | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                    |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 81          | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 91          | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 02:47 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                | <b>4.0</b>  | %     |        |      | 1  |                | 06/29/18 08:46 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-268 **Lab ID:** 40169156044 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1590</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>188J</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>1780</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 1336-36-3  | J    |
| <b>Surrogates</b>                                                                    |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 77          | %     | 61-102 |     | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 88          | %     | 60-112 |     | 10 | 06/27/18 09:06 | 06/29/18 03:15 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |     |    |                |                |            |      |
| Lipid                                                                                | <b>4.4</b>  | %     |        |     | 1  |                | 06/29/18 08:46 |            |      |

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-269 **Lab ID:** 40169156045 **Collected:** 05/14/18 15:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>1640</b> | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>179</b>  | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 11096-82-5 |      |
| PCB, Total                                               | <b>1820</b> | ug/kg | 125    | 62.5 | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 85          | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 95          | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 03:42 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>3.7</b>  | %     |        |      | 1  |                | 06/29/18 08:46 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-270 **Lab ID:** 40169156046 **Collected:** 05/14/18 15:00 **Received:** 05/16/18 08:10 **Matrix:** Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual   |
|--------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|--------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |        |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 12674-11-2 | J<br>↓ |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 11104-28-2 |        |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 11141-16-5 |        |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 53469-21-9 |        |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 12672-29-6 |        |
| PCB-1254 (Aroclor 1254)                                                              | <b>1770</b> | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 11097-69-1 |        |
| PCB-1260 (Aroclor 1260)                                                              | <b>213J</b> | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 11096-82-5 |        |
| PCB, Total                                                                           | <b>1990</b> | ug/kg | 375    | 188 | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 1336-36-3  | ↓      |
| <b>Surrogates</b>                                                                    |             |       |        |     |    |                |                |            |        |
| Tetrachloro-m-xylene (S)                                                             | 0           | %     | 61-102 |     | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 877-09-8   | S4     |
| Decachlorobiphenyl (S)                                                               | 0           | %     | 60-112 |     | 15 | 06/27/18 09:06 | 06/29/18 04:09 | 2051-24-3  | S4     |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |     |    |                |                |            |        |
| Lipid                                                                                | <b>4.7</b>  | %     |        |     | 1  |                | 06/29/18 08:46 |            |        |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-271 **Lab ID:** 40169156047 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                               | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|----------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b>                              |             |       |        |      |    |                |                |            |      |
| Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                  | ND          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                  | ND          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                  | ND          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                  | ND          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                  | ND          | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                  | <b>1370</b> | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                  | <b>169</b>  | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 11096-82-5 |      |
| PCB, Total                                               | <b>1540</b> | ug/kg | 125    | 62.4 | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 1336-36-3  |      |
| <b>Surrogates</b>                                        |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                 | 81          | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                   | 88          | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 04:37 | 2051-24-3  |      |
| <b>Lipid</b>                                             |             |       |        |      |    |                |                |            |      |
| Analytical Method: Pace Lipid                            |             |       |        |      |    |                |                |            |      |
| Lipid                                                    | <b>4.3</b>  | %     |        |      | 1  |                | 06/29/18 08:46 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample:** SLT-CC-272 **Lab ID:** 40169156048 Collected: 05/14/18 15:00 Received: 05/16/18 08:10 Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                           | Results     | Units | PQL    | MDL | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|--------------------------------------------------------------------------------------|-------------|-------|--------|-----|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082 Preparation Method: EPA 3540 |             |       |        |     |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                              | ND          | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                              | <b>1600</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                              | <b>196J</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 11096-82-5 |      |
| PCB, Total                                                                           | <b>1800</b> | ug/kg | 250    | 125 | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 1336-36-3  | J    |
| <b>Surrogates</b>                                                                    |             |       |        |     |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                             | 78          | %     | 61-102 |     | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                               | 83          | %     | 60-112 |     | 10 | 06/27/18 09:06 | 06/29/18 05:04 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                           |             |       |        |     |    |                |                |            |      |
| Lipid                                                                                | <b>3.1</b>  | %     |        |     | 1  |                | 06/29/18 08:46 |            |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B0051341.1601.00001 TGP 229 FI

Pace Project No.: 40169156

**Sample: SLT-BD-261**      **Lab ID: 40169156049**      Collected: 05/14/18 17:00      Received: 05/16/18 08:10      Matrix: Tissue

**Results reported on a "wet-weight" basis**

| Parameters                                                                                | Results     | Units | PQL    | MDL  | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|-------------------------------------------------------------------------------------------|-------------|-------|--------|------|----|----------------|----------------|------------|------|
| <b>8082 GCS PCB, Tissue</b> Analytical Method: EPA 8082      Preparation Method: EPA 3540 |             |       |        |      |    |                |                |            |      |
| PCB-1016 (Aroclor 1016)                                                                   | ND          | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 12674-11-2 |      |
| PCB-1221 (Aroclor 1221)                                                                   | ND          | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 11104-28-2 |      |
| PCB-1232 (Aroclor 1232)                                                                   | ND          | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 11141-16-5 |      |
| PCB-1242 (Aroclor 1242)                                                                   | ND          | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 53469-21-9 |      |
| PCB-1248 (Aroclor 1248)                                                                   | ND          | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 12672-29-6 |      |
| PCB-1254 (Aroclor 1254)                                                                   | <b>1010</b> | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 11097-69-1 |      |
| PCB-1260 (Aroclor 1260)                                                                   | <b>122J</b> | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 11096-82-5 |      |
| PCB, Total                                                                                | <b>1130</b> | ug/kg | 128    | 64.1 | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 1336-36-3  |      |
| <b>Surrogates</b>                                                                         |             |       |        |      |    |                |                |            |      |
| Tetrachloro-m-xylene (S)                                                                  | 85          | %     | 61-102 |      | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 877-09-8   |      |
| Decachlorobiphenyl (S)                                                                    | 89          | %     | 60-112 |      | 5  | 06/27/18 09:06 | 06/29/18 05:32 | 2051-24-3  |      |
| <b>Lipid</b> Analytical Method: Pace Lipid                                                |             |       |        |      |    |                |                |            |      |
| Lipid                                                                                     | <b>4.4</b>  | %     |        |      | 1  |                | 06/29/18 08:45 |            |      |

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Automated Report

## Technical Report for

### EL PASO CORPORATION

BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

B0051341.1601

SGS Job Number: JC66894

Sampling Date: 05/24/18

#### Report to:

Arcadis U.S.  
1 Lincoln Center, 110 West Fayette Street Suite 300  
Syracuse, NY 13202  
Elizabeth.Baker@arcadis.com

ATTN: Elizabeth Baker

Total number of pages in report: **376**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Nancy Cole".

Nancy Cole  
Laboratory Director

Client Service contact: Victoria Pushkova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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Sample Summary

EL PASO CORPORATION

Job No: JC66894

BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY  
Project No: B0051341.1601

| Sample<br>Number | Collected |       |    | Received | Matrix |                   | Client<br>Sample ID  |
|------------------|-----------|-------|----|----------|--------|-------------------|----------------------|
|                  | Date      | Time  | By |          | Code   | Type              |                      |
| JC66894-1        | 05/24/18  | 10:50 | AR | 05/26/18 | SO     | Sediment          | 229-OC-DD10-001-11   |
| JC66894-2        | 05/24/18  | 11:30 | AR | 05/26/18 | SO     | Sediment          | 229-OC-DD10-002-11   |
| JC66894-3        | 05/24/18  | 12:00 | AR | 05/26/18 | SO     | Sediment          | 229-OC-DD10-003-11   |
| JC66894-3D       | 05/24/18  | 12:00 | AR | 05/26/18 | SO     | Soil Dup/MSD      | 229-OC-DD10-003-11   |
| JC66894-3S       | 05/24/18  | 12:00 | AR | 05/26/18 | SO     | Soil Matrix Spike | 229-OC-DD10-003-11   |
| JC66894-4        | 05/24/18  | 00:00 | AR | 05/26/18 | SO     | Sediment          | 229-OC-DD10-FD052418 |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** EL PASO CORPORATION

**Job No** JC66894

**Site:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

**Report Date** 6/6/2018 3:42:58 PM

On 05/26/2018, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC66894 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

### GC/LC Semi-volatiles By Method SW846 8082A

**Matrix:** SO

**Batch ID:** OP12385

- All samples were extracted within the recommended method holding time.
- Sample(s) JC66894-3MS, JC66894-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### General Chemistry By Method LLOYD KAHN 1988 MOD

**Matrix:** SO

**Batch ID:** GP13384

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC66894-3DUP, JC66894-3MS were used as the QC samples for Total Organic Carbon.

### General Chemistry By Method SM2540 G-97

**Matrix:** SO

**Batch ID:** GN80592

- The data for SM2540 G-97 meets quality control requirements.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

## Summary of Hits

Page 1 of 1

**Job Number:** JC66894

**Account:** EL PASO CORPORATION

**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

**Collected:** 05/24/18



| Lab Sample ID        | Client Sample ID     | Result/<br>Analyte Qual | RL  | MDL | Units | Method              |
|----------------------|----------------------|-------------------------|-----|-----|-------|---------------------|
| JC66894-1            | 229-OC-DD10-001-11   |                         |     |     |       |                     |
| Aroclor 1254         |                      | 114                     | 50  | 12  | ug/kg | SW846 8082A         |
| Total Organic Carbon |                      | 8440                    | 160 |     | mg/kg | LLOYD KAHN 1988 MOD |
| JC66894-2            | 229-OC-DD10-002-11   |                         |     |     |       |                     |
| Aroclor 1254         |                      | 308                     | 130 | 33  | ug/kg | SW846 8082A         |
| Total Organic Carbon |                      | 45300                   | 420 |     | mg/kg | LLOYD KAHN 1988 MOD |
| JC66894-3            | 229-OC-DD10-003-11   |                         |     |     |       |                     |
| Aroclor 1254         |                      | 239                     | 48  | 12  | ug/kg | SW846 8082A         |
| Total Organic Carbon |                      | 14400                   | 150 |     | mg/kg | LLOYD KAHN 1988 MOD |
| JC66894-4            | 229-OC-DD10-FD052418 |                         |     |     |       |                     |
| Aroclor 1254         |                      | 54.2                    | 40  | 9.8 | ug/kg | SW846 8082A         |
| Total Organic Carbon |                      | 21200                   | 130 |     | mg/kg | LLOYD KAHN 1988 MOD |



Dayton, NJ

## Section 4

4

Sample Results

Report of Analysis

SGS North America Inc.

## Report of Analysis

Page 1 of 1

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-001-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-1                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 64.5     |
| <b>Method:</b>           | SW846 8082A SW846 3546                          |                        |          |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

| Run #  | File ID    | DF | Analyzed       | By | Prep Date      | Prep Batch | Analytical Batch |
|--------|------------|----|----------------|----|----------------|------------|------------------|
| Run #1 | 2G164751.D | 1  | 06/01/18 16:36 | CP | 05/30/18 10:15 | OP12385    | G2G4351          |
| Run #2 |            |    |                |    |                |            |                  |

| Run #  | Initial Weight | Final Volume |
|--------|----------------|--------------|
| Run #1 | 15.5 g         | 10.0 ml      |
| Run #2 |                |              |

## PCB List

| CAS No.    | Compound     | Result | RL | MDL | Units | Q |
|------------|--------------|--------|----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 50 | 20  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 50 | 20  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 50 | 13  | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 50 | 8.0 | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 50 | 29  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | 114    | 50 | 12  | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 50 | 16  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 50 | 7.4 | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 50 | 3.8 | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 877-09-8  | Tetrachloro-m-xylene | 93%    |        | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 105%   |        | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 79%    |        | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 99%    |        | 10-166% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-001-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-1                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 64.5     |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

General Chemistry

| Analyte              | Result | RL  | Units | DF | Analyzed       | By | Method              |
|----------------------|--------|-----|-------|----|----------------|----|---------------------|
| Solids, Percent      | 64.5   |     | %     | 1  | 05/29/18 16:00 | DJ | SM2540 G-97         |
| Total Organic Carbon | 8440   | 160 | mg/kg | 1  | 05/31/18 13:53 | JO | LLOYD KAHN 1988 MOD |

RL = Reporting Limit

4.1  
4

SGS North America Inc.

## Report of Analysis

Page 1 of 1

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-002-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-2                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 23.9     |
| <b>Method:</b>           | SW846 8082A SW846 3546                          |                        |          |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

|        | File ID    | DF | Analyzed       | By | Prep Date      | Prep Batch | Analytical Batch |
|--------|------------|----|----------------|----|----------------|------------|------------------|
| Run #1 | 2G164752.D | 1  | 06/01/18 16:53 | CP | 05/30/18 10:15 | OP12385    | G2G4351          |
| Run #2 |            |    |                |    |                |            |                  |

|        | Initial Weight | Final Volume |
|--------|----------------|--------------|
| Run #1 | 15.7 g         | 10.0 ml      |
| Run #2 |                |              |

## PCB List

| CAS No.    | Compound     | Result | RL  | MDL | Units | Q |
|------------|--------------|--------|-----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 130 | 54  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 130 | 54  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 130 | 36  | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 130 | 21  | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 130 | 78  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | 308    | 130 | 33  | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 130 | 42  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 130 | 20  | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 130 | 10  | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 877-09-8  | Tetrachloro-m-xylene | 94%    |        | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 96%    |        | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 80%    |        | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 84%    |        | 10-166% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-002-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-2                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 23.9     |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

General Chemistry

| Analyte              | Result | RL  | Units | DF | Analyzed       | By | Method              |
|----------------------|--------|-----|-------|----|----------------|----|---------------------|
| Solids, Percent      | 23.9   |     | %     | 1  | 05/29/18 16:00 | DJ | SM2540 G-97         |
| Total Organic Carbon | 45300  | 420 | mg/kg | 1  | 05/31/18 09:59 | JO | LLOYD KAHN 1988 MOD |

RL = Reporting Limit

4.2  
4

SGS North America Inc.

## Report of Analysis

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|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-003-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-3                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 67.5     |
| <b>Method:</b>           | SW846 8082A SW846 3546                          |                        |          |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

| Run #  | File ID    | DF | Analyzed       | By | Prep Date      | Prep Batch | Analytical Batch |
|--------|------------|----|----------------|----|----------------|------------|------------------|
| Run #1 | 2G164656.D | 1  | 05/31/18 12:54 | CP | 05/30/18 10:15 | OP12385    | G2G4350          |
| Run #2 |            |    |                |    |                |            |                  |

| Run #  | Initial Weight | Final Volume |
|--------|----------------|--------------|
| Run #1 | 15.4 g         | 10.0 ml      |
| Run #2 |                |              |

## PCB List

| CAS No.    | Compound     | Result | RL | MDL | Units | Q |
|------------|--------------|--------|----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 48 | 19  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 48 | 20  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 48 | 13  | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 48 | 7.7 | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 48 | 28  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | 239    | 48 | 12  | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 48 | 15  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 48 | 7.2 | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 48 | 3.7 | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 877-09-8  | Tetrachloro-m-xylene | 85%    |        | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 78%    |        | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 63%    |        | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 67%    |        | 10-166% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-003-11                              | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-3                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 67.5     |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

General Chemistry

| Analyte              | Result | RL  | Units | DF | Analyzed       | By | Method              |
|----------------------|--------|-----|-------|----|----------------|----|---------------------|
| Solids, Percent      | 67.5   |     | %     | 1  | 05/29/18 16:00 | DJ | SM2540 G-97         |
| Total Organic Carbon | 14400  | 150 | mg/kg | 1  | 05/31/18 10:11 | JO | LLOYD KAHN 1988 MOD |

RL = Reporting Limit

4.3  
4

SGS North America Inc.

## Report of Analysis

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|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-FD052418                            | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-4                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 79.8     |
| <b>Method:</b>           | SW846 8082A SW846 3546                          |                        |          |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

| Run #  | File ID    | DF | Analyzed       | By | Prep Date      | Prep Batch | Analytical Batch |
|--------|------------|----|----------------|----|----------------|------------|------------------|
| Run #1 | 2G164753.D | 1  | 06/01/18 17:10 | CP | 05/30/18 10:15 | OP12385    | G2G4351          |
| Run #2 |            |    |                |    |                |            |                  |

| Run #  | Initial Weight | Final Volume |
|--------|----------------|--------------|
| Run #1 | 15.7 g         | 10.0 ml      |
| Run #2 |                |              |

## PCB List

| CAS No.    | Compound     | Result | RL | MDL | Units | Q |
|------------|--------------|--------|----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 40 | 16  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 40 | 16  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 40 | 11  | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 40 | 6.4 | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 40 | 23  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | 54.2   | 40 | 9.8 | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 40 | 13  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 40 | 5.9 | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 40 | 3.0 | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 877-09-8  | Tetrachloro-m-xylene | 92%    |        | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 93%    |        | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 79%    |        | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 80%    |        | 10-166% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

|                          |                                                 |                        |          |
|--------------------------|-------------------------------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | 229-OC-DD10-FD052418                            | <b>Date Sampled:</b>   | 05/24/18 |
| <b>Lab Sample ID:</b>    | JC66894-4                                       | <b>Date Received:</b>  | 05/26/18 |
| <b>Matrix:</b>           | SO - Sediment                                   | <b>Percent Solids:</b> | 79.8     |
| <b>Project:</b>          | BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY |                        |          |

General Chemistry

| Analyte              | Result | RL  | Units | DF | Analyzed       | By | Method              |
|----------------------|--------|-----|-------|----|----------------|----|---------------------|
| Solids, Percent      | 79.8   |     | %     | 1  | 05/29/18 16:00 | DJ | SM2540 G-97         |
| Total Organic Carbon | 21200  | 130 | mg/kg | 1  | 05/31/18 10:25 | JO | LLOYD KAHN 1988 MOD |

RL = Reporting Limit

4.4  
4

## Misc. Forms

5

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS

ACCUTEST

## CHAIN OF CUSTODY

PAGE 1 OF 1

SGS Accutest - Dayton  
2235 Route 130, Dayton, NJ 08810  
TEL: 732-329-0200 FAX: 732-329-3499/3480  
www.accutest.com

SGS EX Tracking # 7811 2656 1424  
SGS Accutest Quote #  
Bottle Order Control #  
SGS Accutest Job # JC66894

| Client / Reporting Information                                                                                                                                                                                                                          |                                        | Project Information                                                                                      |         | Requested Analysis                                                                                                                                                                                                                                                                                              |            | Matrix Codes                                                                                                                                                                                                       |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------|-----|----------------------------|-------|-------------------------------------------------------------|----------|------------------------|--------|--------------|----------|--|
| Company Name<br><b>ARCADIS</b>                                                                                                                                                                                                                          | Project Name<br><b>TGP Station 229</b> | Billing Information (if different from Report to)                                                        |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| Street Address<br><b>110 W. Fayette St.</b>                                                                                                                                                                                                             | Street<br><b>7586 East Eden Rd</b>     | Company Name<br><b>WILDER MORGAN</b>                                                                     |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| City<br><b>Syracuse NY</b>                                                                                                                                                                                                                              | City<br><b>Boonville NY</b>            | Street Address<br><b>1001 Louisiana St</b>                                                               |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| State<br><b>NY</b>                                                                                                                                                                                                                                      | State<br><b>NY</b>                     | City<br><b>HOUSTON TX</b>                                                                                |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| Zip<br><b>13202</b>                                                                                                                                                                                                                                     | Zip<br><b>13001</b>                    | State<br><b>TX</b>                                                                                       |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| Project Contact<br><b>LIZ HOVER</b>                                                                                                                                                                                                                     | Project #                              | Attention:                                                                                               |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| Phone #                                                                                                                                                                                                                                                 | Fax #                                  | Client Purchase Order #                                                                                  |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| Sampler(s) Name(s)<br><b>AARON RICHARDSON</b>                                                                                                                                                                                                           | Phone #                                | Project Manager<br><b>LIZ HOVER</b>                                                                      |         |                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| SGS Accutest Sample #                                                                                                                                                                                                                                   | Field ID / Point of Collection         | MECHDO Vial #                                                                                            | Date    | Time                                                                                                                                                                                                                                                                                                            | Sampled by | Matrix                                                                                                                                                                                                             | # of bottles | HCl                            | NH4 | PHOS                       | H2SO4 | NO3                                                         | DI Water | MECH                   | ENCORE | LAB USE ONLY |          |  |
| 1                                                                                                                                                                                                                                                       | 229-OC-DD10-001-11                     |                                                                                                          | 5/24/18 | 1050                                                                                                                                                                                                                                                                                                            | AR         | SED                                                                                                                                                                                                                | 2            |                                |     |                            |       | 2                                                           |          |                        |        |              | D13      |  |
| 2                                                                                                                                                                                                                                                       | 229-OC-DD10-002-11                     |                                                                                                          | ↓       | 1130                                                                                                                                                                                                                                                                                                            | ↓          | ↓                                                                                                                                                                                                                  | 4            |                                |     |                            |       | 4                                                           |          |                        |        |              | D30      |  |
| 3                                                                                                                                                                                                                                                       | 229-OC-DD10-003-11                     |                                                                                                          | ↓       | 1200                                                                                                                                                                                                                                                                                                            | ↓          | ↓                                                                                                                                                                                                                  | 4            |                                |     |                            |       | 4                                                           |          |                        |        |              | (MS/MSD) |  |
| 4                                                                                                                                                                                                                                                       | 229-OC-DD10-FD052418                   |                                                                                                          | ↓       | ↓                                                                                                                                                                                                                                                                                                               | ↓          | ↓                                                                                                                                                                                                                  | 2            |                                |     |                            |       | 2                                                           |          |                        |        |              |          |  |
| Turnaround Time (Business days)                                                                                                                                                                                                                         |                                        | Data Deliverable Information                                                                             |         | Comments / Special Instructions                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                    |              |                                |     |                            |       |                                                             |          |                        |        |              |          |  |
| <input checked="" type="checkbox"/> Std. 10 Business Days<br><input type="checkbox"/> 5 Day RUSH<br><input type="checkbox"/> 3 Day RUSH<br><input type="checkbox"/> 2 Day RUSH<br><input type="checkbox"/> 1 Day RUSH<br><input type="checkbox"/> other |                                        | Approved By (SGS Accutest PM): / Date:                                                                   |         | <input type="checkbox"/> Commercial "A" (Level 1)<br><input type="checkbox"/> Commercial "B" (Level 2)<br><input type="checkbox"/> FULLT1 (Level 3+4)<br><input type="checkbox"/> NJ Reduced<br><input type="checkbox"/> Commercial "C"<br><input type="checkbox"/> NJ Data of Known Quality Protocol Reporting |            | <input type="checkbox"/> NYASP Category A<br><input checked="" type="checkbox"/> NYASP Category B<br><input type="checkbox"/> State Forms<br><input type="checkbox"/> EDD Format<br><input type="checkbox"/> Other |              | INITIAL ASSESSMENT <b>GLZB</b> |     | LABEL VERIFICATION         |       | Sample inventory is verified upon receipt in the Laboratory |          |                        |        |              |          |  |
| Emergency & Rush TIA data available via Lablink                                                                                                                                                                                                         |                                        | Sample Custody must be documented below each time samples change possession, including courier delivery. |         | Relinquished by: <b>AR</b>                                                                                                                                                                                                                                                                                      |            | Relinquished by: <b>AR</b>                                                                                                                                                                                         |              | Relinquished by: <b>AR</b>     |     | Relinquished by: <b>AR</b> |       | Relinquished by: <b>AR</b>                                  |          |                        |        |              |          |  |
| Date Time: <b>5/25/18 0800</b>                                                                                                                                                                                                                          |                                        | Received By: <b>AR</b>                                                                                   |         | Date Time: <b>5/26/18 0800</b>                                                                                                                                                                                                                                                                                  |            | Received By: <b>AR</b>                                                                                                                                                                                             |              | Date Time: <b>5/26/18 0800</b> |     | Received By: <b>AR</b>     |       | Date Time: <b>5/26/18 0800</b>                              |          | Received By: <b>AR</b> |        |              |          |  |
| Relinquished by Sampler:                                                                                                                                                                                                                                |                                        | Received By:                                                                                             |         | Relinquished by:                                                                                                                                                                                                                                                                                                |            | Received By:                                                                                                                                                                                                       |              | Relinquished by:               |     | Received By:               |       | Relinquished by:                                            |          | Received By:           |        |              |          |  |
| Relinquished by:                                                                                                                                                                                                                                        |                                        | Received By:                                                                                             |         | Relinquished by:                                                                                                                                                                                                                                                                                                |            | Received By:                                                                                                                                                                                                       |              | Relinquished by:               |     | Received By:               |       | Relinquished by:                                            |          | Received By:           |        |              |          |  |
| Custody Seal #                                                                                                                                                                                                                                          |                                        | Intact                                                                                                   |         | Preserved where applicable                                                                                                                                                                                                                                                                                      |            | On Ice                                                                                                                                                                                                             |              | Cooler Temp.                   |     | 21°C                       |       |                                                             |          |                        |        |              |          |  |

JC66894: Chain of Custody

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SGS

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JC66894

## SGS Sample Receipt Summary

**Job Number:** JC66894

**Client:**
**Project:** TGP Station 229

**Date / Time Received:** 5/26/2018 2:00:00 PM

**Delivery Method:**
**Airbill #s:** 7811 2656 1424

**Cooler Temps (Raw Measured) °C:** Cooler 1: (2.1);

**Cooler Temps (Corrected) °C:** Cooler 1: (2.1);

**Cooler Security**
**Y or N**
**Y or N**

- |                                                                                            |                                                                                         |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1. Custody Seals Present: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | 3. COC Present: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N        |
| 2. Custody Seals Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N  | 4. Smpl Dates/Time OK: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |

**Cooler Temperature**
**Y or N**

- |                                                                                             |           |
|---------------------------------------------------------------------------------------------|-----------|
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | IR Gun    |
| 2. Cooler temp verification:                                                                |           |
| 3. Cooler media:                                                                            | Ice (Bag) |
| 4. No. Coolers:                                                                             | 1         |

**Quality Control Preservation**
**Y or N**
**N/A**

- |                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Trip Blank present / cooler: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> N/A |  |
| 2. Trip Blank listed on COC: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> N/A    |  |
| 3. Samples preserved properly: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A  |  |
| 4. VOCs headspace free: <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> N/A         |  |

**Sample Integrity - Documentation**
**Y or N**

- |                                                                                                         |  |
|---------------------------------------------------------------------------------------------------------|--|
| 1. Sample labels present on bottles: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N   |  |
| 2. Container labeling complete: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N        |  |
| 3. Sample container label / COC agree: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |  |

**Sample Integrity - Condition**
**Y or N**

- |                                                                                                   |        |
|---------------------------------------------------------------------------------------------------|--------|
| 1. Sample recvd within HT: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N       |        |
| 2. All containers accounted for: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |        |
| 3. Condition of sample: <input type="checkbox"/> Y <input type="checkbox"/> N                     | Intact |

**Sample Integrity - Instructions**
**Y or N**
**N/A**

- |                                                                                                             |                                         |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1. Analysis requested is clear: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N            |                                         |
| 2. Bottles received for unspecified tests: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N |                                         |
| 3. Sufficient volume recvd for analysis: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N   |                                         |
| 4. Compositing instructions clear: <input type="checkbox"/> Y <input type="checkbox"/> N                    | <input checked="" type="checkbox"/> N/A |
| 5. Filtering instructions clear: <input type="checkbox"/> Y <input type="checkbox"/> N                      | <input checked="" type="checkbox"/> N/A |

**Test Strip Lot #s:**
**pH 1-12:** 216017

**pH 12+:** 208717

**Other: (Specify)**
**Comments**

-4 Did not receive second 4oz bottle for TOC/PCB analysis

SM089-02 Rev. Date 12/1/16

**JC66894: Chain of Custody**
**Page 2 of 3**


There is sufficient volume to proceed with analysis.

**JC66894: Chain of Custody**  
**Page 3 of 3**

## Internal Sample Tracking Chronicle

EL PASO CORPORATION

Job No: JC66894

BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Project No: B0051341.1601

| Sample Number                                                                                  | Method            | Analyzed        | By | Prepped      | By | Test Codes |
|------------------------------------------------------------------------------------------------|-------------------|-----------------|----|--------------|----|------------|
| JC66894-1 Collected: 24-MAY-18 10:50 By: AR Received: 26-MAY-18 By: GE<br>229-OC-DD10-001-11   |                   |                 |    |              |    |            |
| JC66894-1                                                                                      | SM2540 G-97       | 29-MAY-18 16:00 | DJ |              |    | SOL104     |
| JC66894-1                                                                                      | LLOYD KAHN 1988 M | 31-MAY-18 13:53 | JO | 31-MAY-18 CD |    | TOCLK      |
| JC66894-1                                                                                      | SW846 8082A       | 01-JUN-18 16:36 | CP | 30-MAY-18 LL |    | P8082PCB11 |
| JC66894-2 Collected: 24-MAY-18 11:30 By: AR Received: 26-MAY-18 By: GE<br>229-OC-DD10-002-11   |                   |                 |    |              |    |            |
| JC66894-2                                                                                      | SM2540 G-97       | 29-MAY-18 16:00 | DJ |              |    | SOL104     |
| JC66894-2                                                                                      | LLOYD KAHN 1988 M | 31-MAY-18 09:59 | JO | 31-MAY-18 CD |    | TOCLK      |
| JC66894-2                                                                                      | SW846 8082A       | 01-JUN-18 16:53 | CP | 30-MAY-18 LL |    | P8082PCB11 |
| JC66894-3 Collected: 24-MAY-18 12:00 By: AR Received: 26-MAY-18 By: GE<br>229-OC-DD10-003-11   |                   |                 |    |              |    |            |
| JC66894-3                                                                                      | SM2540 G-97       | 29-MAY-18 16:00 | DJ |              |    | SOL104     |
| JC66894-3                                                                                      | LLOYD KAHN 1988 M | 31-MAY-18 10:11 | JO | 31-MAY-18 CD |    | TOCLK      |
| JC66894-3                                                                                      | SW846 8082A       | 31-MAY-18 12:54 | CP | 30-MAY-18 LL |    | P8082PCB11 |
| JC66894-4 Collected: 24-MAY-18 00:00 By: AR Received: 26-MAY-18 By: GE<br>229-OC-DD10-FD052418 |                   |                 |    |              |    |            |
| JC66894-4                                                                                      | SM2540 G-97       | 29-MAY-18 16:00 | DJ |              |    | SOL104     |
| JC66894-4                                                                                      | LLOYD KAHN 1988 M | 31-MAY-18 10:25 | JO | 31-MAY-18 CD |    | TOCLK      |
| JC66894-4                                                                                      | SW846 8082A       | 01-JUN-18 17:10 | CP | 30-MAY-18 LL |    | P8082PCB11 |



# SGS Internal Chain of Custody

Page 1 of 2

**Job Number:** JC66894  
**Account:** ELPASOX EL PASO CORPORATION  
**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY  
**Received:** 05/26/18

| Sample.Bottle Number | Transfer FROM        | Transfer TO          | Date/Time      | Reason                   |
|----------------------|----------------------|----------------------|----------------|--------------------------|
| JC66894-1.1          | Secured Storage      | Dwayne Johnson       | 05/29/18 12:44 | Retrieve from Storage    |
| JC66894-1.1          | Dwayne Johnson       | Secured Staging Area | 05/29/18 12:44 | Return to Storage        |
| JC66894-1.1          | Secured Staging Area | Dwayne Johnson       | 05/29/18 13:30 | Retrieve from Storage    |
| JC66894-1.1          | Dwayne Johnson       | Secured Storage      | 05/29/18 14:27 | Return to Storage        |
| JC66894-1.1          | Secured Storage      | Matthew Robbins      | 05/29/18 19:46 | Retrieve from Storage    |
| JC66894-1.1          | Matthew Robbins      | Secured Staging Area | 05/29/18 19:46 | Return to Storage        |
| JC66894-1.1          | Secured Staging Area | Sora Lynn Mathurin   | 05/30/18 06:32 | Retrieve from Storage    |
| JC66894-1.1          | Sora Lynn Mathurin   | Secured Storage      | 05/30/18 15:02 | Return to Storage        |
| JC66894-1.1.1        | Sora Lynn Mathurin   | Organics Prep        | 05/30/18 06:44 | Extract from JC66894-1.1 |
| JC66894-1.1.1        | Organics Prep        | Lindsey Lee          | 05/30/18 20:42 | Extract from JC66894-1.1 |
| JC66894-1.1.1        | Lindsey Lee          | Extract Storage      | 05/30/18 20:42 | Return to Storage        |
| JC66894-1.2          | Secured Storage      | Todd Shoemaker       | 05/29/18 14:13 | Retrieve from Storage    |
| JC66894-1.2          | Todd Shoemaker       | Secured Staging Area | 05/29/18 14:13 | Return to Storage        |
| JC66894-1.2          | Secured Staging Area | Courtney Dringus     | 05/30/18 07:46 | Retrieve from Storage    |
| JC66894-1.2          | Courtney Dringus     | Secured Storage      | 05/30/18 15:06 | Return to Storage        |
| JC66894-1.2          | Secured Storage      | Dave Hunkele         | 05/31/18 12:40 | Retrieve from Storage    |
| JC66894-1.2          | Dave Hunkele         | Secured Staging Area | 05/31/18 12:40 | Return to Storage        |
| JC66894-1.2          | Secured Staging Area | John Osborne         | 05/31/18 13:46 | Retrieve from Storage    |
| JC66894-1.2          | John Osborne         | Secured Storage      | 05/31/18 15:10 | Return to Storage        |
| JC66894-2.1          | Secured Storage      | Dwayne Johnson       | 05/29/18 12:44 | Retrieve from Storage    |
| JC66894-2.1          | Dwayne Johnson       | Secured Staging Area | 05/29/18 12:44 | Return to Storage        |
| JC66894-2.1          | Secured Staging Area | Dwayne Johnson       | 05/29/18 13:30 | Retrieve from Storage    |
| JC66894-2.1          | Dwayne Johnson       | Secured Storage      | 05/29/18 14:27 | Return to Storage        |
| JC66894-2.1          | Secured Storage      | Matthew Robbins      | 05/29/18 19:46 | Retrieve from Storage    |
| JC66894-2.1          | Matthew Robbins      | Secured Staging Area | 05/29/18 19:46 | Return to Storage        |
| JC66894-2.1          | Secured Staging Area | Sora Lynn Mathurin   | 05/30/18 06:32 | Retrieve from Storage    |
| JC66894-2.1          | Sora Lynn Mathurin   | Secured Storage      | 05/30/18 15:02 | Return to Storage        |
| JC66894-2.1.1        | Sora Lynn Mathurin   | Organics Prep        | 05/30/18 06:44 | Extract from JC66894-2.1 |
| JC66894-2.1.1        | Organics Prep        | Lindsey Lee          | 05/30/18 20:42 | Extract from JC66894-2.1 |
| JC66894-2.1.1        | Lindsey Lee          | Extract Storage      | 05/30/18 20:42 | Return to Storage        |
| JC66894-2.2          | Secured Storage      | Todd Shoemaker       | 05/29/18 14:13 | Retrieve from Storage    |
| JC66894-2.2          | Todd Shoemaker       | Secured Staging Area | 05/29/18 14:13 | Return to Storage        |
| JC66894-2.2          | Secured Staging Area | Courtney Dringus     | 05/30/18 07:46 | Retrieve from Storage    |
| JC66894-2.2          | Courtney Dringus     | Secured Storage      | 05/30/18 15:06 | Return to Storage        |
| JC66894-3.1          | Secured Storage      | Dwayne Johnson       | 05/29/18 12:44 | Retrieve from Storage    |
| JC66894-3.1          | Dwayne Johnson       | Secured Staging Area | 05/29/18 12:44 | Return to Storage        |
| JC66894-3.1          | Secured Staging Area | Dwayne Johnson       | 05/29/18 13:30 | Retrieve from Storage    |
| JC66894-3.1          | Dwayne Johnson       | Secured Storage      | 05/29/18 14:27 | Return to Storage        |

# SGS Internal Chain of Custody

Page 2 of 2

**Job Number:** JC66894  
**Account:** ELPASOX EL PASO CORPORATION  
**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY  
**Received:** 05/26/18

| Sample.Bottle Number                                                  | Transfer FROM        | Transfer TO          | Date/Time      | Reason                     |
|-----------------------------------------------------------------------|----------------------|----------------------|----------------|----------------------------|
| JC66894-3.1                                                           | Secured Storage      | Matthew Robbins      | 05/29/18 19:46 | Retrieve from Storage      |
| JC66894-3.1                                                           | Matthew Robbins      | Secured Staging Area | 05/29/18 19:46 | Return to Storage          |
| JC66894-3.1                                                           | Secured Staging Area | Sora Lynn Mathurin   | 05/30/18 06:32 | Retrieve from Storage      |
| JC66894-3.1                                                           | Sora Lynn Mathurin   | Secured Storage      | 05/30/18 15:02 | Return to Storage          |
| JC66894-3.1.1                                                         | Sora Lynn Mathurin   | Organics Prep        | 05/30/18 06:44 | Extract from JC66894-3.1   |
| JC66894-3.1.1                                                         | Organics Prep        | Lindsey Lee          | 05/30/18 20:42 | Extract from JC66894-3.1   |
| JC66894-3.1.1                                                         | Lindsey Lee          | Extract Storage      | 05/30/18 20:42 | Return to Storage          |
| JC66894-3.1.1                                                         | Extract Storage      | Christine Phillips   | 05/31/18 02:07 | Retrieve from Storage      |
| JC66894-3.1.1                                                         | Christine Phillips   | GC2G                 | 05/31/18 02:08 | Load on Instrument         |
| JC66894-3.2                                                           | Secured Storage      | Matthew Robbins      | 05/29/18 19:46 | Retrieve from Storage      |
| JC66894-3.2                                                           | Matthew Robbins      | Secured Staging Area | 05/29/18 19:46 | Return to Storage          |
| JC66894-3.2                                                           | Secured Staging Area | Sora Lynn Mathurin   | 05/30/18 06:32 | Retrieve from Storage      |
| JC66894-3.2                                                           | Sora Lynn Mathurin   | Secured Storage      | 05/30/18 15:02 | Return to Storage          |
| JC66894-3.2.1                                                         | Sora Lynn Mathurin   | Organics Prep        | 05/30/18 06:44 | Extract from JC66894-3.2   |
| JC66894-3.4                                                           | Secured Storage      | Todd Shoemaker       | 05/29/18 14:13 | Retrieve from Storage      |
| JC66894-3.4                                                           | Todd Shoemaker       | Secured Staging Area | 05/29/18 14:13 | Return to Storage          |
| JC66894-3.4                                                           | Secured Staging Area | Courtney Dringus     | 05/30/18 07:46 | Retrieve from Storage      |
| JC66894-3.4                                                           | Courtney Dringus     | Secured Storage      | 05/30/18 15:06 | Return to Storage          |
| JC66894-4.1                                                           | Secured Storage      | Dwayne Johnson       | 05/29/18 12:44 | Retrieve from Storage      |
| JC66894-4.1                                                           | Dwayne Johnson       | Secured Staging Area | 05/29/18 12:44 | Return to Storage          |
| JC66894-4.1                                                           | Secured Staging Area | Dwayne Johnson       | 05/29/18 13:30 | Retrieve from Storage      |
| JC66894-4.1                                                           | Secured Storage      | Todd Shoemaker       | 05/29/18 14:13 | Retrieve from Storage      |
| Bottle was returned to secure storage, but inadvertently not scanned. |                      |                      |                |                            |
| JC66894-4.1                                                           | Todd Shoemaker       | Secured Staging Area | 05/29/18 14:13 | Return to Storage          |
| JC66894-4.1                                                           | Secured Staging Area | Courtney Dringus     | 05/30/18 07:46 | Retrieve from Storage      |
| JC66894-4.1                                                           | Courtney Dringus     | Secured Storage      | 05/30/18 15:06 | Return to Storage          |
| JC66894-4.1.1                                                         | Courtney Dringus     | Finley Nyaata        | 05/30/18 09:42 | Aliquot from JC66894-4.1   |
| JC66894-4.1.1                                                         | Finley Nyaata        |                      | 05/31/18 10:36 | Depleted                   |
| JC66894-4.1.2                                                         | Finley Nyaata        | Organics Prep        | 05/30/18 09:44 | Extract from JC66894-4.1.1 |
| JC66894-4.1.2                                                         | Organics Prep        | Lindsey Lee          | 05/30/18 20:42 | Extract from JC66894-4.1.1 |
| JC66894-4.1.2                                                         | Lindsey Lee          | Extract Storage      | 05/30/18 20:42 | Return to Storage          |



## GC/LC Semi-volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Sample      | File ID    | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|------------|----|----------|----|-----------|------------|------------------|
| OP12385-MB1 | 2G164632.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4349          |

The QC reported here applies to the following samples: Method: SW846 8082A  
JC66894-1, JC66894-2, JC66894-3, JC66894-4

| CAS No.    | Compound     | Result | RL | MDL | Units | Q |
|------------|--------------|--------|----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 33 | 13  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 33 | 14  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 33 | 8.9 | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 33 | 5.3 | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 33 | 20  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | ND     | 33 | 8.2 | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 33 | 11  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 33 | 5.0 | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 33 | 2.5 | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Limits      |
|-----------|----------------------|-------------|
| 877-09-8  | Tetrachloro-m-xylene | 95% 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 97% 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 90% 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 94% 10-166% |

Method Blank Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Sample      | File ID    | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|------------|----|----------|----|-----------|------------|------------------|
| OP12385-MB1 | 2G164652.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4350          |

The QC reported here applies to the following samples: Method: SW846 8082A  
JC66894-1, JC66894-2, JC66894-3, JC66894-4

| CAS No.    | Compound     | Result | RL | MDL | Units | Q |
|------------|--------------|--------|----|-----|-------|---|
| 12674-11-2 | Aroclor 1016 | ND     | 33 | 13  | ug/kg |   |
| 11104-28-2 | Aroclor 1221 | ND     | 33 | 14  | ug/kg |   |
| 11141-16-5 | Aroclor 1232 | ND     | 33 | 8.9 | ug/kg |   |
| 53469-21-9 | Aroclor 1242 | ND     | 33 | 5.3 | ug/kg |   |
| 12672-29-6 | Aroclor 1248 | ND     | 33 | 20  | ug/kg |   |
| 11097-69-1 | Aroclor 1254 | ND     | 33 | 8.2 | ug/kg |   |
| 11096-82-5 | Aroclor 1260 | ND     | 33 | 11  | ug/kg |   |
| 11100-14-4 | Aroclor 1268 | ND     | 33 | 5.0 | ug/kg |   |
| 37324-23-5 | Aroclor 1262 | ND     | 33 | 2.5 | ug/kg |   |

| CAS No.   | Surrogate Recoveries | Limits      |
|-----------|----------------------|-------------|
| 877-09-8  | Tetrachloro-m-xylene | 91% 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 89% 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 85% 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 90% 10-166% |

Blank Spike Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Sample      | File ID    | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|------------|----|----------|----|-----------|------------|------------------|
| OP12385-BS1 | 2G164653.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4350          |

The QC reported here applies to the following samples: Method: SW846 8082A  
JC66894-1, JC66894-2, JC66894-3, JC66894-4

| CAS No.    | Compound     | Spike<br>ug/kg | BSP<br>ug/kg | BSP<br>% | Limits              |
|------------|--------------|----------------|--------------|----------|---------------------|
| 12674-11-2 | Aroclor 1016 | 133            | 132          | 99       | 61-146              |
| 11104-28-2 | Aroclor 1221 |                | ND           |          | 70-130              |
| 11141-16-5 | Aroclor 1232 |                | ND           |          | 70-130              |
| 53469-21-9 | Aroclor 1242 |                | ND           |          | 70-130              |
| 12672-29-6 | Aroclor 1248 |                | ND           |          | 70-130              |
| 11097-69-1 | Aroclor 1254 |                | ND           |          | 70-130              |
| 11096-82-5 | Aroclor 1260 | 133            | 125          | 94       | 62-148              |
| 11100-14-4 | Aroclor 1268 |                | ND           |          | 50-150 <sup>a</sup> |
| 37324-23-5 | Aroclor 1262 |                | ND           |          | 50-150 <sup>a</sup> |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 877-09-8  | Tetrachloro-m-xylene | 97% | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 92% | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 77% | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 80% | 10-166% |

(a) Advisory control limits.

\* = Outside of Control Limits.

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JC66894

Account: ELPASOX EL PASO CORPORATION

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Sample      | File ID    | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|------------|----|----------|----|-----------|------------|------------------|
| OP12385-MS  | 2G164657.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4350          |
| OP12385-MSD | 2G164658.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4350          |
| JC66894-3   | 2G164656.D | 1  | 05/31/18 | CP | 05/30/18  | OP12385    | G2G4350          |

The QC reported here applies to the following samples:

Method: SW846 8082A

JC66894-1, JC66894-2, JC66894-3, JC66894-4

| CAS No.    | Compound     | JC66894-3<br>ug/kg | Spike<br>Q | Spike<br>ug/kg | MS<br>ug/kg | MS<br>% | Spike<br>ug/kg | MSD<br>ug/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|--------------|--------------------|------------|----------------|-------------|---------|----------------|--------------|----------|-----|-------------------|
| 12674-11-2 | Aroclor 1016 | ND                 |            | 186            | 225         | 121     | 194            | 244          | 126      | 8   | 24-178/46         |
| 11104-28-2 | Aroclor 1221 | ND                 |            |                | ND          |         |                | ND           |          | nc  | 70-130/50         |
| 11141-16-5 | Aroclor 1232 | ND                 |            |                | ND          |         |                | ND           |          | nc  | 70-130/50         |
| 53469-21-9 | Aroclor 1242 | ND                 |            |                | ND          |         |                | ND           |          | nc  | 70-130/50         |
| 12672-29-6 | Aroclor 1248 | ND                 |            |                | ND          |         |                | ND           |          | nc  | 70-130/50         |
| 11097-69-1 | Aroclor 1254 | 239                |            |                | 428         |         |                | 530          |          | 21  | 70-130/50         |
| 11096-82-5 | Aroclor 1260 | ND                 |            | 186            | 208         | 112     | 194            | 248          | 128      | 18  | 15-185/45         |
| 11100-14-4 | Aroclor 1268 | ND                 |            |                | ND          |         |                | ND           |          | nc  | -/50              |
| 37324-23-5 | Aroclor 1262 | ND                 |            |                | ND          |         |                | ND           |          | nc  | -/50              |

| CAS No.   | Surrogate Recoveries | MS  | MSD | JC66894-3 | Limits  |
|-----------|----------------------|-----|-----|-----------|---------|
| 877-09-8  | Tetrachloro-m-xylene | 81% | 90% | 85%       | 24-152% |
| 877-09-8  | Tetrachloro-m-xylene | 73% | 81% | 78%       | 24-152% |
| 2051-24-3 | Decachlorobiphenyl   | 70% | 75% | 63%       | 10-166% |
| 2051-24-3 | Decachlorobiphenyl   | 62% | 68% | 67%       | 10-166% |

\* = Outside of Control Limits.

## GC Identification Summary

Page 1 of 1

**Job Number:** JC66894**Account:** ELPASOX EL PASO CORPORATION**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY**Check Std:** G2G4351-CC4311**Injection Date:** 06/01/18**Lab File ID:** 2G164748.D**Injection Time:** 15:16**Instrument ID:** GC2G**Method:** SW846 8082A**Sample ID:** JC66894-1**Injection Date:** 06/01/18**Lab File ID:** 2G164751.D**Injection Time:** 16:36**Client ID:** 229-OC-DD10-001-11

| Compound     | Column         | RT   | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|------|-------------------|------|---|-------|-------------|
| Aroclor 1254 | 1 <sup>a</sup> |      |                   | 114  |   | ug/kg | 40.0        |
| Aroclor 1254 | 2              |      |                   | 171  |   | ug/kg |             |
| AR1254-A     | 1              | 5.24 | 5.28 <sup>b</sup> | 124  |   | ug/kg |             |
| AR1254-A     | 2              | 6.67 | 6.70 <sup>b</sup> | 147  |   | ug/kg |             |
| AR1254-B     | 1              | 5.58 | 5.62 <sup>b</sup> | 115  |   | ug/kg |             |
| AR1254-B     | 2              | 6.95 | 6.96 <sup>b</sup> | 473  |   | ug/kg |             |
| AR1254-C     | 1              | 5.95 | 5.98 <sup>b</sup> | 143  |   | ug/kg |             |
| AR1254-C     | 2              | 7.43 | 7.46 <sup>b</sup> | 140  |   | ug/kg |             |
| AR1254-D     | 1              | 6.11 | 6.14 <sup>b</sup> | 106  |   | ug/kg |             |
| AR1254-D     | 2              | 7.60 | 7.63 <sup>b</sup> | 103  |   | ug/kg |             |
| AR1254-E     | 1              | 6.49 | 6.52 <sup>b</sup> | 98.5 |   | ug/kg |             |
| AR1254-E     | 2              | 7.93 | 7.96 <sup>b</sup> | 96.9 |   | ug/kg |             |
| AR1254-F     | 1              | 6.73 | 6.77 <sup>b</sup> | 117  |   | ug/kg |             |
| AR1254-F     | 2              | 8.38 | 8.42 <sup>b</sup> | 146  |   | ug/kg |             |
| AR1254-G     | 1              | 7.11 | 7.15 <sup>b</sup> | 92.9 |   | ug/kg |             |
| AR1254-G     | 2              | 8.68 | 8.71 <sup>b</sup> | 87.7 |   | ug/kg |             |

(a) Final result reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52



## GC Identification Summary

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**Job Number:** JC66894**Account:** ELPASOX EL PASO CORPORATION**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY**Check Std:** G2G4351-CC4311**Injection Date:** 06/01/18**Lab File ID:** 2G164748.D**Injection Time:** 15:16**Instrument ID:** GC2G**Method:** SW846 8082A**Sample ID:** JC66894-2**Injection Date:** 06/01/18**Lab File ID:** 2G164752.D**Injection Time:** 16:53**Client ID:** 229-OC-DD10-002-11

| Compound     | Column         | RT   | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|------|-------------------|------|---|-------|-------------|
| Aroclor 1254 | 1 <sup>a</sup> |      |                   | 308  |   | ug/kg | 0.0         |
| Aroclor 1254 | 2              |      |                   | 308  |   | ug/kg |             |
| AR1254-A     | 1              | 5.24 | 5.28 <sup>b</sup> | 340  |   | ug/kg |             |
| AR1254-A     | 2              | 6.67 | 6.70 <sup>b</sup> | 345  |   | ug/kg |             |
| AR1254-B     | 1              | 5.58 | 5.62 <sup>b</sup> | 295  |   | ug/kg |             |
| AR1254-B     | 2              | 6.93 | 6.96 <sup>b</sup> | 306  |   | ug/kg |             |
| AR1254-C     | 1              | 5.94 | 5.98 <sup>b</sup> | 323  |   | ug/kg |             |
| AR1254-C     | 2              | 7.43 | 7.46 <sup>b</sup> | 279  |   | ug/kg |             |
| AR1254-D     | 1              | 6.10 | 6.14 <sup>b</sup> | 289  |   | ug/kg |             |
| AR1254-D     | 2              | 7.60 | 7.63 <sup>b</sup> | 273  |   | ug/kg |             |
| AR1254-E     | 1              | 6.49 | 6.52 <sup>b</sup> | 305  |   | ug/kg |             |
| AR1254-E     | 2              | 7.92 | 7.96 <sup>b</sup> | 321  |   | ug/kg |             |
| AR1254-F     | 1              | 6.73 | 6.77 <sup>b</sup> | 324  |   | ug/kg |             |
| AR1254-F     | 2              | 8.38 | 8.42 <sup>b</sup> | 321  |   | ug/kg |             |
| AR1254-G     | 1              | 7.11 | 7.15 <sup>b</sup> | 279  |   | ug/kg |             |
| AR1254-G     | 2              | 8.68 | 8.71 <sup>b</sup> | 313  |   | ug/kg |             |

(a) Final result reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52

## GC Identification Summary

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**Job Number:** JC66894**Account:** ELPASOX EL PASO CORPORATION**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY**Check Std:** G2G4350-CC4311**Injection Date:** 05/31/18**Lab File ID:** 2G164650.D**Injection Time:** 11:09**Instrument ID:** GC2G**Method:** SW846 8082A**Sample ID:** JC66894-3**Injection Date:** 05/31/18**Lab File ID:** 2G164656.D**Injection Time:** 12:54**Client ID:** 229-OC-DD10-003-11

| Compound     | Column         | RT   | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|------|-------------------|------|---|-------|-------------|
| Aroclor 1254 | 1              |      |                   | 283  |   | ug/kg | 16.9        |
| Aroclor 1254 | 2 <sup>a</sup> |      |                   | 239  |   | ug/kg |             |
| AR1254-A     | 1              | 5.24 | 5.28 <sup>b</sup> | 269  |   | ug/kg |             |
| AR1254-A     | 2              | 6.67 | 6.70 <sup>b</sup> | 270  |   | ug/kg |             |
| AR1254-B     | 1              | 5.58 | 5.62 <sup>b</sup> | 298  |   | ug/kg |             |
| AR1254-B     | 2              | 6.93 | 6.96 <sup>b</sup> | 318  |   | ug/kg |             |
| AR1254-C     | 1              | 5.94 | 5.98 <sup>b</sup> | 287  |   | ug/kg |             |
| AR1254-C     | 2              | 7.43 | 7.46 <sup>b</sup> | 211  |   | ug/kg |             |
| AR1254-D     | 1              | 6.11 | 6.14 <sup>b</sup> | 311  |   | ug/kg |             |
| AR1254-D     | 2              | 7.60 | 7.63 <sup>b</sup> | 210  |   | ug/kg |             |
| AR1254-E     | 1              | 6.48 | 6.52 <sup>b</sup> | 266  |   | ug/kg |             |
| AR1254-E     | 2              | 7.92 | 7.96 <sup>b</sup> | 254  |   | ug/kg |             |
| AR1254-F     | 1              | 6.73 | 6.77 <sup>b</sup> | 270  |   | ug/kg |             |
| AR1254-F     | 2              | 8.38 | 8.42 <sup>b</sup> | 218  |   | ug/kg |             |
| AR1254-G     | 1              | 7.11 | 7.15 <sup>b</sup> | 277  |   | ug/kg |             |
| AR1254-G     | 2              | 8.68 | 8.71 <sup>b</sup> | 194  |   | ug/kg |             |

(a) Final result reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52

## GC Identification Summary

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**Job Number:** JC66894**Account:** ELPASOX EL PASO CORPORATION**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY**Check Std:** G2G4351-CC4311**Injection Date:** 06/01/18**Lab File ID:** 2G164748.D**Injection Time:** 15:16**Instrument ID:** GC2G**Method:** SW846 8082A**Sample ID:** JC66894-4**Injection Date:** 06/01/18**Lab File ID:** 2G164753.D**Injection Time:** 17:10**Client ID:** 229-OC-DD10-FD052418

| Compound     | Column         | RT   | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|------|-------------------|------|---|-------|-------------|
| Aroclor 1254 | 1 <sup>a</sup> |      |                   | 54.2 |   | ug/kg | 19.0        |
| Aroclor 1254 | 2              |      |                   | 65.6 |   | ug/kg |             |
| AR1254-A     | 1              | 5.24 | 5.28 <sup>b</sup> | 65.7 |   | ug/kg |             |
| AR1254-A     | 2              | 6.67 | 6.70 <sup>b</sup> | 79.9 |   | ug/kg |             |
| AR1254-B     | 1              | 5.58 | 5.62 <sup>b</sup> | 62.7 |   | ug/kg |             |
| AR1254-B     | 2              | 6.93 | 6.96 <sup>b</sup> | 83.3 |   | ug/kg |             |
| AR1254-C     | 1              | 5.95 | 5.98 <sup>b</sup> | 49.6 |   | ug/kg |             |
| AR1254-C     | 2              | 7.43 | 7.46 <sup>b</sup> | 88.7 |   | ug/kg |             |
| AR1254-D     | 1              | 6.11 | 6.14 <sup>b</sup> | 54.3 |   | ug/kg |             |
| AR1254-D     | 2              | 7.60 | 7.63 <sup>b</sup> | 56.0 |   | ug/kg |             |
| AR1254-E     | 1              | 6.49 | 6.52 <sup>b</sup> | 50.5 |   | ug/kg |             |
| AR1254-E     | 2              | 7.93 | 7.96 <sup>b</sup> | 44.7 |   | ug/kg |             |
| AR1254-F     | 1              | 6.73 | 6.77 <sup>b</sup> | 55.3 |   | ug/kg |             |
| AR1254-F     | 2              | 8.38 | 8.42 <sup>b</sup> | 61.1 |   | ug/kg |             |
| AR1254-G     | 1              | 7.11 | 7.15 <sup>b</sup> | 41.4 |   | ug/kg |             |
| AR1254-G     | 2              | 8.68 | 8.71 <sup>b</sup> | 45.8 |   | ug/kg |             |

(a) Final result reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52

## GC Identification Summary

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**Job Number:** JC66894**Account:** ELPASOX EL PASO CORPORATION**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY**Check Std:** G2G4350-CC4311**Injection Date:** 05/31/18**Lab File ID:** 2G164650.D**Injection Time:** 11:09**Instrument ID:** GC2G**Method:** SW846 8082A**Sample ID:** OP12385-BS1**Injection Date:** 05/31/18**Lab File ID:** 2G164653.D**Injection Time:** 12:01**Client ID:** Blank Spike

| Compound     | Column         | RT    | StdRT | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|-------|-------|------|---|-------|-------------|
| Aroclor 1016 | 1 <sup>a</sup> |       |       | 132  |   | ug/kg | 3.0         |
| Aroclor 1016 | 2              |       |       | 136  |   | ug/kg |             |
| AR1016-A     | 1              | 3.14  | 3.14  | 143  |   | ug/kg |             |
| AR1016-A     | 2              | 4.08  | 4.08  | 158  |   | ug/kg |             |
| AR1016-B     | 1              | 3.54  | 3.53  | 146  |   | ug/kg |             |
| AR1016-B     | 2              | 4.62  | 4.61  | 158  |   | ug/kg |             |
| AR1016-C     | 1              | 4.08  | 4.08  | 121  |   | ug/kg |             |
| AR1016-C     | 2              | 5.26  | 5.26  | 117  |   | ug/kg |             |
| AR1016-D     | 1              | 4.24  | 4.24  | 129  |   | ug/kg |             |
| AR1016-D     | 2              | 5.45  | 5.44  | 125  |   | ug/kg |             |
| AR1016-E     | 1              | 4.75  | 4.75  | 124  |   | ug/kg |             |
| AR1016-E     | 2              | 6.09  | 6.09  | 120  |   | ug/kg |             |
| Aroclor 1260 | 1              |       |       | 129  |   | ug/kg | 3.1         |
| Aroclor 1260 | 2 <sup>a</sup> |       |       | 125  |   | ug/kg |             |
| AR1260-A     | 1              | 7.16  | 7.15  | 102  |   | ug/kg |             |
| AR1260-A     | 2              | 8.70  | 8.70  | 99.7 |   | ug/kg |             |
| AR1260-B     | 1              | 7.28  | 7.28  | 153  |   | ug/kg |             |
| AR1260-B     | 2              | 8.80  | 8.80  | 143  |   | ug/kg |             |
| AR1260-C     | 1              | 7.62  | 7.62  | 125  |   | ug/kg |             |
| AR1260-C     | 2              | 9.23  | 9.23  | 124  |   | ug/kg |             |
| AR1260-D     | 1              | 8.07  | 8.07  | 143  |   | ug/kg |             |
| AR1260-D     | 2              | 9.59  | 9.59  | 121  |   | ug/kg |             |
| AR1260-E     | 1              | 8.49  | 8.49  | 120  |   | ug/kg |             |
| AR1260-E     | 2              | 10.14 | 10.14 | 138  |   | ug/kg |             |

(a) QC results reported from this column.

# GC Identification Summary

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**Job Number:** JC66894  
**Account:** ELPASOX EL PASO CORPORATION  
**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>Check Std:</b> G2G4350-CC4311 | <b>Injection Date:</b> 05/31/18 |
| <b>Lab File ID:</b> 2G164650.D   | <b>Injection Time:</b> 11:09    |
| <b>Instrument ID:</b> GC2G       | <b>Method:</b> SW846 8082A      |

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>Sample ID:</b> OP12385-MS   | <b>Injection Date:</b> 05/31/18 |
| <b>Lab File ID:</b> 2G164657.D | <b>Injection Time:</b> 13:11    |
| <b>Client ID:</b> Matrix Spike |                                 |

| Compound     | Column         | RT    | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|-------|-------------------|------|---|-------|-------------|
| Aroclor 1016 | 1 <sup>a</sup> |       |                   | 225  |   | ug/kg | 12.8        |
| Aroclor 1016 | 2              |       |                   | 198  |   | ug/kg |             |
| AR1016-B     | 1              | 3.54  | 3.53              | 196  |   | ug/kg |             |
| AR1016-B     | 2              | 4.62  | 4.61              | 171  |   | ug/kg |             |
| AR1016-C     | 1              | 4.08  | 4.08              | 191  |   | ug/kg |             |
| AR1016-C     | 2              | 5.25  | 5.26              | 188  |   | ug/kg |             |
| AR1016-D     | 1              | 4.24  | 4.24              | 210  |   | ug/kg |             |
| AR1016-D     | 2              | 5.44  | 5.44              | 154  |   | ug/kg |             |
| AR1016-E     | 1              | 4.75  | 4.75              | 304  |   | ug/kg |             |
| AR1016-E     | 2              | 6.08  | 6.09              | 278  |   | ug/kg |             |
| Aroclor 1254 | 1              |       |                   | 436  |   | ug/kg | 1.9         |
| Aroclor 1254 | 2 <sup>a</sup> |       |                   | 428  |   | ug/kg |             |
| AR1254-A     | 1              | 5.24  | 5.28 <sup>b</sup> | 373  |   | ug/kg |             |
| AR1254-A     | 2              | 6.67  | 6.70 <sup>b</sup> | 371  |   | ug/kg |             |
| AR1254-B     | 1              | 5.58  | 5.62 <sup>b</sup> | 402  |   | ug/kg |             |
| AR1254-B     | 2              | 6.94  | 6.96 <sup>b</sup> | 770  |   | ug/kg |             |
| AR1254-C     | 1              | 5.94  | 5.98 <sup>b</sup> | 389  |   | ug/kg |             |
| AR1254-C     | 2              | 7.43  | 7.46 <sup>b</sup> | 319  |   | ug/kg |             |
| AR1254-D     | 1              | 6.11  | 6.14 <sup>b</sup> | 364  |   | ug/kg |             |
| AR1254-D     | 2              | 7.60  | 7.63 <sup>b</sup> | 355  |   | ug/kg |             |
| AR1254-E     | 1              | 6.48  | 6.52 <sup>b</sup> | 421  |   | ug/kg |             |
| AR1254-E     | 2              | 7.92  | 7.96 <sup>b</sup> | 305  |   | ug/kg |             |
| AR1254-F     | 1              | 6.73  | 6.77 <sup>b</sup> | 665  |   | ug/kg |             |
| AR1254-F     | 2              | 8.38  | 8.42 <sup>b</sup> | 451  |   | ug/kg |             |
| Aroclor 1260 | 1 <sup>a</sup> |       |                   | 208  |   | ug/kg | 8.5         |
| Aroclor 1260 | 2              |       |                   | 191  |   | ug/kg |             |
| AR1260-B     | 1              | 7.27  | 7.28              | 230  |   | ug/kg |             |
| AR1260-B     | 2              | 8.79  | 8.80              | 187  |   | ug/kg |             |
| AR1260-C     | 1              | 7.60  | 7.62              | 219  |   | ug/kg |             |
| AR1260-C     | 2              | 9.22  | 9.23              | 227  |   | ug/kg |             |
| AR1260-D     | 1              | 8.03  | 8.07              | 190  |   | ug/kg |             |
| AR1260-D     | 2              | 9.57  | 9.59              | 171  |   | ug/kg |             |
| AR1260-E     | 1              | 8.42  | 8.49              | 192  |   | ug/kg |             |
| AR1260-E     | 2              | 10.11 | 10.14             | 177  |   | ug/kg |             |

(a) QC results reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52

# GC Identification Summary

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**Job Number:** JC66894  
**Account:** ELPASOX EL PASO CORPORATION  
**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>Check Std:</b> G2G4350-CC4311 | <b>Injection Date:</b> 05/31/18 |
| <b>Lab File ID:</b> 2G164650.D   | <b>Injection Time:</b> 11:09    |
| <b>Instrument ID:</b> GC2G       | <b>Method:</b> SW846 8082A      |

|                                          |                                 |
|------------------------------------------|---------------------------------|
| <b>Sample ID:</b> OP12385-MSD            | <b>Injection Date:</b> 05/31/18 |
| <b>Lab File ID:</b> 2G164658.D           | <b>Injection Time:</b> 13:28    |
| <b>Client ID:</b> Matrix Spike Duplicate |                                 |

| Compound     | Column         | RT    | StdRT             | Conc | Q | Units | RPD<br>Conc |
|--------------|----------------|-------|-------------------|------|---|-------|-------------|
| Aroclor 1016 | 1 <sup>a</sup> |       |                   | 244  |   | ug/kg | 8.5         |
| Aroclor 1016 | 2              |       |                   | 224  |   | ug/kg |             |
| AR1016-B     | 1              | 3.54  | 3.53              | 207  |   | ug/kg |             |
| AR1016-B     | 2              | 4.62  | 4.61              | 196  |   | ug/kg |             |
| AR1016-C     | 1              | 4.08  | 4.08              | 208  |   | ug/kg |             |
| AR1016-C     | 2              | 5.26  | 5.26              | 218  |   | ug/kg |             |
| AR1016-D     | 1              | 4.24  | 4.24              | 233  |   | ug/kg |             |
| AR1016-D     | 2              | 5.44  | 5.44              | 186  |   | ug/kg |             |
| AR1016-E     | 1              | 4.75  | 4.75              | 326  |   | ug/kg |             |
| AR1016-E     | 2              | 6.08  | 6.09              | 295  |   | ug/kg |             |
| Aroclor 1254 | 1              |       |                   | 494  |   | ug/kg | 7.0         |
| Aroclor 1254 | 2 <sup>a</sup> |       |                   | 530  |   | ug/kg |             |
| AR1254-A     | 1              | 5.24  | 5.28 <sup>b</sup> | 406  |   | ug/kg |             |
| AR1254-A     | 2              | 6.67  | 6.70 <sup>b</sup> | 448  |   | ug/kg |             |
| AR1254-B     | 1              | 5.58  | 5.62 <sup>b</sup> | 451  |   | ug/kg |             |
| AR1254-B     | 2              | 6.94  | 6.96 <sup>b</sup> | 1040 |   | ug/kg |             |
| AR1254-C     | 1              | 5.94  | 5.98 <sup>b</sup> | 448  |   | ug/kg |             |
| AR1254-C     | 2              | 7.43  | 7.46 <sup>b</sup> | 368  |   | ug/kg |             |
| AR1254-D     | 1              | 6.11  | 6.14 <sup>b</sup> | 414  |   | ug/kg |             |
| AR1254-D     | 2              | 7.60  | 7.63 <sup>b</sup> | 409  |   | ug/kg |             |
| AR1254-E     | 1              | 6.48  | 6.52 <sup>b</sup> | 476  |   | ug/kg |             |
| AR1254-E     | 2              | 7.92  | 7.96 <sup>b</sup> | 385  |   | ug/kg |             |
| AR1254-F     | 1              | 6.73  | 6.77 <sup>b</sup> | 773  |   | ug/kg |             |
| AR1254-F     | 2              | 8.38  | 8.42 <sup>b</sup> | 527  |   | ug/kg |             |
| Aroclor 1260 | 1 <sup>a</sup> |       |                   | 248  |   | ug/kg | 8.4         |
| Aroclor 1260 | 2              |       |                   | 228  |   | ug/kg |             |
| AR1260-B     | 1              | 7.27  | 7.28              | 269  |   | ug/kg |             |
| AR1260-B     | 2              | 8.79  | 8.80              | 217  |   | ug/kg |             |
| AR1260-C     | 1              | 7.60  | 7.62              | 251  |   | ug/kg |             |
| AR1260-C     | 2              | 9.22  | 9.23              | 295  |   | ug/kg |             |
| AR1260-D     | 1              | 8.03  | 8.07              | 227  |   | ug/kg |             |
| AR1260-D     | 2              | 9.57  | 9.59              | 202  |   | ug/kg |             |
| AR1260-E     | 1              | 8.42  | 8.49              | 244  |   | ug/kg |             |
| AR1260-E     | 2              | 10.11 | 10.14             | 200  |   | ug/kg |             |

(a) QC results reported from this column.

(b) StdRT taken from init cal: G2G4311-IC4311 2G162102.D 04/19/18 13:52

Surrogate Recovery Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|                     |            |
|---------------------|------------|
| Method: SW846 8082A | Matrix: SO |
|---------------------|------------|

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> | S2 <sup>a</sup> | S2 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|-----------------|-----------------|
| JC66894-1     | 2G164751.D  | 93              | 105             | 79              | 99              |
| JC66894-2     | 2G164752.D  | 94              | 96              | 80              | 84              |
| JC66894-3     | 2G164656.D  | 85              | 78              | 63              | 67              |
| JC66894-4     | 2G164753.D  | 92              | 93              | 79              | 80              |
| OP12385-BS1   | 2G164653.D  | 97              | 92              | 77              | 80              |
| OP12385-MB1   | 2G164632.D  | 95              | 97              | 90              | 94              |
| OP12385-MB1   | 2G164652.D  | 91              | 89              | 85              | 90              |
| OP12385-MS    | 2G164657.D  | 81              | 73              | 70              | 62              |
| OP12385-MSD   | 2G164658.D  | 90              | 81              | 75              | 68              |

| Surrogate Compounds       | Recovery Limits |
|---------------------------|-----------------|
| S1 = Tetrachloro-m-xylene | 24-152%         |
| S2 = Decachlorobiphenyl   | 10-166%         |

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | G2G4349-CC4311 | Injection Date: | 05/31/18    |
| Lab File ID:   | 2G164625.D     | Injection Time: | 04:18       |
| Instrument ID: | GC2G           | Method:         | SW846 8082A |

|           | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| Check Std | 2.77                  | 3.42                  | 9.97                  | 11.77                 |

| Lab<br>Sample ID | Lab<br>File ID | Date<br>Analyzed | Time<br>Analyzed | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|------------------|----------------|------------------|------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| ZZZZZZ           | 2G164627.D     | 05/31/18         | 04:51            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| ZZZZZZ           | 2G164628.D     | 05/31/18         | 05:08            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| ZZZZZZ           | 2G164629.D     | 05/31/18         | 05:25            | 2.77                  | 3.42                  | 9.96                  | 11.76                 |
| ZZZZZZ           | 2G164630.D     | 05/31/18         | 05:42            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| OP12385-MB1      | 2G164632.D     | 05/31/18         | 06:16            | 2.77                  | 3.42                  | 9.97                  | 11.77                 |
| G2G4349-ECC4311  | 2G164636.D     | 05/31/18         | 07:24            | 2.77                  | 3.42                  | 9.97                  | 11.77                 |

Surrogate  
Compounds

S1 = Tetrachloro-m-xylene  
S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1  
(b) Retention time from GC signal #2



## GC Surrogate Retention Time Summary

Page 1 of 1

**Job Number:** JC66894

**Account:** ELPASOX EL PASO CORPORATION

**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

**Check Std:** G2G4350-CC4311

**Injection Date:** 05/31/18

**Lab File ID:** 2G164650.D

**Injection Time:** 11:09

**Instrument ID:** GC2G

**Method:** SW846 8082A

|           | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| Check Std | 2.77                  | 3.42                  | 9.97                  | 11.77                 |

| Lab<br>Sample ID | Lab<br>File ID | Date<br>Analyzed | Time<br>Analyzed | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|------------------|----------------|------------------|------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| OP12385-MB1      | 2G164652.D     | 05/31/18         | 11:44            | 2.77                  | 3.42                  | 9.97                  | 11.77                 |
| OP12385-BS1      | 2G164653.D     | 05/31/18         | 12:01            | 2.77                  | 3.42                  | 9.97                  | 11.77                 |
| ZZZZZZ           | 2G164654.D     | 05/31/18         | 12:18            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| ZZZZZZ           | 2G164655.D     | 05/31/18         | 12:38            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| JC66894-3        | 2G164656.D     | 05/31/18         | 12:54            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| OP12385-MS       | 2G164657.D     | 05/31/18         | 13:11            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| OP12385-MSD      | 2G164658.D     | 05/31/18         | 13:28            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |

### Surrogate Compounds

S1 = Tetrachloro-m-xylene

S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

(b) Retention time from GC signal #2

## GC Surrogate Retention Time Summary

Page 1 of 1

**Job Number:** JC66894

**Account:** ELPASOX EL PASO CORPORATION

**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

**Check Std:** G2G4351-CC4311

**Injection Date:** 06/01/18

**Lab File ID:** 2G164748.D

**Injection Time:** 15:16

**Instrument ID:** GC2G

**Method:** SW846 8082A

|           | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| Check Std | 2.77                  | 3.42                  | 9.96                  | 11.76                 |

| Lab<br>Sample ID | Lab<br>File ID | Date<br>Analyzed | Time<br>Analyzed | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT | S2 <sup>a</sup><br>RT | S2 <sup>b</sup><br>RT |
|------------------|----------------|------------------|------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| ZZZZZZ           | 2G164750.D     | 06/01/18         | 16:19            | 2.78                  | 3.42                  | 9.96                  | 11.76                 |
| JC66894-1        | 2G164751.D     | 06/01/18         | 16:36            | 2.77                  | 3.42                  | 9.96                  | 11.76                 |
| JC66894-2        | 2G164752.D     | 06/01/18         | 16:53            | 2.77                  | 3.42                  | 9.95                  | 11.76                 |
| JC66894-4        | 2G164753.D     | 06/01/18         | 17:10            | 2.77                  | 3.42                  | 9.96                  | 11.76                 |
| ZZZZZZ           | 2G164754.D     | 06/01/18         | 17:27            | 2.77                  | 3.42                  | 9.96                  | 11.76                 |
| ZZZZZZ           | 2G164755.D     | 06/01/18         | 17:44            | 2.77                  | 3.42                  | 9.96                  | 11.76                 |
| ZZZZZZ           | 2G164756.D     | 06/02/18         | 00:17            | 2.78                  | 3.42                  | 9.97                  | 11.77                 |

### Surrogate Compounds

S1 = Tetrachloro-m-xylene

S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

(b) Retention time from GC signal #2

# Initial Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4311-ICC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162099.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Response Factor Report HP G1530A

Method Path : C:\MSDCHEM\1\METHODS\  
Method File : 2PCB4311.M  
Title :  
Last Update : Thu Apr 19 15:41:07 2018  
Response Via : Initial Calibration

### Calibration Files

50 =2G162102a.D 250 =2G162097.D 500 =2G162098.D  
1000 =2G162099.D 2000 =2G162100.D 3000 =2G162101.D

|     | Compound           | 50    | 250   | 500   | 1000  | 2000  | 3000  | Avg   |    | %RSD  |
|-----|--------------------|-------|-------|-------|-------|-------|-------|-------|----|-------|
| 1)  | S Tetrachloro-m... | 3.853 | 3.487 | 3.538 | 3.692 | 3.667 | 3.785 | 3.670 | E6 | 3.81  |
| 2)  | AR1221-A           |       |       |       | 2.897 |       |       | 2.897 | E4 | 0.00  |
| 3)  | AR1221-B           |       |       |       | 4.202 |       |       | 4.202 | E4 | 0.00  |
| 4)  | AR1221-C           |       |       |       | 1.288 |       |       | 1.288 | E5 | 0.00  |
| 5)  | AR1221-D           |       |       |       | 1.466 |       |       | 1.466 | E4 | 0.00  |
| 6)  | AR1221-E           |       |       |       | 1.436 |       |       | 1.436 | E4 | 0.00  |
| 7)  | AR1232-A           |       |       |       | 9.734 |       |       | 9.734 | E4 | 0.00  |
| 8)  | AR1232-B           |       |       |       | 6.684 |       |       | 6.684 | E4 | 0.00  |
| 9)  | AR1232-C           |       |       |       | 1.305 |       |       | 1.305 | E5 | 0.00  |
| 10) | AR1232-D           |       |       |       | 5.447 |       |       | 5.447 | E4 | 0.00  |
| 11) | AR1232-E           |       |       |       | 5.149 |       |       | 5.149 | E4 | 0.00  |
| 12) | AR1242-A           |       |       |       | 1.198 |       |       | 1.198 | E5 | 0.00  |
| 13) | AR1242-B           |       |       |       | 2.525 |       |       | 2.525 | E5 | 0.00  |
| 14) | AR1242-C           |       |       |       | 1.054 |       |       | 1.054 | E5 | 0.00  |
| 15) | AR1242-D           |       |       |       | 1.090 |       |       | 1.090 | E5 | 0.00  |
| 16) | AR1242-E           |       |       |       | 9.298 |       |       | 9.298 | E4 | 0.00  |
| 17) | AR1248-A           |       |       |       | 5.917 |       |       | 5.917 | E4 | 0.00  |
| 18) | AR1248-B           |       |       |       | 1.544 |       |       | 1.544 | E5 | 0.00  |
| 19) | AR1248-C           |       |       |       | 1.652 |       |       | 1.652 | E5 | 0.00  |
| 20) | AR1248-D           |       |       |       | 1.598 |       |       | 1.598 | E5 | 0.00  |
| 21) | AR1248-E           |       |       |       | 1.421 |       |       | 1.421 | E5 | 0.00  |
| 22) | AR1248-F           |       |       |       | 1.402 |       |       | 1.402 | E5 | 0.00  |
| 23) | AR1248-G           |       |       |       | 1.572 |       |       | 1.572 | E5 | 0.00  |
| 24) | AR1254-A           |       |       |       | 1.234 |       |       | 1.234 | E5 | 0.00  |
| 25) | AR1254-B           |       |       |       | 2.588 |       |       | 2.588 | E5 | 0.00  |
| 26) | AR1254-C           |       |       |       | 1.370 |       |       | 1.370 | E5 | 0.00  |
| 27) | AR1254-D           |       |       |       | 2.459 |       |       | 2.459 | E5 | 0.00  |
| 28) | AR1254-E           |       |       |       | 1.825 |       |       | 1.825 | E5 | 0.00  |
| 29) | AR1254-F           |       |       |       | 1.712 |       |       | 1.712 | E5 | 0.00  |
| 30) | AR1254-G           |       |       |       | 2.518 |       |       | 2.518 | E5 | 0.00  |
| 31) | AR1016-A           | 9.451 | 7.869 | 7.627 | 7.558 | 7.126 | 7.105 | 7.789 | E4 | 11.13 |
| 32) | AR1016-B           | 1.685 | 1.361 | 1.324 | 1.304 | 1.242 | 1.247 | 1.361 | E5 | 12.16 |
| 33) | AR1016-C           | 3.261 | 2.840 | 2.792 | 2.854 | 2.797 | 2.854 | 2.900 | E5 | 6.18  |
| 34) | AR1016-D           | 1.360 | 1.162 | 1.156 | 1.157 | 1.119 | 1.140 | 1.182 | E5 | 7.49  |
| 35) | AR1016-E           | 1.424 | 1.227 | 1.184 | 1.176 | 1.145 | 1.161 | 1.219 | E5 | 8.51  |
| 36) | AR1260-A           | 3.759 | 3.397 | 3.078 | 3.178 | 3.473 | 3.566 | 3.408 | E5 | 7.36  |
| 37) | AR1260-B           | 1.602 | 1.368 | 1.501 | 1.530 | 1.316 | 1.349 | 1.444 | E5 | 8.00  |
| 38) | AR1260-C           | 1.676 | 1.539 | 1.642 | 1.690 | 1.480 | 1.527 | 1.592 | E5 | 5.54  |
| 39) | AR1260-D           | 3.627 | 3.372 | 3.743 | 3.953 | 3.621 | 3.712 | 3.671 | E5 | 5.17  |
| 40) | AR1260-E           | 3.931 | 3.596 | 3.895 | 4.026 | 3.611 | 3.668 | 3.788 | E5 | 4.88  |
| 41) | AR1262-A           |       |       |       | 1.935 |       |       | 1.935 | E5 | 0.00  |
| 42) | AR1262-B           |       |       |       | 2.424 |       |       | 2.424 | E5 | 0.00  |
| 43) | AR1262-C           |       |       |       | 2.270 |       |       | 2.270 | E5 | 0.00  |
| 44) | AR1262-D           |       |       |       | 4.854 |       |       | 4.854 | E5 | 0.00  |
| 45) | AR1262-E           |       |       |       | 5.588 |       |       | 5.588 | E5 | 0.00  |
| 46) | AR1268-A           |       |       |       | 5.754 |       |       | 5.754 | E5 | 0.00  |

## Initial Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4311-ICC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162099.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|       |                  |       |       |       |       |       |       |       |    |      |
|-------|------------------|-------|-------|-------|-------|-------|-------|-------|----|------|
| 47)   | AR1268-B         |       |       |       | 5.673 |       |       | 5.673 | E5 | 0.00 |
| 48)   | AR1268-C         |       |       |       | 4.730 |       |       | 4.730 | E5 | 0.00 |
| 49)   | AR1268-D         |       |       |       | 1.992 |       |       | 1.992 | E5 | 0.00 |
| 50)   | AR1268-E         |       |       |       | 1.615 |       |       | 1.615 | E6 | 0.00 |
| 51) S | Decachlorobip... | 4.697 | 4.061 | 3.924 | 3.931 | 3.825 | 3.897 | 4.056 | E6 | 7.97 |

## Signal #2 Calibration Files

|      |              |      |             |      |             |
|------|--------------|------|-------------|------|-------------|
| 50   | =2G162102a.D | 250  | =2G162097.D | 500  | =2G162098.D |
| 1000 | =2G162099.D  | 2000 | =2G162100.D | 3000 | =2G162101.D |

|      | Compound         | 50    | 250   | 500   | 1000  | 2000  | 3000  | Avg   |    | %RSD  |
|------|------------------|-------|-------|-------|-------|-------|-------|-------|----|-------|
| 1) S | Tetrachloro-m... | 2.359 | 2.161 | 2.233 | 2.322 | 2.300 | 2.354 | 2.288 | E7 | 3.37  |
| 2)   | AR1221-A         |       |       |       | 1.409 |       |       | 1.409 | E5 | 0.00  |
| 3)   | AR1221-B         |       |       |       | 2.507 |       |       | 2.507 | E5 | 0.00  |
| 4)   | AR1221-C         |       |       |       | 6.558 |       |       | 6.558 | E5 | 0.00  |
| 5)   | AR1221-D         |       |       |       | 1.222 |       |       | 1.222 | E5 | 0.00  |
| 6)   | AR1221-E         |       |       |       | 8.849 |       |       | 8.849 | E4 | 0.00  |
| 7)   | AR1232-A         |       |       |       | 5.020 |       |       | 5.020 | E5 | 0.00  |
| 8)   | AR1232-B         |       |       |       | 3.935 |       |       | 3.935 | E5 | 0.00  |
| 9)   | AR1232-C         |       |       |       | 8.152 |       |       | 8.152 | E5 | 0.00  |
| 10)  | AR1232-D         |       |       |       | 3.615 |       |       | 3.615 | E5 | 0.00  |
| 11)  | AR1232-E         |       |       |       | 2.173 |       |       | 2.173 | E5 | 0.00  |
| 12)  | AR1242-A         |       |       |       | 7.054 |       |       | 7.054 | E5 | 0.00  |
| 13)  | AR1242-B         |       |       |       | 1.548 |       |       | 1.548 | E6 | 0.00  |
| 14)  | AR1242-C         |       |       |       | 6.668 |       |       | 6.668 | E5 | 0.00  |
| 15)  | AR1242-D         |       |       |       | 4.564 |       |       | 4.564 | E5 | 0.00  |
| 16)  | AR1242-E         |       |       |       | 6.343 |       |       | 6.343 | E5 | 0.00  |
| 17)  | AR1248-A         |       |       |       | 3.627 |       |       | 3.627 | E5 | 0.00  |
| 18)  | AR1248-B         |       |       |       | 9.548 |       |       | 9.548 | E5 | 0.00  |
| 19)  | AR1248-C         |       |       |       | 5.697 |       |       | 5.697 | E5 | 0.00  |
| 20)  | AR1248-D         |       |       |       | 7.271 |       |       | 7.271 | E5 | 0.00  |
| 21)  | AR1248-E         |       |       |       | 8.799 |       |       | 8.799 | E5 | 0.00  |
| 22)  | AR1248-F         |       |       |       | 1.097 |       |       | 1.097 | E6 | 0.00  |
| 23)  | AR1248-G         |       |       |       | 1.220 |       |       | 1.220 | E6 | 0.00  |
| 24)  | AR1254-A         |       |       |       | 9.925 |       |       | 9.925 | E5 | 0.00  |
| 25)  | AR1254-B         |       |       |       | 9.839 |       |       | 9.839 | E5 | 0.00  |
| 26)  | AR1254-C         |       |       |       | 7.977 |       |       | 7.977 | E5 | 0.00  |
| 27)  | AR1254-D         |       |       |       | 1.634 |       |       | 1.634 | E6 | 0.00  |
| 28)  | AR1254-E         |       |       |       | 1.089 |       |       | 1.089 | E6 | 0.00  |
| 29)  | AR1254-F         |       |       |       | 1.181 |       |       | 1.181 | E6 | 0.00  |
| 30)  | AR1254-G         |       |       |       | 1.511 |       |       | 1.511 | E6 | 0.00  |
| 31)  | AR1016-A         | 4.464 | 3.663 | 3.554 | 3.667 | 3.532 | 3.597 | 3.746 | E5 | 9.50  |
| 32)  | AR1016-B         | 1.008 | 0.785 | 0.781 | 0.777 | 0.734 | 0.721 | 0.801 | E6 | 13.07 |
| 33)  | AR1016-C         | 1.870 | 1.661 | 1.687 | 1.744 | 1.719 | 1.721 | 1.734 | E6 | 4.20  |
| 34)  | AR1016-D         | 8.979 | 7.276 | 7.297 | 7.378 | 7.117 | 7.090 | 7.523 | E5 | 9.59  |
| 35)  | AR1016-E         | 5.760 | 4.925 | 4.923 | 5.029 | 5.023 | 5.124 | 5.131 | E5 | 6.19  |
| 36)  | AR1260-A         | 2.222 | 1.949 | 1.820 | 1.882 | 2.043 | 2.081 | 2.000 | E6 | 7.30  |
| 37)  | AR1260-B         | 1.009 | 0.803 | 0.897 | 0.917 | 0.804 | 0.816 | 0.874 | E6 | 9.41  |
| 38)  | AR1260-C         | 1.124 | 0.949 | 1.023 | 1.051 | 0.980 | 1.006 | 1.022 | E6 | 5.98  |
| 39)  | AR1260-D         | 2.347 | 1.930 | 2.170 | 2.256 | 2.063 | 2.114 | 2.146 | E6 | 6.84  |
| 40)  | AR1260-E         | 2.219 | 1.874 | 2.089 | 2.144 | 1.933 | 1.971 | 2.038 | E6 | 6.55  |
| 41)  | AR1262-A         |       |       |       | 1.044 |       |       | 1.044 | E6 | 0.00  |
| 42)  | AR1262-B         |       |       |       | 1.428 |       |       | 1.428 | E6 | 0.00  |
| 43)  | AR1262-C         |       |       |       | 1.336 |       |       | 1.336 | E6 | 0.00  |
| 44)  | AR1262-D         |       |       |       | 2.732 |       |       | 2.732 | E6 | 0.00  |
| 45)  | AR1262-E         |       |       |       | 3.034 |       |       | 3.034 | E6 | 0.00  |
| 46)  | AR1268-A         |       |       |       | 3.086 |       |       | 3.086 | E6 | 0.00  |
| 47)  | AR1268-B         |       |       |       | 3.099 |       |       | 3.099 | E6 | 0.00  |
| 48)  | AR1268-C         |       |       |       | 2.498 |       |       | 2.498 | E6 | 0.00  |

Initial Calibration Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4311-ICC4311  
Lab FileID: 2G162099.D

|                     |                  |                                           |       |      |      |
|---------------------|------------------|-------------------------------------------|-------|------|------|
| 49)                 | AR1268-D         | 1.038                                     | 1.038 | E6   | 0.00 |
| 50)                 | AR1268-E         | 8.238                                     | 8.238 | E6   | 0.00 |
| 51) S               | Decachlorobip... | 2.219 1.845 1.796 1.874 1.841 1.884 1.910 | E7    | 8.10 |      |
| -----               |                  |                                           |       |      |      |
| (# ) = Out of Range |                  |                                           |       |      |      |

2PCB4311.M Thu Apr 19 15:44:17 2018 RPT1

6.7.1  
6

## Initial Calibration Verification

Page 1 of 3

Job Number: JC66894

Sample: G2G4311-ICV4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162106.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4311\2G162106.D\ECD1A.CH Vial: 13  
 Signal #2 : C:\msdchem\1\DATA\2G4311\2G162106.D\ECD2B.CH  
 Acq On : 19 Apr 2018 3:17 pm Operator: tianweir  
 Sample : icv4311-1000 Inst : HP G1530A  
 Misc : OP11095,G2G4311,15.0,,,10.0,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu Apr 19 15:41:07 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 3.975 E6   | -8.3         | 108   | 0.00     | 2.75- | 2.81   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 76.686 E3  | 1.5          | 101   | 0.00     | 3.12- | 3.18   |
| 32  | AR1016-B             | 136.058 | 141.949 E3 | -4.3         | 109   | 0.00     | 3.53- | 3.59   |
| 33  | AR1016-C             | 289.965 | 305.729 E3 | -5.4         | 107   | 0.00     | 4.08- | 4.14   |
| 34  | AR1016-D             | 118.235 | 126.283 E3 | -6.8         | 109   | 0.00     | 4.24- | 4.30   |
| 35  | AR1016-E             | 121.934 | 124.361 E3 | -2.0         | 106   | 0.00     | 4.75- | 4.81   |
| 36  | AR1260-A             | 340.850 | 344.355 E3 | -1.0         | 108   | 0.00     | 7.12- | 7.18   |
| 37  | AR1260-B             | 144.444 | 147.854 E3 | -2.4         | 97    | 0.00     | 7.28- | 7.34   |
| 38  | AR1260-C             | 159.229 | 170.106 E3 | -6.8         | 101   | 0.00     | 7.62- | 7.68   |
| 39  | AR1260-D             | 367.146 | 387.161 E3 | -5.5         | 98    | 0.00     | 8.05- | 8.11   |
| 40  | AR1260-E             | 378.788 | 394.757 E3 | -4.2         | 98    | 0.00     | 8.39- | 8.55   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

## Page 2 of 3

**Sample:** G2G4311-ICV4311

**Lab FileID:** 2G162106.D

\_\_\_\_\_

## 6.7.2

| 1  | S | Tetrachloro-m-xylene | 22.882  | 25.201  | E6 | -10.1 | 109 | 0.00 | 3.40  | 3.46  |
|----|---|----------------------|---------|---------|----|-------|-----|------|-------|-------|
| 2  |   | AR1221-A             |         |         |    | NA    |     |      |       |       |
| 3  |   | AR1221-B             |         |         |    | NA    |     |      |       |       |
| 4  |   | AR1221-C             |         |         |    | NA    |     |      |       |       |
| 5  |   | AR1221-D             |         |         |    | NA    |     |      |       |       |
| 6  |   | AR1221-E             |         |         |    | NA    |     |      |       |       |
| 7  |   | AR1232-A             |         |         |    | NA    |     |      |       |       |
| 8  |   | AR1232-B             |         |         |    | NA    |     |      |       |       |
| 9  |   | AR1232-C             |         |         |    | NA    |     |      |       |       |
| 10 |   | AR1232-D             |         |         |    | NA    |     |      |       |       |
| 11 |   | AR1232-E             |         |         |    | NA    |     |      |       |       |
| 12 |   | AR1242-A             |         |         |    | NA    |     |      |       |       |
| 13 |   | AR1242-B             |         |         |    | NA    |     |      |       |       |
| 14 |   | AR1242-C             |         |         |    | NA    |     |      |       |       |
| 15 |   | AR1242-D             |         |         |    | NA    |     |      |       |       |
| 16 |   | AR1242-E             |         |         |    | NA    |     |      |       |       |
| 17 |   | AR1248-A             |         |         |    | NA    |     |      |       |       |
| 18 |   | AR1248-B             |         |         |    | NA    |     |      |       |       |
| 19 |   | AR1248-C             |         |         |    | NA    |     |      |       |       |
| 20 |   | AR1248-D             |         |         |    | NA    |     |      |       |       |
| 21 |   | AR1248-E             |         |         |    | NA    |     |      |       |       |
| 22 |   | AR1248-F             |         |         |    | NA    |     |      |       |       |
| 23 |   | AR1248-G             |         |         |    | NA    |     |      |       |       |
| 24 |   | AR1254-A             |         |         |    | NA    |     |      |       |       |
| 25 |   | AR1254-B             |         |         |    | NA    |     |      |       |       |
| 26 |   | AR1254-C             |         |         |    | NA    |     |      |       |       |
| 27 |   | AR1254-D             |         |         |    | NA    |     |      |       |       |
| 28 |   | AR1254-E             |         |         |    | NA    |     |      |       |       |
| 29 |   | AR1254-F             |         |         |    | NA    |     |      |       |       |
| 30 |   | AR1254-G             |         |         |    | NA    |     |      |       |       |
| 31 |   | AR1016-A             | 374.605 | 415.731 | E3 | -11.0 | 113 | 0.00 | 4.06  | 4.12  |
| 32 |   | AR1016-B             | 0.801   | 0.845   | E6 | -5.5  | 109 | 0.00 | 4.60  | 4.66  |
| 33 |   | AR1016-C             | 1.734   | 1.899   | E6 | -9.5  | 109 | 0.00 | 5.25  | 5.31  |
| 34 |   | AR1016-D             | 752.270 | 823.449 | E3 | -9.5  | 112 | 0.00 | 5.43  | 5.49  |
| 35 |   | AR1016-E             | 513.080 | 544.014 | E3 | -6.0  | 108 | 0.00 | 6.08  | 6.14  |
| 36 |   | AR1260-A             | 2.000   | 2.060   | E6 | -3.0  | 109 | 0.00 | 8.68  | 8.74  |
| 37 |   | AR1260-B             | 0.874   | 0.905   | E6 | -3.5  | 99  | 0.00 | 8.80  | 8.86  |
| 38 |   | AR1260-C             | 1.022   | 1.071   | E6 | -4.8  | 102 | 0.00 | 9.23  | 9.29  |
| 39 |   | AR1260-D             | 2.146   | 2.253   | E6 | -5.0  | 100 | 0.00 | 9.58  | 9.64  |
| 40 |   | AR1260-E             | 2.038   | 2.122   | E6 | -4.1  | 99  | 0.00 | 10.12 | 10.18 |
| 41 |   | AR1262-A             |         |         |    | NA    |     |      |       |       |
| 42 |   | AR1262-B             |         |         |    | NA    |     |      |       |       |
| 43 |   | AR1262-C             |         |         |    | NA    |     |      |       |       |
| 44 |   | AR1262-D             |         |         |    | NA    |     |      |       |       |
| 45 |   | AR1262-E             |         |         |    | NA    |     |      |       |       |
| 46 |   | AR1268-A             |         |         |    | NA    |     |      |       |       |
| 47 |   | AR1268-B             |         |         |    | NA    |     |      |       |       |

Initial Calibration Verification

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4311-ICV4311  
Lab FileID: 2G162106.D

|       |                    |        |        |    |     |     |      |  |             |              |
|-------|--------------------|--------|--------|----|-----|-----|------|--|-------------|--------------|
| 48    | AR1268-C           |        |        |    |     |     |      |  |             | -----NA----- |
| 49    | AR1268-D           |        |        |    |     |     |      |  |             | -----NA----- |
| 50    | AR1268-E           |        |        |    |     |     |      |  |             | -----NA----- |
| 51 S  | Decachlorobiphenyl | 19.099 | 18.717 | E6 | 2.0 | 100 | 0.00 |  | 11.78-11.84 |              |
| ----- |                    |        |        |    |     |     |      |  |             |              |
| ----- |                    |        |        |    |     |     |      |  |             |              |

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
2G162099.D 2PCB4311.M              Thu Apr 19 15:43:22 2018    RPT1

6.7.2  
6



## Initial Calibration Verification

Page 1 of 1

Job Number: JC66894

Sample: G2G4311-ICV4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162107.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4311\2G162107.D\ECD1A.CH Vial: 14  
 Signal #2 : C:\msdchem\1\DATA\2G4311\2G162107.D\ECD2B.CH  
 Acq On : 19 Apr 2018 3:34 pm Operator: tianweir  
 Sample : icv4311-1000 Inst : HP G1530A  
 Misc : OP11095,G2G4311,15.0,,,10.0,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu Apr 19 15:41:07 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|    | Compound | AvgRF   | CCRF       | %Dev | Area% | Dev(min) | RT    | Window |
|----|----------|---------|------------|------|-------|----------|-------|--------|
| 2  | AR1221-A | 28.967  | 30.231 E3  | -4.4 | 104   | 0.00     | 2.18- | 2.38   |
| 3  | AR1221-B | 42.023  | 40.285 E3  | 4.1  | 96    | 0.00     | 2.85- | 3.05   |
| 4  | AR1221-C | 128.795 | 122.705 E3 | 4.7  | 95    | 0.00     | 3.05- | 3.25   |
| 5  | AR1221-D | 14.657  | 11.965 E3  | 18.4 | 82    | 0.00     | 3.46- | 3.66   |
| 6  | AR1221-E | 14.364  | 14.535 E3  | -1.2 | 101   | 0.00     | 3.60- | 3.80   |
| 24 | AR1254-A | 123.364 | 129.470 E3 | -4.9 | 105   | 0.00     | 4.78- | 5.78   |
| 25 | AR1254-B | 258.753 | 268.829 E3 | -3.9 | 104   | 0.00     | 5.52- | 5.72   |
| 26 | AR1254-C | 136.952 | 143.562 E3 | -4.8 | 105   | 0.00     | 5.88- | 6.08   |
| 27 | AR1254-D | 245.908 | 257.604 E3 | -4.8 | 105   | 0.00     | 6.04- | 6.24   |
| 28 | AR1254-E | 182.509 | 189.827 E3 | -4.0 | 104   | 0.00     | 6.42- | 6.62   |
| 29 | AR1254-F | 171.196 | 179.789 E3 | -5.0 | 105   | 0.00     | 6.67- | 6.87   |
| 30 | AR1254-G | 251.778 | 263.449 E3 | -4.6 | 105   | 0.00     | 7.05- | 7.25   |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|    |          |         |             |      |     |      |       |      |
|----|----------|---------|-------------|------|-----|------|-------|------|
| 2  | AR1221-A | 140.927 | 146.033 E3  | -3.6 | 104 | 0.00 | 2.77- | 2.97 |
| 3  | AR1221-B | 250.670 | 252.257 E3  | -0.6 | 101 | 0.00 | 3.72- | 3.92 |
| 4  | AR1221-C | 655.831 | 636.187 E3  | 3.0  | 97  | 0.00 | 3.99- | 4.19 |
| 5  | AR1221-D | 122.166 | 105.889 E3  | 13.3 | 87  | 0.00 | 4.55- | 4.75 |
| 6  | AR1221-E | 88.492  | 89.522 E3   | -1.2 | 101 | 0.00 | 4.67- | 4.87 |
| 24 | AR1254-A | 992.497 | 1051.994 E3 | -6.0 | 106 | 0.00 | 6.20- | 7.20 |
| 25 | AR1254-B | 983.915 | 1037.386 E3 | -5.4 | 105 | 0.00 | 6.86- | 7.06 |
| 26 | AR1254-C | 797.725 | 839.207 E3  | -5.2 | 105 | 0.00 | 7.37- | 7.56 |
| 27 | AR1254-D | 1.634   | 1.719 E6    | -5.2 | 105 | 0.00 | 7.53- | 7.73 |
| 28 | AR1254-E | 1.089   | 1.136 E6    | -4.3 | 104 | 0.00 | 7.86- | 8.06 |
| 29 | AR1254-F | 1.181   | 1.231 E6    | -4.2 | 104 | 0.00 | 8.32- | 8.52 |
| 30 | AR1254-G | 1.511   | 1.615 E6    | -6.9 | 107 | 0.00 | 8.62- | 8.82 |

(#) = Out of Range  
 2G162099.D 2PCB4311.M

SPCC's out = 0 CCC's out = 0  
 Thu Apr 19 16:15:57 2018 RPT1

## Initial Calibration Verification

Page 1 of 1

Job Number: JC66894

Sample: G2G4311-ICV4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162108.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4311\2G162108.D\ECD1A.CH Vial: 15  
 Signal #2 : C:\msdchem\1\DATA\2G4311\2G162108.D\ECD2B.CH  
 Acq On : 19 Apr 2018 3:51 pm Operator: tianweir  
 Sample : icv4311-1000 Inst : HP G1530A  
 Misc : OP11095,G2G4311,15.0,,,10.0,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu Apr 19 15:41:07 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|    | Compound | AvgRF   | CCRF       | %Dev | Area% | Dev(min) | RT    | Window |
|----|----------|---------|------------|------|-------|----------|-------|--------|
| 7  | AR1232-A | 97.343  | 98.365 E3  | -1.0 | 101   | 0.00     | 3.05- | 3.25   |
| 8  | AR1232-B | 66.843  | 68.498 E3  | -2.5 | 102   | 0.00     | 3.46- | 3.66   |
| 9  | AR1232-C | 130.487 | 135.897 E3 | -4.1 | 104   | 0.00     | 4.01- | 4.21   |
| 10 | AR1232-D | 54.474  | 56.766 E3  | -4.2 | 104   | 0.00     | 4.17- | 4.37   |
| 11 | AR1232-E | 51.489  | 53.116 E3  | -3.2 | 103   | 0.00     | 4.68- | 4.88   |
| 41 | AR1262-A | 193.481 | 203.733 E3 | -5.3 | 105   | 0.00     | 6.67- | 6.87   |
| 42 | AR1262-B | 242.383 | 258.534 E3 | -6.7 | 107   | 0.00     | 7.21- | 7.41   |
| 43 | AR1262-C | 227.005 | 238.593 E3 | -5.1 | 105   | 0.00     | 7.55- | 7.75   |
| 44 | AR1262-D | 485.357 | 514.218 E3 | -5.9 | 106   | 0.00     | 7.98- | 8.18   |
| 45 | AR1262-E | 558.779 | 598.920 E3 | -7.2 | 107   | 0.00     | 8.43- | 8.63   |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|    |          |         |            |      |     |      |        |       |
|----|----------|---------|------------|------|-----|------|--------|-------|
| 7  | AR1232-A | 501.961 | 512.204 E3 | -2.0 | 102 | 0.00 | 4.00-  | 4.20  |
| 8  | AR1232-B | 393.517 | 401.624 E3 | -2.1 | 102 | 0.00 | 4.54-  | 4.74  |
| 9  | AR1232-C | 815.235 | 827.075 E3 | -1.5 | 101 | 0.00 | 5.18-  | 5.38  |
| 10 | AR1232-D | 361.545 | 372.004 E3 | -2.9 | 103 | 0.00 | 5.37-  | 5.57  |
| 11 | AR1232-E | 217.324 | 220.012 E3 | -1.2 | 101 | 0.00 | 6.02-  | 6.22  |
| 41 | AR1262-A | 1.044   | 1.084 E6   | -3.8 | 104 | 0.00 | 8.09-  | 8.29  |
| 42 | AR1262-B | 1.428   | 1.495 E6   | -4.7 | 105 | 0.00 | 8.73-  | 8.93  |
| 43 | AR1262-C | 1.336   | 1.393 E6   | -4.3 | 104 | 0.00 | 9.16-  | 9.36  |
| 44 | AR1262-D | 2.732   | 2.841 E6   | -4.0 | 104 | 0.00 | 9.51-  | 9.71  |
| 45 | AR1262-E | 3.034   | 3.169 E6   | -4.4 | 104 | 0.00 | 10.02- | 10.22 |

(#) = Out of Range  
 2G162099.D 2PCB4311.M

SPCC's out = 0 CCC's out = 0  
 Thu Apr 19 16:15:59 2018 RPT1

## Initial Calibration Verification

Page 1 of 1

Job Number: JC66894

Sample: G2G4311-ICV4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162109.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4311\2G162109.D\ECD1A.CH Vial: 16  
 Signal #2 : C:\msdchem\1\DATA\2G4311\2G162109.D\ECD2B.CH  
 Acq On : 19 Apr 2018 4:08 pm Operator: tianweir  
 Sample : icv4311-1000 Inst : HP G1530A  
 Misc : OP11095,G2G4311,15.0,,,10.0,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu Apr 19 15:41:07 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|    | Compound | AvgRF   | CCRF       | %Dev | Area% | Dev(min) | RT    | Window |
|----|----------|---------|------------|------|-------|----------|-------|--------|
| 12 | AR1242-A | 119.785 | 114.904 E3 | 4.1  | 96    | 0.00     | 3.46- | 3.66   |
| 13 | AR1242-B | 252.484 | 244.856 E3 | 3.0  | 97    | 0.00     | 4.01- | 4.21   |
| 14 | AR1242-C | 105.443 | 101.790 E3 | 3.5  | 97    | 0.00     | 4.17- | 4.37   |
| 15 | AR1242-D | 108.979 | 102.543 E3 | 5.9  | 94    | 0.00     | 4.68- | 4.88   |
| 16 | AR1242-E | 92.981  | 87.846 E3  | 5.5  | 94    | 0.00     | 5.27- | 5.47   |
| 46 | AR1268-A | 575.351 | 581.914 E3 | -1.1 | 101   | 0.00     | 8.42- | 8.62   |
| 47 | AR1268-B | 567.310 | 583.888 E3 | -2.9 | 103   | 0.00     | 8.48- | 8.68   |
| 48 | AR1268-C | 473.024 | 486.973 E3 | -2.9 | 103   | 0.00     | 8.75- | 8.95   |
| 49 | AR1268-D | 199.180 | 204.671 E3 | -2.8 | 103   | 0.00     | 9.24- | 9.44   |
| 50 | AR1268-E | 1.615   | 1.646 E6   | -1.9 | 102   | 0.00     | 9.64- | 9.84   |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|    |          |         |            |      |     |      |        |       |
|----|----------|---------|------------|------|-----|------|--------|-------|
| 12 | AR1242-A | 705.391 | 679.662 E3 | 3.6  | 96  | 0.00 | 4.53-  | 4.73  |
| 13 | AR1242-B | 1.548   | 1.499 E6   | 3.2  | 97  | 0.00 | 5.18-  | 5.38  |
| 14 | AR1242-C | 666.761 | 667.573 E3 | -0.1 | 100 | 0.00 | 5.37-  | 5.57  |
| 15 | AR1242-D | 456.404 | 438.896 E3 | 3.8  | 96  | 0.00 | 6.01-  | 6.21  |
| 16 | AR1242-E | 634.341 | 601.296 E3 | 5.2  | 95  | 0.00 | 6.63-  | 6.83  |
| 46 | AR1268-A | 3.086   | 3.010 E6   | 2.5  | 98  | 0.00 | 10.02- | 10.22 |
| 47 | AR1268-B | 3.099   | 3.068 E6   | 1.0  | 99  | 0.00 | 10.09- | 10.29 |
| 48 | AR1268-C | 2.498   | 2.444 E6   | 2.2  | 98  | 0.00 | 10.46- | 10.66 |
| 49 | AR1268-D | 1.038   | 1.042 E6   | -0.4 | 100 | 0.00 | 10.86- | 11.06 |
| 50 | AR1268-E | 8.238   | 7.835 E6   | 4.9  | 95  | 0.00 | 11.33- | 11.53 |

(#) = Out of Range  
 2G162099.D 2PCB4311.M

SPCC's out = 0 CCC's out = 0  
 Thu Apr 19 16:23:22 2018 RPT1

## Initial Calibration Verification

Page 1 of 1

Job Number: JC66894

Sample: G2G4311-ICV4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G162110.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4311\2G162110.D\ECD1A.CH Vial: 17  
 Signal #2 : C:\msdchem\1\DATA\2G4311\2G162110.D\ECD2B.CH  
 Acq On : 19 Apr 2018 4:25 pm Operator: tianweir  
 Sample : icv4311-1000 Inst : HP G1530A  
 Misc : OP11095,G2G4311,15.0,,,10.0,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu Apr 19 15:41:07 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|    | Compound | AvgRF   | CCRF       | %Dev  | Area% | Dev(min) | RT    | Window |
|----|----------|---------|------------|-------|-------|----------|-------|--------|
| 17 | AR1248-A | 59.174  | 55.493 E3  | 6.2   | 94    | 0.00     | 3.45- | 3.65   |
| 18 | AR1248-B | 154.398 | 154.781 E3 | -0.2  | 100   | 0.00     | 4.01- | 4.21   |
| 19 | AR1248-C | 165.207 | 165.431 E3 | -0.1  | 100   | 0.00     | 4.40- | 4.60   |
| 20 | AR1248-D | 159.827 | 163.966 E3 | -2.6  | 103   | 0.00     | 4.68- | 4.88   |
| 21 | AR1248-E | 142.066 | 146.330 E3 | -3.0  | 103   | 0.00     | 4.79- | 4.99   |
| 22 | AR1248-F | 140.157 | 154.154 E3 | -10.0 | 110   | 0.00     | 5.26- | 5.46   |
| 23 | AR1248-G | 157.220 | 168.971 E3 | -7.5  | 107   | 0.00     | 5.12- | 6.12   |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|    |          |         |            |      |     |      |       |      |
|----|----------|---------|------------|------|-----|------|-------|------|
| 17 | AR1248-A | 362.749 | 338.780 E3 | 6.6  | 93  | 0.00 | 4.53- | 4.73 |
| 18 | AR1248-B | 954.786 | 932.709 E3 | 2.3  | 98  | 0.00 | 5.18- | 5.38 |
| 19 | AR1248-C | 569.681 | 572.997 E3 | -0.6 | 101 | 0.00 | 5.63- | 5.83 |
| 20 | AR1248-D | 727.117 | 735.665 E3 | -1.2 | 101 | 0.00 | 6.01- | 6.21 |
| 21 | AR1248-E | 879.894 | 914.038 E3 | -3.9 | 104 | 0.00 | 6.19- | 6.39 |
| 22 | AR1248-F | 1.097   | 1.158 E6   | -5.6 | 106 | 0.00 | 6.62- | 6.82 |
| 23 | AR1248-G | 1.220   | 1.306 E6   | -7.0 | 107 | 0.00 | 6.55- | 7.55 |

(#) = Out of Range  
 2G162099.D 2PCB4311.M

SPCC's out = 0 CCC's out = 0  
 Thu Apr 19 16:41:13 2018 RPT1

## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4349-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164625.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4349\2G164625.D\ECD1A.CH Vial: 87  
 Signal #2 : C:\msdchem\1\DATA\2G4349\2G164625.D\ECD2B.CH  
 Acq On : 31 May 2018 4:18 am Operator: christp  
 Sample : cc4311-1000 Inst : HP G1530A  
 Misc : OP12371,G2G4349,300,,,2,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu May 31 09:51:57 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 4.073 E6   | -11.0        | 110   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 82.497 E3  | -5.9         | 109   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 143.454 E3 | -5.4         | 110   | 0.00     | 3.51- | 3.57   |
| 33  | AR1016-C             | 289.965 | 274.660 E3 | 5.3          | 96    | 0.00     | 4.06- | 4.12   |
| 34  | AR1016-D             | 118.235 | 118.226 E3 | 0.0          | 102   | 0.00     | 4.22- | 4.28   |
| 35  | AR1016-E             | 121.934 | 123.214 E3 | -1.0         | 105   | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 283.083 E3 | 16.9         | 89    | 0.00     | 7.12- | 7.18   |
| 37  | AR1260-B             | 144.444 | 160.390 E3 | -11.0        | 105   | 0.00     | 7.24- | 7.30   |
| 38  | AR1260-C             | 159.229 | 141.291 E3 | 11.3         | 84    | 0.00     | 7.58- | 7.64   |
| 39  | AR1260-D             | 367.146 | 399.385 E3 | -8.8         | 101   | 0.00     | 8.03- | 8.09   |
| 40  | AR1260-E             | 378.788 | 383.096 E3 | -1.1         | 95    | 0.00     | 8.40- | 8.56   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4349-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164625.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |       |    |     |     |      |  |  |  |  |            |  |
|------|--------------------|-------|-------|----|-----|-----|------|--|--|--|--|------------|--|
| 42   | AR1262-B           |       |       |    |     |     |      |  |  |  |  |            |  |
| 43   | AR1262-C           |       |       |    |     |     |      |  |  |  |  |            |  |
| 44   | AR1262-D           |       |       |    |     |     |      |  |  |  |  |            |  |
| 45   | AR1262-E           |       |       |    |     |     |      |  |  |  |  |            |  |
| 46   | AR1268-A           |       |       |    |     |     |      |  |  |  |  |            |  |
| 47   | AR1268-B           |       |       |    |     |     |      |  |  |  |  |            |  |
| 48   | AR1268-C           |       |       |    |     |     |      |  |  |  |  |            |  |
| 49   | AR1268-D           |       |       |    |     |     |      |  |  |  |  |            |  |
| 50   | AR1268-E           |       |       |    |     |     |      |  |  |  |  |            |  |
| 51 S | Decachlorobiphenyl | 4.056 | 3.912 | E6 | 3.6 | 100 | 0.00 |  |  |  |  | 9.94-10.00 |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |         |    |        |     |      |  |  |  |  |             |  |
|-----|----------------------|---------|---------|----|--------|-----|------|--|--|--|--|-------------|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 24.686  | E6 | -7.9   | 106 | 0.00 |  |  |  |  | 3.39- 3.45  |  |
| 2   | AR1221-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 3   | AR1221-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 4   | AR1221-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 5   | AR1221-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 6   | AR1221-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 7   | AR1232-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 8   | AR1232-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 9   | AR1232-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 10  | AR1232-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 11  | AR1232-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 12  | AR1242-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 13  | AR1242-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 14  | AR1242-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 15  | AR1242-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 16  | AR1242-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 17  | AR1248-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 18  | AR1248-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 19  | AR1248-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 20  | AR1248-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 21  | AR1248-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 22  | AR1248-F             |         |         |    |        |     |      |  |  |  |  |             |  |
| 23  | AR1248-G             |         |         |    |        |     |      |  |  |  |  |             |  |
| 24  | AR1254-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 25  | AR1254-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 26  | AR1254-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 27  | AR1254-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 28  | AR1254-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 29  | AR1254-F             |         |         |    |        |     |      |  |  |  |  |             |  |
| 30  | AR1254-G             |         |         |    |        |     |      |  |  |  |  |             |  |
| 31  | AR1016-A             | 374.605 | 418.759 | E3 | -11.8  | 114 | 0.00 |  |  |  |  | 4.06- 4.12  |  |
| 32  | AR1016-B             | 0.801   | 0.822   | E6 | -2.6   | 106 | 0.00 |  |  |  |  | 4.58- 4.64  |  |
| 33  | AR1016-C             | 1.734   | 1.690   | E6 | 2.5    | 97  | 0.00 |  |  |  |  | 5.23- 5.29  |  |
| 34  | AR1016-D             | 752.270 | 876.328 | E3 | -16.5  | 119 | 0.00 |  |  |  |  | 5.42- 5.48  |  |
| 35  | AR1016-E             | 513.080 | 519.587 | E3 | -1.3   | 103 | 0.00 |  |  |  |  | 6.06- 6.12  |  |
| 36  | AR1260-A             | 2.000   | 1.800   | E6 | 10.0   | 96  | 0.00 |  |  |  |  | 8.66- 8.72  |  |
| 37  | AR1260-B             | 0.874   | 1.104   | E6 | -26.3# | 120 | 0.00 |  |  |  |  | 8.77- 8.83  |  |
| 38  | AR1260-C             | 1.022   | 1.100   | E6 | -7.6   | 105 | 0.00 |  |  |  |  | 9.20- 9.26  |  |
| 39  | AR1260-D             | 2.146   | 2.188   | E6 | -2.0   | 97  | 0.00 |  |  |  |  | 9.56- 9.62  |  |
| 40  | AR1260-E             | 2.038   | 2.351   | E6 | -15.4  | 110 | 0.04 |  |  |  |  | 10.11-10.17 |  |
| 41  | AR1262-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 42  | AR1262-B             |         |         |    |        |     |      |  |  |  |  |             |  |
| 43  | AR1262-C             |         |         |    |        |     |      |  |  |  |  |             |  |
| 44  | AR1262-D             |         |         |    |        |     |      |  |  |  |  |             |  |
| 45  | AR1262-E             |         |         |    |        |     |      |  |  |  |  |             |  |
| 46  | AR1268-A             |         |         |    |        |     |      |  |  |  |  |             |  |
| 47  | AR1268-B             |         |         |    |        |     |      |  |  |  |  |             |  |

**Job Number:** JC66894

**Sample:** G2G4349-CC4311

**Account:** ELPASOX EL PASO CORPORATION

**Lab FileID:** 2G164625.D

**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |        |        |    |      |              |      |             |
|------|--------------------|--------|--------|----|------|--------------|------|-------------|
| 48   | AR1268-C           |        |        |    |      | -----NA----- |      |             |
| 49   | AR1268-D           |        |        |    |      | -----NA----- |      |             |
| 50   | AR1268-E           |        |        |    |      | -----NA----- |      |             |
| 51 S | Decachlorobiphenyl | 19.099 | 20.014 | E6 | -4.8 | 107          | 0.00 | 11.74-11.80 |

(#) = Out of Range

2G164625.D 2PCB4311.M

SPCC's out = 0   CCC's out = 0

Thu May 31 10:10:15 2018 RPT1

## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4349-ECC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164636.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4349\2G164636.D\ECD1A.CH Vial: 94  
 Signal #2 : C:\msdchem\1\DATA\2G4349\2G164636.D\ECD2B.CH  
 Acq On : 31 May 2018 7:24 am Operator: christp  
 Sample : cc4311-500 Inst : HP G1530A  
 Misc : OP12385,G2G4349,15.0,,,10,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu May 31 12:42:15 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 4.037 E6   | -10.0        | 114   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 86.377 E3  | -10.9        | 113   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 147.707 E3 | -8.6         | 112   | 0.00     | 3.51- | 3.57   |
| 33  | AR1016-C             | 289.965 | 294.570 E3 | -1.6         | 105   | 0.00     | 4.06- | 4.12   |
| 34  | AR1016-D             | 118.235 | 117.974 E3 | 0.2          | 102   | 0.00     | 4.22- | 4.28   |
| 35  | AR1016-E             | 121.934 | 119.267 E3 | 2.2          | 101   | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 260.963 E3 | 23.4#        | 85    | 0.00     | 7.12- | 7.18   |
| 37  | AR1260-B             | 144.444 | 170.335 E3 | -17.9        | 113   | 0.00     | 7.25- | 7.31   |
| 38  | AR1260-C             | 159.229 | 142.262 E3 | 10.7         | 87    | 0.00     | 7.59- | 7.65   |
| 39  | AR1260-D             | 367.146 | 439.694 E3 | -19.8        | 117   | 0.00     | 8.04- | 8.10   |
| 40  | AR1260-E             | 378.788 | 408.344 E3 | -7.8         | 105   | 0.00     | 8.41- | 8.57   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |



# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4349-ECC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164636.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |       |    |      |     |      |            |  |
|------|--------------------|-------|-------|----|------|-----|------|------------|--|
| 42   | AR1262-B           |       |       |    |      |     |      |            |  |
| 43   | AR1262-C           |       |       |    |      |     |      |            |  |
| 44   | AR1262-D           |       |       |    |      |     |      |            |  |
| 45   | AR1262-E           |       |       |    |      |     |      |            |  |
| 46   | AR1268-A           |       |       |    |      |     |      |            |  |
| 47   | AR1268-B           |       |       |    |      |     |      |            |  |
| 48   | AR1268-C           |       |       |    |      |     |      |            |  |
| 49   | AR1268-D           |       |       |    |      |     |      |            |  |
| 50   | AR1268-E           |       |       |    |      |     |      |            |  |
| 51 S | Decachlorobiphenyl | 4.056 | 4.100 | E6 | -1.1 | 105 | 0.00 | 9.94-10.00 |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |         |    |        |     |      |             |  |
|-----|----------------------|---------|---------|----|--------|-----|------|-------------|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 24.119  | E6 | -5.4   | 108 | 0.00 | 3.39- 3.45  |  |
| 2   | AR1221-A             |         |         |    |        |     |      |             |  |
| 3   | AR1221-B             |         |         |    |        |     |      |             |  |
| 4   | AR1221-C             |         |         |    |        |     |      |             |  |
| 5   | AR1221-D             |         |         |    |        |     |      |             |  |
| 6   | AR1221-E             |         |         |    |        |     |      |             |  |
| 7   | AR1232-A             |         |         |    |        |     |      |             |  |
| 8   | AR1232-B             |         |         |    |        |     |      |             |  |
| 9   | AR1232-C             |         |         |    |        |     |      |             |  |
| 10  | AR1232-D             |         |         |    |        |     |      |             |  |
| 11  | AR1232-E             |         |         |    |        |     |      |             |  |
| 12  | AR1242-A             |         |         |    |        |     |      |             |  |
| 13  | AR1242-B             |         |         |    |        |     |      |             |  |
| 14  | AR1242-C             |         |         |    |        |     |      |             |  |
| 15  | AR1242-D             |         |         |    |        |     |      |             |  |
| 16  | AR1242-E             |         |         |    |        |     |      |             |  |
| 17  | AR1248-A             |         |         |    |        |     |      |             |  |
| 18  | AR1248-B             |         |         |    |        |     |      |             |  |
| 19  | AR1248-C             |         |         |    |        |     |      |             |  |
| 20  | AR1248-D             |         |         |    |        |     |      |             |  |
| 21  | AR1248-E             |         |         |    |        |     |      |             |  |
| 22  | AR1248-F             |         |         |    |        |     |      |             |  |
| 23  | AR1248-G             |         |         |    |        |     |      |             |  |
| 24  | AR1254-A             |         |         |    |        |     |      |             |  |
| 25  | AR1254-B             |         |         |    |        |     |      |             |  |
| 26  | AR1254-C             |         |         |    |        |     |      |             |  |
| 27  | AR1254-D             |         |         |    |        |     |      |             |  |
| 28  | AR1254-E             |         |         |    |        |     |      |             |  |
| 29  | AR1254-F             |         |         |    |        |     |      |             |  |
| 30  | AR1254-G             |         |         |    |        |     |      |             |  |
| 31  | AR1016-A             | 374.605 | 436.336 | E3 | -16.5  | 123 | 0.00 | 4.06- 4.12  |  |
| 32  | AR1016-B             | 0.801   | 0.854   | E6 | -6.6   | 109 | 0.00 | 4.58- 4.64  |  |
| 33  | AR1016-C             | 1.734   | 1.590   | E6 | 8.3    | 94  | 0.00 | 5.24- 5.30  |  |
| 34  | AR1016-D             | 752.270 | 939.925 | E3 | -24.9# | 129 | 0.00 | 5.42- 5.48  |  |
| 35  | AR1016-E             | 513.080 | 514.718 | E3 | -0.3   | 105 | 0.00 | 6.06- 6.12  |  |
| 36  | AR1260-A             | 2.000   | 1.752   | E6 | 12.4   | 96  | 0.00 | 8.67- 8.73  |  |
| 37  | AR1260-B             | 0.874   | 1.147   | E6 | -31.2# | 128 | 0.00 | 8.77- 8.83  |  |
| 38  | AR1260-C             | 1.022   | 1.088   | E6 | -6.5   | 106 | 0.00 | 9.20- 9.26  |  |
| 39  | AR1260-D             | 2.146   | 2.130   | E6 | 0.7    | 98  | 0.00 | 9.57- 9.63  |  |
| 40  | AR1260-E             | 2.038   | 2.391   | E6 | -17.3  | 114 | 0.00 | 10.13-10.19 |  |
| 41  | AR1262-A             |         |         |    |        |     |      |             |  |
| 42  | AR1262-B             |         |         |    |        |     |      |             |  |
| 43  | AR1262-C             |         |         |    |        |     |      |             |  |
| 44  | AR1262-D             |         |         |    |        |     |      |             |  |
| 45  | AR1262-E             |         |         |    |        |     |      |             |  |
| 46  | AR1268-A             |         |         |    |        |     |      |             |  |
| 47  | AR1268-B             |         |         |    |        |     |      |             |  |

Continuing Calibration Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4349-ECC4311  
Lab FileID: 2G164636.D

|       |                    |        |        |    |      |     |      |       |       |              |
|-------|--------------------|--------|--------|----|------|-----|------|-------|-------|--------------|
| 48    | AR1268-C           |        |        |    |      |     |      |       |       | -----NA----- |
| 49    | AR1268-D           |        |        |    |      |     |      |       |       | -----NA----- |
| 50    | AR1268-E           |        |        |    |      |     |      |       |       | -----NA----- |
| 51 S  | Decachlorobiphenyl | 19.099 | 19.399 | E6 | -1.6 | 108 | 0.00 | 11.74 | 11.80 |              |
| ----- |                    |        |        |    |      |     |      |       |       |              |

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
2G162098.D 2PCB4311.M              Thu May 31 12:44:17 2018    RPT1

6.7.8  
6

## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4350-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164650.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4350\2G164650.D\ECD1A.CH Vial: 6  
 Signal #2 : C:\msdchem\1\DATA\2G4350\2G164650.D\ECD2B.CH  
 Acq On : 31 May 2018 11:09 am Operator: christp  
 Sample : cc4311-500 Inst : HP G1530A  
 Misc : OP12385,G2G4350,15.6,,,10,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu May 31 15:20:40 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 3.685 E6   | -0.4         | 104   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 78.054 E3  | -0.2         | 102   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 137.276 E3 | -0.9         | 104   | 0.00     | 3.50- | 3.56   |
| 33  | AR1016-C             | 289.965 | 283.314 E3 | 2.3          | 101   | 0.00     | 4.05- | 4.11   |
| 34  | AR1016-D             | 118.235 | 110.149 E3 | 6.8          | 95    | 0.00     | 4.21- | 4.27   |
| 35  | AR1016-E             | 121.934 | 113.151 E3 | 7.2          | 96    | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 280.303 E3 | 17.8         | 91    | 0.00     | 7.12- | 7.18   |
| 37  | AR1260-B             | 144.444 | 154.262 E3 | -6.8         | 103   | 0.01     | 7.25- | 7.31   |
| 38  | AR1260-C             | 159.229 | 138.222 E3 | 13.2         | 84    | 0.02     | 7.59- | 7.65   |
| 39  | AR1260-D             | 367.146 | 406.222 E3 | -10.6        | 109   | 0.04     | 8.04- | 8.10   |
| 40  | AR1260-E             | 378.788 | 378.864 E3 | -0.0         | 97    | 0.07     | 8.41- | 8.57   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4350-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164650.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |       |    |      |    |      |  |  |  |  |            |  |
|------|--------------------|-------|-------|----|------|----|------|--|--|--|--|------------|--|
| 42   | AR1262-B           |       |       |    |      |    |      |  |  |  |  |            |  |
| 43   | AR1262-C           |       |       |    |      |    |      |  |  |  |  |            |  |
| 44   | AR1262-D           |       |       |    |      |    |      |  |  |  |  |            |  |
| 45   | AR1262-E           |       |       |    |      |    |      |  |  |  |  |            |  |
| 46   | AR1268-A           |       |       |    |      |    |      |  |  |  |  |            |  |
| 47   | AR1268-B           |       |       |    |      |    |      |  |  |  |  |            |  |
| 48   | AR1268-C           |       |       |    |      |    |      |  |  |  |  |            |  |
| 49   | AR1268-D           |       |       |    |      |    |      |  |  |  |  |            |  |
| 50   | AR1268-E           |       |       |    |      |    |      |  |  |  |  |            |  |
| 51 S | Decachlorobiphenyl | 4.056 | 3.619 | E6 | 10.8 | 92 | 0.02 |  |  |  |  | 9.94-10.00 |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |         |    |      |     |       |  |  |  |  |             |  |
|-----|----------------------|---------|---------|----|------|-----|-------|--|--|--|--|-------------|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 21.840  | E6 | 4.6  | 98  | 0.00  |  |  |  |  | 3.39- 3.45  |  |
| 2   | AR1221-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 3   | AR1221-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 4   | AR1221-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 5   | AR1221-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 6   | AR1221-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 7   | AR1232-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 8   | AR1232-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 9   | AR1232-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 10  | AR1232-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 11  | AR1232-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 12  | AR1242-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 13  | AR1242-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 14  | AR1242-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 15  | AR1242-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 16  | AR1242-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 17  | AR1248-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 18  | AR1248-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 19  | AR1248-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 20  | AR1248-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 21  | AR1248-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 22  | AR1248-F             |         |         |    |      |     |       |  |  |  |  |             |  |
| 23  | AR1248-G             |         |         |    |      |     |       |  |  |  |  |             |  |
| 24  | AR1254-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 25  | AR1254-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 26  | AR1254-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 27  | AR1254-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 28  | AR1254-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 29  | AR1254-F             |         |         |    |      |     |       |  |  |  |  |             |  |
| 30  | AR1254-G             |         |         |    |      |     |       |  |  |  |  |             |  |
| 31  | AR1016-A             | 374.605 | 355.876 | E3 | 5.0  | 100 | -0.01 |  |  |  |  | 4.05- 4.11  |  |
| 32  | AR1016-B             | 0.801   | 0.767   | E6 | 4.2  | 98  | -0.01 |  |  |  |  | 4.58- 4.64  |  |
| 33  | AR1016-C             | 1.734   | 1.570   | E6 | 9.5  | 93  | 0.00  |  |  |  |  | 5.23- 5.29  |  |
| 34  | AR1016-D             | 752.270 | 752.537 | E3 | -0.0 | 103 | 0.00  |  |  |  |  | 5.41- 5.47  |  |
| 35  | AR1016-E             | 513.080 | 460.219 | E3 | 10.3 | 93  | 0.00  |  |  |  |  | 6.06- 6.12  |  |
| 36  | AR1260-A             | 2.000   | 1.606   | E6 | 19.7 | 88  | 0.00  |  |  |  |  | 8.67- 8.73  |  |
| 37  | AR1260-B             | 0.874   | 0.915   | E6 | -4.7 | 102 | 0.00  |  |  |  |  | 8.77- 8.83  |  |
| 38  | AR1260-C             | 1.022   | 0.938   | E6 | 8.2  | 92  | 0.01  |  |  |  |  | 9.20- 9.26  |  |
| 39  | AR1260-D             | 2.146   | 2.052   | E6 | 4.4  | 95  | 0.02  |  |  |  |  | 9.56- 9.62  |  |
| 40  | AR1260-E             | 2.038   | 2.026   | E6 | 0.6  | 97  | 0.03  |  |  |  |  | 10.11-10.17 |  |
| 41  | AR1262-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 42  | AR1262-B             |         |         |    |      |     |       |  |  |  |  |             |  |
| 43  | AR1262-C             |         |         |    |      |     |       |  |  |  |  |             |  |
| 44  | AR1262-D             |         |         |    |      |     |       |  |  |  |  |             |  |
| 45  | AR1262-E             |         |         |    |      |     |       |  |  |  |  |             |  |
| 46  | AR1268-A             |         |         |    |      |     |       |  |  |  |  |             |  |
| 47  | AR1268-B             |         |         |    |      |     |       |  |  |  |  |             |  |

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**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

```
SPCC's out = 0 CCC's out = 0
Thu May 31 15:22:35 2018 RPT1
```

## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4350-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164661.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4350\2G164661.D\ECD1A.CH Vial: 14  
 Signal #2 : C:\msdchem\1\DATA\2G4350\2G164661.D\ECD2B.CH  
 Acq On : 31 May 2018 2:30 pm Operator: tianweir  
 Sample : cc4311-1000 Inst : HP G1530A  
 Misc : OP12385,G2G4350,15.6,,,10,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Thu May 31 15:20:40 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 3.872 E6   | -5.5         | 105   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 77.559 E3  | 0.4          | 103   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 134.705 E3 | 1.0          | 103   | 0.00     | 3.50- | 3.56   |
| 33  | AR1016-C             | 289.965 | 289.523 E3 | 0.2          | 101   | 0.00     | 4.05- | 4.11   |
| 34  | AR1016-D             | 118.235 | 111.156 E3 | 6.0          | 96    | 0.00     | 4.21- | 4.27   |
| 35  | AR1016-E             | 121.934 | 114.589 E3 | 6.0          | 97    | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 280.728 E3 | 17.6         | 88    | 0.00     | 7.12- | 7.18   |
| 37  | AR1260-B             | 144.444 | 157.519 E3 | -9.1         | 103   | 0.00     | 7.24- | 7.30   |
| 38  | AR1260-C             | 159.229 | 143.006 E3 | 10.2         | 85    | 0.00     | 7.58- | 7.64   |
| 39  | AR1260-D             | 367.146 | 424.148 E3 | -15.5        | 107   | 0.03     | 8.03- | 8.09   |
| 40  | AR1260-E             | 378.788 | 385.864 E3 | -1.9         | 96    | 0.06     | 8.40- | 8.56   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4350-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164661.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |          |     |    |      |  |            |  |
|------|--------------------|-------|----------|-----|----|------|--|------------|--|
| 42   | AR1262-B           |       |          |     |    |      |  |            |  |
| 43   | AR1262-C           |       |          |     |    |      |  |            |  |
| 44   | AR1262-D           |       |          |     |    |      |  |            |  |
| 45   | AR1262-E           |       |          |     |    |      |  |            |  |
| 46   | AR1268-A           |       |          |     |    |      |  |            |  |
| 47   | AR1268-B           |       |          |     |    |      |  |            |  |
| 48   | AR1268-C           |       |          |     |    |      |  |            |  |
| 49   | AR1268-D           |       |          |     |    |      |  |            |  |
| 50   | AR1268-E           |       |          |     |    |      |  |            |  |
| 51 S | Decachlorobiphenyl | 4.056 | 3.682 E6 | 9.2 | 94 | 0.01 |  | 9.94-10.00 |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |            |       |     |       |  |             |  |
|-----|----------------------|---------|------------|-------|-----|-------|--|-------------|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 22.870 E6  | 0.1   | 99  | 0.00  |  | 3.39- 3.45  |  |
| 2   | AR1221-A             |         |            |       |     |       |  |             |  |
| 3   | AR1221-B             |         |            |       |     |       |  |             |  |
| 4   | AR1221-C             |         |            |       |     |       |  |             |  |
| 5   | AR1221-D             |         |            |       |     |       |  |             |  |
| 6   | AR1221-E             |         |            |       |     |       |  |             |  |
| 7   | AR1232-A             |         |            |       |     |       |  |             |  |
| 8   | AR1232-B             |         |            |       |     |       |  |             |  |
| 9   | AR1232-C             |         |            |       |     |       |  |             |  |
| 10  | AR1232-D             |         |            |       |     |       |  |             |  |
| 11  | AR1232-E             |         |            |       |     |       |  |             |  |
| 12  | AR1242-A             |         |            |       |     |       |  |             |  |
| 13  | AR1242-B             |         |            |       |     |       |  |             |  |
| 14  | AR1242-C             |         |            |       |     |       |  |             |  |
| 15  | AR1242-D             |         |            |       |     |       |  |             |  |
| 16  | AR1242-E             |         |            |       |     |       |  |             |  |
| 17  | AR1248-A             |         |            |       |     |       |  |             |  |
| 18  | AR1248-B             |         |            |       |     |       |  |             |  |
| 19  | AR1248-C             |         |            |       |     |       |  |             |  |
| 20  | AR1248-D             |         |            |       |     |       |  |             |  |
| 21  | AR1248-E             |         |            |       |     |       |  |             |  |
| 22  | AR1248-F             |         |            |       |     |       |  |             |  |
| 23  | AR1248-G             |         |            |       |     |       |  |             |  |
| 24  | AR1254-A             |         |            |       |     |       |  |             |  |
| 25  | AR1254-B             |         |            |       |     |       |  |             |  |
| 26  | AR1254-C             |         |            |       |     |       |  |             |  |
| 27  | AR1254-D             |         |            |       |     |       |  |             |  |
| 28  | AR1254-E             |         |            |       |     |       |  |             |  |
| 29  | AR1254-F             |         |            |       |     |       |  |             |  |
| 30  | AR1254-G             |         |            |       |     |       |  |             |  |
| 31  | AR1016-A             | 374.605 | 391.213 E3 | -4.4  | 107 | -0.01 |  | 4.05- 4.11  |  |
| 32  | AR1016-B             | 0.801   | 0.776 E6   | 3.1   | 100 | -0.01 |  | 4.58- 4.64  |  |
| 33  | AR1016-C             | 1.734   | 1.608 E6   | 7.3   | 92  | 0.00  |  | 5.23- 5.29  |  |
| 34  | AR1016-D             | 752.270 | 791.982 E3 | -5.3  | 107 | 0.00  |  | 5.41- 5.47  |  |
| 35  | AR1016-E             | 513.080 | 477.586 E3 | 6.9   | 95  | 0.00  |  | 6.05- 6.11  |  |
| 36  | AR1260-A             | 2.000   | 1.660 E6   | 17.0  | 88  | -0.01 |  | 8.66- 8.72  |  |
| 37  | AR1260-B             | 0.874   | 0.979 E6   | -12.0 | 107 | 0.00  |  | 8.77- 8.83  |  |
| 38  | AR1260-C             | 1.022   | 0.995 E6   | 2.6   | 95  | 0.00  |  | 9.20- 9.26  |  |
| 39  | AR1260-D             | 2.146   | 2.232 E6   | -4.0  | 99  | 0.02  |  | 9.56- 9.62  |  |
| 40  | AR1260-E             | 2.038   | 2.084 E6   | -2.3  | 97  | 0.03  |  | 10.11-10.17 |  |
| 41  | AR1262-A             |         |            |       |     |       |  |             |  |
| 42  | AR1262-B             |         |            |       |     |       |  |             |  |
| 43  | AR1262-C             |         |            |       |     |       |  |             |  |
| 44  | AR1262-D             |         |            |       |     |       |  |             |  |
| 45  | AR1262-E             |         |            |       |     |       |  |             |  |
| 46  | AR1268-A             |         |            |       |     |       |  |             |  |
| 47  | AR1268-B             |         |            |       |     |       |  |             |  |

Continuing Calibration Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4350-CC4311  
Lab FileID: 2G164661.D

|       |                    |        |           |     |    |      |       |       |  |              |
|-------|--------------------|--------|-----------|-----|----|------|-------|-------|--|--------------|
| 48    | AR1268-C           |        |           |     |    |      |       |       |  | -----NA----- |
| 49    | AR1268-D           |        |           |     |    |      |       |       |  | -----NA----- |
| 50    | AR1268-E           |        |           |     |    |      |       |       |  | -----NA----- |
| 51 S  | Decachlorobiphenyl | 19.099 | 18.088 E6 | 5.3 | 97 | 0.00 | 11.74 | 11.80 |  |              |
| ----- |                    |        |           |     |    |      |       |       |  |              |

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
2G164657.D 2PCB4311.M              Thu May 31 15:22:25 2018    RPT1

6.7.10  
6



## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4351-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164748.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4351\2G164748.D\ECD1A.CH Vial: 70  
 Signal #2 : C:\msdchem\1\DATA\2G4351\2G164748.D\ECD2B.CH  
 Acq On : 01 Jun 2018 3:16 pm Operator: tianweir  
 Sample : cc4311-1000 Inst : HP G1530A  
 Misc : OP12416,G2G4351,16.7,,,10,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Fri Jun 01 12:21:49 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 3.976 E6   | -8.3         | 108   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 80.208 E3  | -3.0         | 106   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 140.143 E3 | -3.0         | 107   | 0.00     | 3.51- | 3.57   |
| 33  | AR1016-C             | 289.965 | 273.816 E3 | 5.6          | 96    | 0.00     | 4.05- | 4.11   |
| 34  | AR1016-D             | 118.235 | 115.651 E3 | 2.2          | 100   | 0.00     | 4.22- | 4.28   |
| 35  | AR1016-E             | 121.934 | 120.958 E3 | 0.8          | 103   | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 285.082 E3 | 16.4         | 90    | 0.00     | 7.09- | 7.15   |
| 37  | AR1260-B             | 144.444 | 158.068 E3 | -9.4         | 103   | 0.00     | 7.24- | 7.30   |
| 38  | AR1260-C             | 159.229 | 152.891 E3 | 4.0          | 90    | 0.00     | 7.57- | 7.63   |
| 39  | AR1260-D             | 367.146 | 372.542 E3 | -1.5         | 94    | 0.00     | 8.01- | 8.07   |
| 40  | AR1260-E             | 378.788 | 407.318 E3 | -7.5         | 101   | 0.00     | 8.40- | 8.56   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4351-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164748.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |       |    |     |    |      |  |       |      |  |  |  |
|------|--------------------|-------|-------|----|-----|----|------|--|-------|------|--|--|--|
| 42   | AR1262-B           |       |       |    |     |    |      |  |       |      |  |  |  |
| 43   | AR1262-C           |       |       |    |     |    |      |  |       |      |  |  |  |
| 44   | AR1262-D           |       |       |    |     |    |      |  |       |      |  |  |  |
| 45   | AR1262-E           |       |       |    |     |    |      |  |       |      |  |  |  |
| 46   | AR1268-A           |       |       |    |     |    |      |  |       |      |  |  |  |
| 47   | AR1268-B           |       |       |    |     |    |      |  |       |      |  |  |  |
| 48   | AR1268-C           |       |       |    |     |    |      |  |       |      |  |  |  |
| 49   | AR1268-D           |       |       |    |     |    |      |  |       |      |  |  |  |
| 50   | AR1268-E           |       |       |    |     |    |      |  |       |      |  |  |  |
| 51 S | Decachlorobiphenyl | 4.056 | 3.661 | E6 | 9.7 | 93 | 0.00 |  | 9.93- | 9.99 |  |  |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |         |    |       |     |      |  |        |       |  |  |  |
|-----|----------------------|---------|---------|----|-------|-----|------|--|--------|-------|--|--|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 24.287  | E6 | -6.1  | 105 | 0.00 |  | 3.39-  | 3.45  |  |  |  |
| 2   | AR1221-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 3   | AR1221-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 4   | AR1221-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 5   | AR1221-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 6   | AR1221-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 7   | AR1232-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 8   | AR1232-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 9   | AR1232-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 10  | AR1232-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 11  | AR1232-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 12  | AR1242-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 13  | AR1242-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 14  | AR1242-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 15  | AR1242-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 16  | AR1242-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 17  | AR1248-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 18  | AR1248-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 19  | AR1248-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 20  | AR1248-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 21  | AR1248-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 22  | AR1248-F             |         |         |    |       |     |      |  |        |       |  |  |  |
| 23  | AR1248-G             |         |         |    |       |     |      |  |        |       |  |  |  |
| 24  | AR1254-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 25  | AR1254-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 26  | AR1254-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 27  | AR1254-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 28  | AR1254-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 29  | AR1254-F             |         |         |    |       |     |      |  |        |       |  |  |  |
| 30  | AR1254-G             |         |         |    |       |     |      |  |        |       |  |  |  |
| 31  | AR1016-A             | 374.605 | 415.300 | E3 | -10.9 | 113 | 0.00 |  | 4.05-  | 4.11  |  |  |  |
| 32  | AR1016-B             | 0.801   | 0.813   | E6 | -1.5  | 105 | 0.00 |  | 4.58-  | 4.64  |  |  |  |
| 33  | AR1016-C             | 1.734   | 1.699   | E6 | 2.0   | 97  | 0.00 |  | 5.23-  | 5.29  |  |  |  |
| 34  | AR1016-D             | 752.270 | 839.715 | E3 | -11.6 | 114 | 0.00 |  | 5.41-  | 5.47  |  |  |  |
| 35  | AR1016-E             | 513.080 | 515.397 | E3 | -0.5  | 102 | 0.00 |  | 6.05-  | 6.11  |  |  |  |
| 36  | AR1260-A             | 2.000   | 1.780   | E6 | 11.0  | 95  | 0.00 |  | 8.65-  | 8.71  |  |  |  |
| 37  | AR1260-B             | 0.874   | 0.991   | E6 | -13.4 | 108 | 0.00 |  | 8.76-  | 8.82  |  |  |  |
| 38  | AR1260-C             | 1.022   | 1.033   | E6 | -1.1  | 98  | 0.00 |  | 9.19-  | 9.25  |  |  |  |
| 39  | AR1260-D             | 2.146   | 1.913   | E6 | 10.9  | 85  | 0.00 |  | 9.54-  | 9.60  |  |  |  |
| 40  | AR1260-E             | 2.038   | 2.128   | E6 | -4.4  | 99  | 0.00 |  | 10.09- | 10.15 |  |  |  |
| 41  | AR1262-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 42  | AR1262-B             |         |         |    |       |     |      |  |        |       |  |  |  |
| 43  | AR1262-C             |         |         |    |       |     |      |  |        |       |  |  |  |
| 44  | AR1262-D             |         |         |    |       |     |      |  |        |       |  |  |  |
| 45  | AR1262-E             |         |         |    |       |     |      |  |        |       |  |  |  |
| 46  | AR1268-A             |         |         |    |       |     |      |  |        |       |  |  |  |
| 47  | AR1268-B             |         |         |    |       |     |      |  |        |       |  |  |  |

Continuing Calibration Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4351-CC4311  
Lab FileID: 2G164748.D

|       |                    |        |        |    |     |    |      |       |       |              |
|-------|--------------------|--------|--------|----|-----|----|------|-------|-------|--------------|
| 48    | AR1268-C           |        |        |    |     |    |      |       |       | -----NA----- |
| 49    | AR1268-D           |        |        |    |     |    |      |       |       | -----NA----- |
| 50    | AR1268-E           |        |        |    |     |    |      |       |       | -----NA----- |
| 51 S  | Decachlorobiphenyl | 19.099 | 18.508 | E6 | 3.1 | 99 | 0.00 | 11.73 | 11.79 |              |
| ----- |                    |        |        |    |     |    |      |       |       |              |
| ----- |                    |        |        |    |     |    |      |       |       |              |

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
2G164733.D 2PCB4311.M              Fri Jun 01 15:39:48 2018    RPT1

6.7.11  
6

## Continuing Calibration Summary

Page 1 of 3

Job Number: JC66894

Sample: G2G4351-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164759.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

## Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\2G4351\2G164759.D\ECD1A.CH Vial: 78  
 Signal #2 : C:\msdchem\1\DATA\2G4351\2G164759.D\ECD2B.CH  
 Acq On : 02 Jun 2018 1:08 am Operator: tianweir  
 Sample : cc4311-500 Inst : HP G1530A  
 Misc : OP12385,G2G4351,15.7,,,10,1 Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\MSDCHEM\1\METHODS\2PCB4311.M (Chemstation Integrator)  
 Title :  
 Last Update : Mon Jun 04 08:46:06 2018  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

|     | Compound             | AvgRF   | CCRF       | %Dev         | Area% | Dev(min) | RT    | Window |
|-----|----------------------|---------|------------|--------------|-------|----------|-------|--------|
| 1 S | Tetrachloro-m-xylene | 3.670   | 3.951 E6   | -7.7         | 112   | 0.00     | 2.74- | 2.80   |
| 2   | AR1221-A             |         |            | -----NA----- |       |          |       |        |
| 3   | AR1221-B             |         |            | -----NA----- |       |          |       |        |
| 4   | AR1221-C             |         |            | -----NA----- |       |          |       |        |
| 5   | AR1221-D             |         |            | -----NA----- |       |          |       |        |
| 6   | AR1221-E             |         |            | -----NA----- |       |          |       |        |
| 7   | AR1232-A             |         |            | -----NA----- |       |          |       |        |
| 8   | AR1232-B             |         |            | -----NA----- |       |          |       |        |
| 9   | AR1232-C             |         |            | -----NA----- |       |          |       |        |
| 10  | AR1232-D             |         |            | -----NA----- |       |          |       |        |
| 11  | AR1232-E             |         |            | -----NA----- |       |          |       |        |
| 12  | AR1242-A             |         |            | -----NA----- |       |          |       |        |
| 13  | AR1242-B             |         |            | -----NA----- |       |          |       |        |
| 14  | AR1242-C             |         |            | -----NA----- |       |          |       |        |
| 15  | AR1242-D             |         |            | -----NA----- |       |          |       |        |
| 16  | AR1242-E             |         |            | -----NA----- |       |          |       |        |
| 17  | AR1248-A             |         |            | -----NA----- |       |          |       |        |
| 18  | AR1248-B             |         |            | -----NA----- |       |          |       |        |
| 19  | AR1248-C             |         |            | -----NA----- |       |          |       |        |
| 20  | AR1248-D             |         |            | -----NA----- |       |          |       |        |
| 21  | AR1248-E             |         |            | -----NA----- |       |          |       |        |
| 22  | AR1248-F             |         |            | -----NA----- |       |          |       |        |
| 23  | AR1248-G             |         |            | -----NA----- |       |          |       |        |
| 24  | AR1254-A             |         |            | -----NA----- |       |          |       |        |
| 25  | AR1254-B             |         |            | -----NA----- |       |          |       |        |
| 26  | AR1254-C             |         |            | -----NA----- |       |          |       |        |
| 27  | AR1254-D             |         |            | -----NA----- |       |          |       |        |
| 28  | AR1254-E             |         |            | -----NA----- |       |          |       |        |
| 29  | AR1254-F             |         |            | -----NA----- |       |          |       |        |
| 30  | AR1254-G             |         |            | -----NA----- |       |          |       |        |
| 31  | AR1016-A             | 77.893  | 84.340 E3  | -8.3         | 111   | 0.00     | 3.11- | 3.17   |
| 32  | AR1016-B             | 136.058 | 144.708 E3 | -6.4         | 109   | 0.00     | 3.51- | 3.57   |
| 33  | AR1016-C             | 289.965 | 272.615 E3 | 6.0          | 98    | 0.00     | 4.06- | 4.12   |
| 34  | AR1016-D             | 118.235 | 119.161 E3 | -0.8         | 103   | 0.00     | 4.22- | 4.28   |
| 35  | AR1016-E             | 121.934 | 126.363 E3 | -3.6         | 107   | 0.00     | 4.72- | 4.78   |
| 36  | AR1260-A             | 340.850 | 287.125 E3 | 15.8         | 93    | 0.00     | 7.09- | 7.15   |
| 37  | AR1260-B             | 144.444 | 162.546 E3 | -12.5        | 108   | 0.00     | 7.24- | 7.30   |
| 38  | AR1260-C             | 159.229 | 159.668 E3 | -0.3         | 97    | 0.00     | 7.58- | 7.64   |
| 39  | AR1260-D             | 367.146 | 428.037 E3 | -16.6        | 114   | 0.00     | 8.01- | 8.07   |
| 40  | AR1260-E             | 378.788 | 380.592 E3 | -0.5         | 98    | 0.00     | 8.40- | 8.55   |
| 41  | AR1262-A             |         |            | -----NA----- |       |          |       |        |

# Continuing Calibration Summary

Page 2 of 3

Job Number: JC66894

Sample: G2G4351-CC4311

Account: ELPASOX EL PASO CORPORATION

Lab FileID: 2G164759.D

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

|      |                    |       |          |     |    |      |       |      |  |
|------|--------------------|-------|----------|-----|----|------|-------|------|--|
| 42   | AR1262-B           |       |          |     |    |      |       |      |  |
| 43   | AR1262-C           |       |          |     |    |      |       |      |  |
| 44   | AR1262-D           |       |          |     |    |      |       |      |  |
| 45   | AR1262-E           |       |          |     |    |      |       |      |  |
| 46   | AR1268-A           |       |          |     |    |      |       |      |  |
| 47   | AR1268-B           |       |          |     |    |      |       |      |  |
| 48   | AR1268-C           |       |          |     |    |      |       |      |  |
| 49   | AR1268-D           |       |          |     |    |      |       |      |  |
| 50   | AR1268-E           |       |          |     |    |      |       |      |  |
| 51 S | Decachlorobiphenyl | 4.056 | 3.795 E6 | 6.4 | 97 | 0.00 | 9.93- | 9.99 |  |

\*\*\*\*\* Signal #2 \*\*\*\*\*

|     |                      |         |            |       |     |      |        |       |  |
|-----|----------------------|---------|------------|-------|-----|------|--------|-------|--|
| 1 S | Tetrachloro-m-xylene | 22.882  | 23.831 E6  | -4.1  | 107 | 0.00 | 3.39-  | 3.45  |  |
| 2   | AR1221-A             |         |            |       |     |      |        |       |  |
| 3   | AR1221-B             |         |            |       |     |      |        |       |  |
| 4   | AR1221-C             |         |            |       |     |      |        |       |  |
| 5   | AR1221-D             |         |            |       |     |      |        |       |  |
| 6   | AR1221-E             |         |            |       |     |      |        |       |  |
| 7   | AR1232-A             |         |            |       |     |      |        |       |  |
| 8   | AR1232-B             |         |            |       |     |      |        |       |  |
| 9   | AR1232-C             |         |            |       |     |      |        |       |  |
| 10  | AR1232-D             |         |            |       |     |      |        |       |  |
| 11  | AR1232-E             |         |            |       |     |      |        |       |  |
| 12  | AR1242-A             |         |            |       |     |      |        |       |  |
| 13  | AR1242-B             |         |            |       |     |      |        |       |  |
| 14  | AR1242-C             |         |            |       |     |      |        |       |  |
| 15  | AR1242-D             |         |            |       |     |      |        |       |  |
| 16  | AR1242-E             |         |            |       |     |      |        |       |  |
| 17  | AR1248-A             |         |            |       |     |      |        |       |  |
| 18  | AR1248-B             |         |            |       |     |      |        |       |  |
| 19  | AR1248-C             |         |            |       |     |      |        |       |  |
| 20  | AR1248-D             |         |            |       |     |      |        |       |  |
| 21  | AR1248-E             |         |            |       |     |      |        |       |  |
| 22  | AR1248-F             |         |            |       |     |      |        |       |  |
| 23  | AR1248-G             |         |            |       |     |      |        |       |  |
| 24  | AR1254-A             |         |            |       |     |      |        |       |  |
| 25  | AR1254-B             |         |            |       |     |      |        |       |  |
| 26  | AR1254-C             |         |            |       |     |      |        |       |  |
| 27  | AR1254-D             |         |            |       |     |      |        |       |  |
| 28  | AR1254-E             |         |            |       |     |      |        |       |  |
| 29  | AR1254-F             |         |            |       |     |      |        |       |  |
| 30  | AR1254-G             |         |            |       |     |      |        |       |  |
| 31  | AR1016-A             | 374.605 | 429.306 E3 | -14.6 | 121 | 0.00 | 4.06-  | 4.12  |  |
| 32  | AR1016-B             | 0.801   | 0.841 E6   | -5.0  | 108 | 0.00 | 4.58-  | 4.64  |  |
| 33  | AR1016-C             | 1.734   | 1.668 E6   | 3.8   | 99  | 0.00 | 5.23-  | 5.29  |  |
| 34  | AR1016-D             | 752.270 | 882.234 E3 | -17.3 | 121 | 0.00 | 5.42-  | 5.48  |  |
| 35  | AR1016-E             | 513.080 | 528.116 E3 | -2.9  | 107 | 0.00 | 6.06-  | 6.12  |  |
| 36  | AR1260-A             | 2.000   | 1.778 E6   | 11.1  | 98  | 0.00 | 8.65-  | 8.71  |  |
| 37  | AR1260-B             | 0.874   | 1.025 E6   | -17.3 | 114 | 0.00 | 8.76-  | 8.82  |  |
| 38  | AR1260-C             | 1.022   | 1.046 E6   | -2.3  | 102 | 0.00 | 9.19-  | 9.25  |  |
| 39  | AR1260-D             | 2.146   | 2.100 E6   | 2.1   | 97  | 0.00 | 9.55-  | 9.61  |  |
| 40  | AR1260-E             | 2.038   | 2.143 E6   | -5.2  | 103 | 0.00 | 10.09- | 10.15 |  |
| 41  | AR1262-A             |         |            |       |     |      |        |       |  |
| 42  | AR1262-B             |         |            |       |     |      |        |       |  |
| 43  | AR1262-C             |         |            |       |     |      |        |       |  |
| 44  | AR1262-D             |         |            |       |     |      |        |       |  |
| 45  | AR1262-E             |         |            |       |     |      |        |       |  |
| 46  | AR1268-A             |         |            |       |     |      |        |       |  |
| 47  | AR1268-B             |         |            |       |     |      |        |       |  |

Continuing Calibration Summary

Job Number: JC66894  
Account: ELPASOX EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

Sample: G2G4351-CC4311  
Lab FileID: 2G164759.D

|       |                    |        |        |    |     |    |      |             |  |              |
|-------|--------------------|--------|--------|----|-----|----|------|-------------|--|--------------|
| 48    | AR1268-C           |        |        |    |     |    |      |             |  | -----NA----- |
| 49    | AR1268-D           |        |        |    |     |    |      |             |  | -----NA----- |
| 50    | AR1268-E           |        |        |    |     |    |      |             |  | -----NA----- |
| 51 S  | Decachlorobiphenyl | 19.099 | 17.445 | E6 | 8.7 | 97 | 0.00 | 11.73-11.79 |  |              |
| ----- |                    |        |        |    |     |    |      |             |  |              |

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
2G162098.D 2PCB4311.M              Mon Jun 04 11:42:01 2018    RPT1

6.7.12  
6



Dayton, NJ

Section 7

GC/LC Semi-volatiles

Raw Data

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:27:19 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2   | Resp#1   | Resp#2  | ppb      | ppb       |
|-----------------------------|----------------|--------|--------|----------|---------|----------|-----------|
| -----                       |                |        |        |          |         |          |           |
| System Monitoring Compounds |                |        |        |          |         |          |           |
| 1)                          | S Tetrachlo... | 2.771  | 3.420  | 136.9E6  | 957.9E6 | 37.310   | 41.861    |
|                             | Spiked Amount  | 40.000 |        | Recovery | =       | 93.28%   | 104.65%   |
| 51)                         | S Decachlor... | 9.956  | 11.761 | 128.4E6  | 755.8E6 | 31.667   | 39.570m   |
|                             | Spiked Amount  | 40.000 |        | Recovery | =       | 79.17%   | 98.92%    |
| Target Compounds            |                |        |        |          |         |          |           |
| 24)                         | AR1254-A       | 5.242  | 6.668  | 15255174 | 146.3E6 | 123.660  | 147.398m  |
| 25)                         | AR1254-B       | 5.581  | 6.954  | 29810572 | 465.2E6 | 115.209m | 472.755m# |
| 26)                         | AR1254-C       | 5.950  | 7.429  | 19632286 | 112.0E6 | 143.352m | 140.343m  |
| 27)                         | AR1254-D       | 6.108  | 7.598  | 26043602 | 168.7E6 | 105.908  | 103.222   |
| 28)                         | AR1254-E       | 6.490  | 7.931  | 17966724 | 105.4E6 | 98.443   | 96.837    |
| 29)                         | AR1254-F       | 6.733  | 8.378  | 20025649 | 172.3E6 | 116.975  | 145.839m  |
| 30)                         | AR1254-G       | 7.111  | 8.680  | 23373191 | 132.5E6 | 92.833   | 87.709    |
| -----                       |                |        |        |          |         |          |           |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

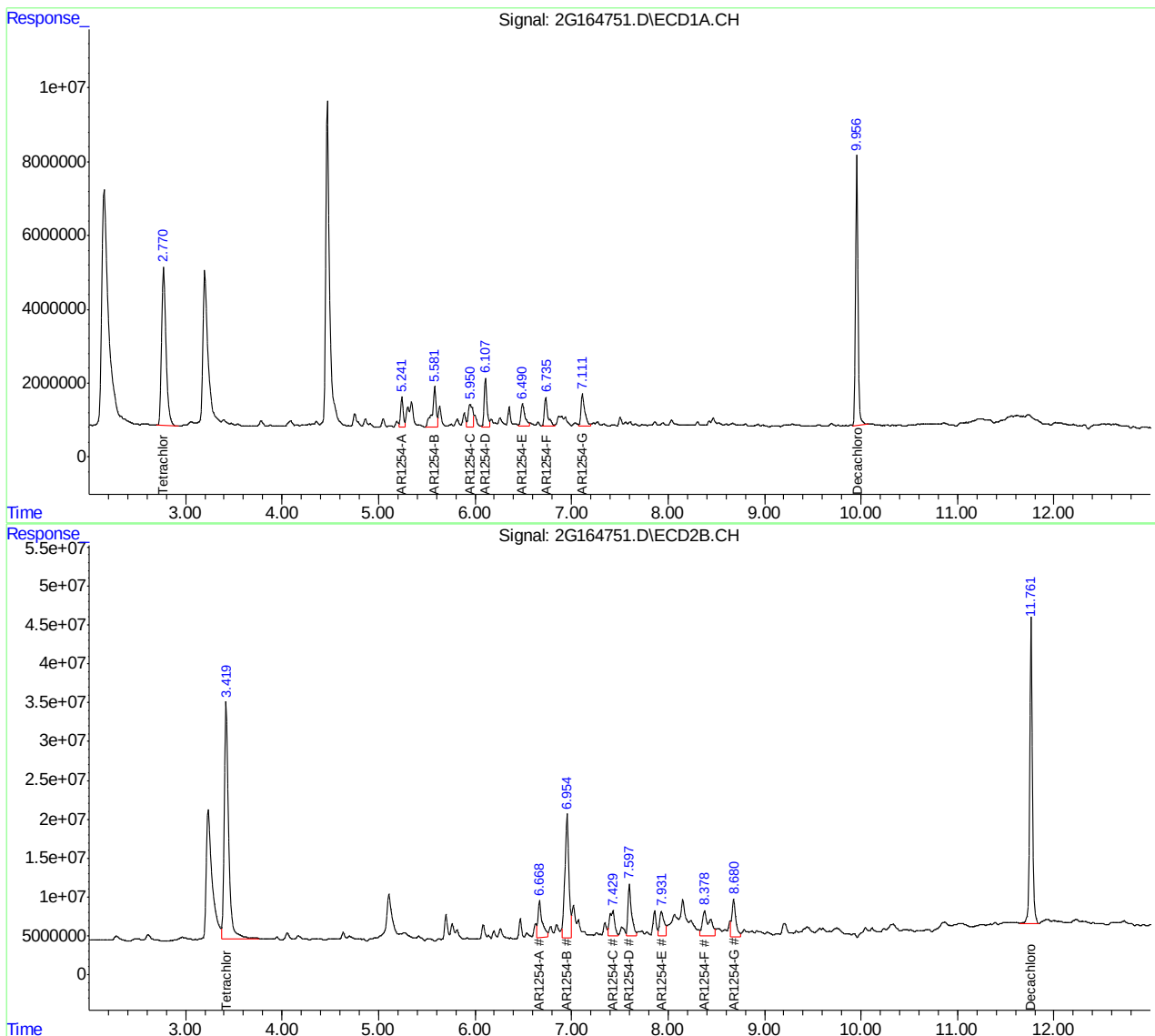


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:27:19 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: JC66894-1

Method: SW846 8082A

Lab FileID: 2G164751.D

Analyst approved: 06/04/18 16:00 Summer Kotb

Injection Time: 06/01/18 16:36

Supervisor approved: 06/05/18 16:15 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1254-B           |           | 1    | 5.58           | Split peak              |
| AR1254-C           |           | 1    | 5.95           | Split peak              |
| AR1254-A           |           | 2    | 6.67           | Split peak              |
| AR1254-B           |           | 2    | 6.95           | Split peak              |
| AR1254-C           |           | 2    | 7.43           | Split peak              |
| AR1254-F           |           | 2    | 8.38           | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.76          | Poorly defined baseline |

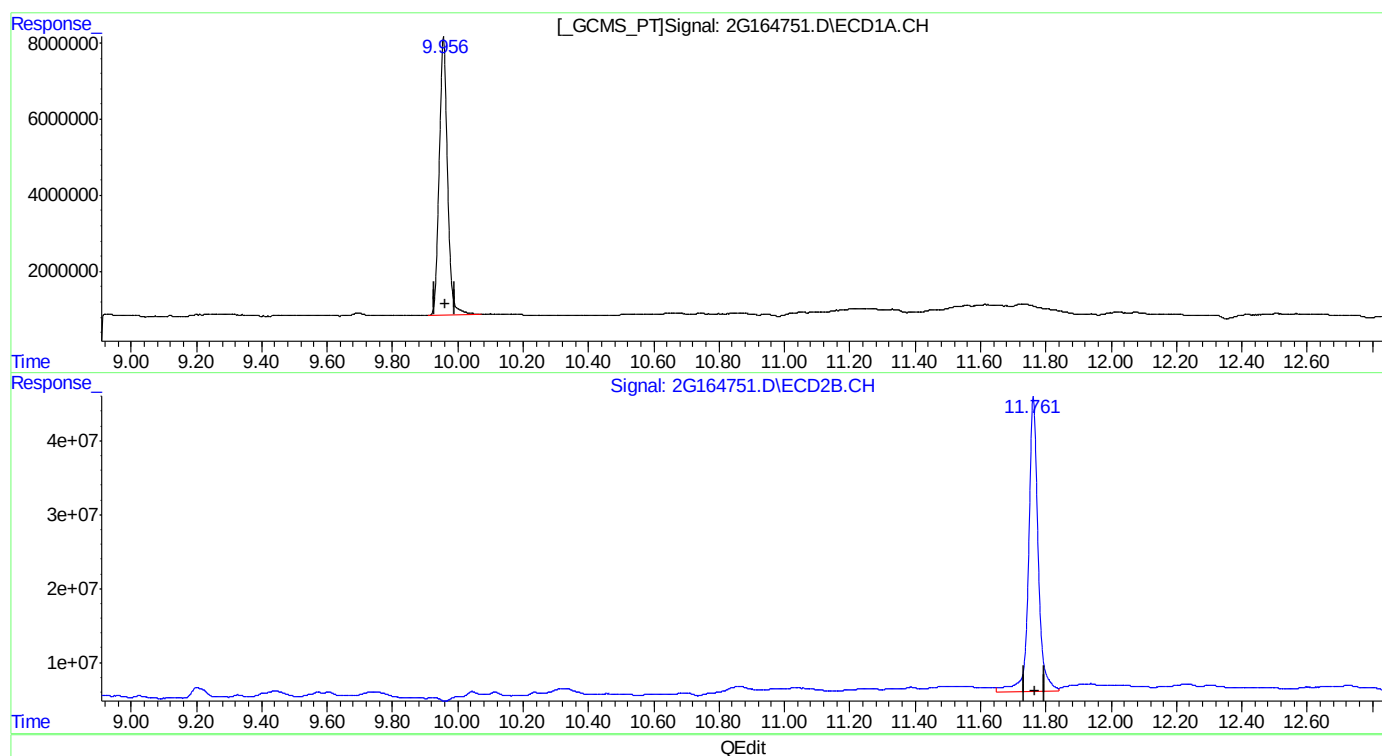
7.1.1.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.956min 31.667ppb

response 128434974

(51) Decachlorobiphenyl #2 (S)

11.762min 42.235ppb

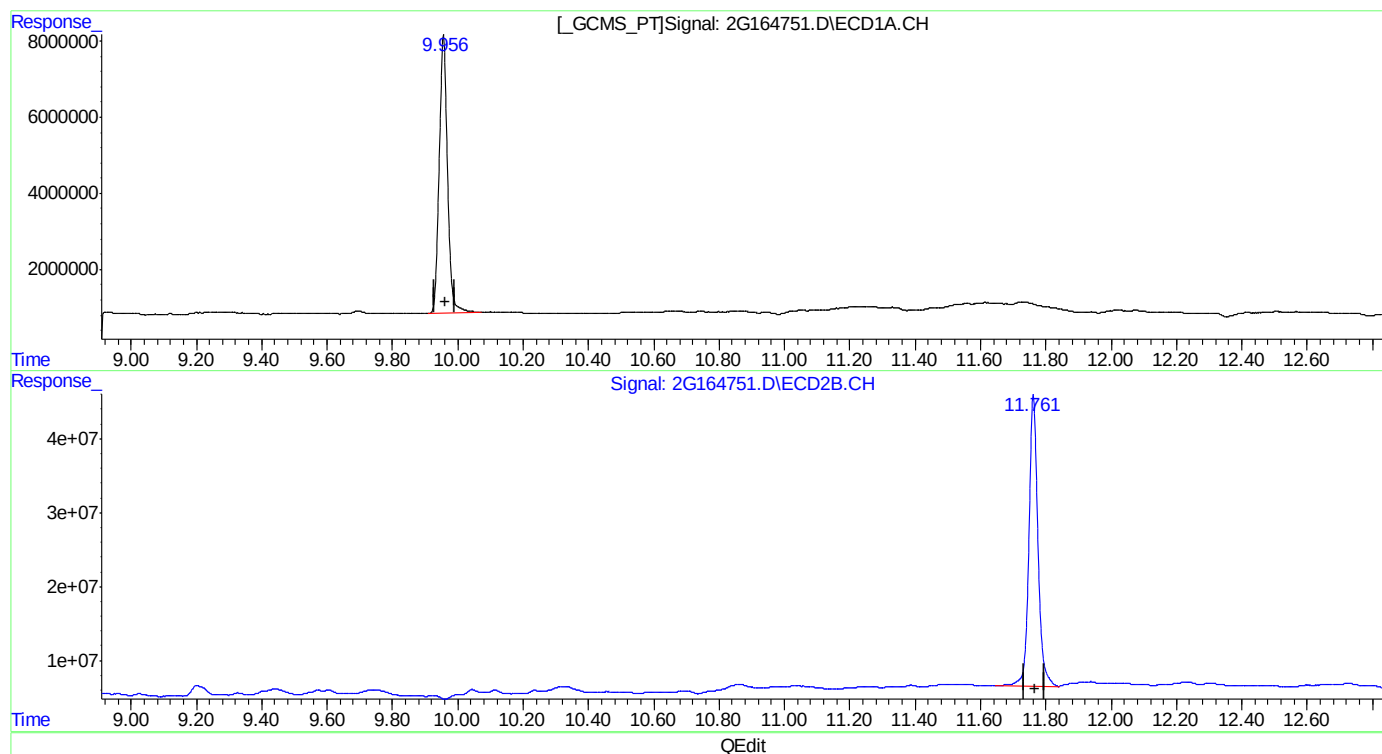
response 806666324

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.956min 31.667ppb

response 128434974

(51) Decachlorobiphenyl #2 (S)

11.761min 39.570ppb m

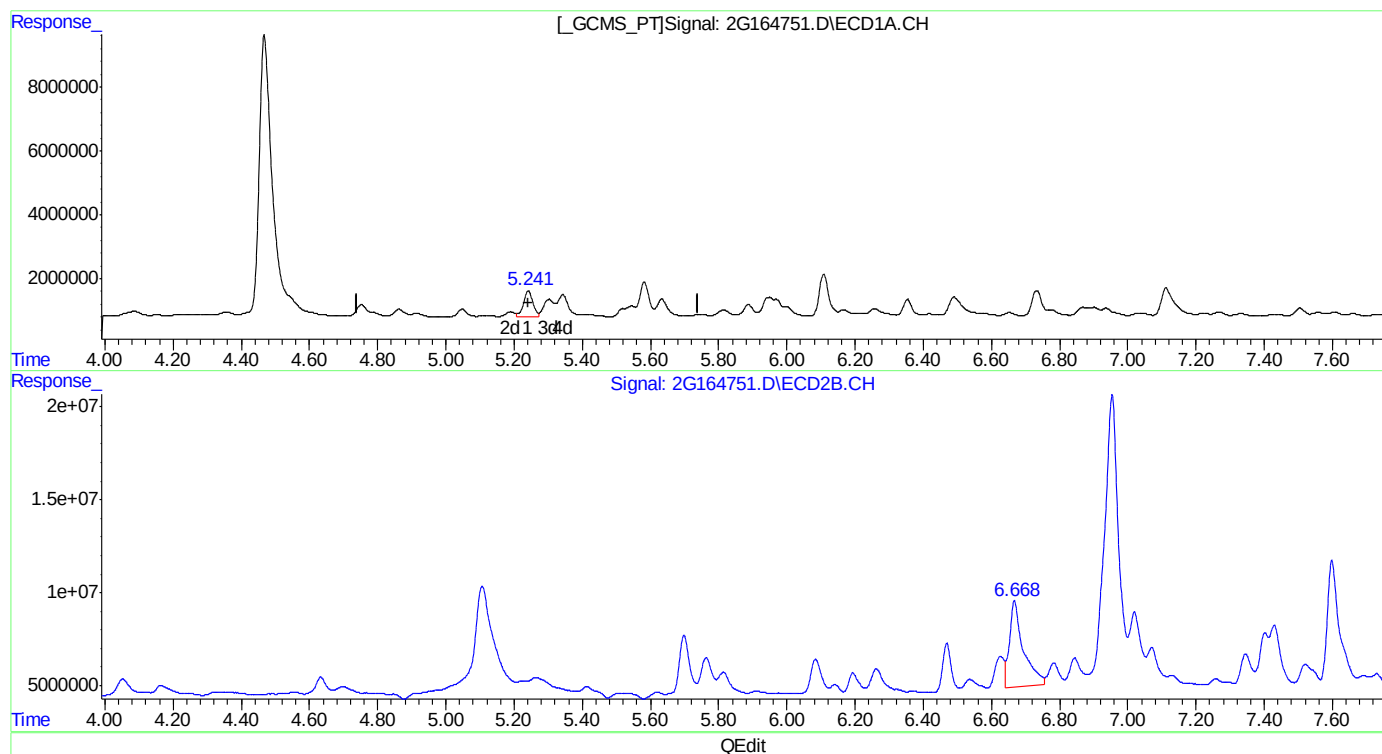
response 755760202

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.242min 123.660  
response 15255174

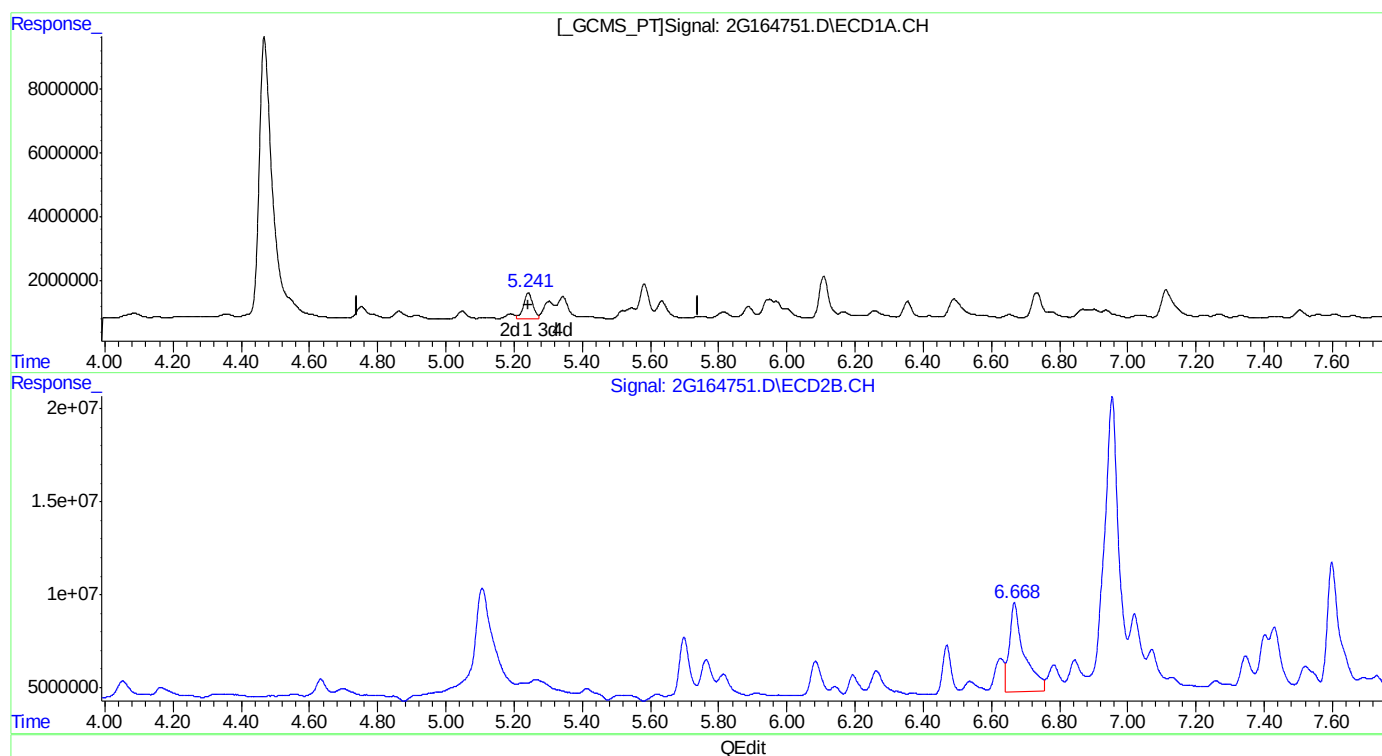
(24) AR1254-A #2  
6.668min 132.566  
response 131571457

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.242min 123.660  
response 15255174

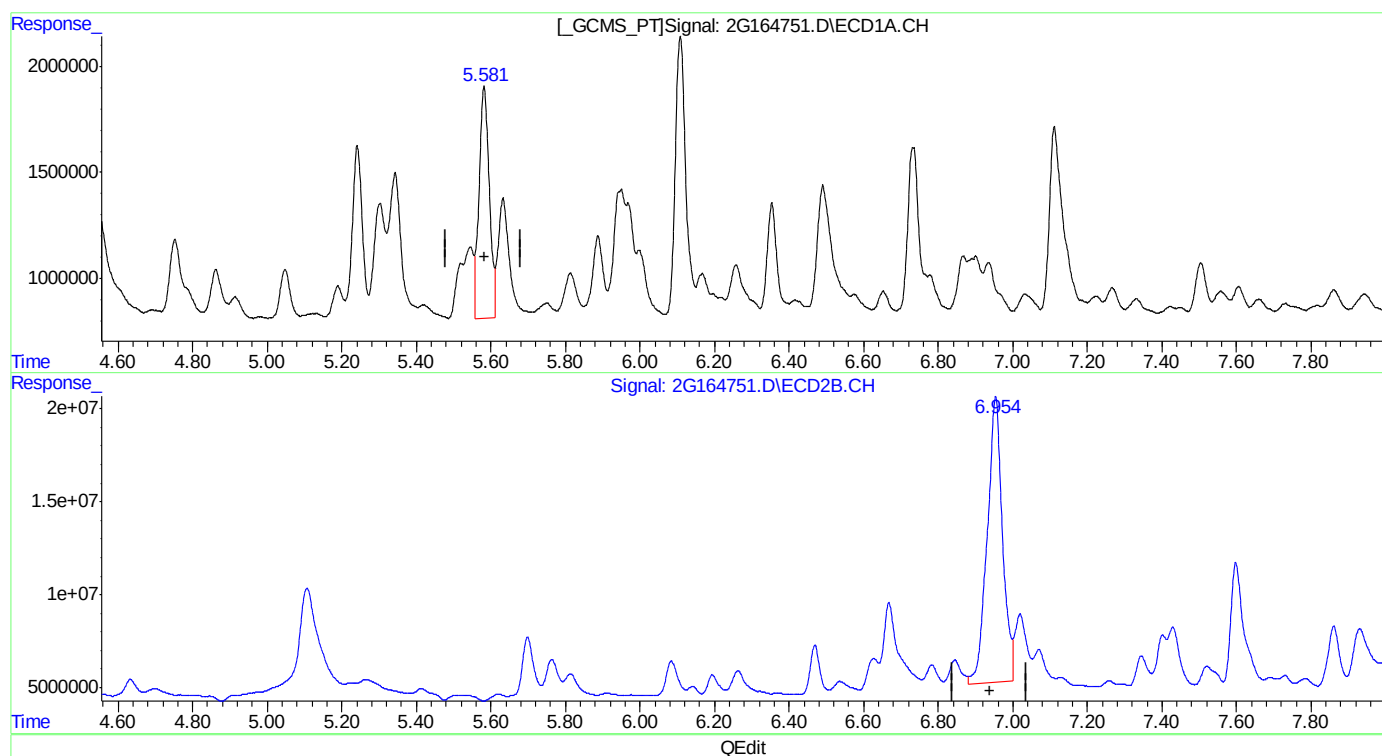
(24) AR1254-A #2  
6.668min 147.398 m  
response 146291827

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.582min 81.418PPB  
response 21067213

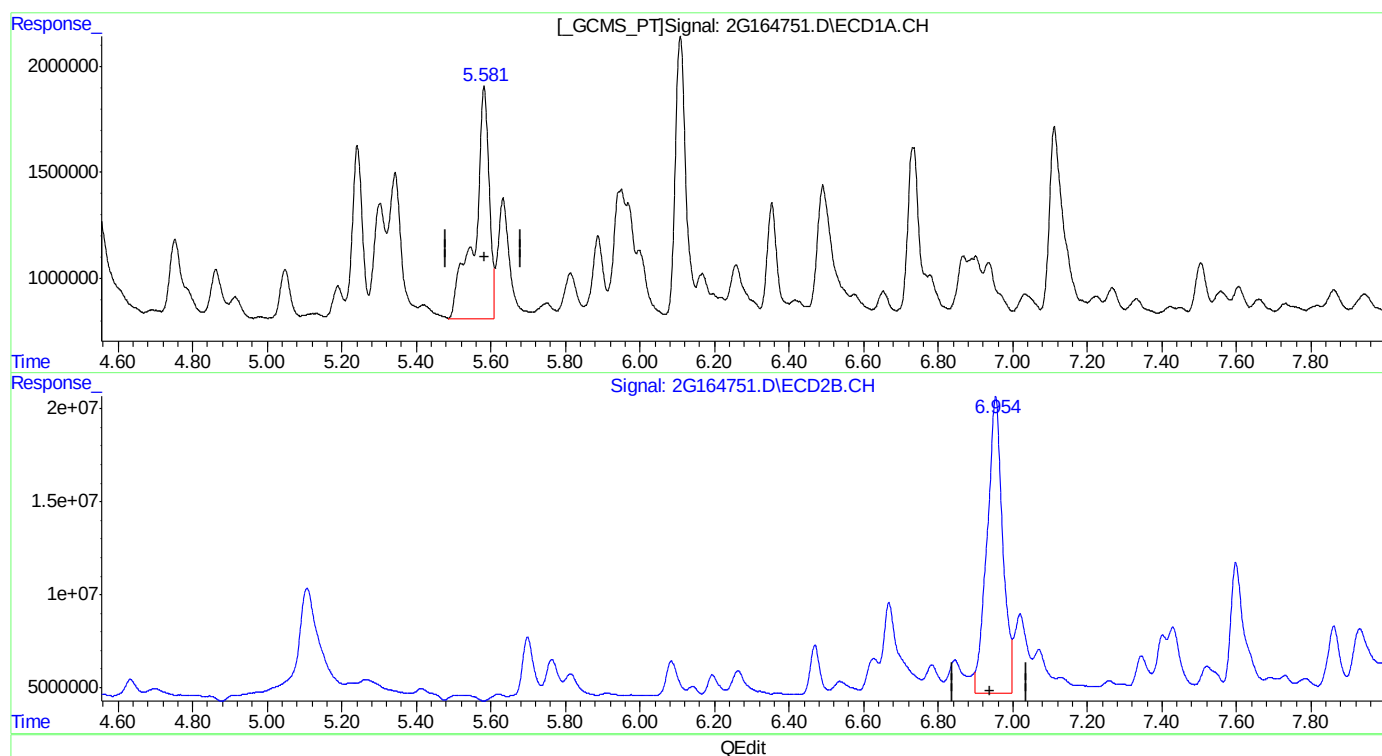
(25) AR1254-B #2  
6.954min 444.057PPB  
response 436914625

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.581min 115.209PPB m  
response 29810572

(25) AR1254-B #2  
6.954min 472.755PPB m  
response 465150764

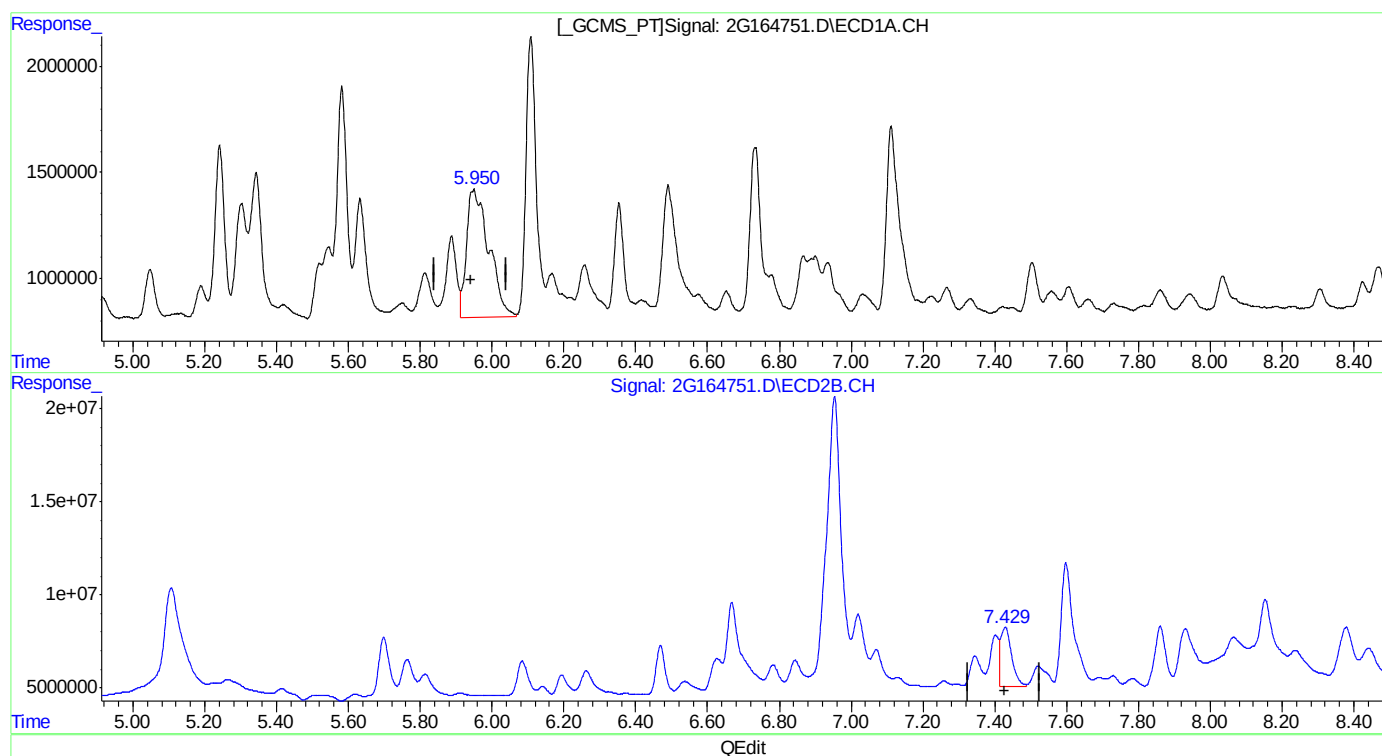


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.948min 188.304PPB  
response 25788582

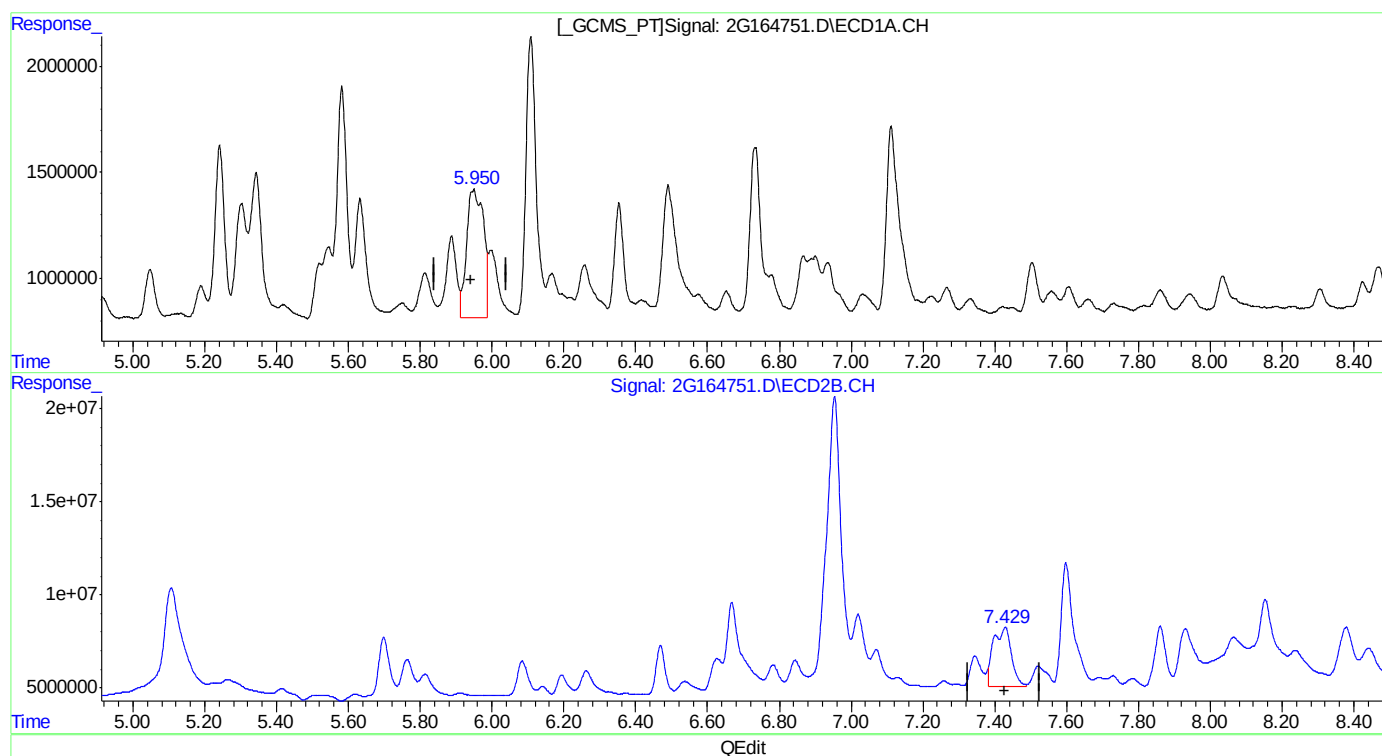
(26) AR1254-C #2  
7.429min 88.277PPB  
response 70420380

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.950min 143.352PPB m  
response 19632286

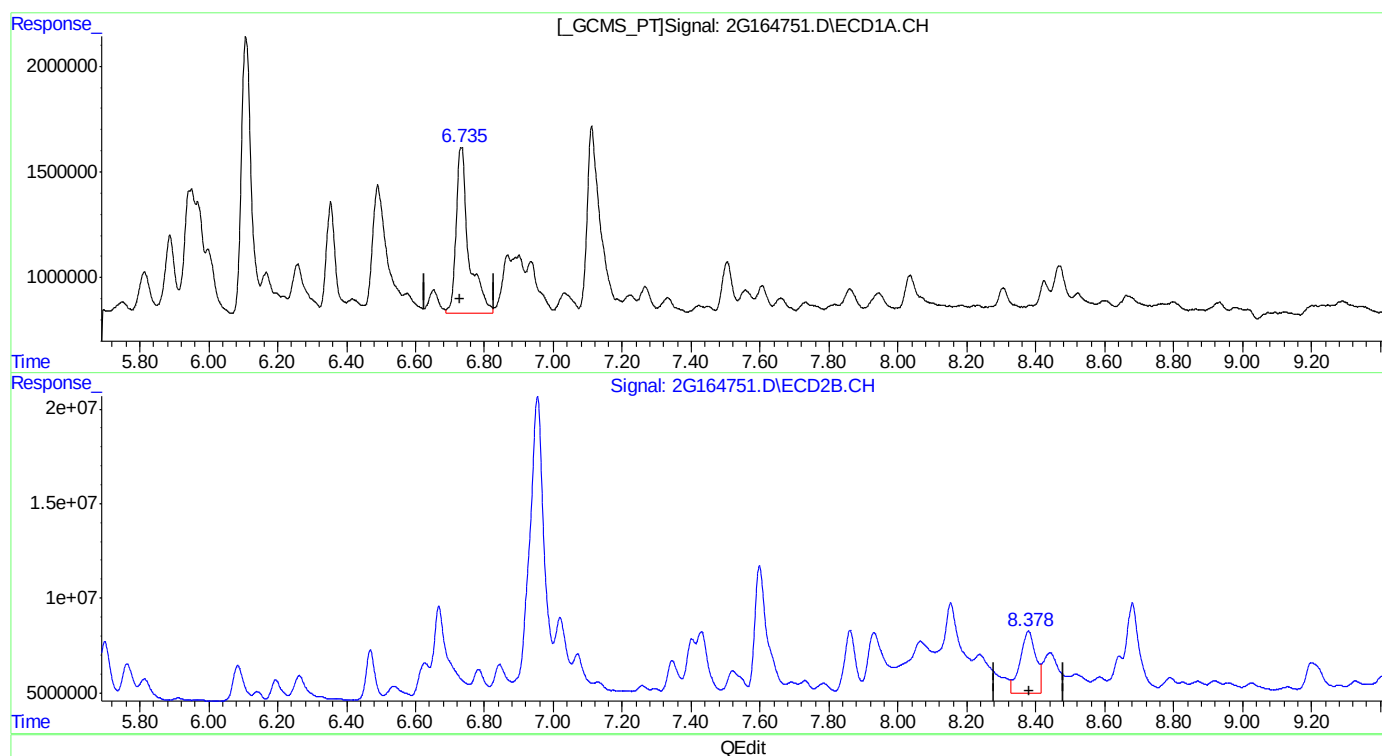
(26) AR1254-C #2  
7.429min 140.343PPB m  
response 111954957

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.733min 116.975PPB  
response 20025649

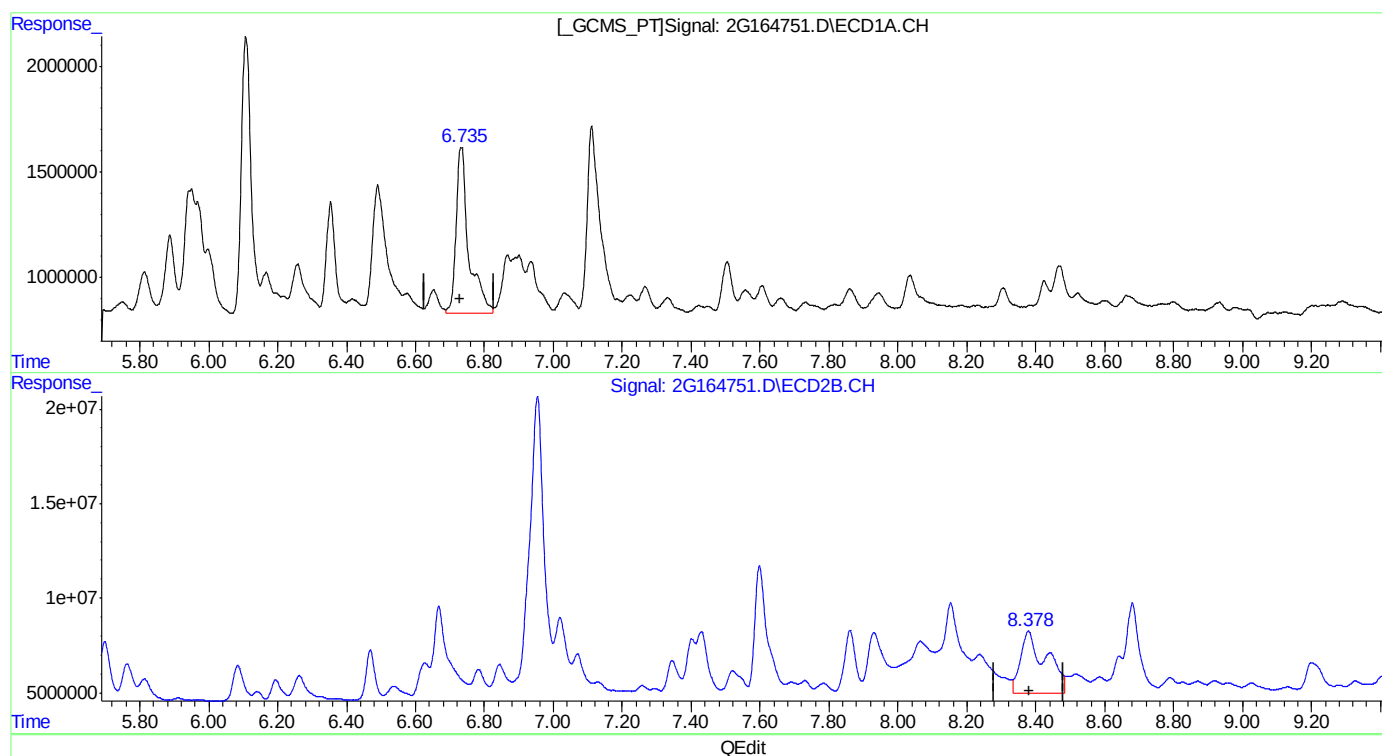
(29) AR1254-F #2  
8.378min 88.286PPB  
response 104282240

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164751.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:36 pm  
Operator : tianweir  
Sample : jc66894-1  
Misc : OP12385,G2G4351,15.5,,,10,1  
ALS Vial : 72 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:21:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.733min 116.975PPB  
response 20025649

(29) AR1254-F #2  
8.378min 145.839PPB m  
response 172263139

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:39:04 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb      |
|-----------------------------|--------|--------|----------|----------|----------|----------|
| -----                       |        |        |          |          |          |          |
| System Monitoring Compounds |        |        |          |          |          |          |
| 1) S Tetrachlo...           | 2.771  | 3.421  | 138.0E6  | 877.7E6  | 37.592   | 38.358   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 93.98%   | 95.89%   |
| 51) S Decachlor...          | 9.953  | 11.760 | 129.6E6  | 641.9E6  | 31.959   | 33.609m  |
| Spiked Amount               | 40.000 |        | Recovery | =        | 79.90%   | 84.02%   |
| Target Compounds            |        |        |          |          |          |          |
| 24) AR1254-A                | 5.240  | 6.667  | 15718847 | 128.6E6  | 127.418  | 129.537m |
| 25) AR1254-B                | 5.580  | 6.929  | 28672257 | 113.1E6  | 110.809m | 114.974m |
| 26) AR1254-C                | 5.942  | 7.429  | 16593432 | 83454180 | 121.163m | 104.615m |
| 27) AR1254-D                | 6.104  | 7.597  | 26629783 | 167.3E6  | 108.292m | 102.348m |
| 28) AR1254-E                | 6.486  | 7.924  | 20917790 | 131.3E6  | 114.612m | 120.546m |
| 29) AR1254-F                | 6.730  | 8.380  | 20793363 | 142.4E6  | 121.459  | 120.543m |
| 30) AR1254-G                | 7.109  | 8.677  | 26358705 | 177.4E6  | 104.690m | 117.411m |
| -----                       |        |        |          |          |          |          |

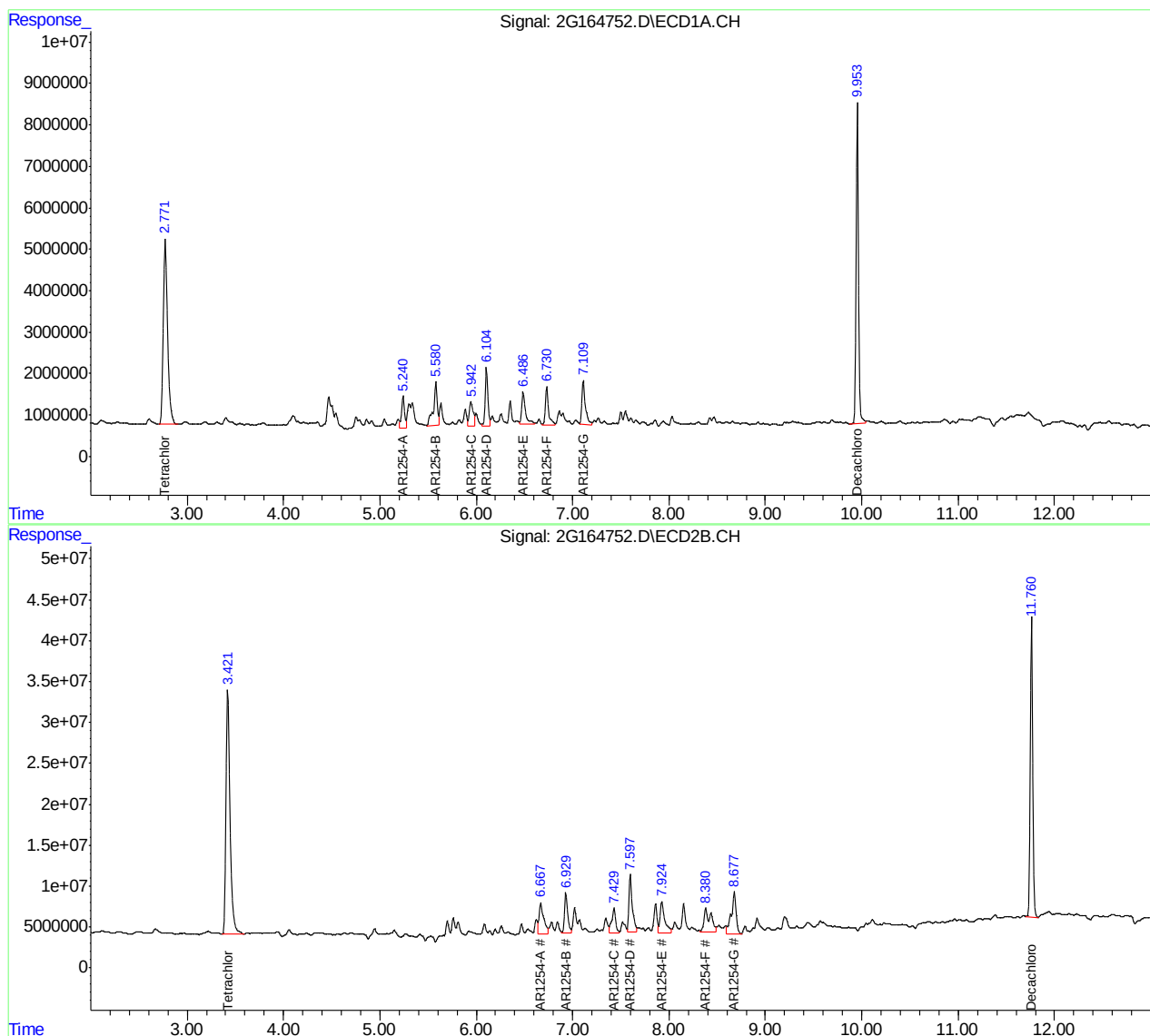
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:39:04 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: JC66894-2

Method: SW846 8082A

Lab FileID: 2G164752.D

Analyst approved: 06/04/18 16:00 Summer Kotb

Injection Time: 06/01/18 16:53

Supervisor approved: 06/05/18 16:15 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1254-B           |           | 1    | 5.58           | Split peak              |
| AR1254-C           |           | 1    | 5.94           | Split peak              |
| AR1254-D           |           | 1    | 6.10           | Split peak              |
| AR1254-E           |           | 1    | 6.49           | Split peak              |
| AR1254-A           |           | 2    | 6.67           | Split peak              |
| AR1254-B           |           | 2    | 6.93           | Split peak              |
| Ar1254-G           |           | 1    | 7.11           | Split peak              |
| AR1254-C           |           | 2    | 7.43           | Split peak              |
| AR1254-D           |           | 2    | 7.60           | Split peak              |
| AR1254-E           |           | 2    | 7.92           | Split peak              |
| AR1254-F           |           | 2    | 8.38           | Split peak              |
| Ar1254-G           |           | 2    | 8.68           | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.76          | Poorly defined baseline |

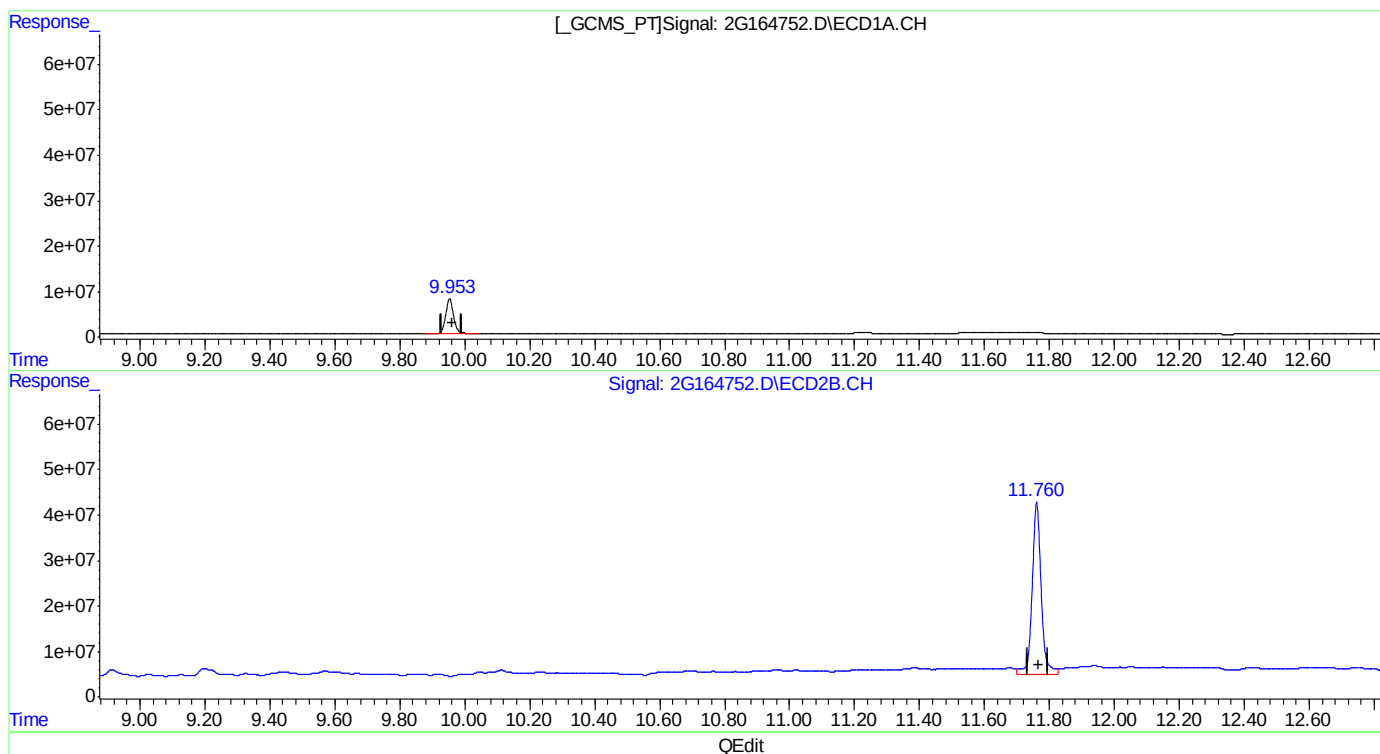
7.1.2.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.953min 31.959ppb

response 129619486

(51) Decachlorobiphenyl #2 (S)

11.761min 38.261ppb

response 730774234

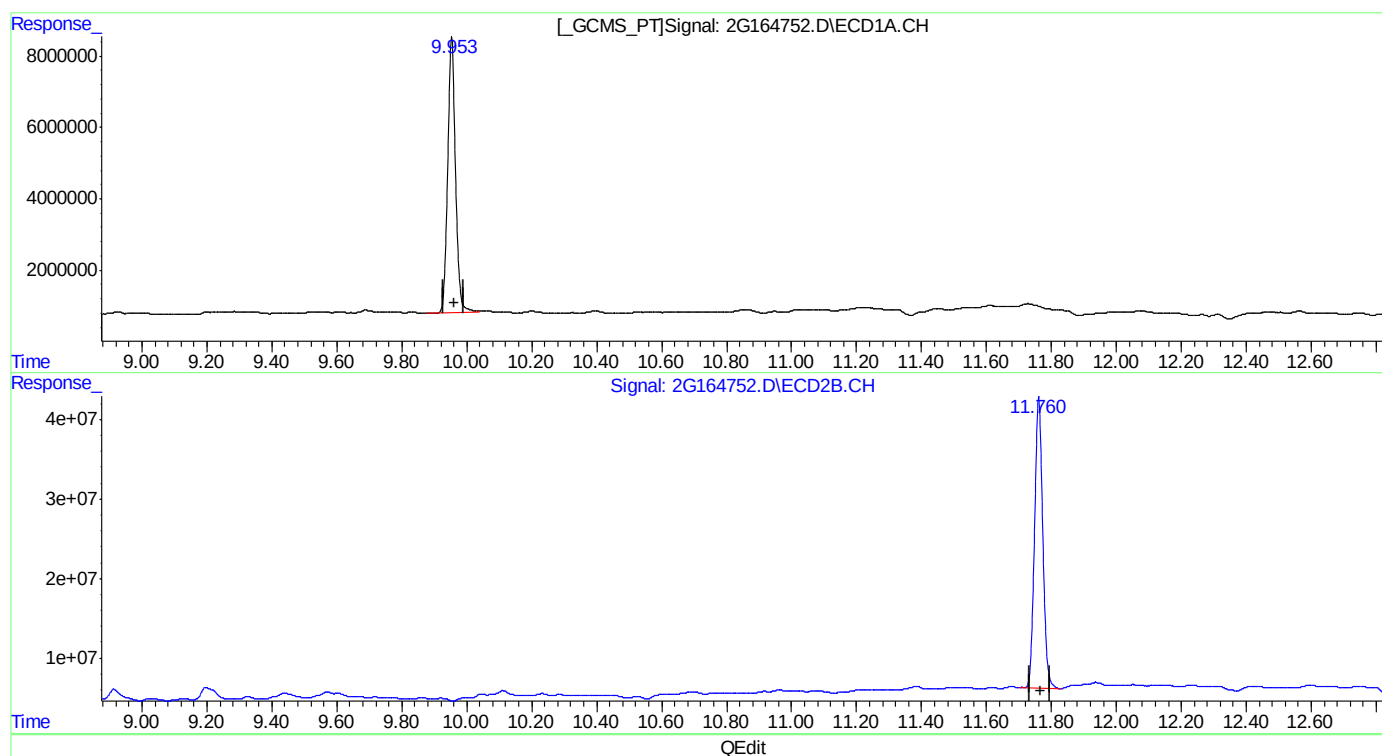


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.953min 31.959ppb

response 129619486

(51) Decachlorobiphenyl #2 (S)

11.760min 33.609ppb m

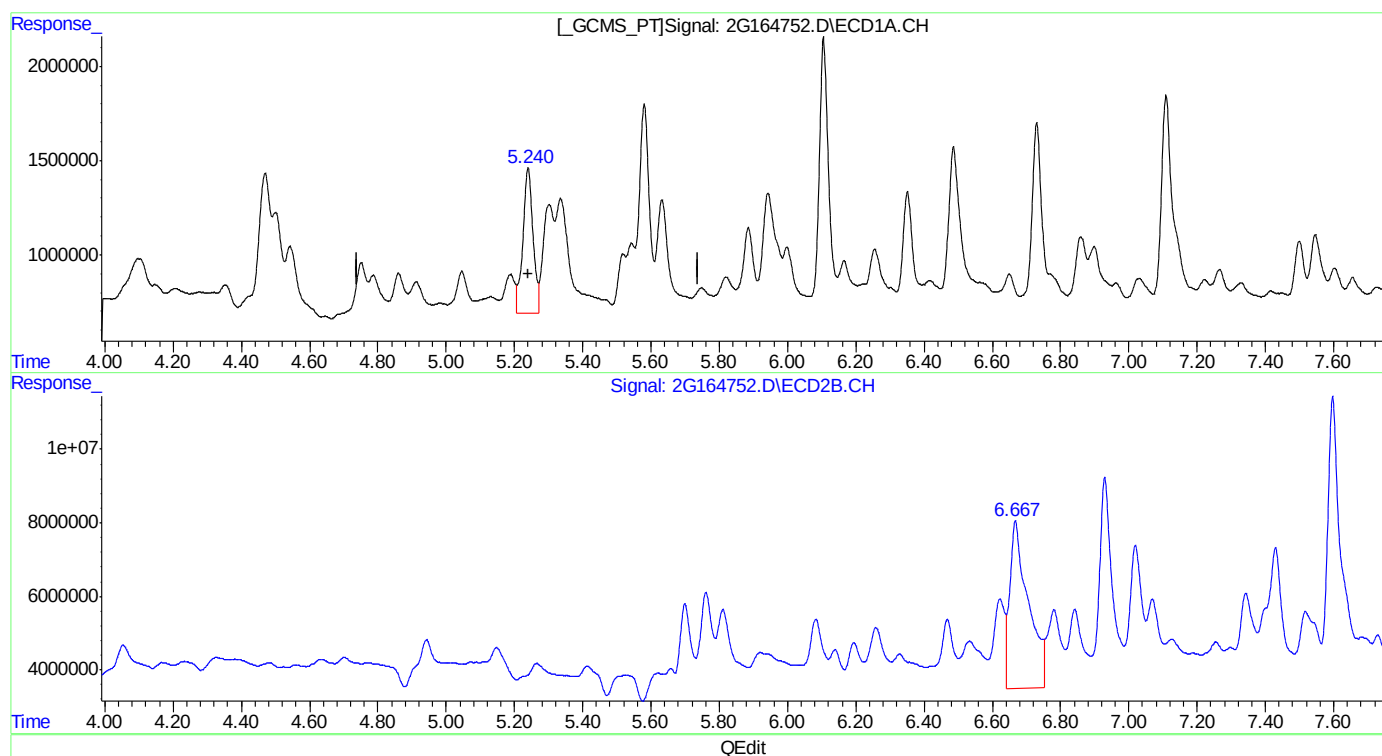
response 641906498

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.240min 127.418  
response 15718847

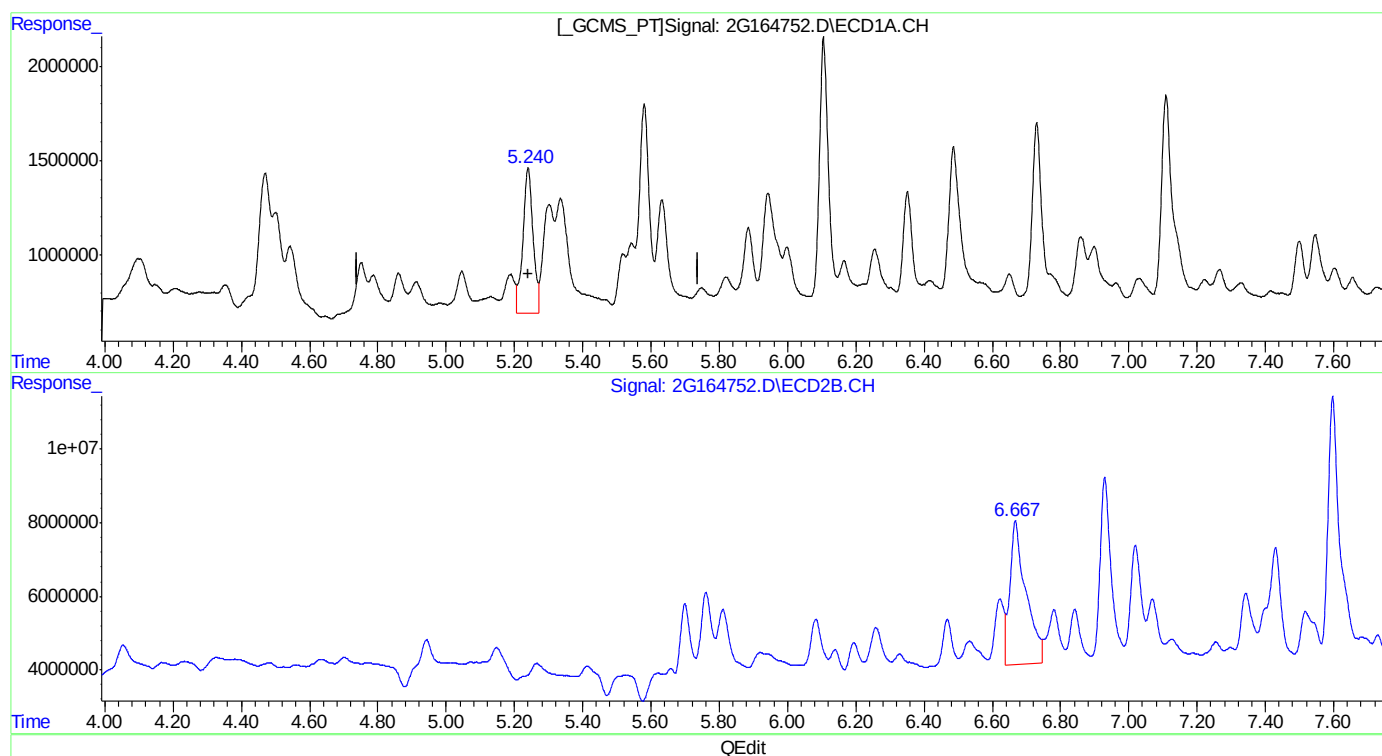
(24) AR1254-A #2  
6.668min 174.317  
response 173009169

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.240min 127.418  
response 15718847

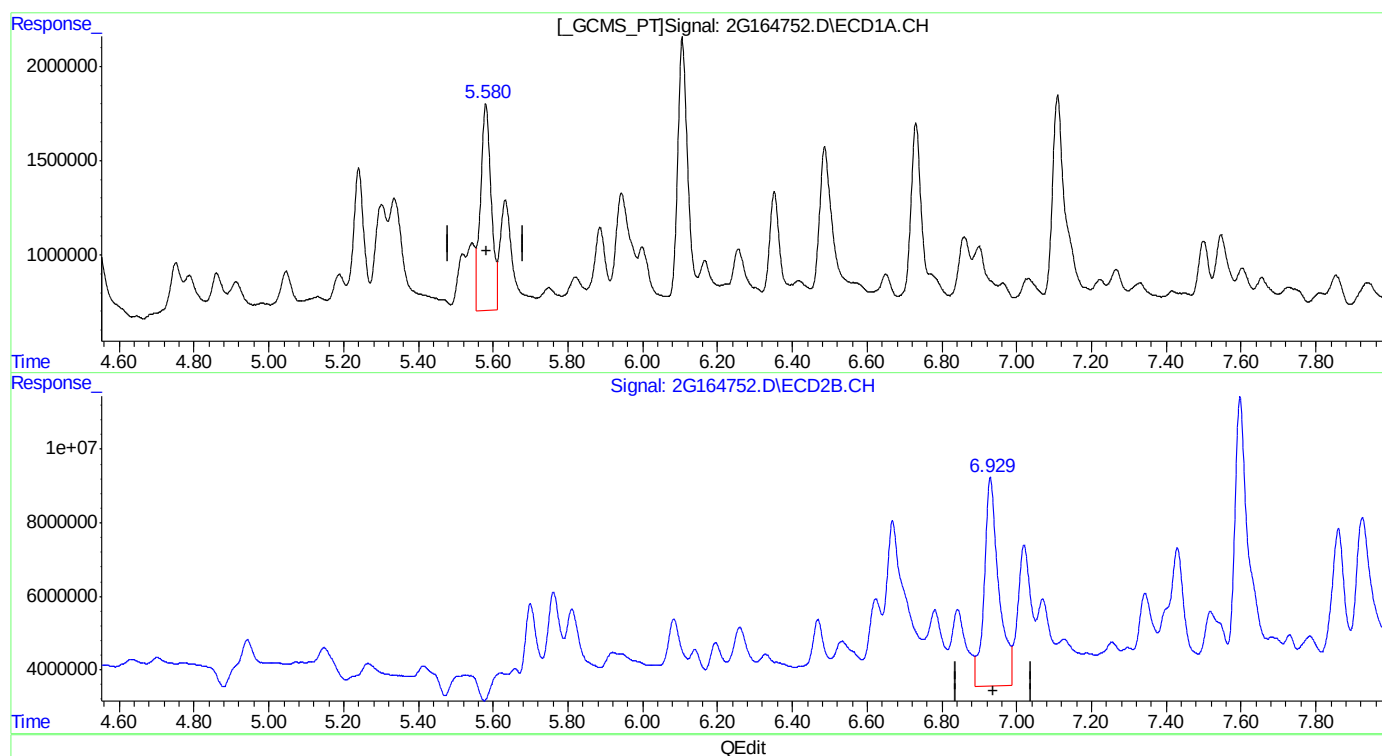
(24) AR1254-A #2  
6.667min 129.537 m  
response 128565270

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 85.324PPB  
response 22077781

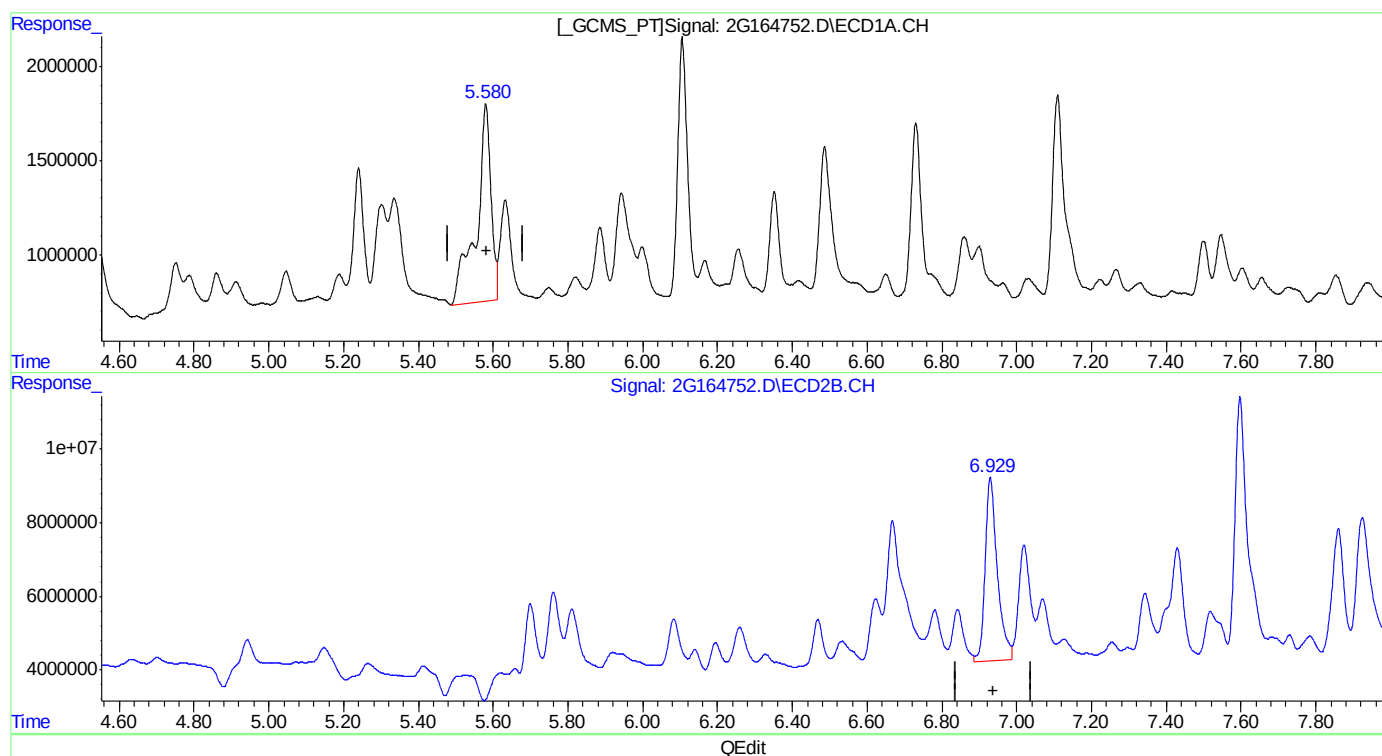
(25) AR1254-B #2  
6.929min 153.945PPB  
response 151468816

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 110.809PPB m  
response 28672257

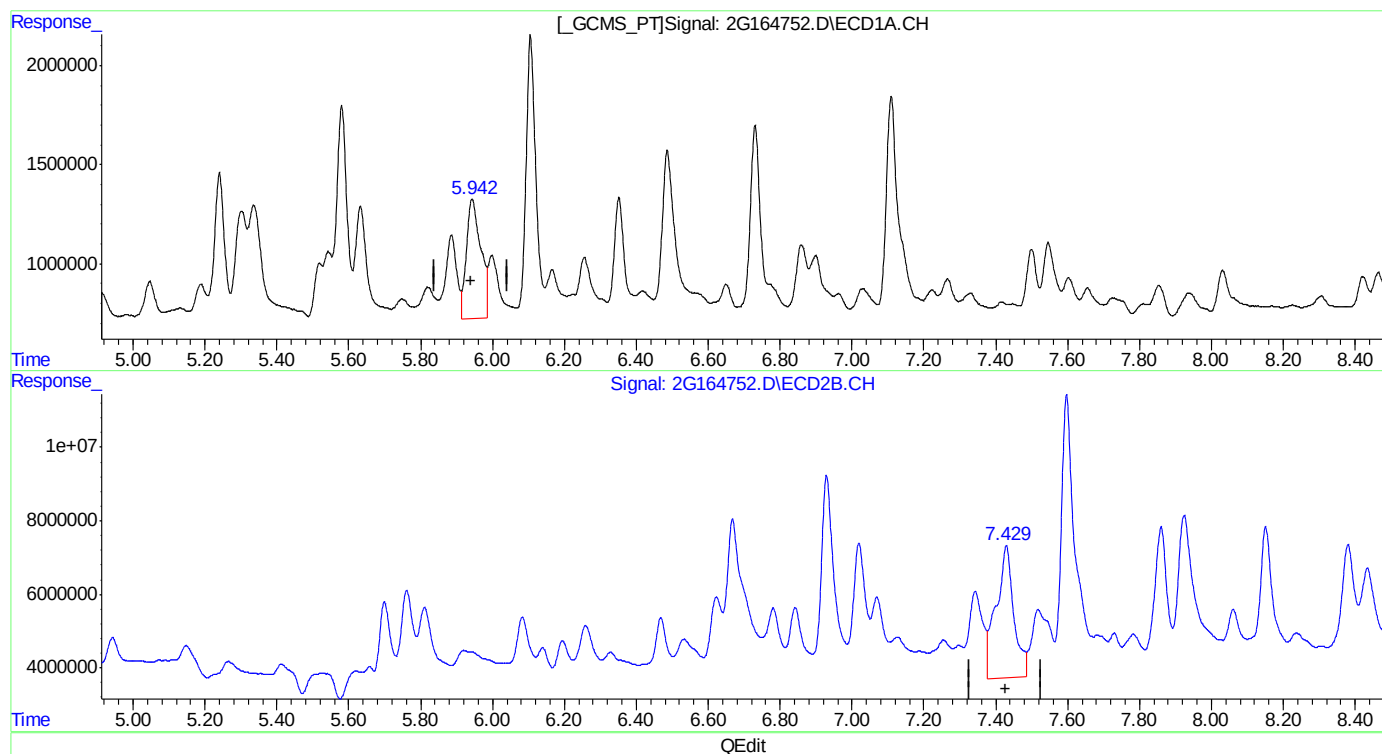
(25) AR1254-B #2  
6.929min 114.974PPB m  
response 113124497

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.943min 123.297PPB  
response 16885778

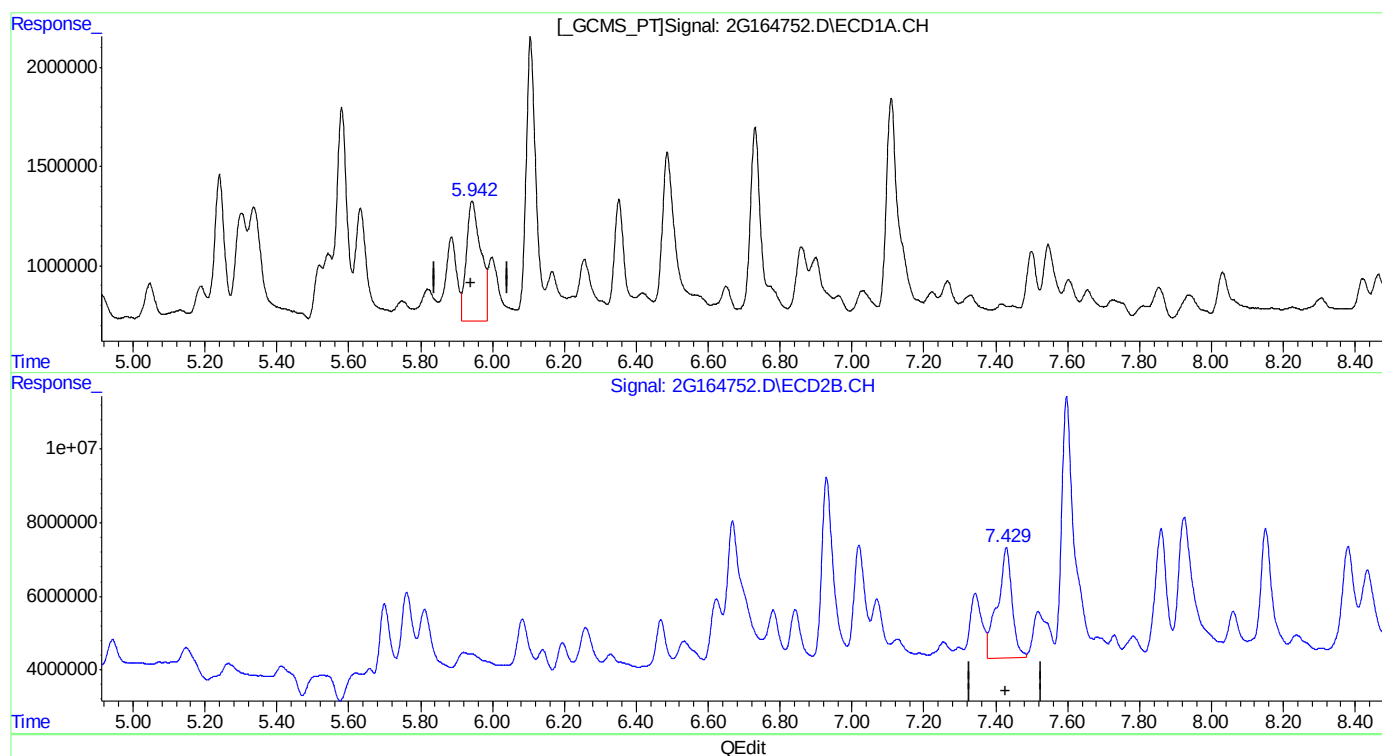
(26) AR1254-C #2  
7.430min 153.896PPB  
response 122766418

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.942min 121.163PPB m  
response 16593432

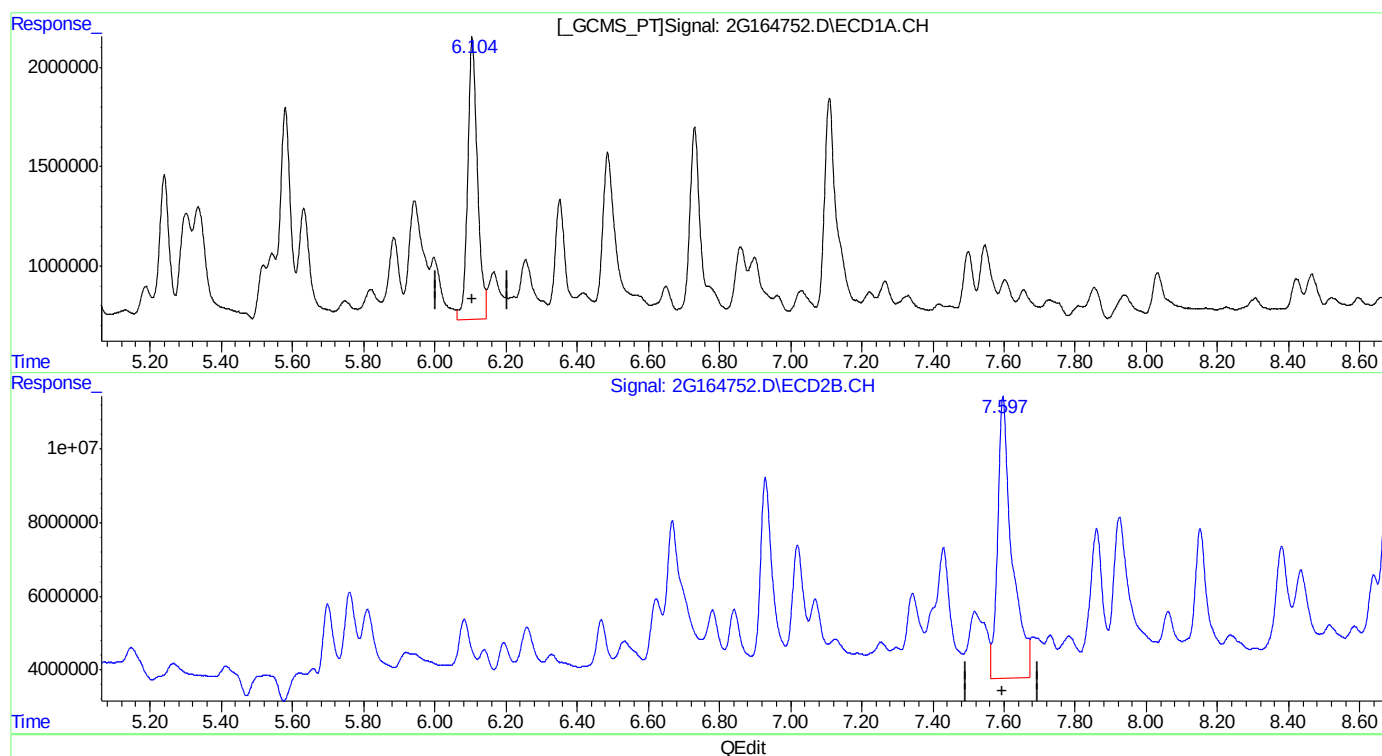
(26) AR1254-C #2  
7.429min 104.615PPB m  
response 83454180

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.105min 109.833PPB  
response 27008840

(27) AR1254-D #2  
7.597min 129.202PPB  
response 211158649

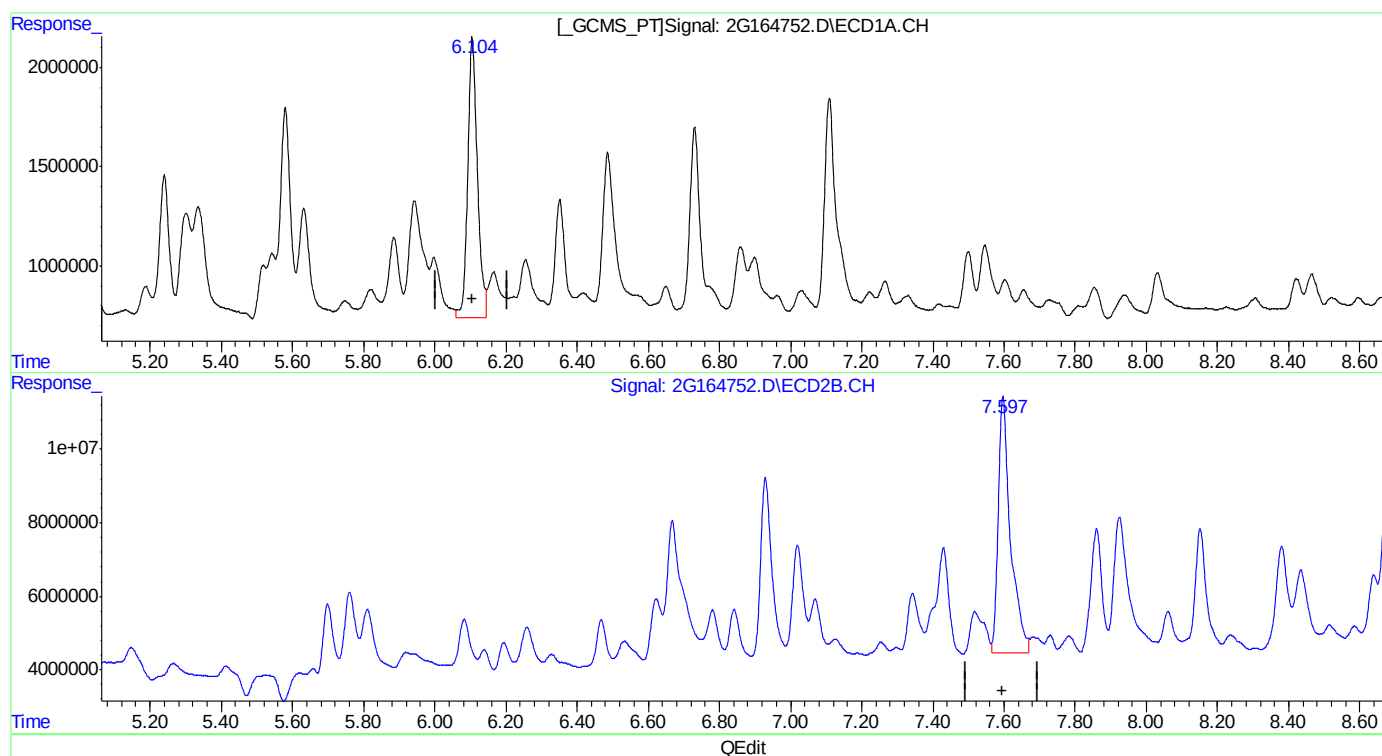


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.104min 108.292PPB m  
response 26629783

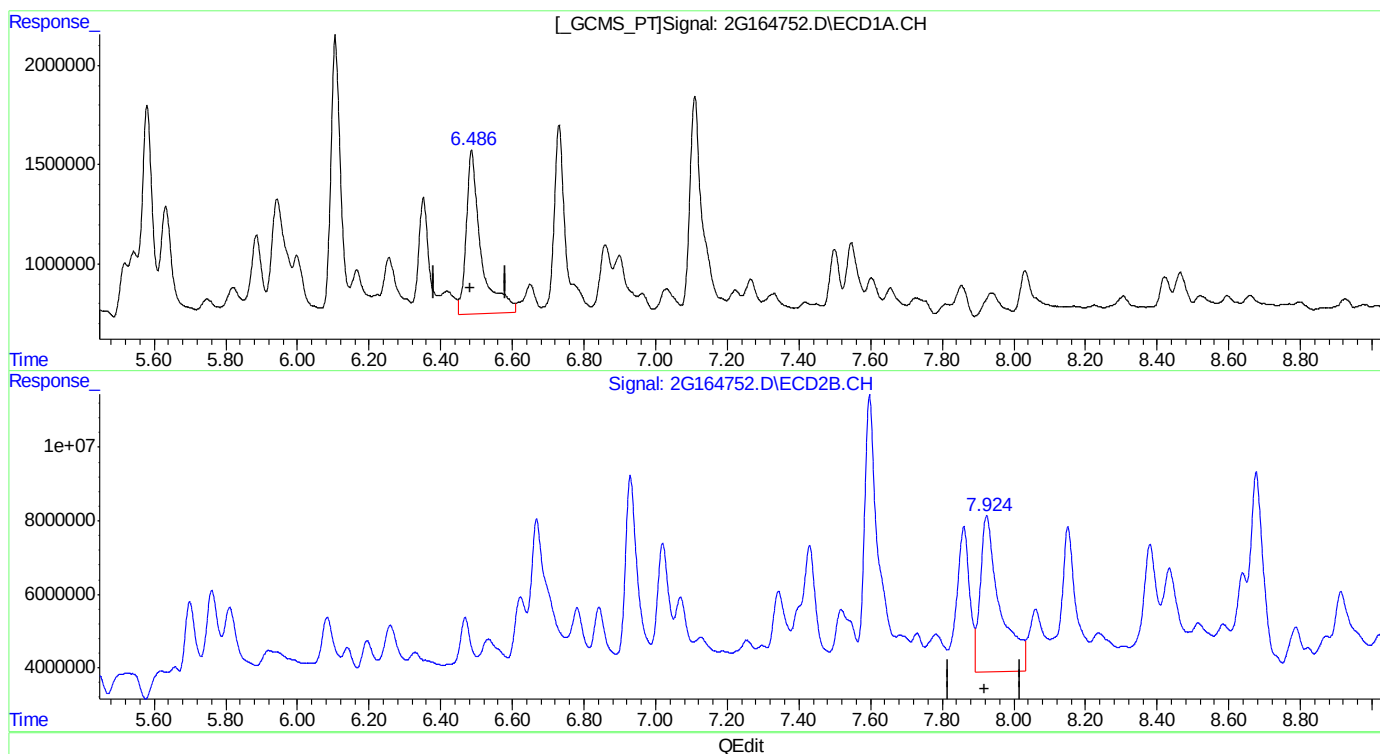
(27) AR1254-D #2  
7.597min 102.348PPB m  
response 167270767

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(28) AR1254-E  
6.486min 130.355PPB  
response 23790948

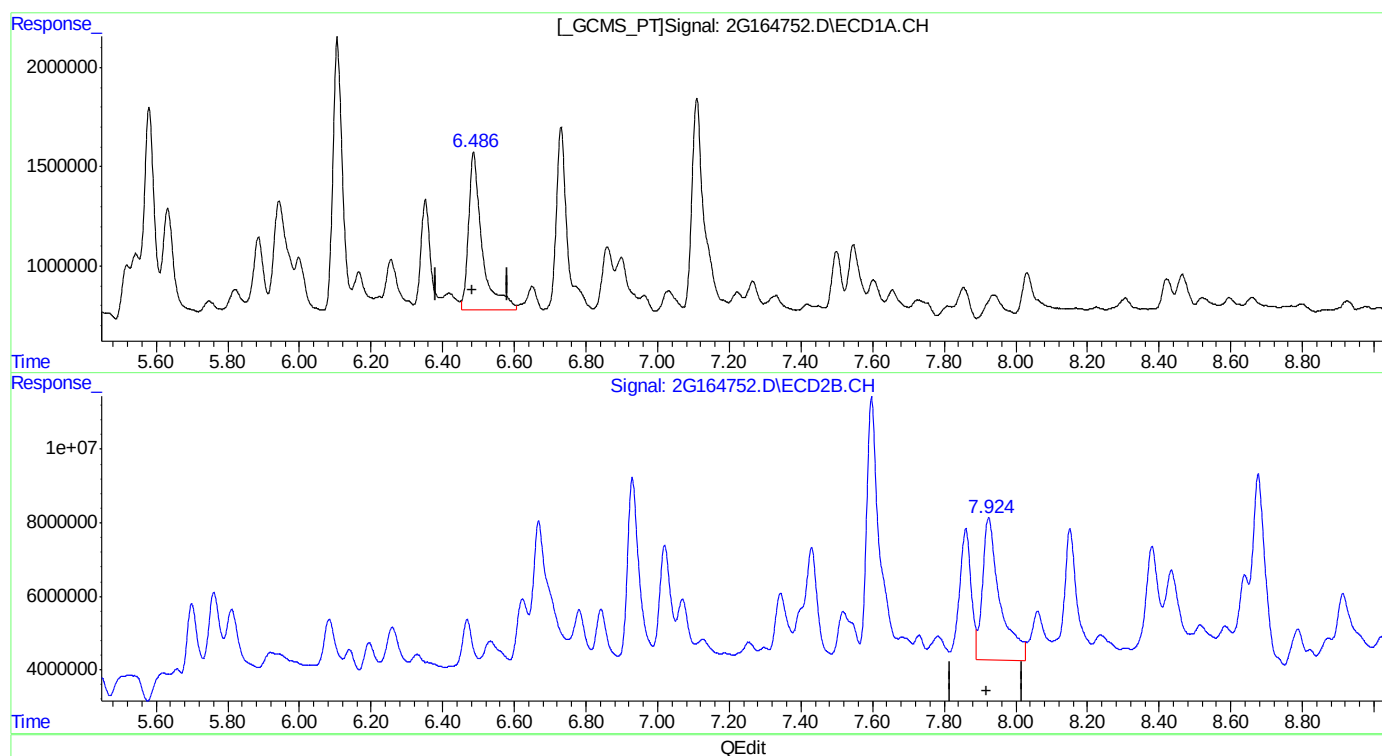
(28) AR1254-E #2  
7.924min 149.251PPB  
response 162520008

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(28) AR1254-E  
6.486min 114.612PPB m  
response 20917790

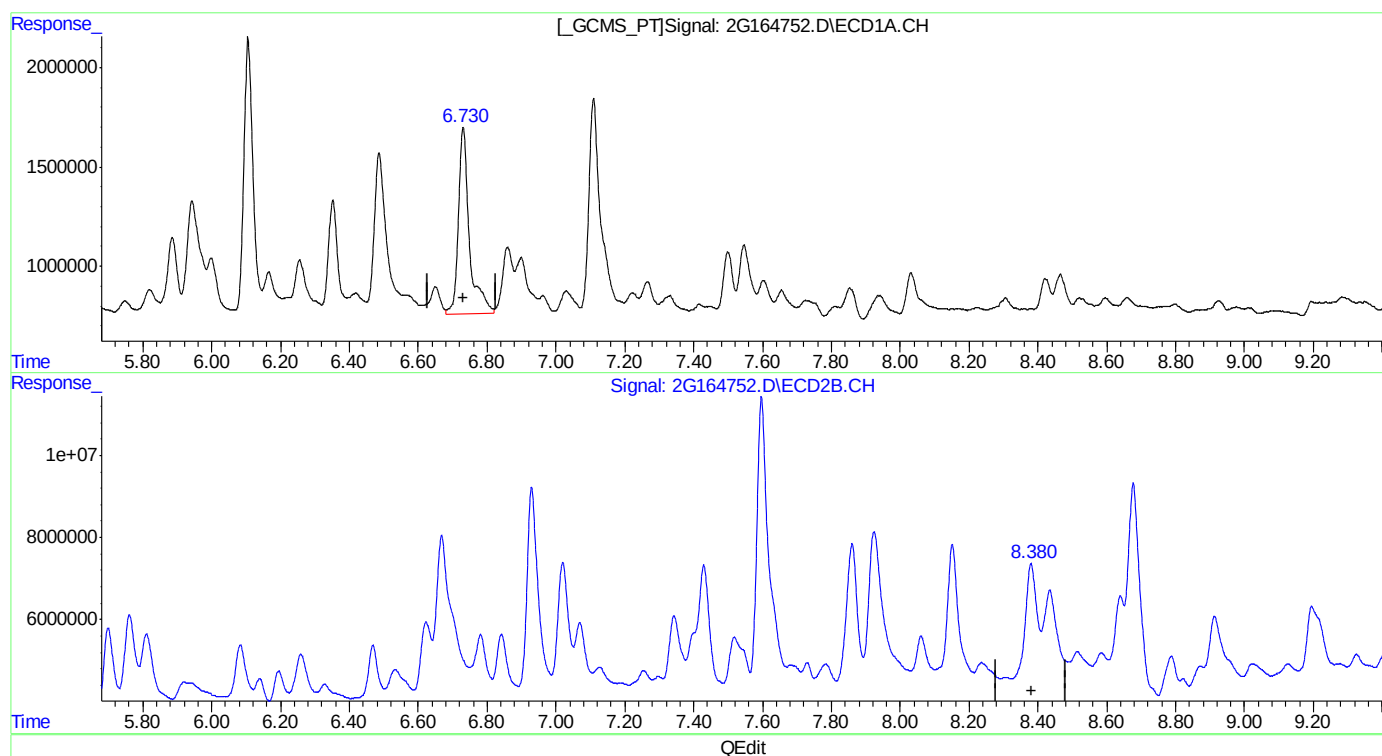
(28) AR1254-E #2  
7.924min 120.546PPB m  
response 131262817

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.730min 121.459PPB  
response 20793363

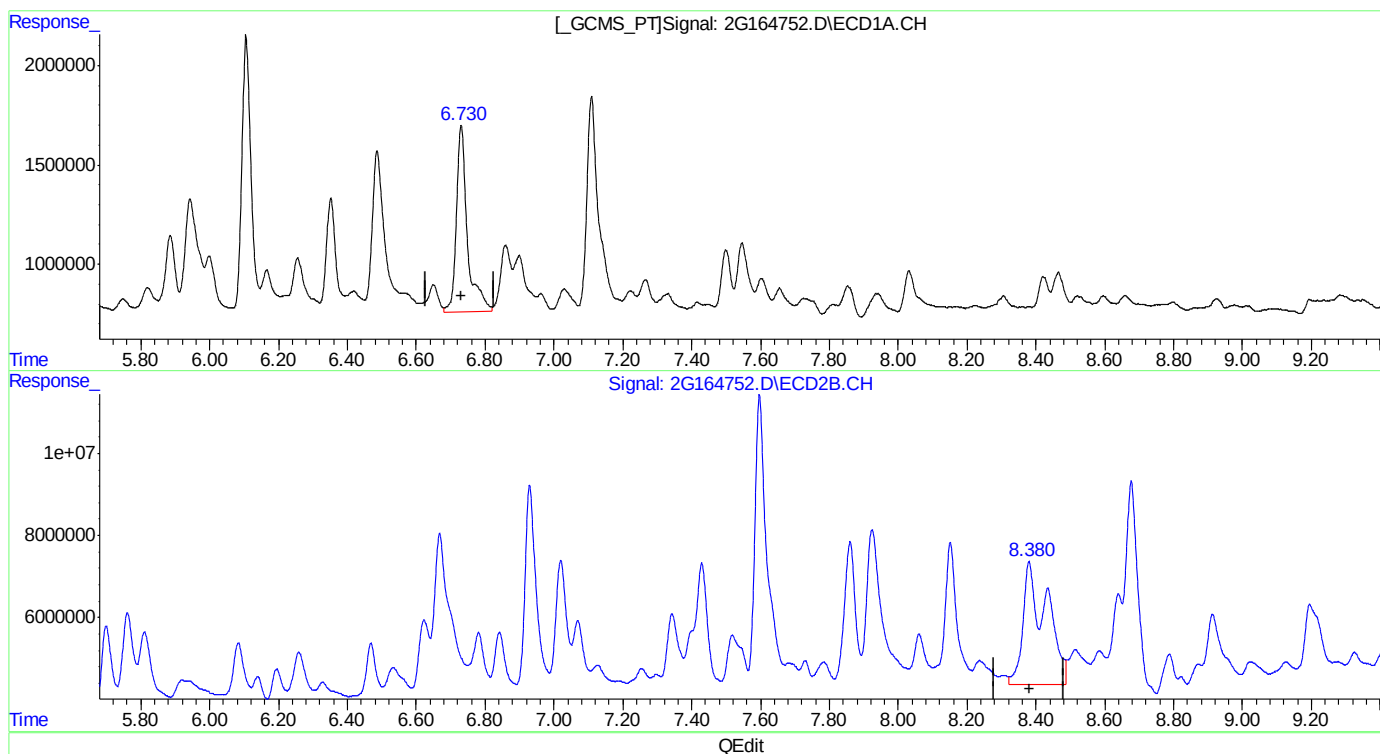
(29) AR1254-F #2  
8.380min 78.037PPB  
response 92176489

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.730min 121.459PPB  
response 20793363

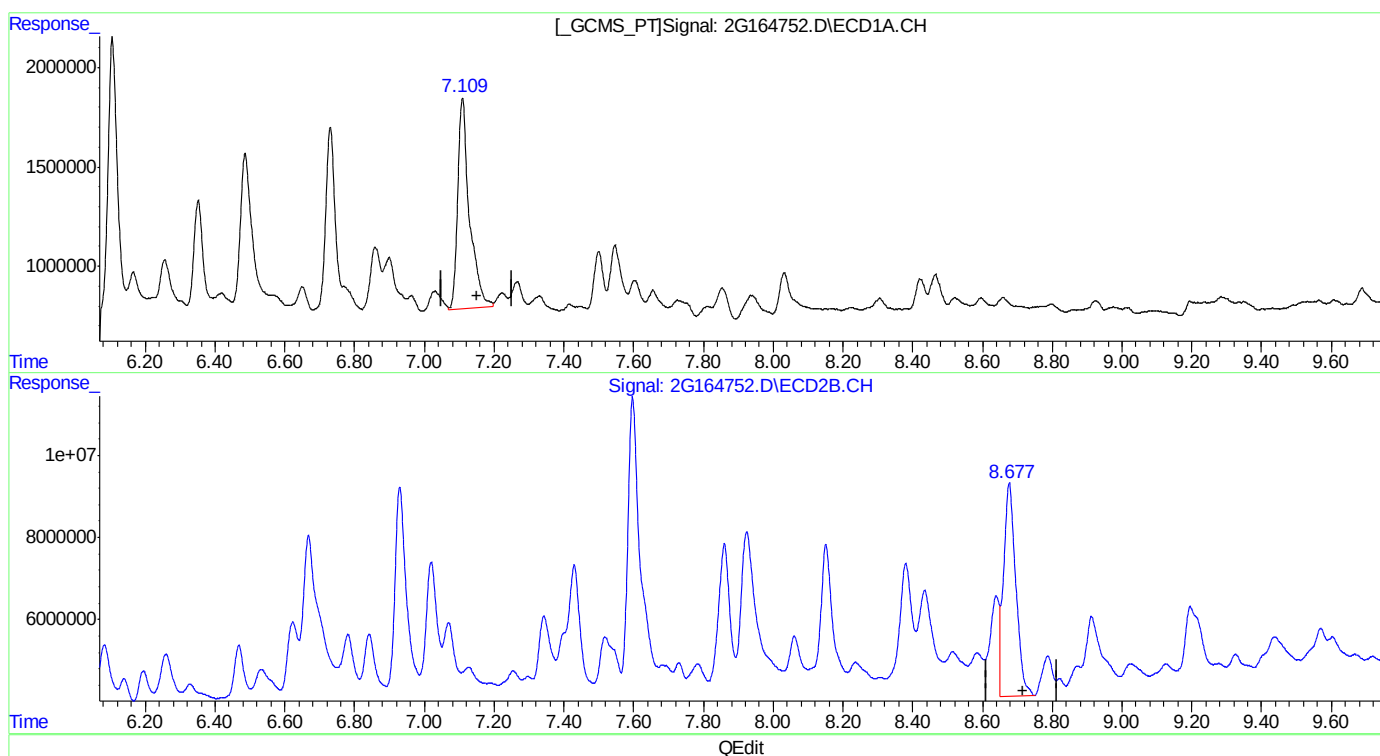
(29) AR1254-F #2  
8.380min 120.543PPB m  
response 142383563

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.110min 98.354PPB  
response 24763418

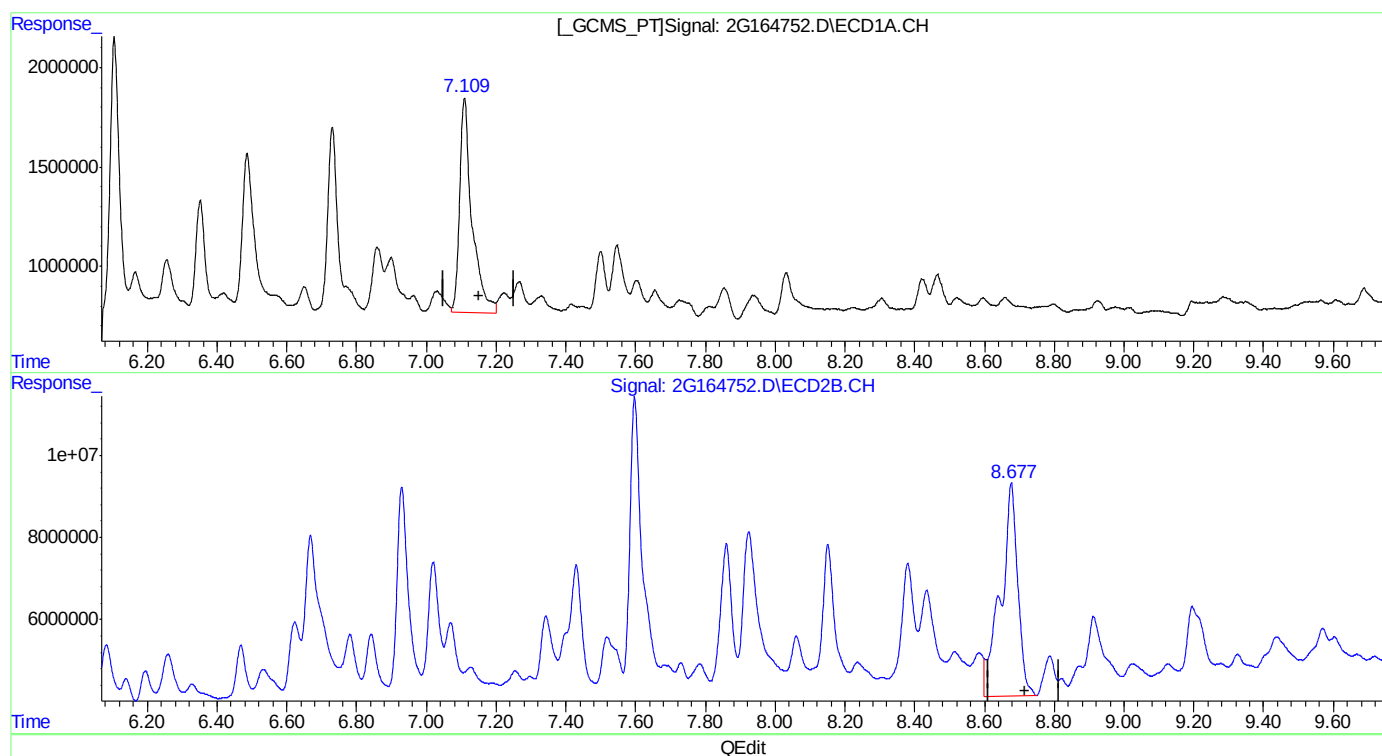
(30) AR1254-G #2  
8.677min 84.315PPB  
response 127378820

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164752.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 4:53 pm  
Operator : tianweir  
Sample : jc66894-2  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 73 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:29:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.109min 104.690PPB m  
response 26358705

(30) AR1254-G #2  
8.677min 117.411PPB m  
response 177378888

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:33 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2   | Resp#1   | Resp#2  | ppb      | ppb       |
|-----------------------------|----------------|--------|--------|----------|---------|----------|-----------|
| -----                       |                |        |        |          |         |          |           |
| System Monitoring Compounds |                |        |        |          |         |          |           |
| 1)                          | S Tetrachlo... | 2.769  | 3.418  | 125.3E6  | 710.8E6 | 34.150   | 31.063    |
|                             | Spiked Amount  | 40.000 |        | Recovery | =       | 85.38%   | 77.66%    |
| 51)                         | S Decachlor... | 9.955  | 11.763 | 102.1E6  | 508.3E6 | 25.164   | 26.613    |
|                             | Spiked Amount  | 40.000 |        | Recovery | =       | 62.91%   | 66.53%    |
| Target Compounds            |                |        |        |          |         |          |           |
| 24)                         | AR1254-A       | 5.241  | 6.668  | 34535647 | 279.0E6 | 279.949m | 281.143   |
| 25)                         | AR1254-B       | 5.579  | 6.928  | 80148334 | 325.1E6 | 309.749m | 330.439   |
| 26)                         | AR1254-C       | 5.943  | 7.427  | 40880963 | 174.6E6 | 298.507m | 218.876 # |
| 27)                         | AR1254-D       | 6.106  | 7.595  | 79537437 | 356.1E6 | 323.444m | 217.899 # |
| 28)                         | AR1254-E       | 6.484  | 7.920  | 50445966 | 287.5E6 | 276.402  | 263.996   |
| 29)                         | AR1254-F       | 6.731  | 8.379  | 48051040 | 267.5E6 | 280.678  | 226.503m  |
| 30)                         | AR1254-G       | 7.110  | 8.675  | 72574622 | 305.1E6 | 288.249m | 201.961m# |
| -----                       |                |        |        |          |         |          |           |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

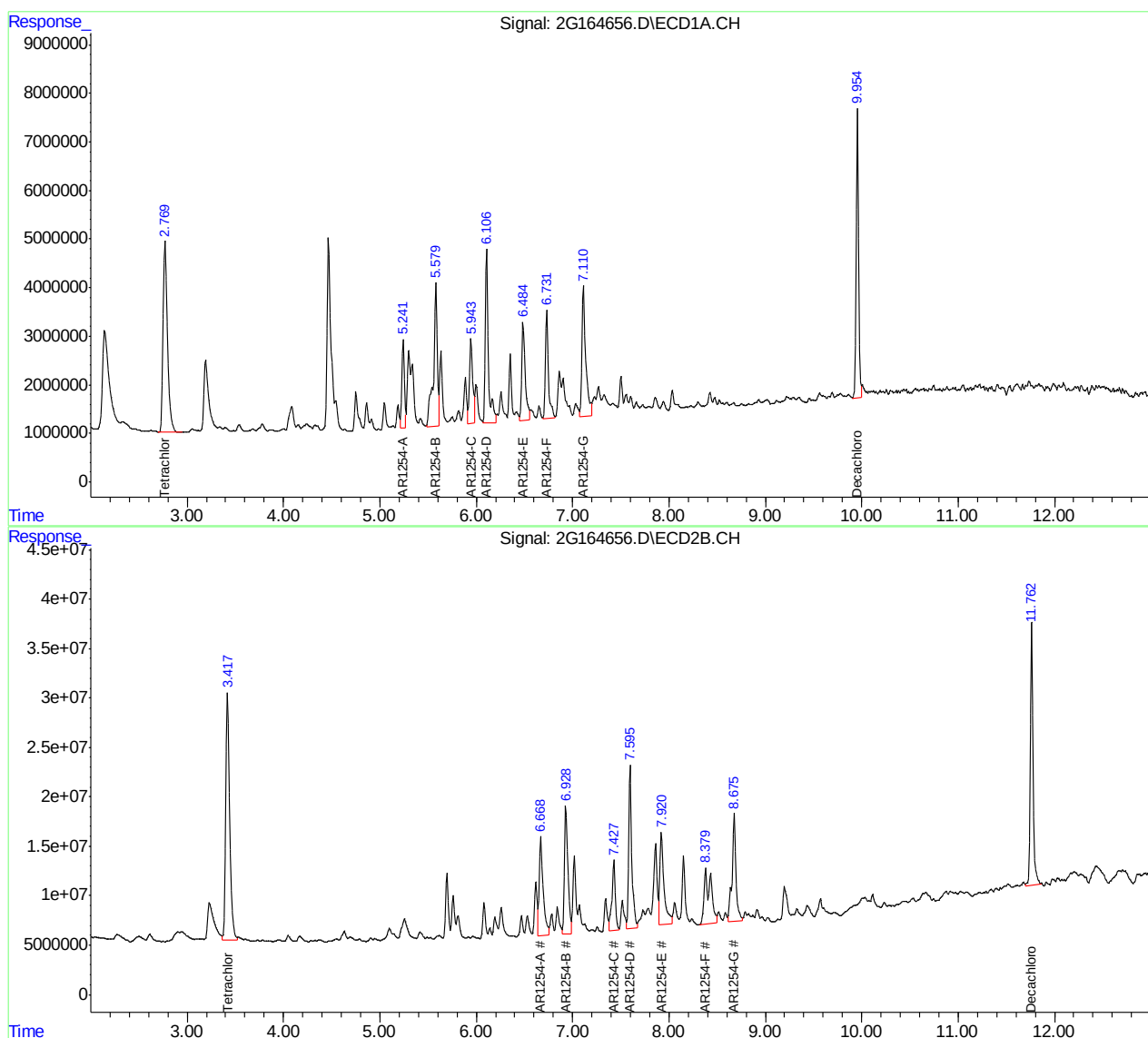


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:33 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: JC66894-3

Method: SW846 8082A

Lab FileID: 2G164656.D

Analyst approved: 05/31/18 15:24 Summer Kotb

Injection Time: 05/31/18 12:54

Supervisor approved: 05/31/18 15:36 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1254-A  |     | 1    | 5.24           | Split peak |
| AR1254-B  |     | 1    | 5.58           | Split peak |
| AR1254-C  |     | 1    | 5.94           | Split peak |
| AR1254-D  |     | 1    | 6.11           | Split peak |
| Ar1254-G  |     | 1    | 7.11           | Split peak |
| AR1254-F  |     | 2    | 8.38           | Split peak |
| Ar1254-G  |     | 2    | 8.68           | Split peak |

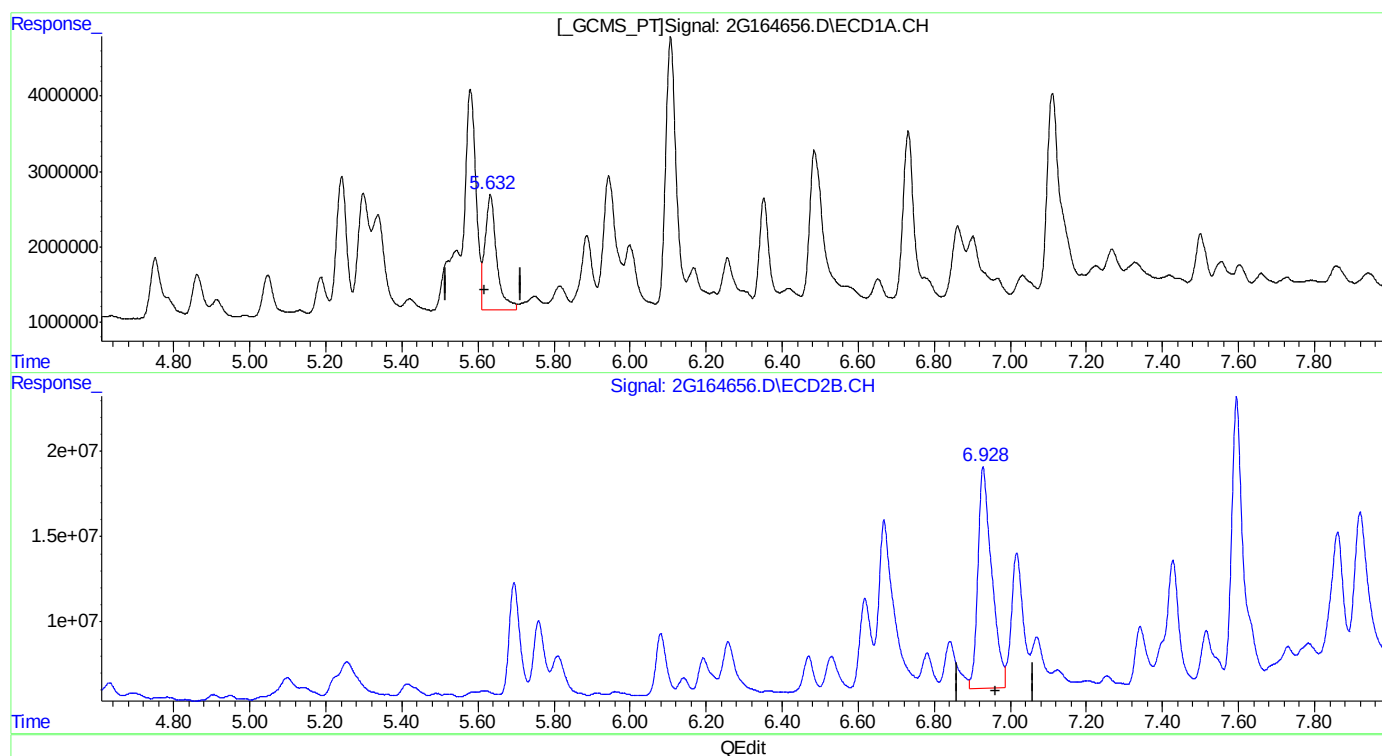
7.1.3.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.632min 125.900PPB  
response 32577068

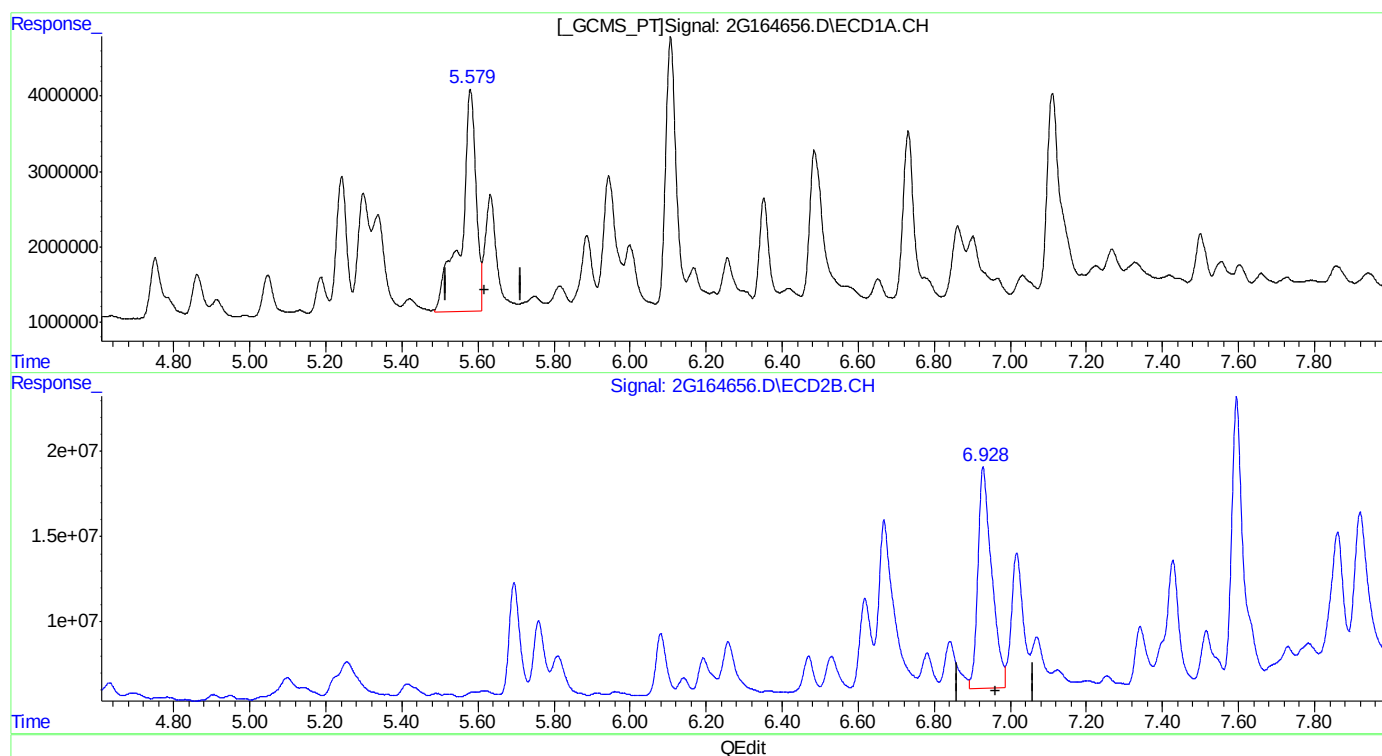
(25) AR1254-B #2  
6.928min 330.439PPB  
response 325124179

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.579min 309.749PPB m  
response 80148334

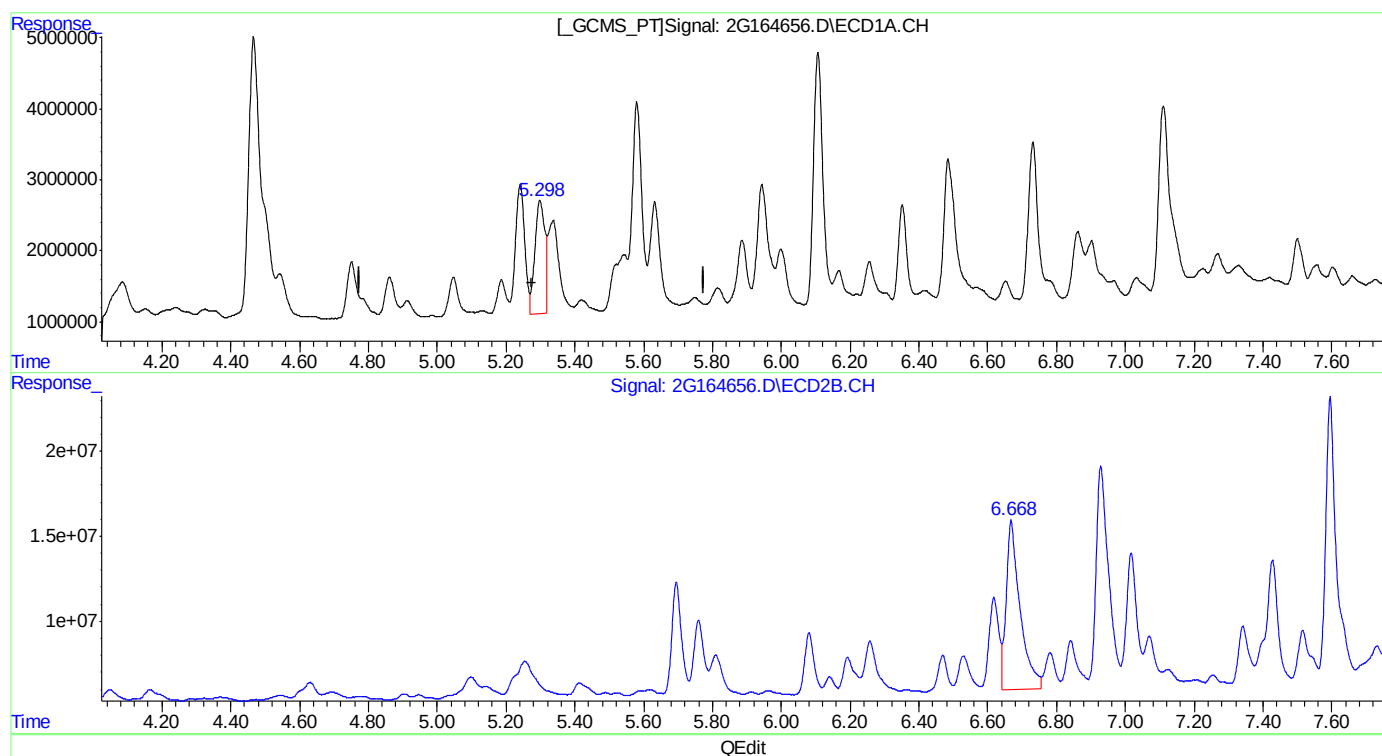
(25) AR1254-B #2  
6.928min 330.439PPB  
response 325124179

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.298min 265.480  
response 32750691

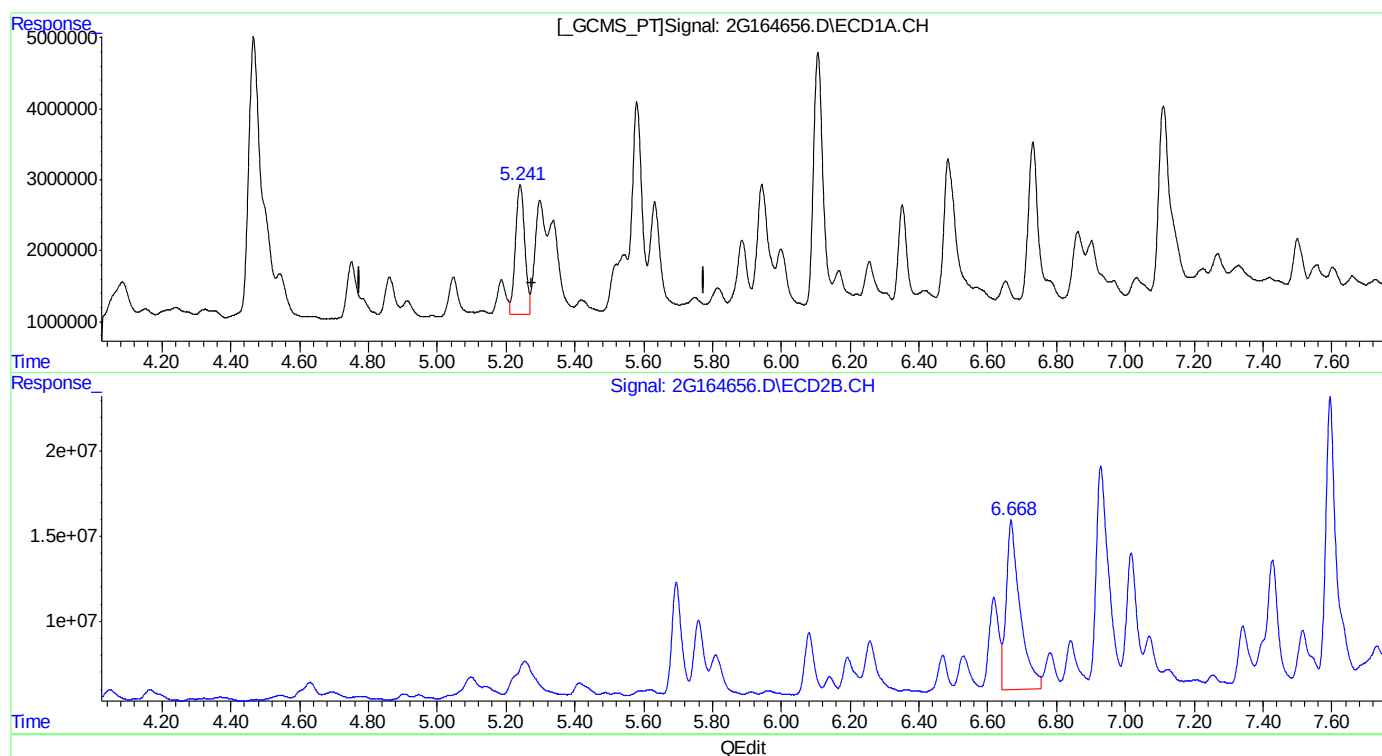
(24) AR1254-A #2  
6.668min 281.143  
response 279033671

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.241min 279.949 m  
response 34535647

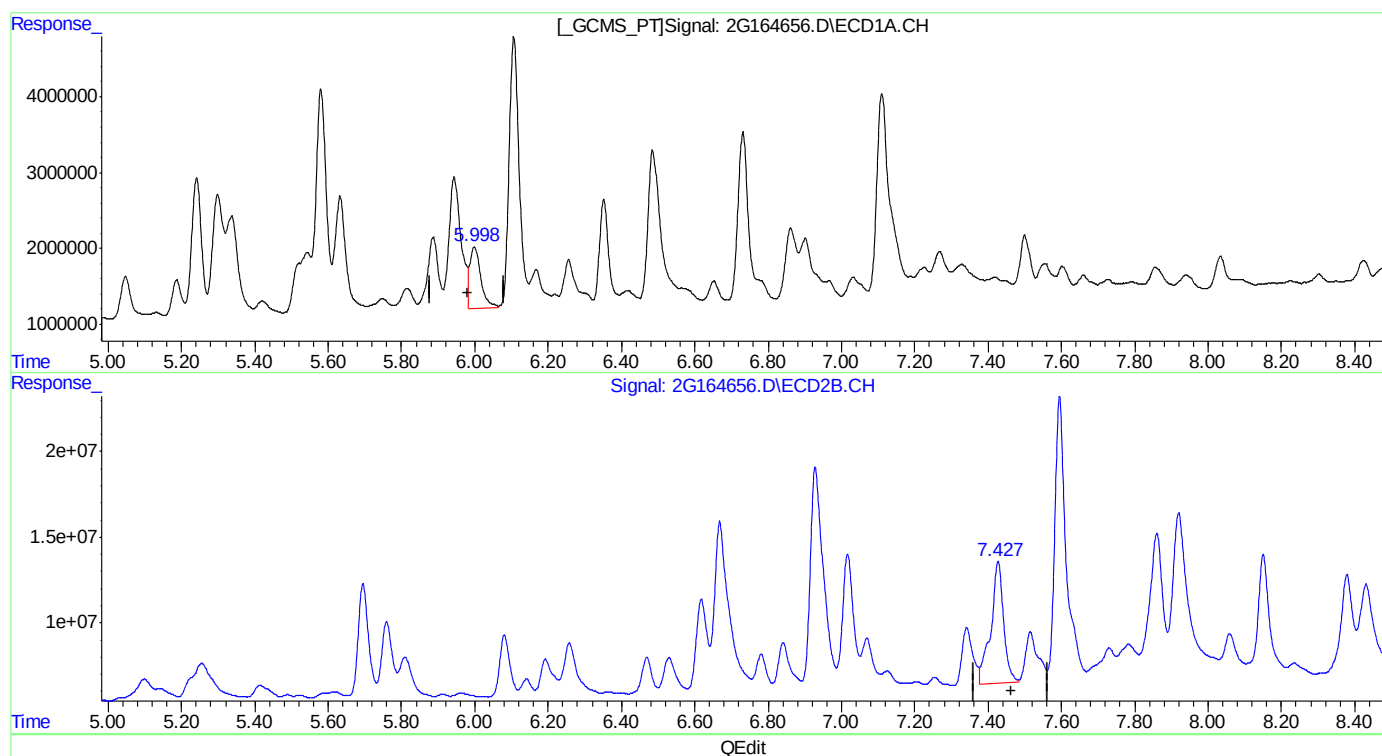
(24) AR1254-A #2  
6.668min 281.143  
response 279033671

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.999min 125.822PPB  
response 17231465

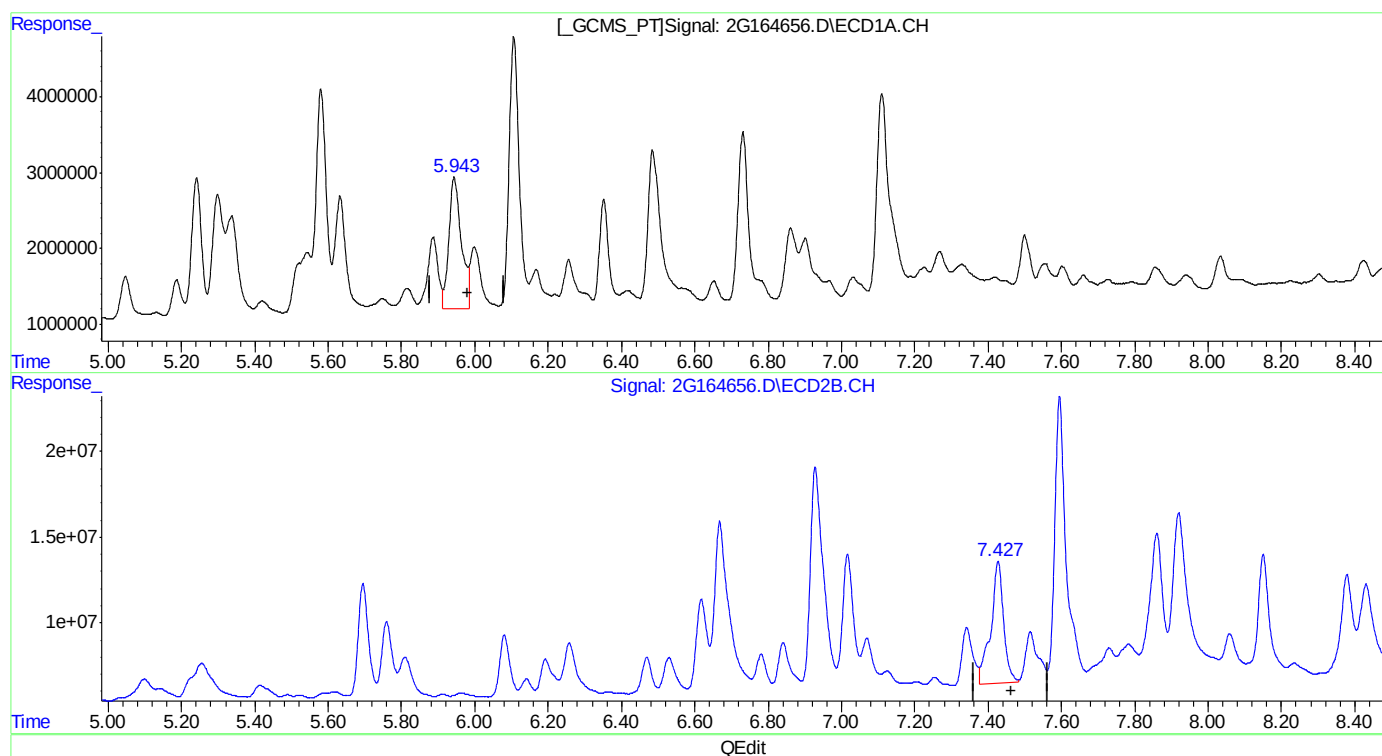
(26) AR1254-C #2  
7.427min 218.876PPB  
response 174602893

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.943min 298.507PPB m  
response 40880963

(26) AR1254-C #2  
7.427min 218.876PPB  
response 174602893

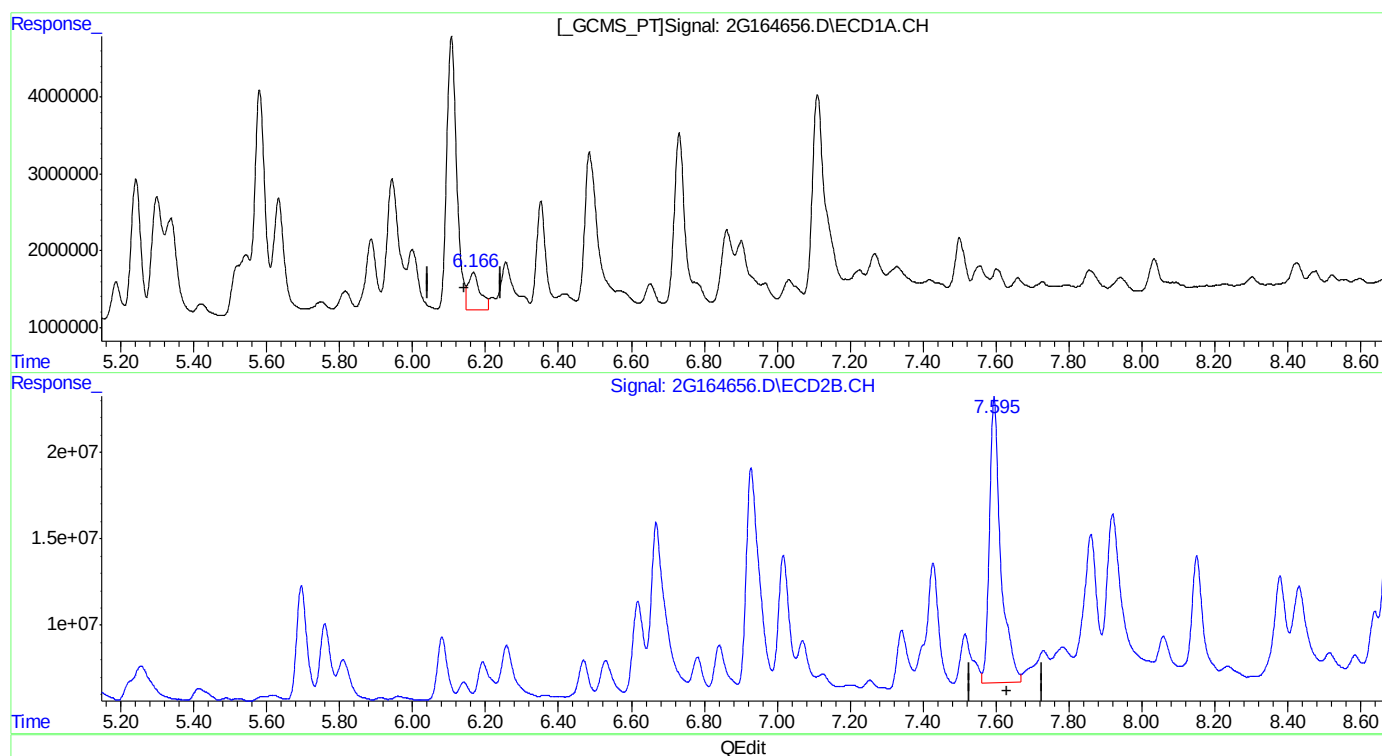


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.167min 45.449PPB  
response 11176388

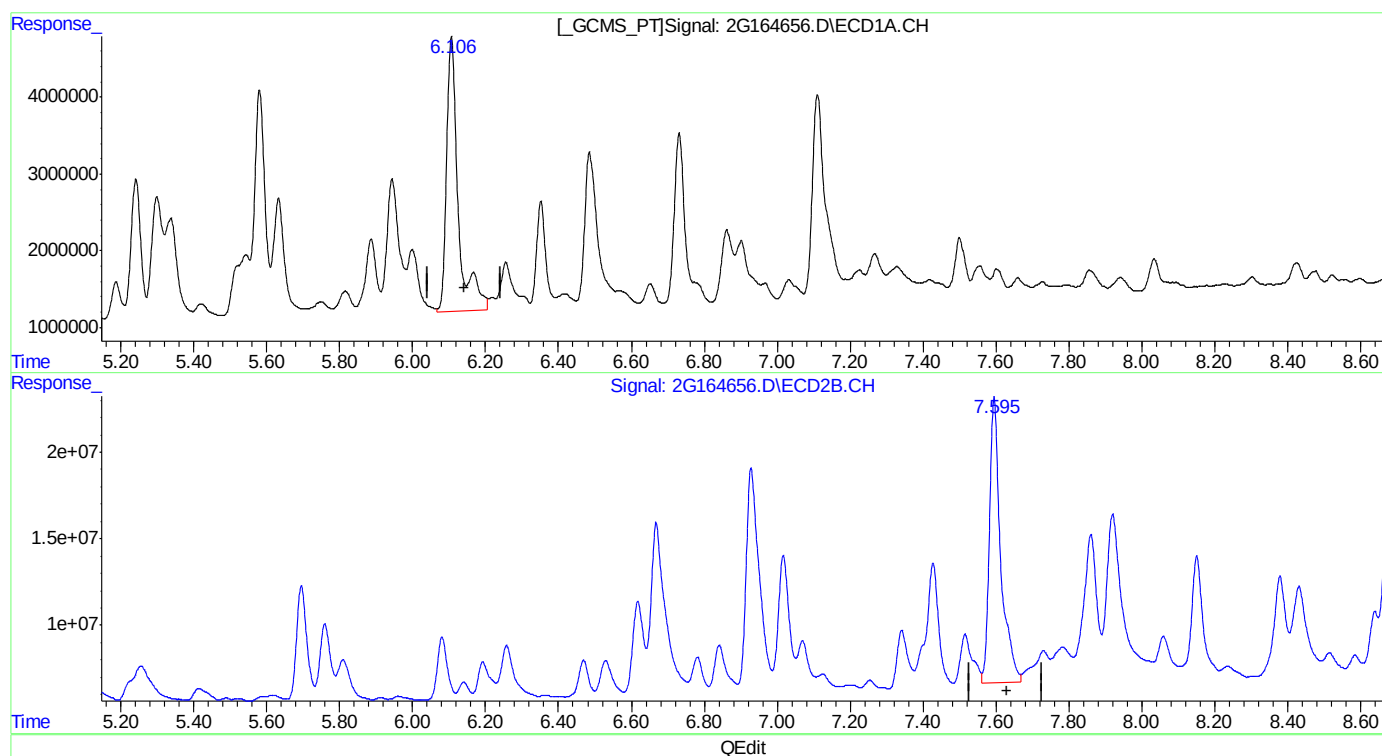
(27) AR1254-D #2  
7.595min 217.899PPB  
response 356118342

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.106min 323.444PPB m  
response 79537437

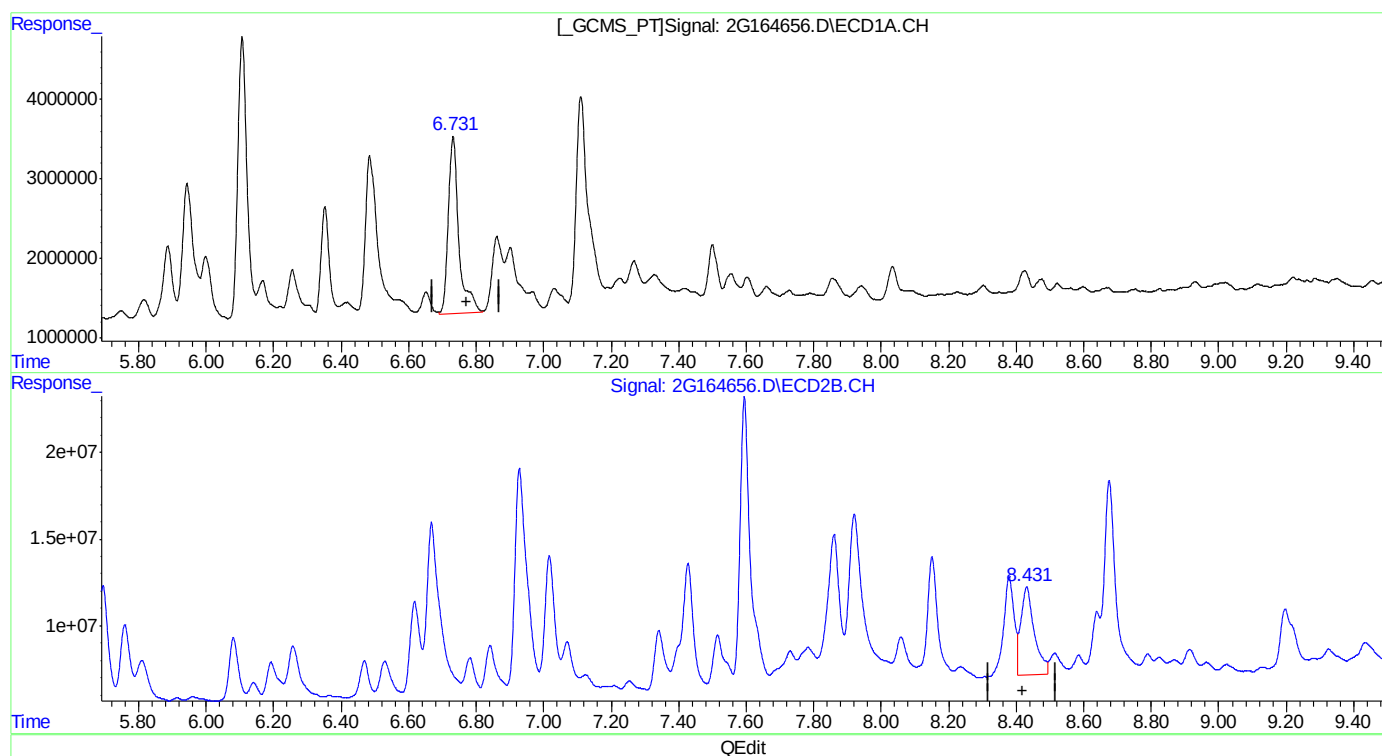
(27) AR1254-D #2  
7.595min 217.899PPB  
response 356118342

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.731min 280.678PPB  
response 48051040

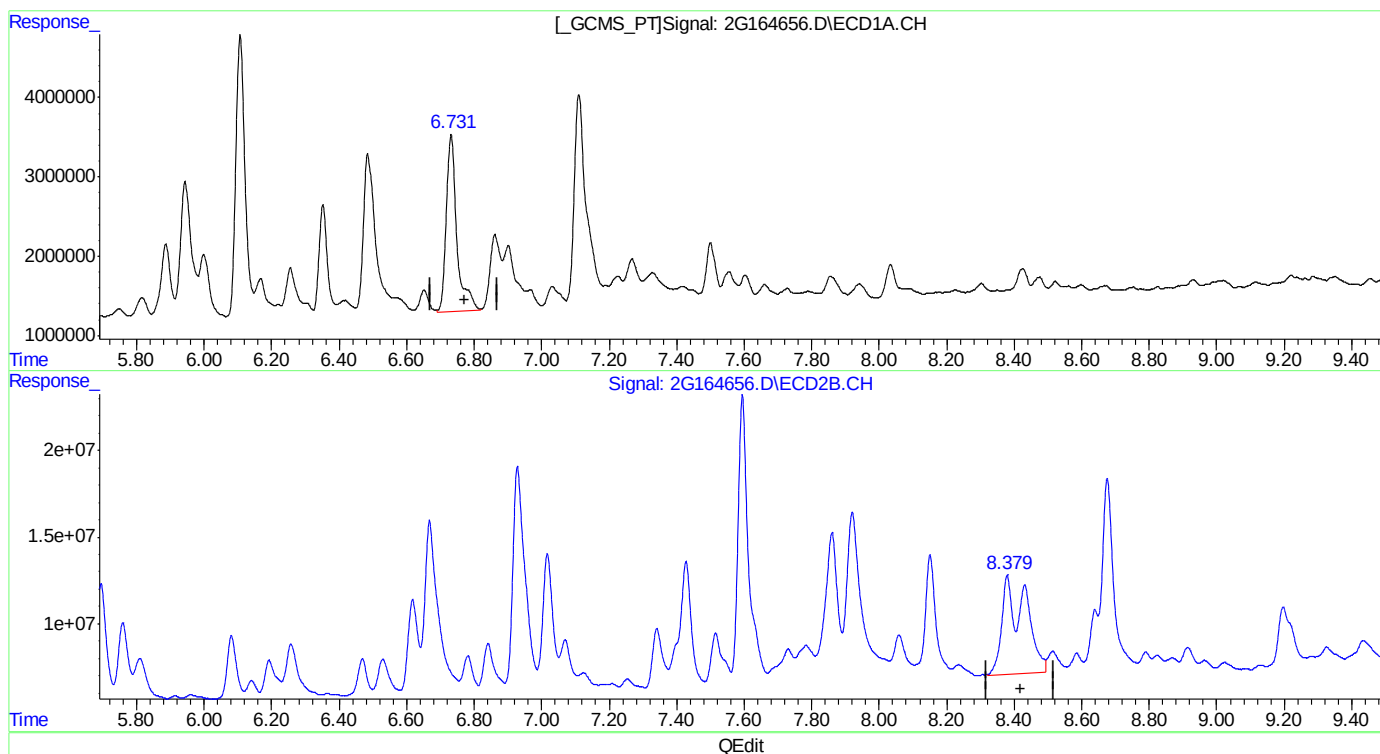
(29) AR1254-F #2  
8.431min 118.705PPB  
response 140211856

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.731min 280.678PPB  
response 48051040

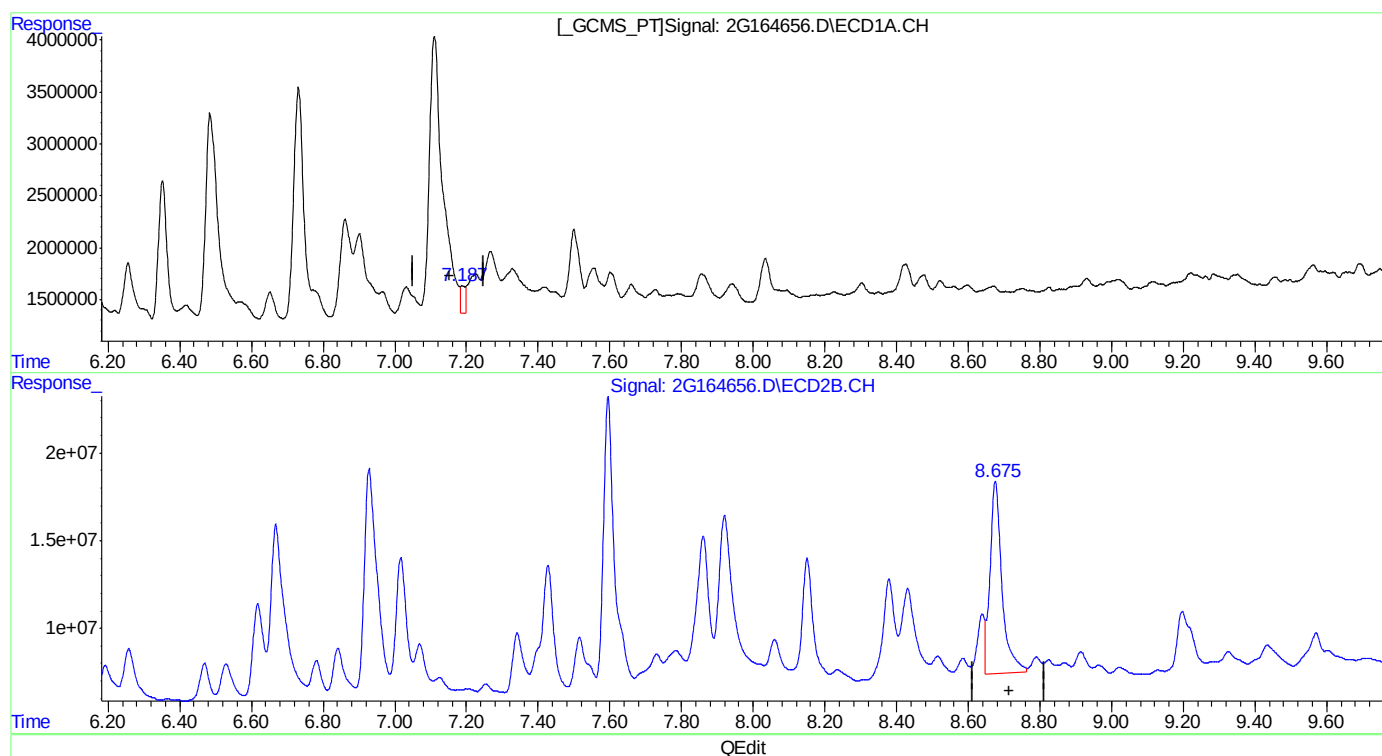
(29) AR1254-F #2  
8.379min 226.503PPB m  
response 267541029

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.187min 10.342PPB  
response 2603815

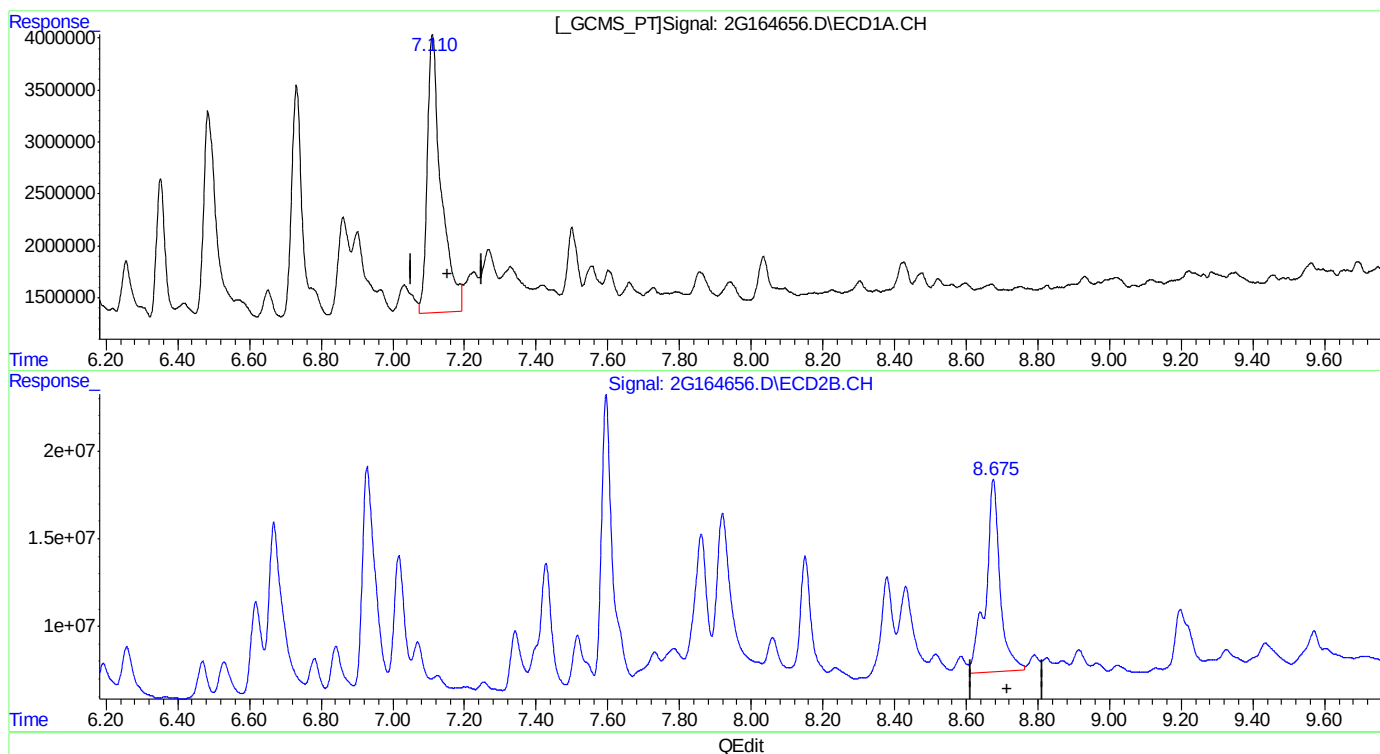
(30) AR1254-G #2  
8.676min 167.887PPB  
response 253636817

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164656.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:54 pm  
Operator : tianweir  
Sample : jc66894-3  
Misc : OP12385,G2G4350,15.4,,,10,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:17:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.110min 288.249PPB m  
response 72574622

(30) AR1254-G #2  
8.675min 201.961PPB m  
response 305113171

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:45:31 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb     | ppb       |
|-----------------------------|--------|--------|----------|----------|---------|-----------|
| -----                       |        |        |          |          |         |           |
| System Monitoring Compounds |        |        |          |          |         |           |
| 1) S Tetrachlo...           | 2.772  | 3.421  | 134.4E6  | 848.6E6  | 36.610  | 37.084    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 91.53%  | 92.71%    |
| 51) S Decachlor...          | 9.954  | 11.761 | 128.0E6  | 608.7E6  | 31.558  | 31.869m   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 78.90%  | 79.67%    |
| Target Compounds            |        |        |          |          |         |           |
| 24) AR1254-A                | 5.239  | 6.668  | 10160443 | 99396734 | 82.362  | 100.148   |
| 25) AR1254-B                | 5.580  | 6.931  | 20333182 | 102.7E6  | 78.581m | 104.348 # |
| 26) AR1254-C                | 5.946  | 7.429  | 8511500  | 88630497 | 62.150  | 111.104m# |
| 27) AR1254-D                | 6.106  | 7.599  | 16726861 | 114.7E6  | 68.021  | 70.177    |
| 28) AR1254-E                | 6.489  | 7.932  | 11556697 | 61035692 | 63.321  | 56.053    |
| 29) AR1254-F                | 6.730  | 8.376  | 11861723 | 90349759 | 69.287m | 76.491m   |
| 30) AR1254-G                | 7.111  | 8.677  | 13050419 | 86630993 | 51.833  | 57.343m   |
| -----                       |        |        |          |          |         |           |

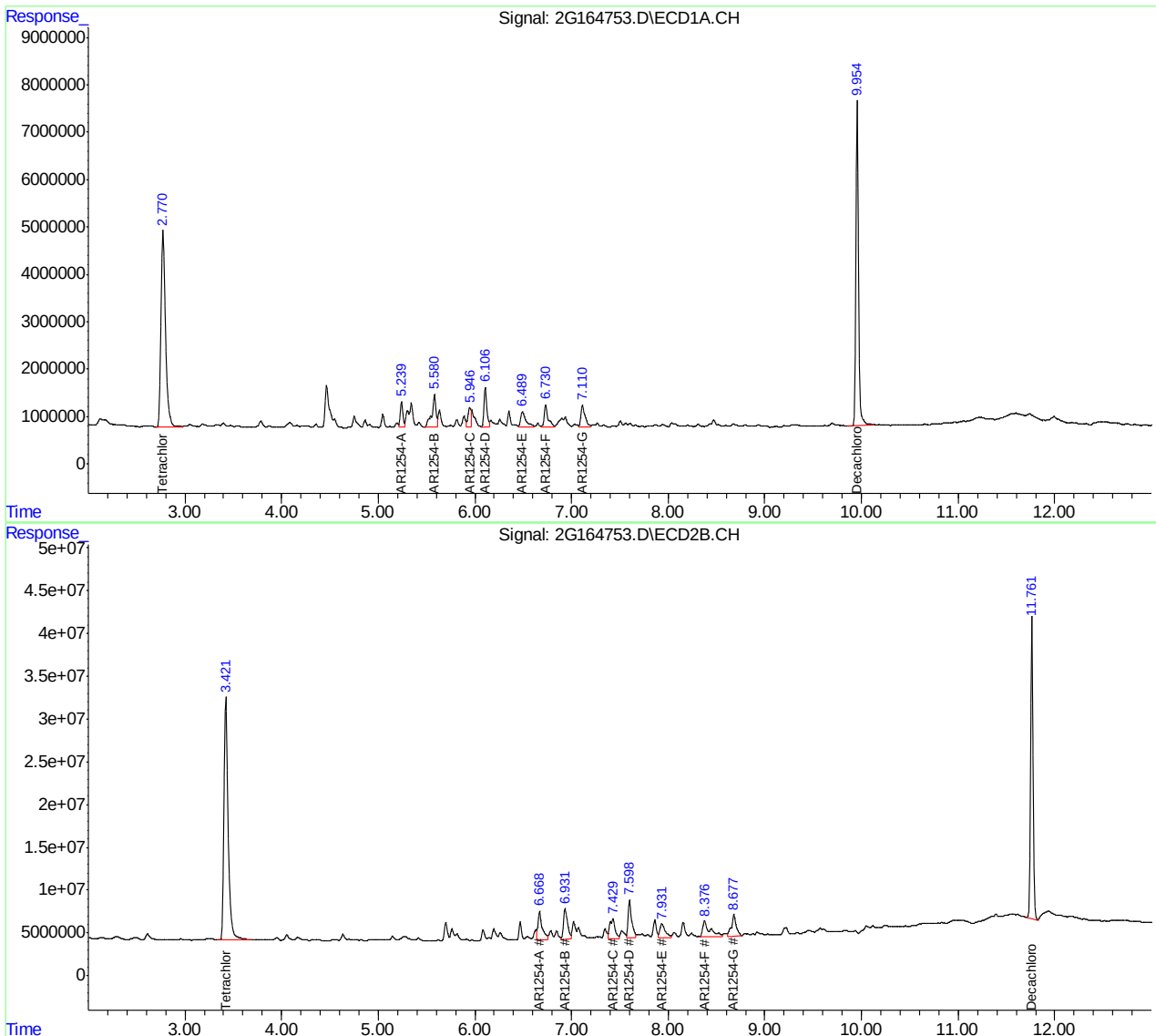
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:45:31 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:

JC66894-4

Method:

SW846 8082A

Lab FileID:

2G164753.D

Analyst approved:

06/04/18 16:00 Summer Kotb

Injection Time:

06/01/18 17:10

Supervisor approved:

06/05/18 16:15 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1254-B           |           | 1    | 5.58           | Split peak              |
| AR1254-F           |           | 1    | 6.73           | Split peak              |
| AR1254-C           |           | 2    | 7.43           | Split peak              |
| AR1254-F           |           | 2    | 8.38           | Split peak              |
| Ar1254-G           |           | 2    | 8.68           | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.76          | Poorly defined baseline |

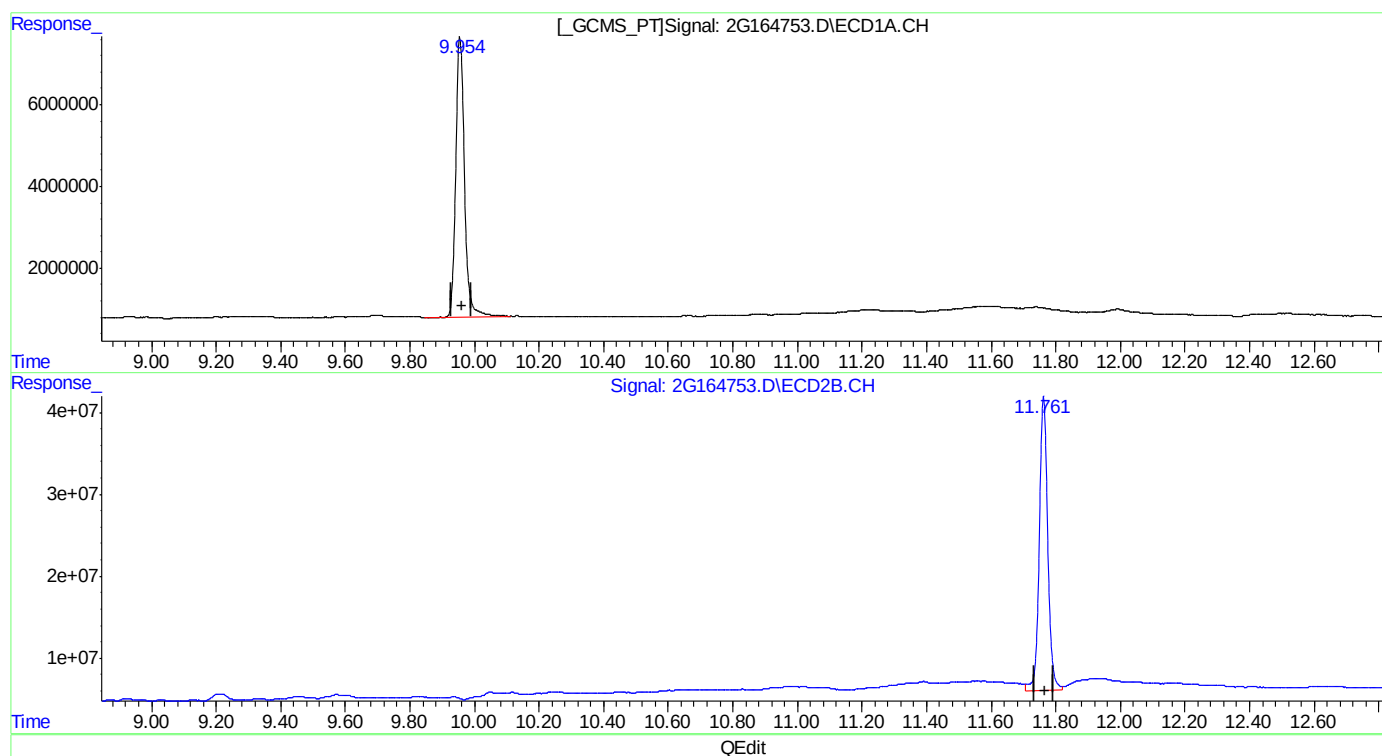
7.1.4.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.954min 31.558ppb

response 127993375

(51) Decachlorobiphenyl #2 (S)

11.762min 34.034ppb

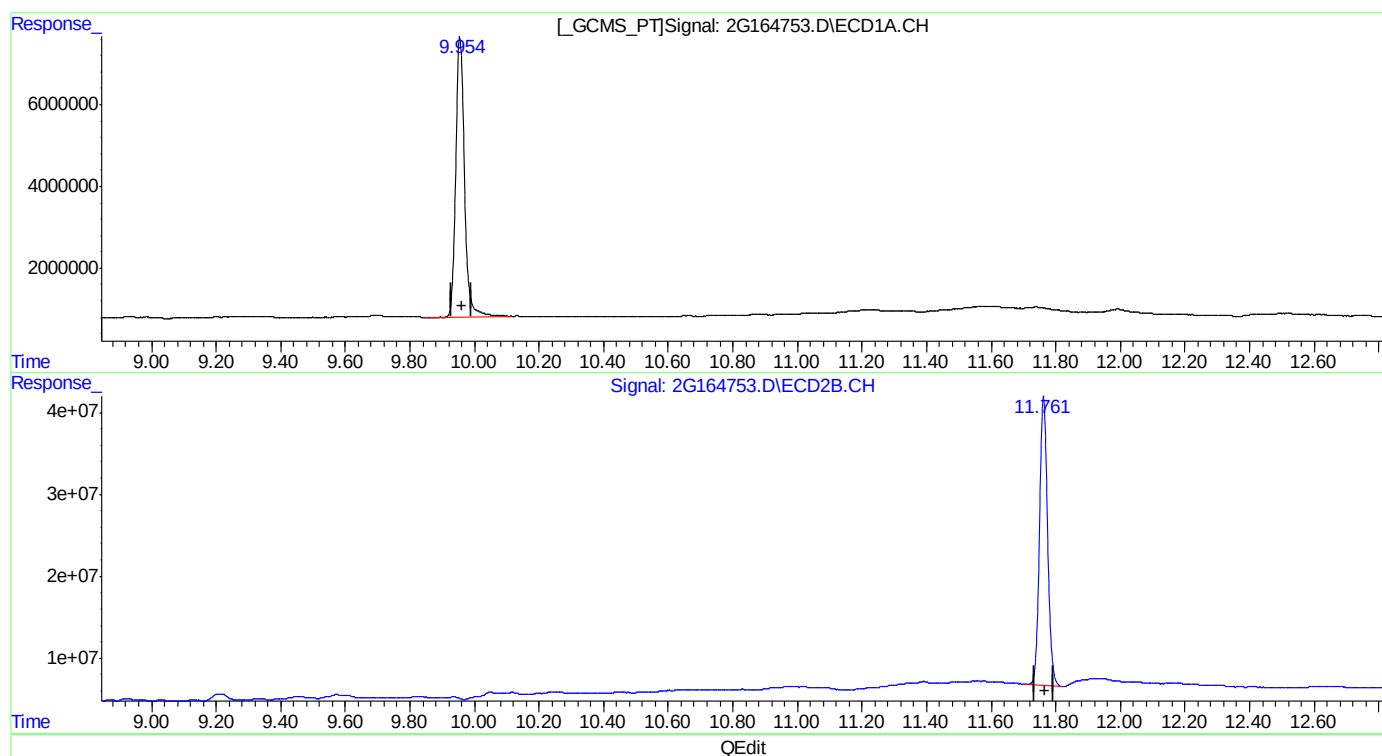
response 650035220

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.954min 31.558ppb

response 127993375

(51) Decachlorobiphenyl #2 (S)

11.761min 31.869ppb m

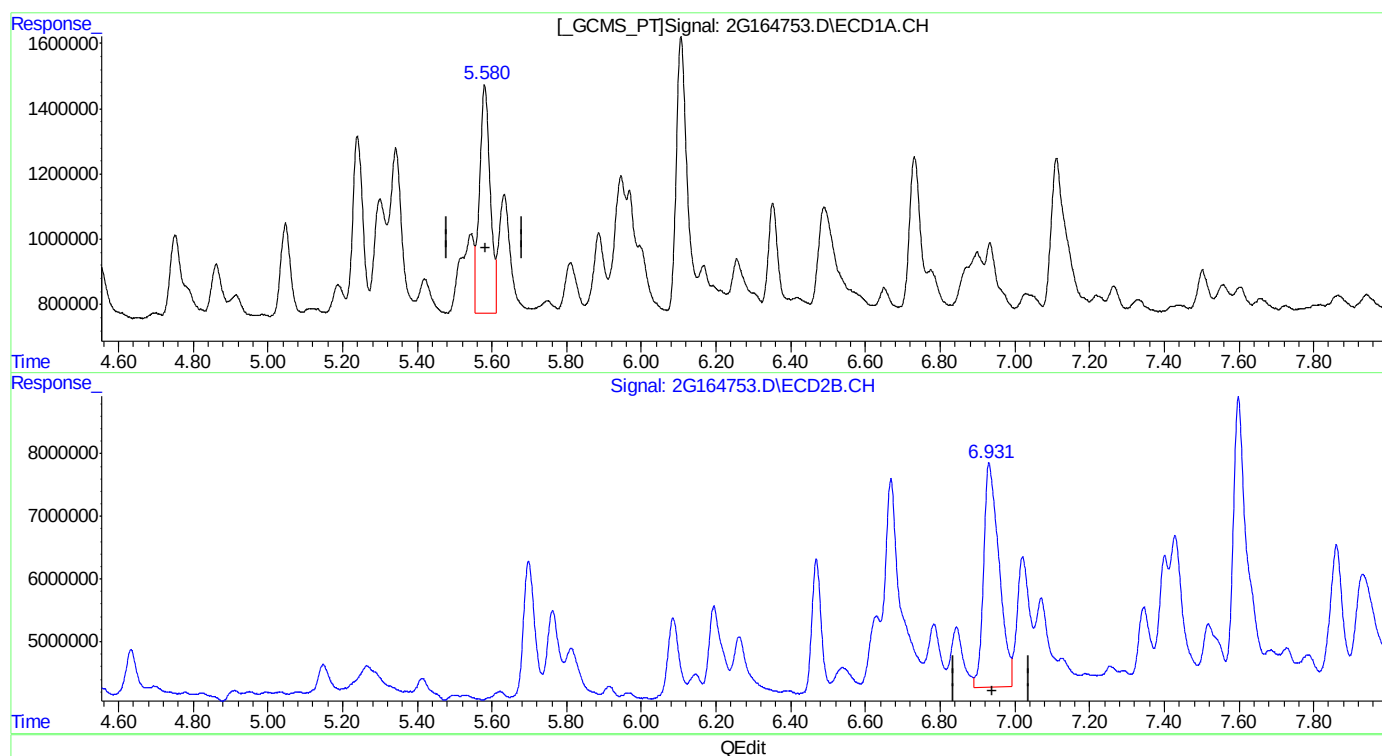
response 608672726

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 53.512PPB  
response 13846480

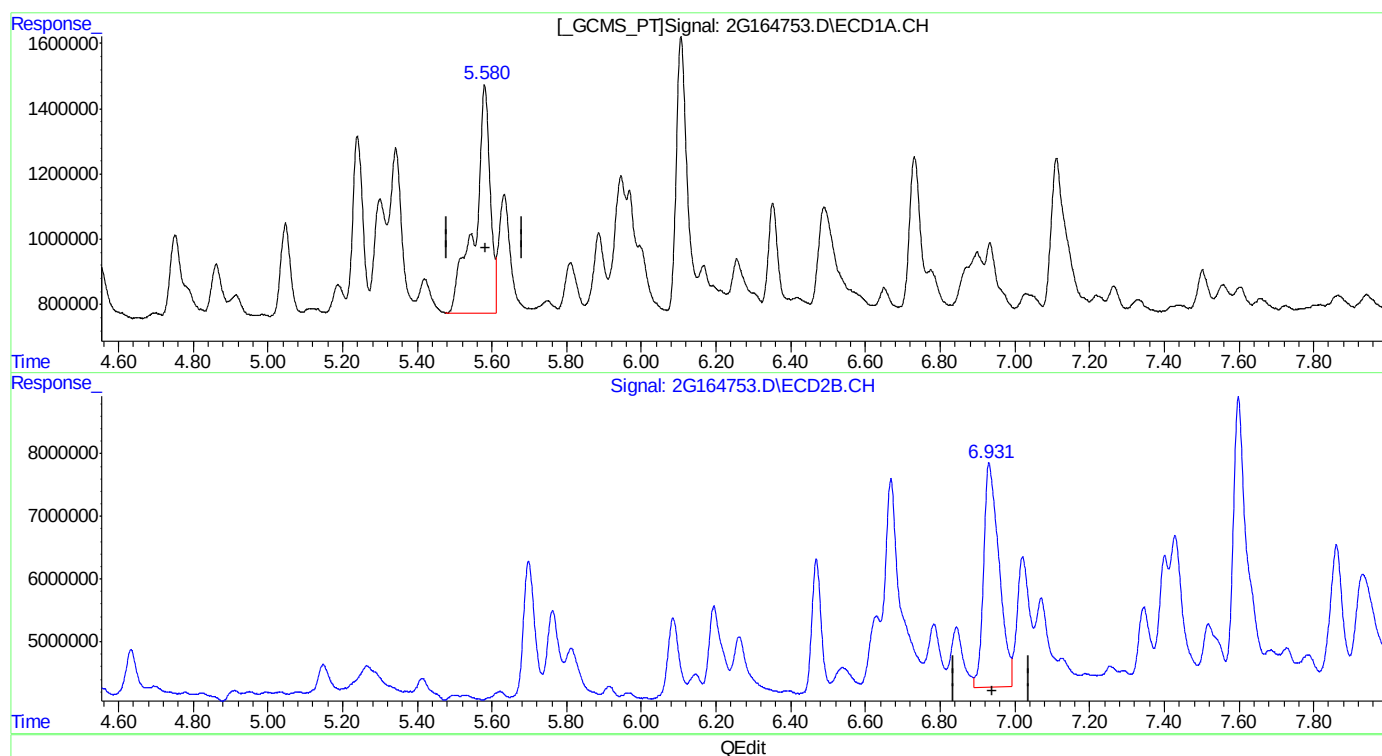
(25) AR1254-B #2  
6.931min 104.348PPB  
response 102669622

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 78.581PPB m  
response 20333182

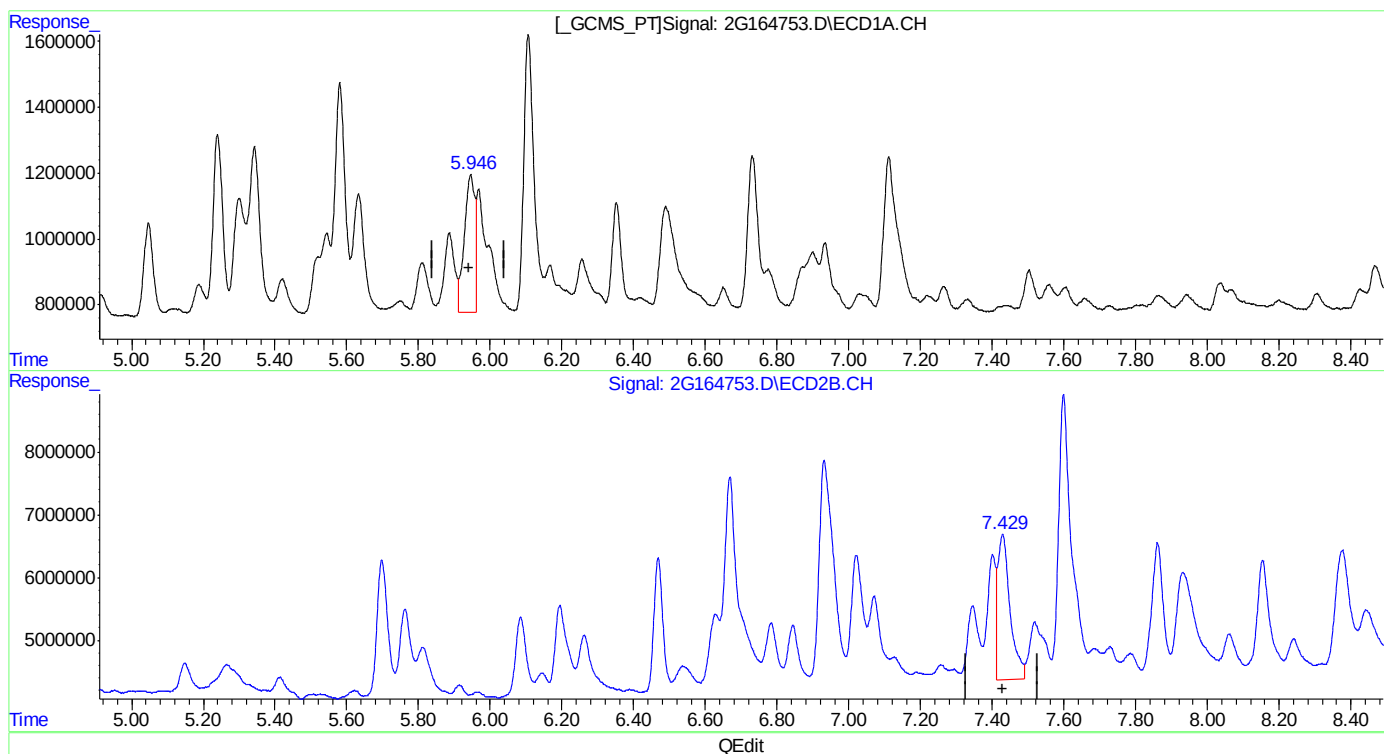
(25) AR1254-B #2  
6.931min 104.348PPB  
response 102669622

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.946min 62.150PPB  
response 8511500

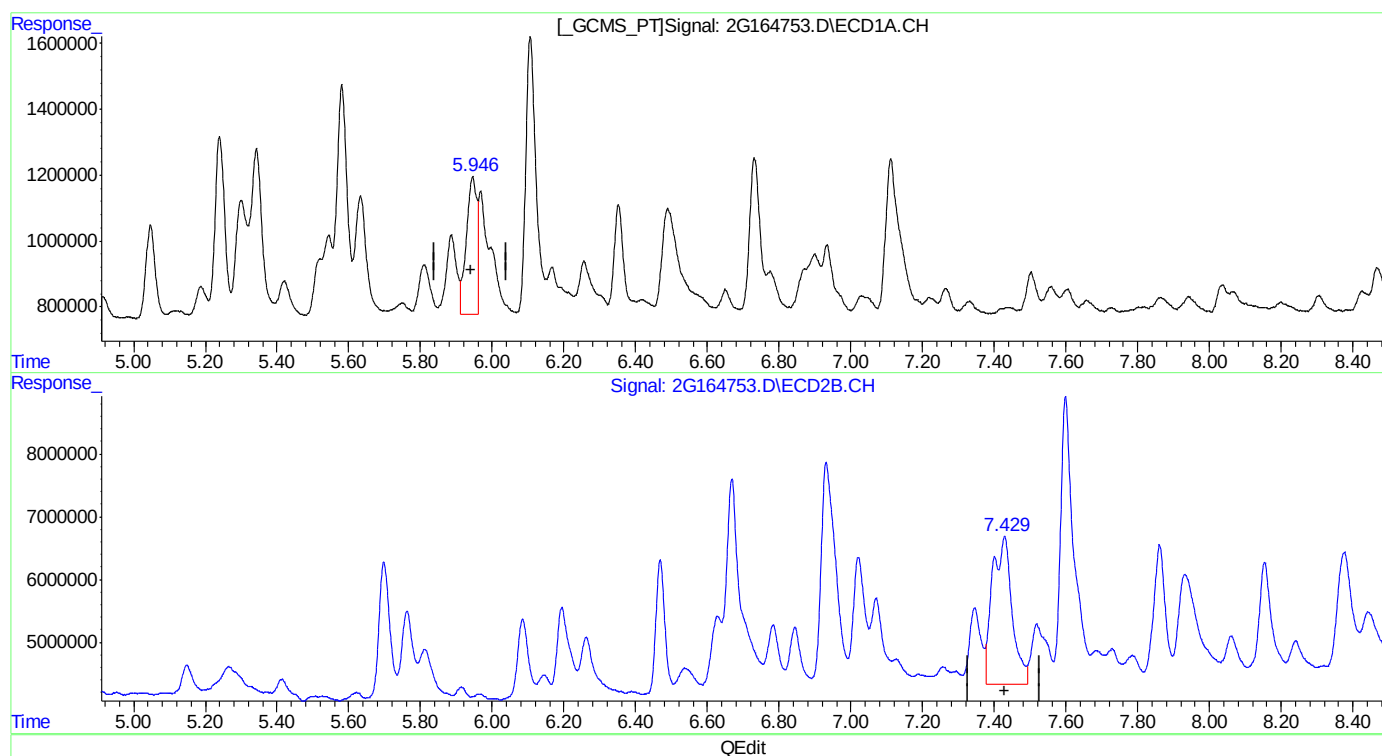
(26) AR1254-C #2  
7.429min 68.934PPB  
response 54990305

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.946min 62.150PPB  
response 8511500

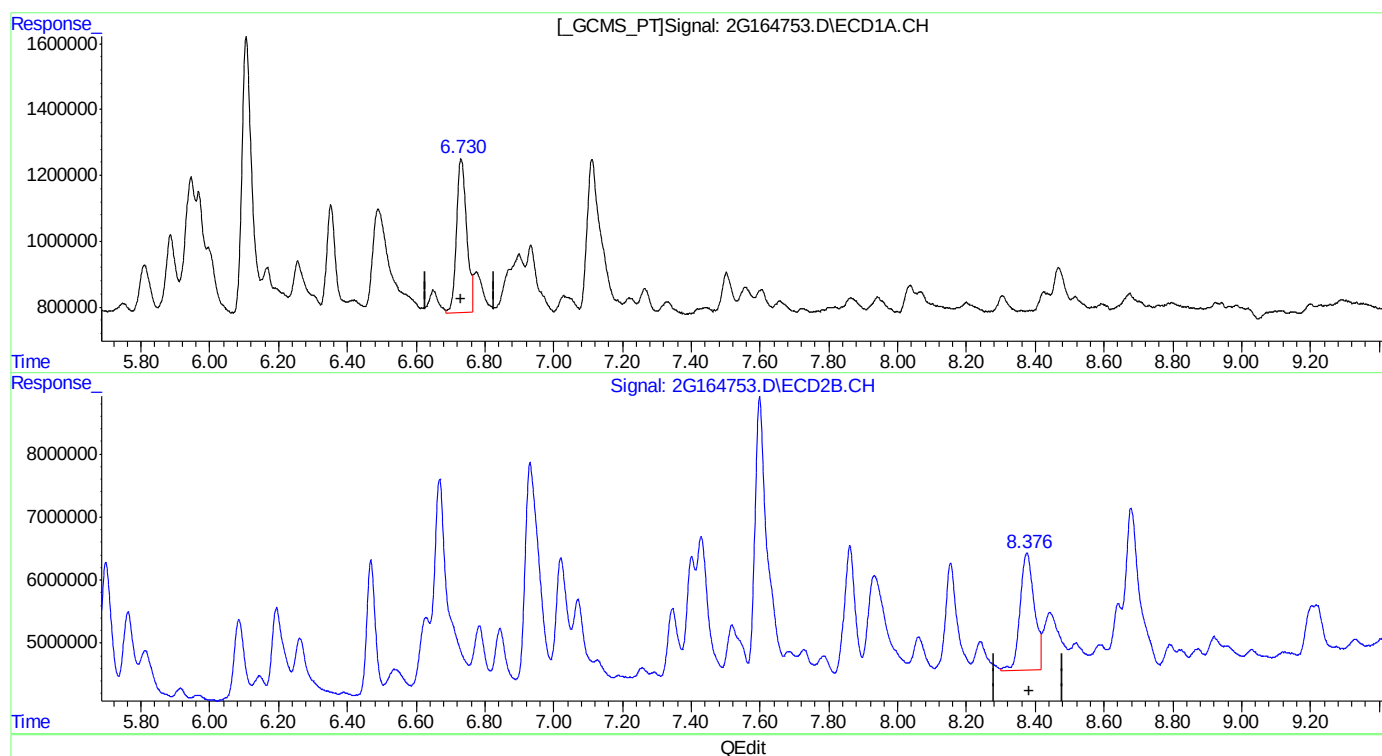
(26) AR1254-C #2  
7.429min 111.104PPB m  
response 88630497

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.731min 55.894PPB  
response 9568909

(29) AR1254-F #2  
8.376min 45.565PPB  
response 53820493

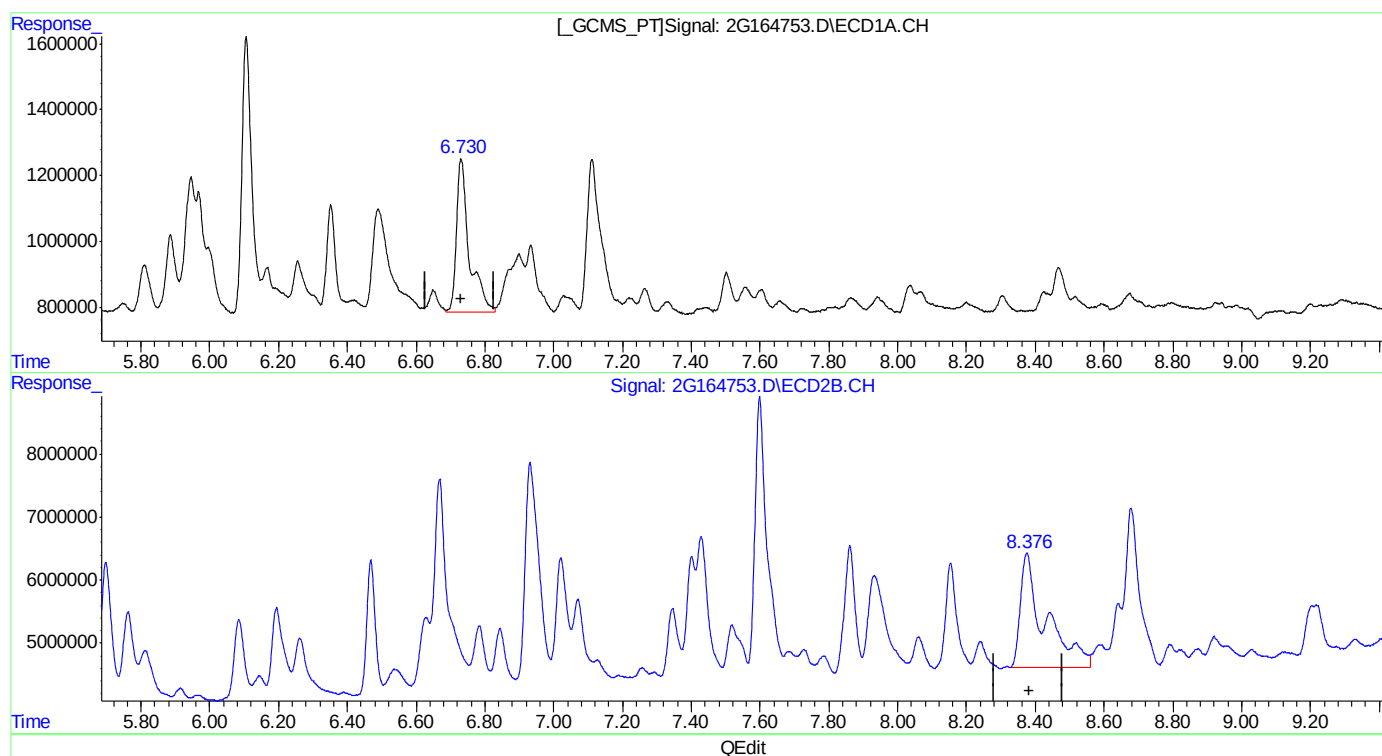


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.730min 69.287PPB m  
response 11861723

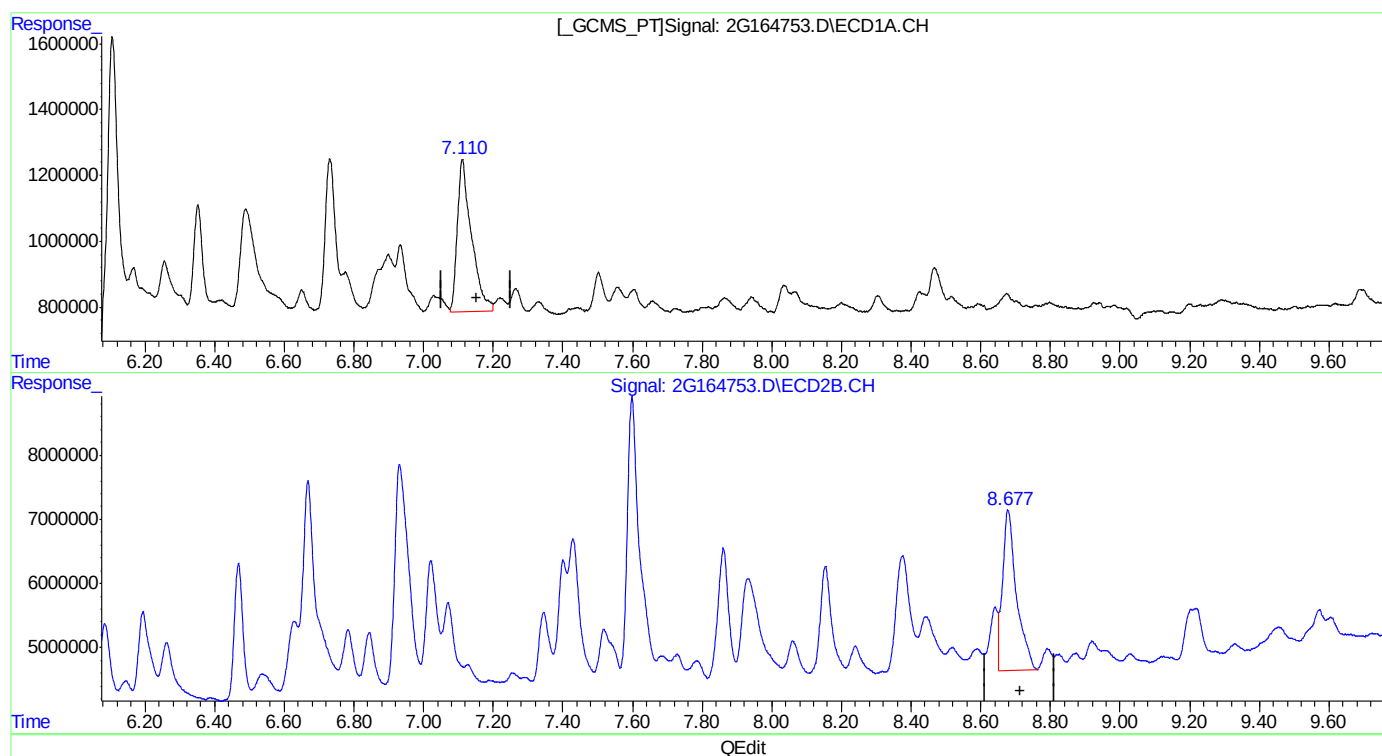
(29) AR1254-F #2  
8.376min 76.491PPB m  
response 90349759

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.111min 51.833PPB  
response 13050419

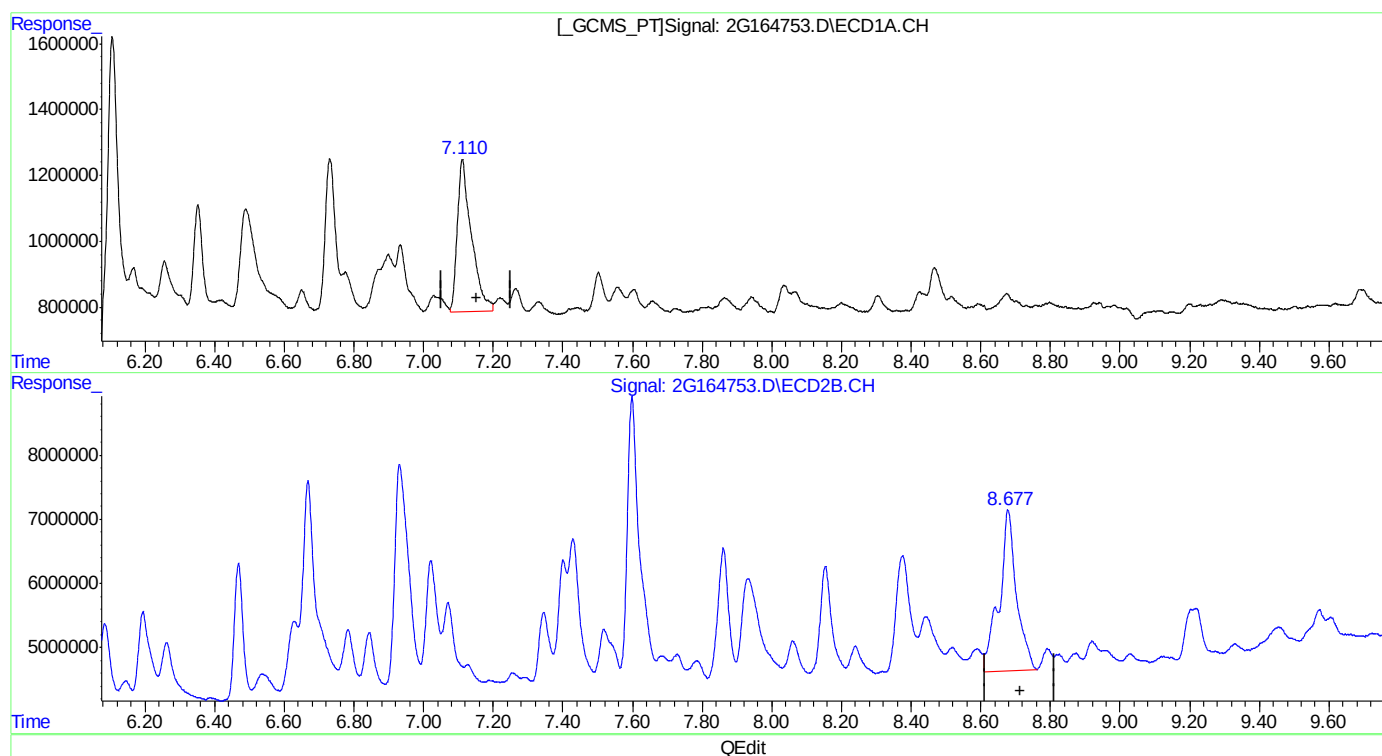
(30) AR1254-G #2  
8.679min 46.234PPB  
response 69848981

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164753.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 5:10 pm  
Operator : tianweir  
Sample : jc66894-4  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 74 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 15:42:17 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(30) AR1254-G  
7.111min 51.833PPB  
response 13050419

(30) AR1254-G #2  
8.677min 57.343PPB m  
response 86630993

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164632.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 6:16 am  
Operator : christp  
Sample : op12385-mb1  
Misc : OP12385,G2G4349,15.0,,,10,1  
ALS Vial : 92 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 11:50:55 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2  | ppb    | ppb    |
|-----------------------------|--------|--------|----------|---------|--------|--------|
| -----                       |        |        |          |         |        |        |
| System Monitoring Compounds |        |        |          |         |        |        |
| 1) S Tetrachlo...           | 2.769  | 3.421  | 139.9E6  | 889.4E6 | 38.108 | 38.871 |
| Spiked Amount               | 40.000 |        | Recovery | =       | 95.27% | 97.18% |
| 51) S Decachlor...          | 9.967  | 11.770 | 145.6E6  | 716.4E6 | 35.887 | 37.507 |
| Spiked Amount               | 40.000 |        | Recovery | =       | 89.72% | 93.77% |

## Target Compounds

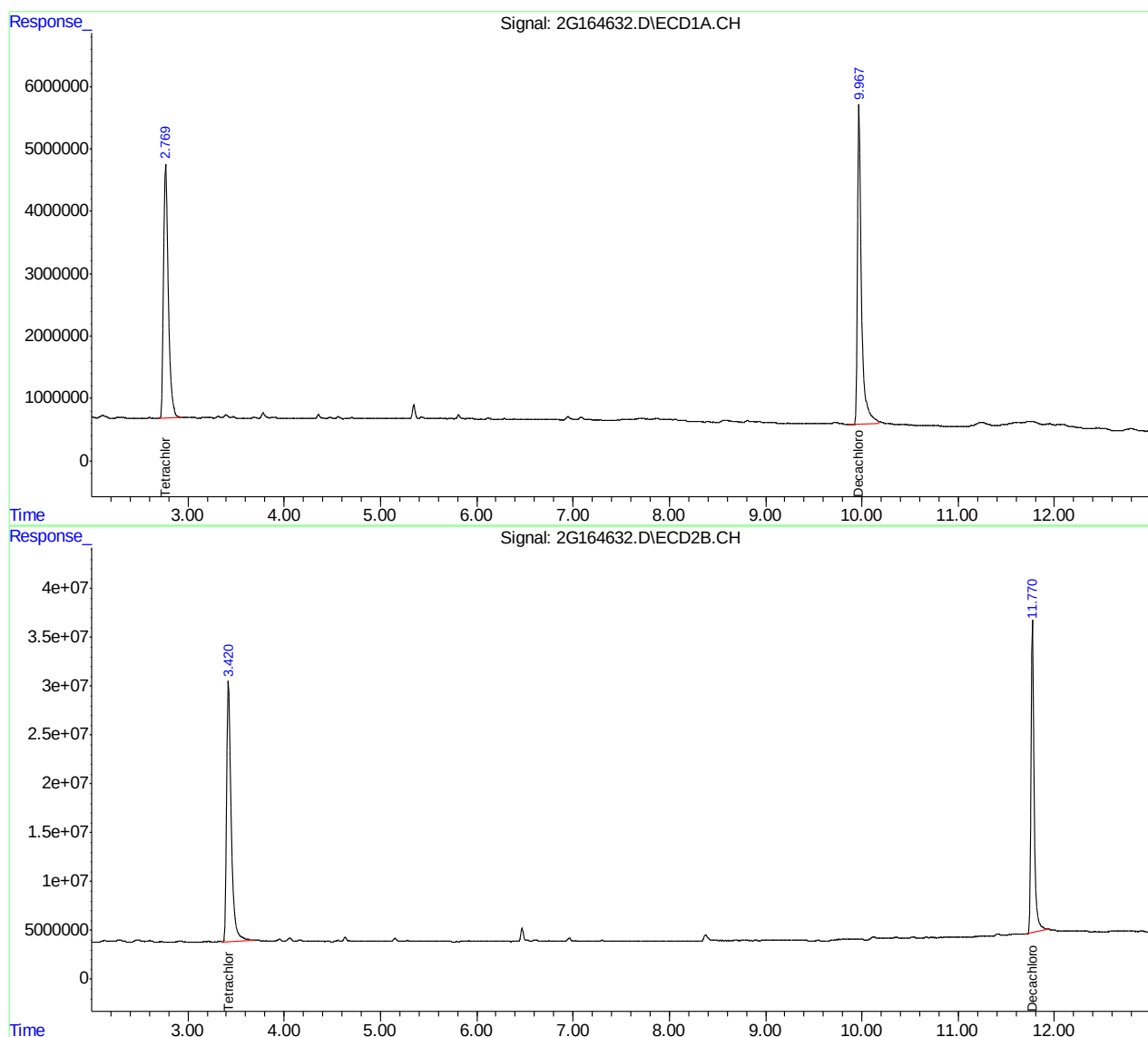
-----  
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164632.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 6:16 am  
Operator : christp  
Sample : op12385-mb1  
Misc : OP12385,G2G4349,15.0,,,10,1  
ALS Vial : 92 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 11:50:55 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164652.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 11:44 am  
Operator : tianweir  
Sample : op12385-mb1  
Misc : OP12385,G2G4350,15.0,,,10,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:25:56 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2  | ppb    | ppb    |
|-----------------------------|--------|--------|----------|---------|--------|--------|
| -----                       |        |        |          |         |        |        |
| System Monitoring Compounds |        |        |          |         |        |        |
| 1) S Tetrachlo...           | 2.771  | 3.419  | 133.0E6  | 810.9E6 | 36.228 | 35.439 |
| Spiked Amount               | 40.000 |        | Recovery | =       | 90.57% | 88.60% |
| 51) S Decachlor...          | 9.971  | 11.771 | 137.9E6  | 684.0E6 | 34.004 | 35.813 |
| Spiked Amount               | 40.000 |        | Recovery | =       | 85.01% | 89.53% |

## Target Compounds

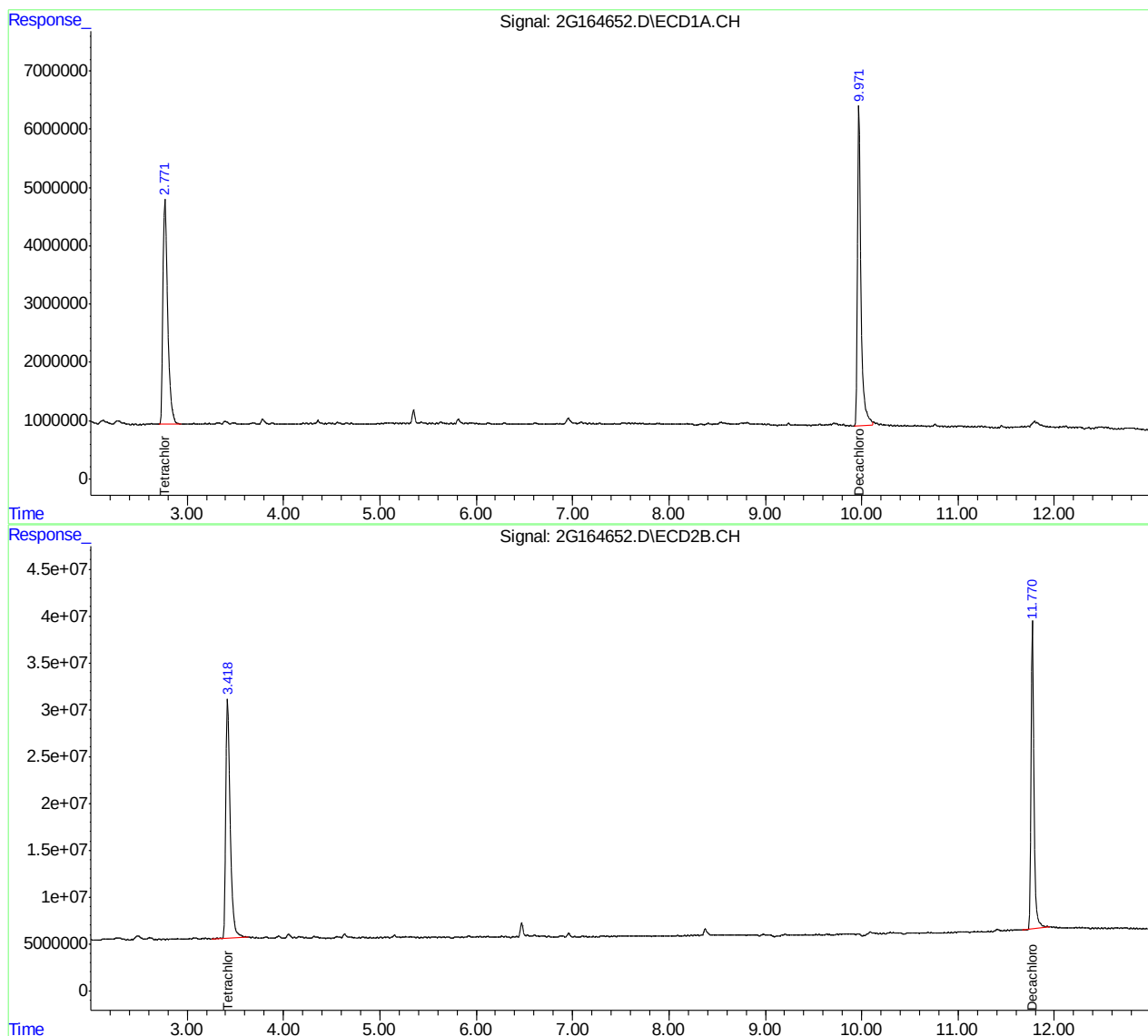
-----  
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164652.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 11:44 am  
Operator : tianweir  
Sample : op12385-mb1  
Misc : OP12385,G2G4350,15.0,,,10,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:25:56 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
 Data File : 2G164653.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 12:01 pm  
 Operator : tianweir  
 Sample : op12385-bs1  
 Misc : OP12385,G2G4350,15.0,,,10,1  
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 12:29:06 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 11:34:26 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb      |
|-----------------------------|--------|--------|----------|----------|----------|----------|
| -----                       |        |        |          |          |          |          |
| System Monitoring Compounds |        |        |          |          |          |          |
| 1) S Tetrachlo...           | 2.766f | 3.419  | 142.5E6  | 840.6E6  | 38.834   | 36.735   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 97.09%   | 91.84%   |
| 51) S Decachlor...          | 9.972  | 11.770 | 124.8E6  | 614.4E6  | 30.766   | 32.169   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 76.92%   | 80.42%   |
| Target Compounds            |        |        |          |          |          |          |
| 31) AR1016-A                | 3.137f | 4.080  | 16656872 | 88700019 | 213.843  | 236.783  |
| 32) AR1016-B                | 3.536  | 4.618  | 29802366 | 190.1E6  | 219.042  | 237.294  |
| 33) AR1016-C                | 4.083  | 5.265  | 52484323 | 305.3E6  | 181.002  | 176.103  |
| 34) AR1016-D                | 4.245  | 5.448  | 22926955 | 140.6E6  | 193.911  | 186.895  |
| 35) AR1016-E                | 4.753  | 6.087  | 22592342 | 92414582 | 185.283  | 180.117  |
| 36) AR1260-A                | 7.158f | 8.698  | 52393962 | 298.9E6  | 153.716  | 149.486  |
| 37) AR1260-B                | 7.280  | 8.800  | 33107157 | 188.1E6  | 229.205  | 215.163  |
| 38) AR1260-C                | 7.620  | 9.231  | 29856410 | 189.5E6  | 187.506  | 185.462  |
| 39) AR1260-D                | 8.072f | 9.594  | 78544503 | 390.9E6  | 213.933  | 182.130  |
| 40) AR1260-E                | 8.493f | 10.139 | 68448033 | 420.5E6  | 180.703m | 206.318m |
| -----                       |        |        |          |          |          |          |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

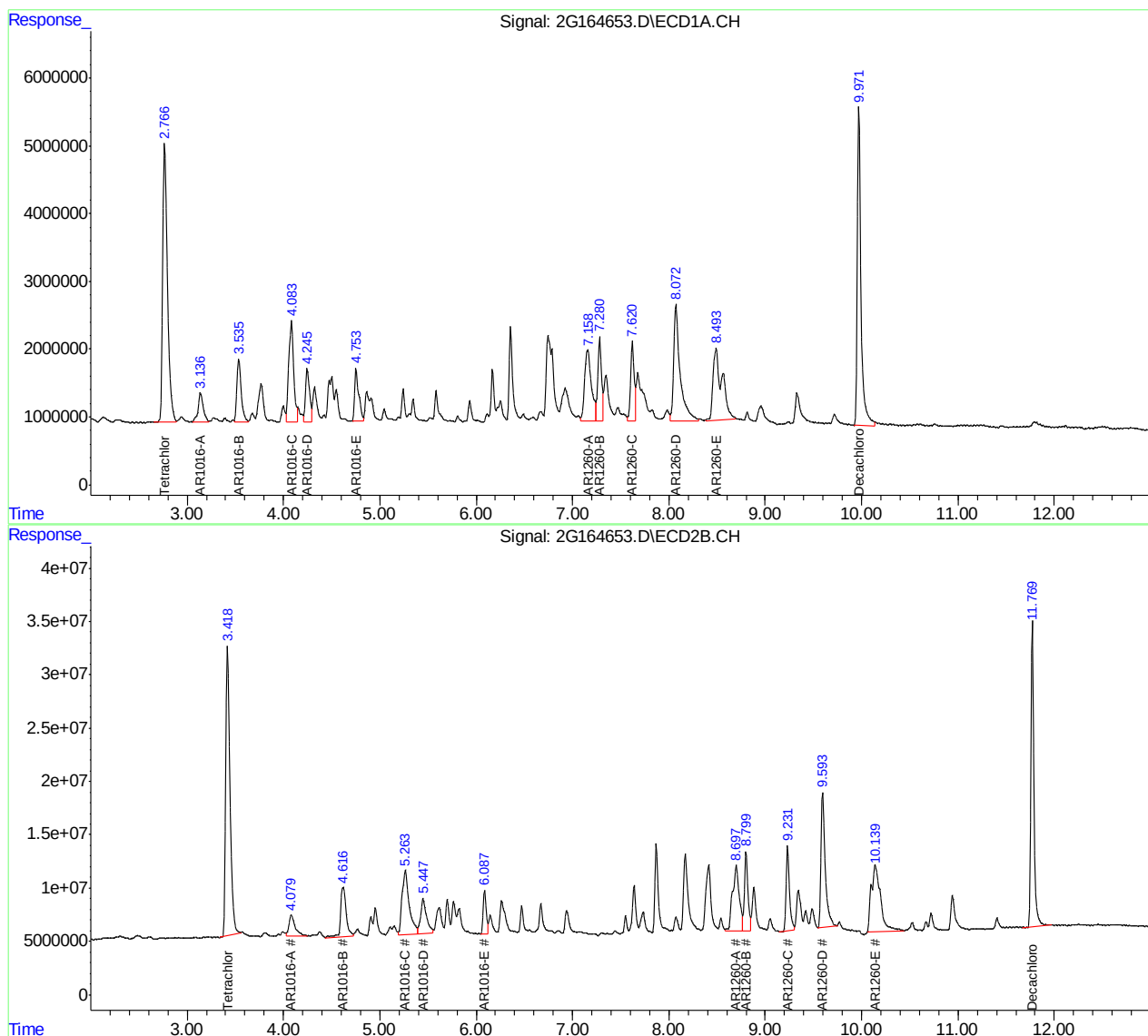


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164653.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:01 pm  
Operator : tianweir  
Sample : op12385-bs1  
Misc : OP12385,G2G4350,15.0,,,10,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:29:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: OP12385-BS1

Method: SW846 8082A

Lab FileID: 2G164653.D

Analyst approved: 05/31/18 15:24 Summer Kotb

Injection Time: 05/31/18 12:01

Supervisor approved: 05/31/18 15:36 Gwendolyn Burns

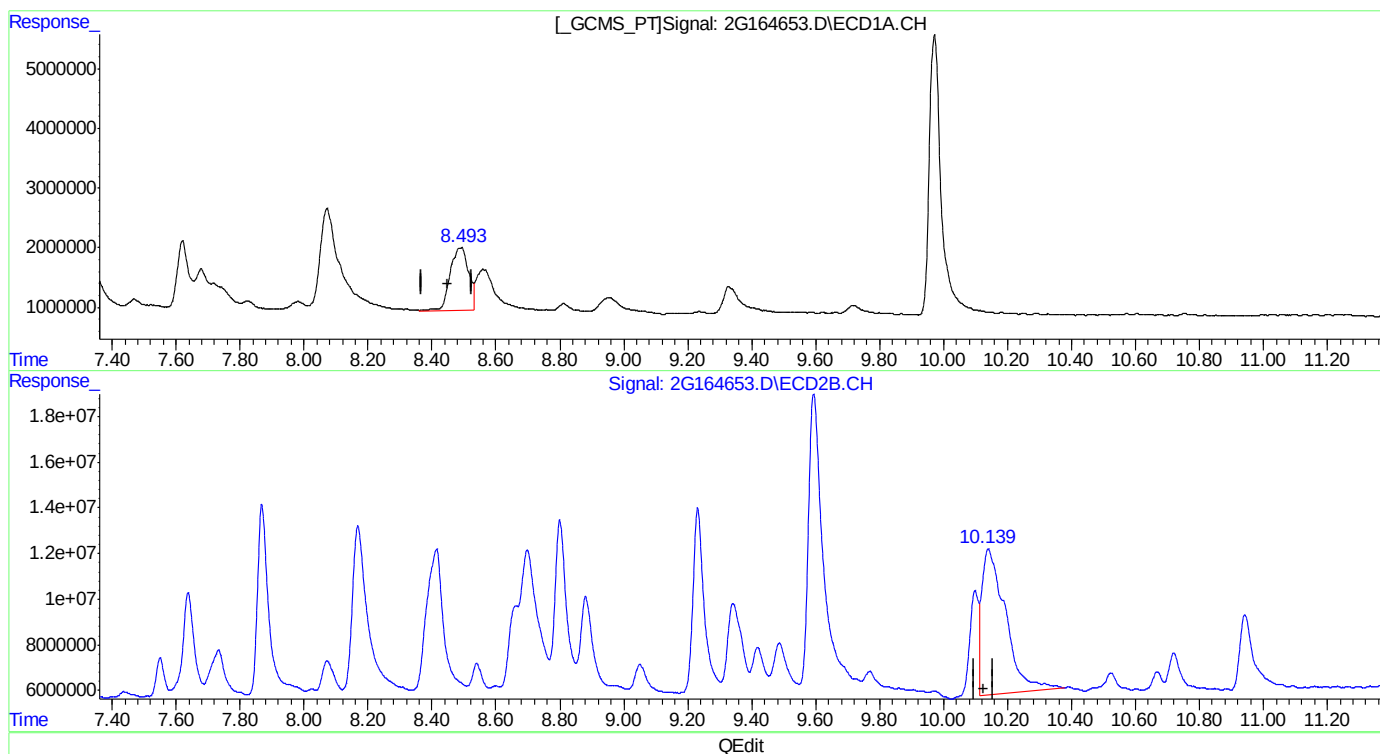
| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1260-E  |     | 1    | 8.49           | Split peak |
| AR1260-E  |     | 2    | 10.14          | Split peak |

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164653.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:01 pm  
Operator : tianweir  
Sample : op12385-bs1  
Misc : OP12385,G2G4350,15.0,,,10,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:26:58 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.493min 110.029PPB  
response 41677540

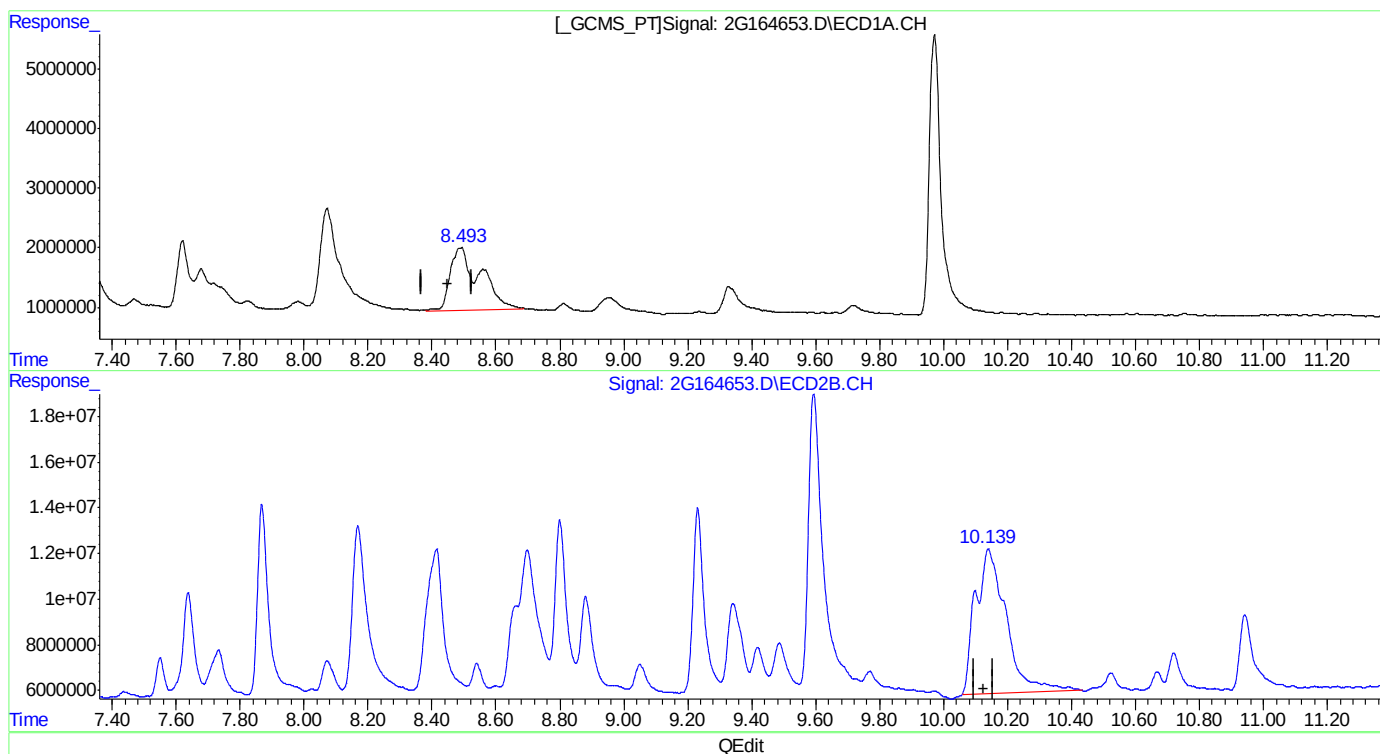
(40) AR1260-E #2  
10.140min 163.054PPB  
response 332332867

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164653.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 12:01 pm  
Operator : tianweir  
Sample : op12385-bs1  
Misc : OP12385,G2G4350,15.0,,,10,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:26:58 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.493min 180.703PPB m  
response 68448033

(40) AR1260-E #2  
10.139min 206.318PPB m  
response 420511227

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
 Data File : 2G164657.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 1:11 pm  
 Operator : tianweir  
 Sample : op12385-ms  
 Misc : OP12385,G2G4350,15.9,,,10,1  
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 15:20:28 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 12:42:15 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2    | Resp#1   | Resp#2  | ppb      | ppb       |
|-----------------------------|----------------|--------|---------|----------|---------|----------|-----------|
| -----                       |                |        |         |          |         |          |           |
| System Monitoring Compounds |                |        |         |          |         |          |           |
| 1)                          | S Tetrachlo... | 2.770  | 3.418   | 118.6E6  | 666.5E6 | 32.319   | 29.129m   |
|                             | Spiked Amount  | 40.000 |         | Recovery | =       | 80.80%   | 72.82%    |
| 51)                         | S Decachlor... | 9.954f | 11.762  | 113.2E6  | 475.3E6 | 27.918   | 24.887    |
|                             | Spiked Amount  | 40.000 |         | Recovery | =       | 69.80%   | 62.22%    |
| Target Compounds            |                |        |         |          |         |          |           |
| 24)                         | AR1254-A       | 5.241  | 6.669   | 49442605 | 394.8E6 | 400.786m | 397.769   |
| 25)                         | AR1254-B       | 5.582  | 6.938   | 111.6E6  | 813.5E6 | 431.176m | 826.780 # |
| 26)                         | AR1254-C       | 5.942  | 7.429   | 57193692 | 273.3E6 | 417.620m | 342.559   |
| 27)                         | AR1254-D       | 6.105  | 7.595   | 96044573 | 622.6E6 | 390.571m | 380.940   |
| 28)                         | AR1254-E       | 6.483  | 7.918   | 82426940 | 356.4E6 | 451.632  | 327.322 # |
| 29)                         | AR1254-F       | 6.729  | 8.382   | 122.1E6  | 571.4E6 | 713.327m | 483.754m# |
| 32)                         | AR1016-B       | 3.536  | 4.624   | 28593129 | 147.1E6 | 210.154  | 183.671   |
| 33)                         | AR1016-C       | 4.085  | 5.254f  | 59588285 | 349.9E6 | 205.502  | 201.804   |
| 34)                         | AR1016-D       | 4.244  | 5.437f  | 26618767 | 124.5E6 | 225.135  | 165.555 # |
| 35)                         | AR1016-E       | 4.752  | 6.082   | 39847538 | 153.2E6 | 326.795  | 298.507   |
| 37)                         | AR1260-B       | 7.268  | 8.790   | 35701432 | 175.7E6 | 247.165  | 200.930   |
| 38)                         | AR1260-C       | 7.604  | 9.219   | 37460627 | 249.2E6 | 235.262  | 243.828   |
| 39)                         | AR1260-D       | 8.031f | 9.570f  | 74965018 | 393.1E6 | 204.183m | 183.134m  |
| 40)                         | AR1260-E       | 8.422f | 10.109f | 77933076 | 387.4E6 | 205.743m | 190.048m  |
| -----                       |                |        |         |          |         |          |           |

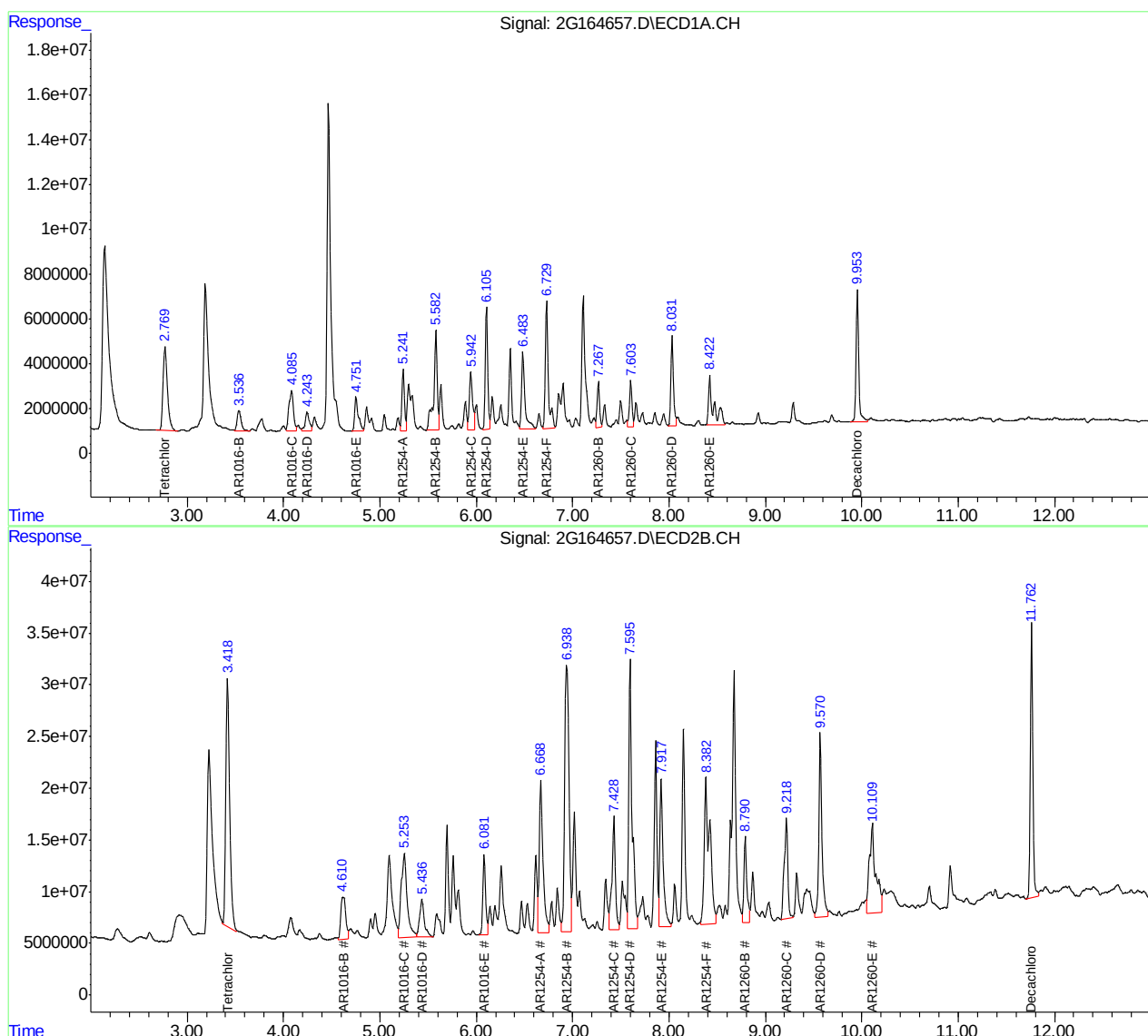
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:28 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

OP12385-MS

Method:

SW846 8082A

Lab FileID:

2G164657.D

Analyst approved:

05/31/18 15:24 Summer Kotb

Injection Time:

05/31/18 13:11

Supervisor approved:

05/31/18 15:36 Gwendolyn Burns

| Parameter            | CAS      | Sig# | R.T.<br>(min.) | Reason                  |
|----------------------|----------|------|----------------|-------------------------|
| Tetrachloro-m-xylene | 877-09-8 | 2    | 3.42           | Poorly defined baseline |
| AR1254-A             |          | 1    | 5.24           | Split peak              |
| AR1254-B             |          | 1    | 5.58           | Split peak              |
| AR1254-C             |          | 1    | 5.94           | Split peak              |
| AR1254-D             |          | 1    | 6.11           | Split peak              |
| AR1254-F             |          | 1    | 6.73           | Split peak              |
| AR1260-D             |          | 1    | 8.03           | Split peak              |
| AR1254-F             |          | 2    | 8.38           | Split peak              |
| AR1260-E             |          | 1    | 8.42           | Split peak              |
| AR1260-D             |          | 2    | 9.57           | Split peak              |
| AR1260-E             |          | 2    | 10.11          | Split peak              |

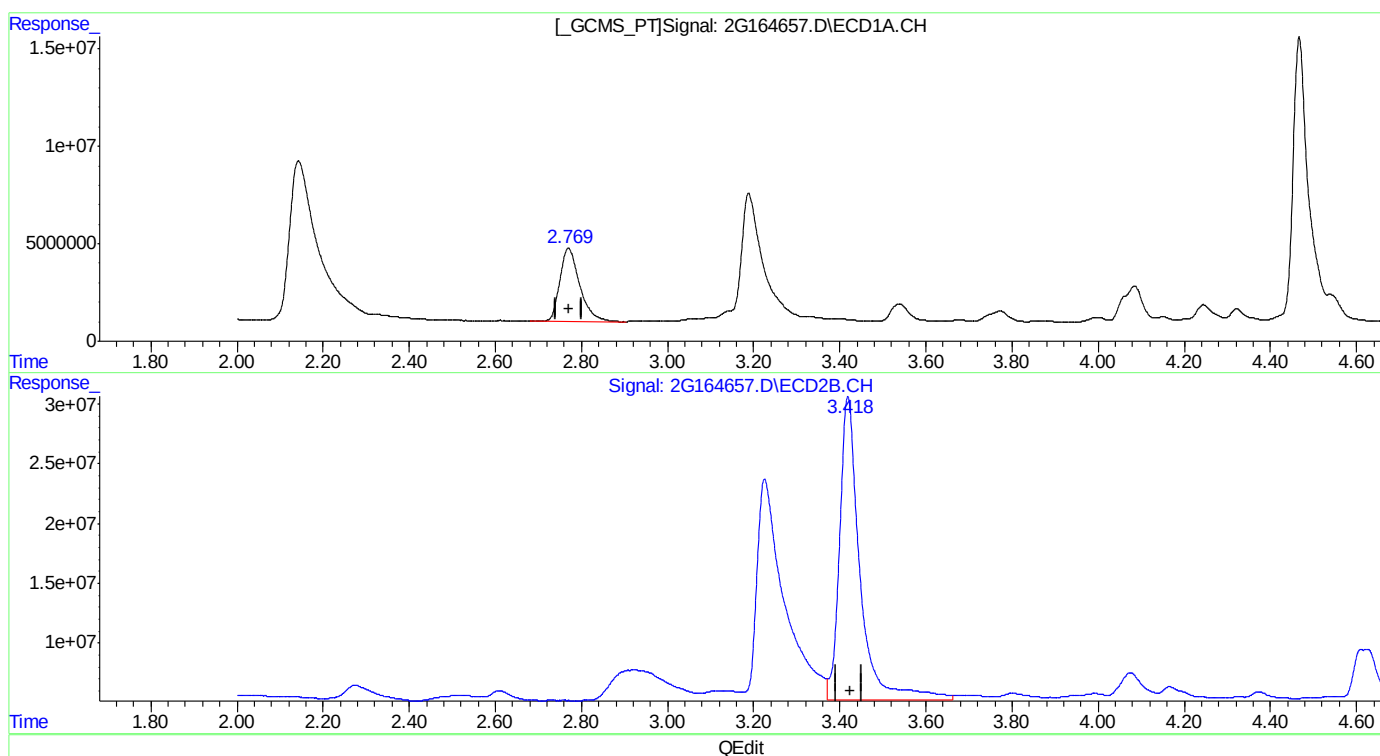
7.4.1.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(1) Tetrachloro-m-xylene (S)

2.770min 32.319ppb

response 118623944

(1) Tetrachloro-m-xylene #2 (S)

3.419min 36.703ppb

response 839840992

(+) = Expected Retention Time  
2PCB4311.M Thu May 31 15:19:04 2018 RPT1

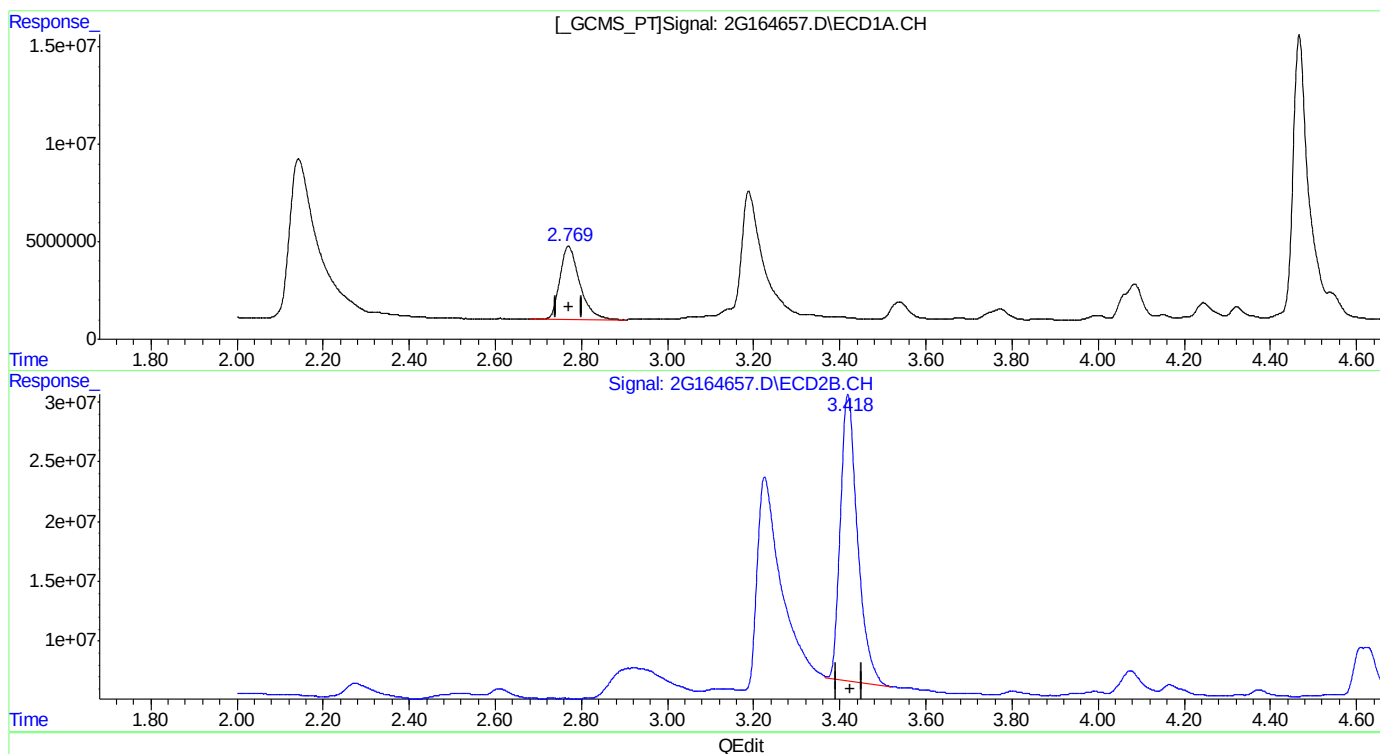


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(1) Tetrachloro-m-xylene (S)

2.770min 32.319ppb

response 118623944

(1) Tetrachloro-m-xylene #2 (S)

3.418min 29.129ppb m

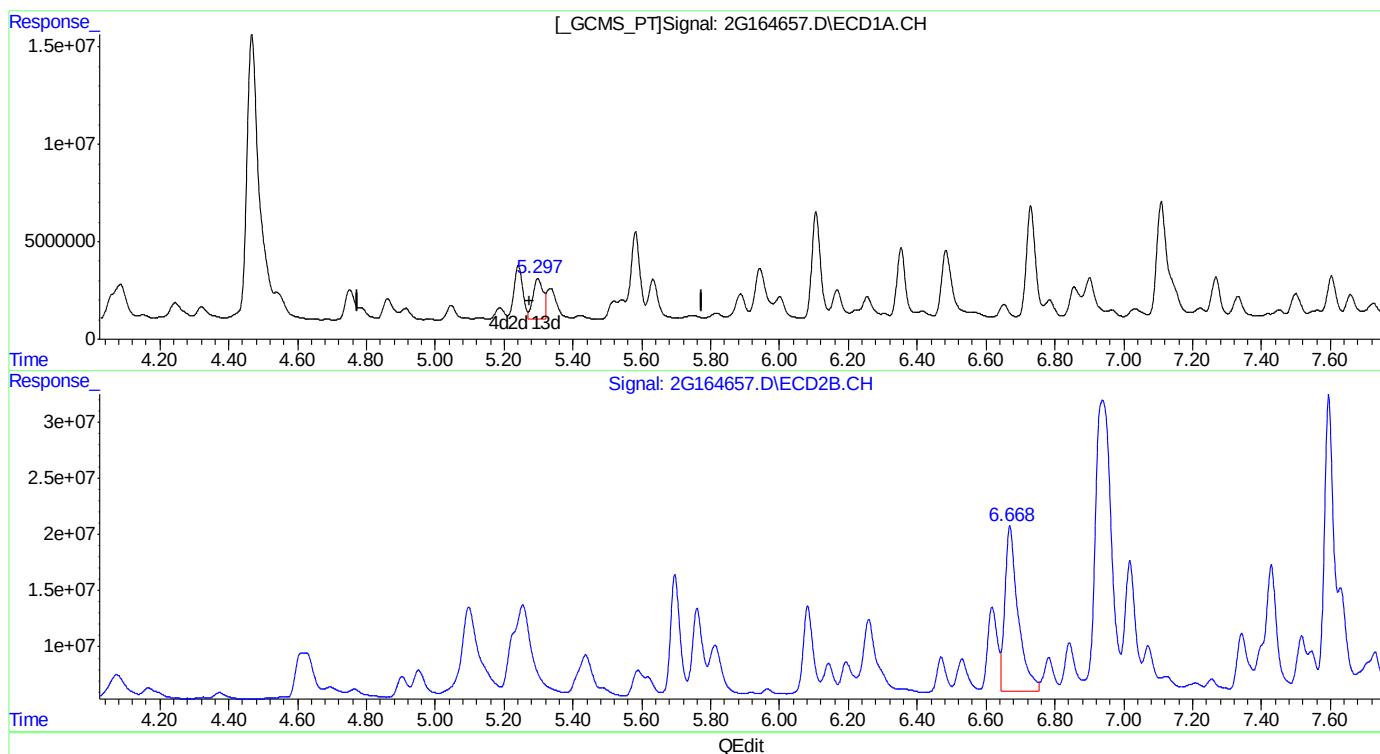
response 666531115

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.298min 344.970  
response 42556813

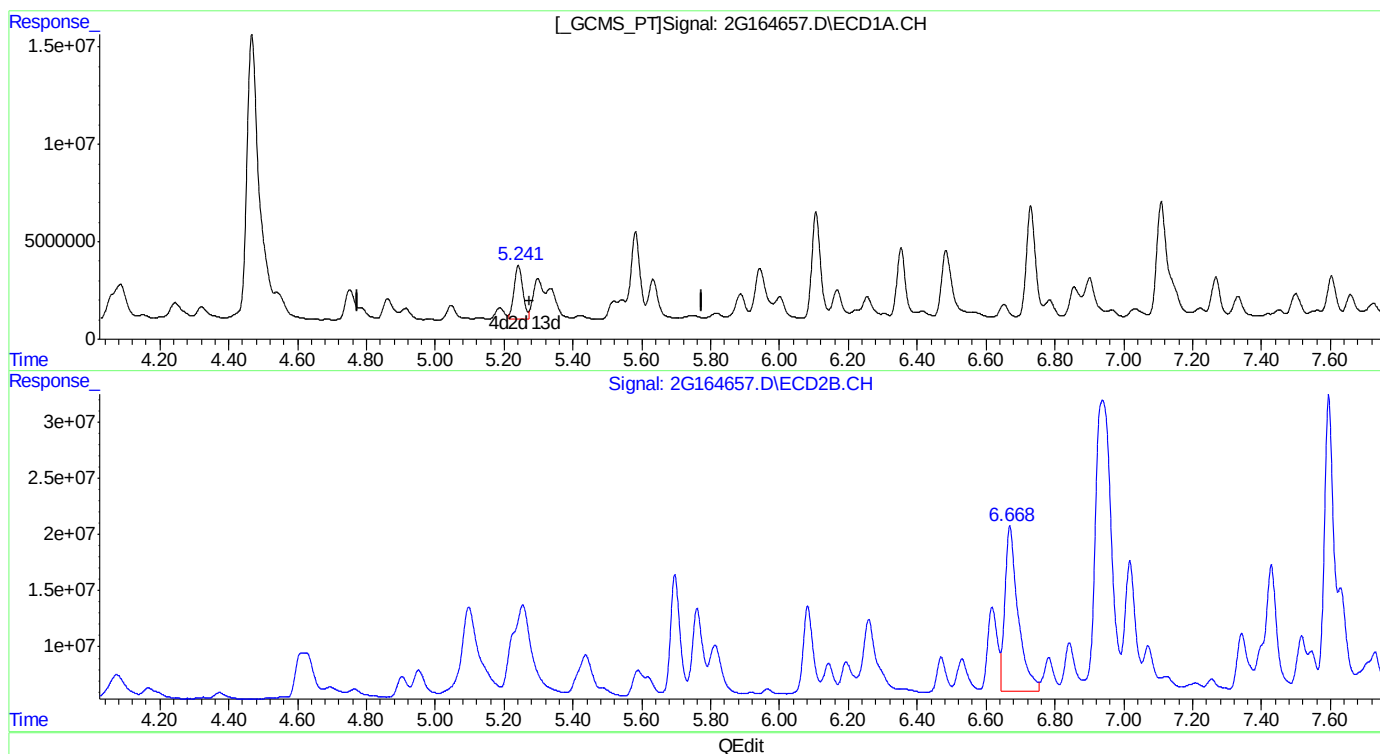
(24) AR1254-A #2  
6.669min 397.769  
response 394784630

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(24) AR1254-A  
5.241min 400.786 m  
response 49442605

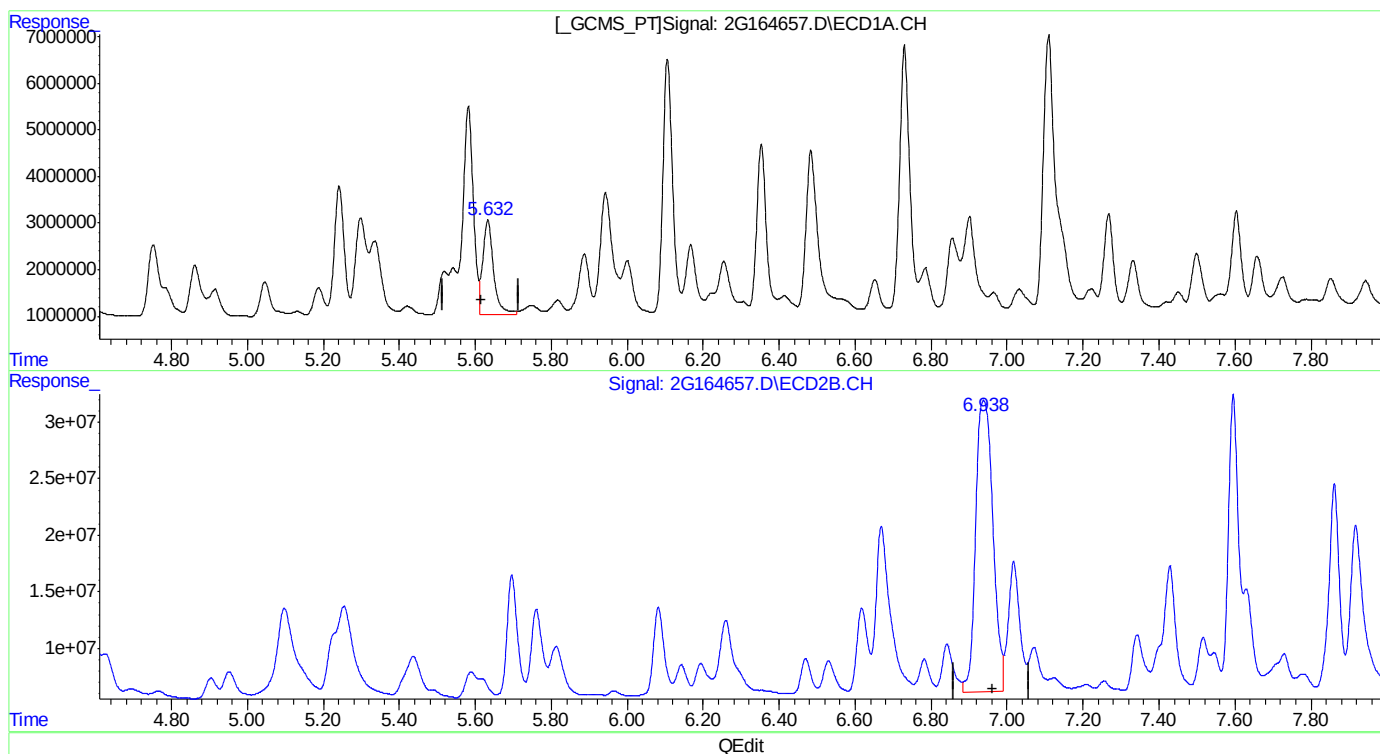
(24) AR1254-A #2  
6.669min 397.769  
response 394784630

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.633min 154.374PPB  
response 39944785

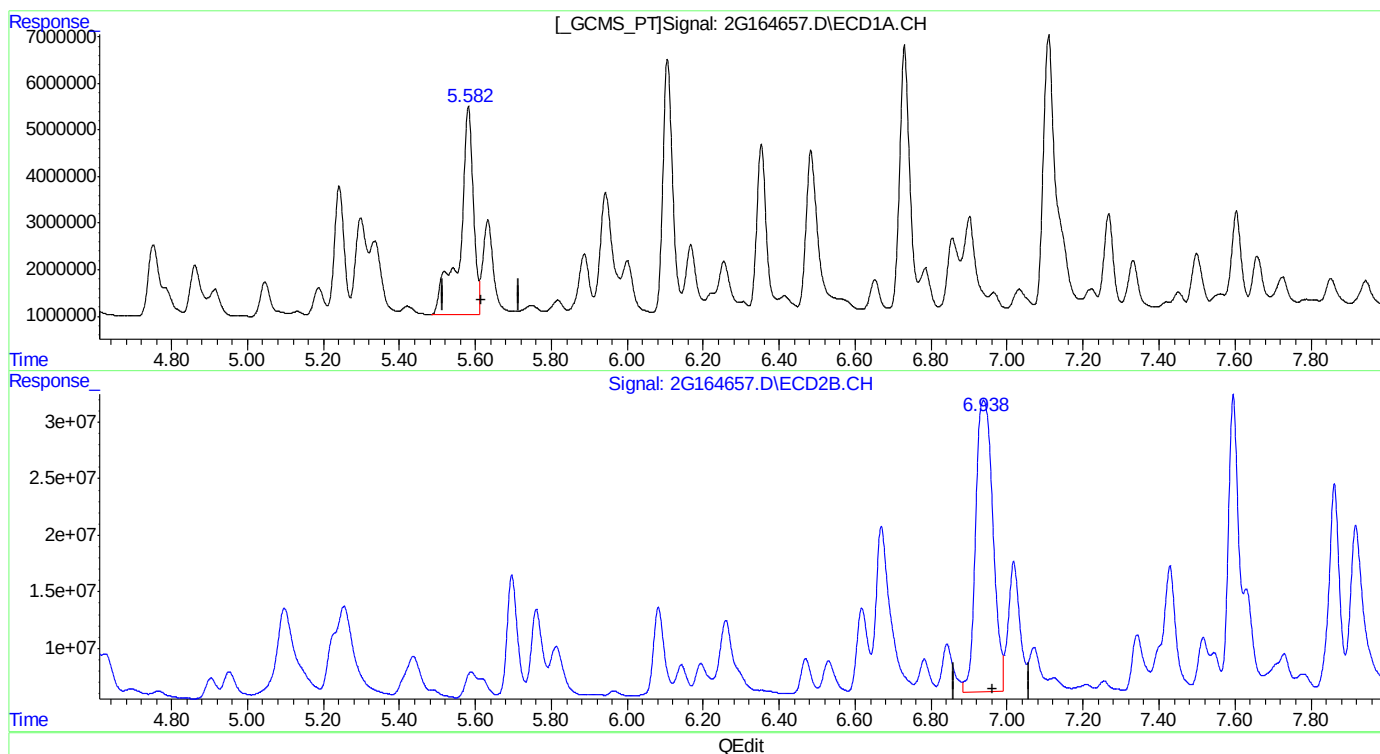
(25) AR1254-B #2  
6.938min 826.780PPB  
response 813481470

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.582min 431.176PPB m  
response 111567913

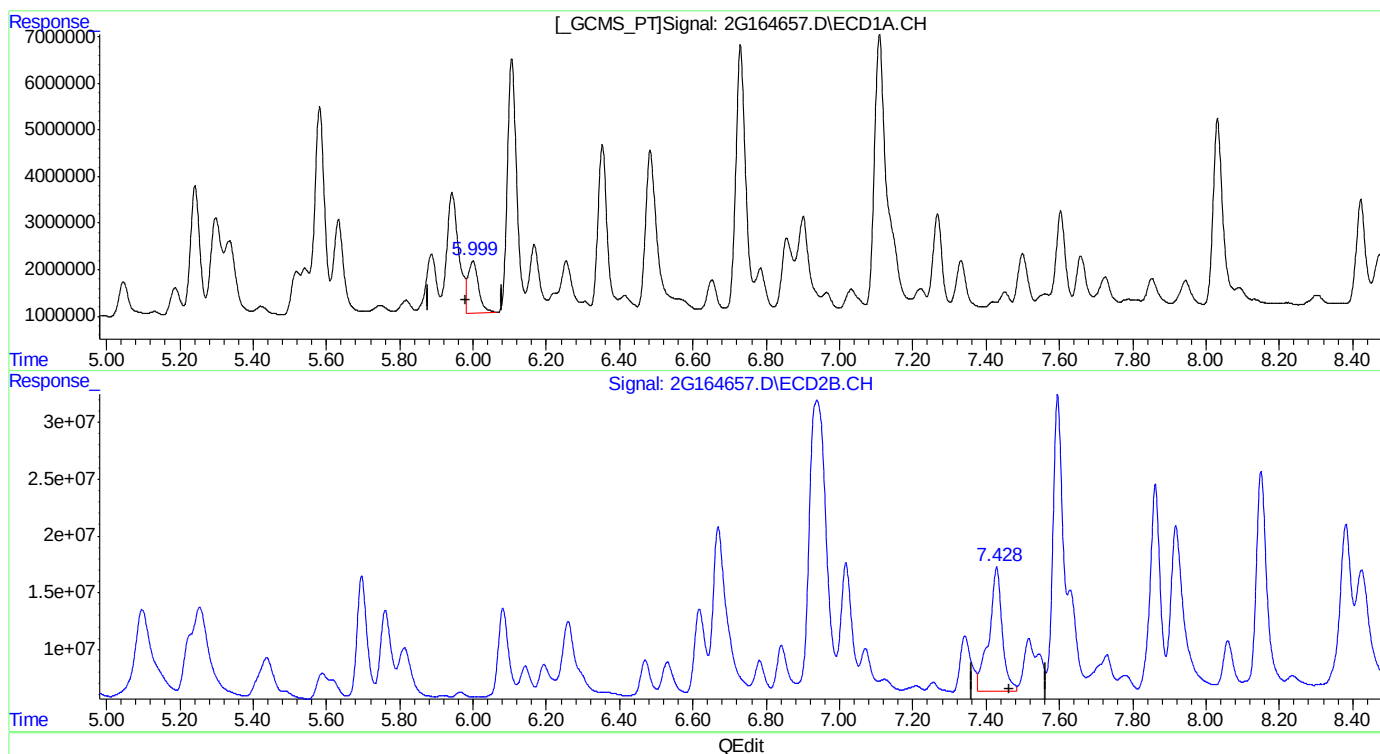
(25) AR1254-B #2  
6.938min 826.780PPB  
response 813481470

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
6.000min 165.082PPB  
response 22608232

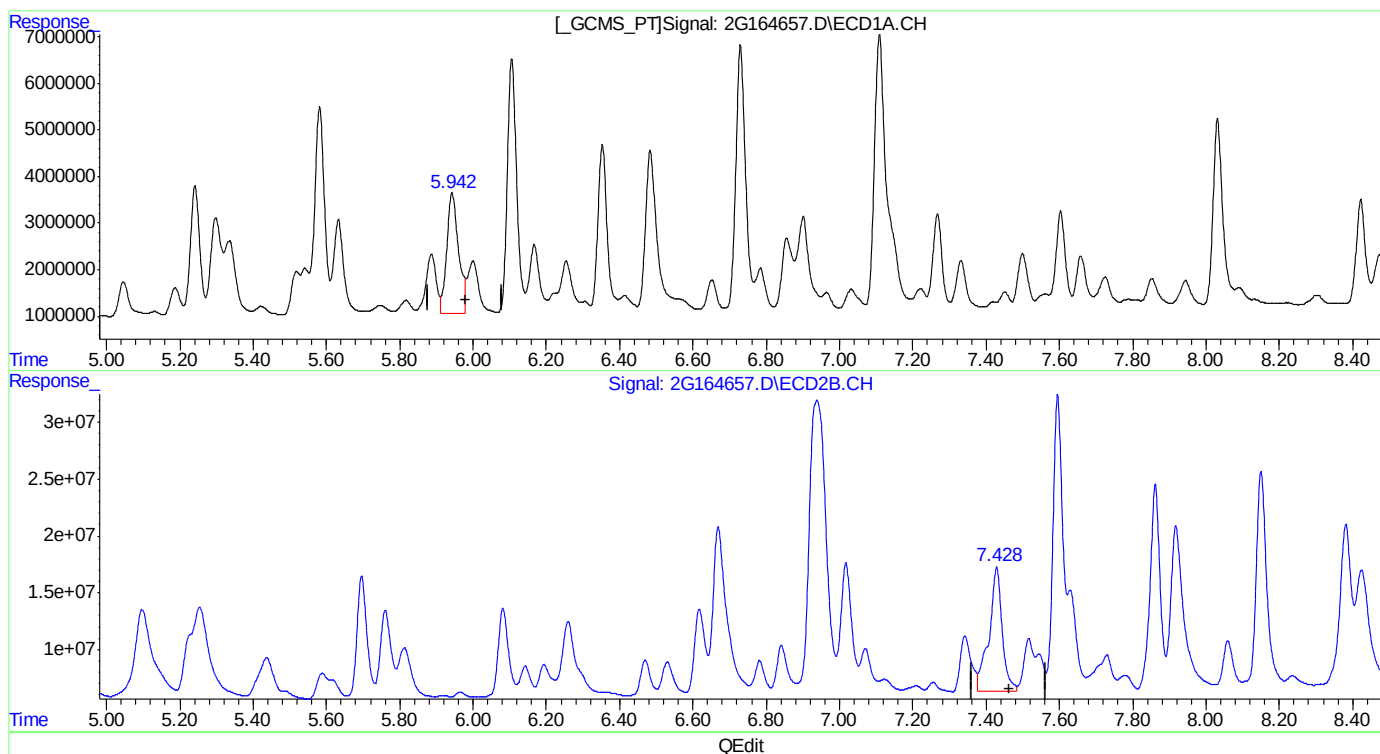
(26) AR1254-C #2  
7.429min 342.559PPB  
response 273267614

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(26) AR1254-C  
5.942min 417.620PPB m  
response 57193692

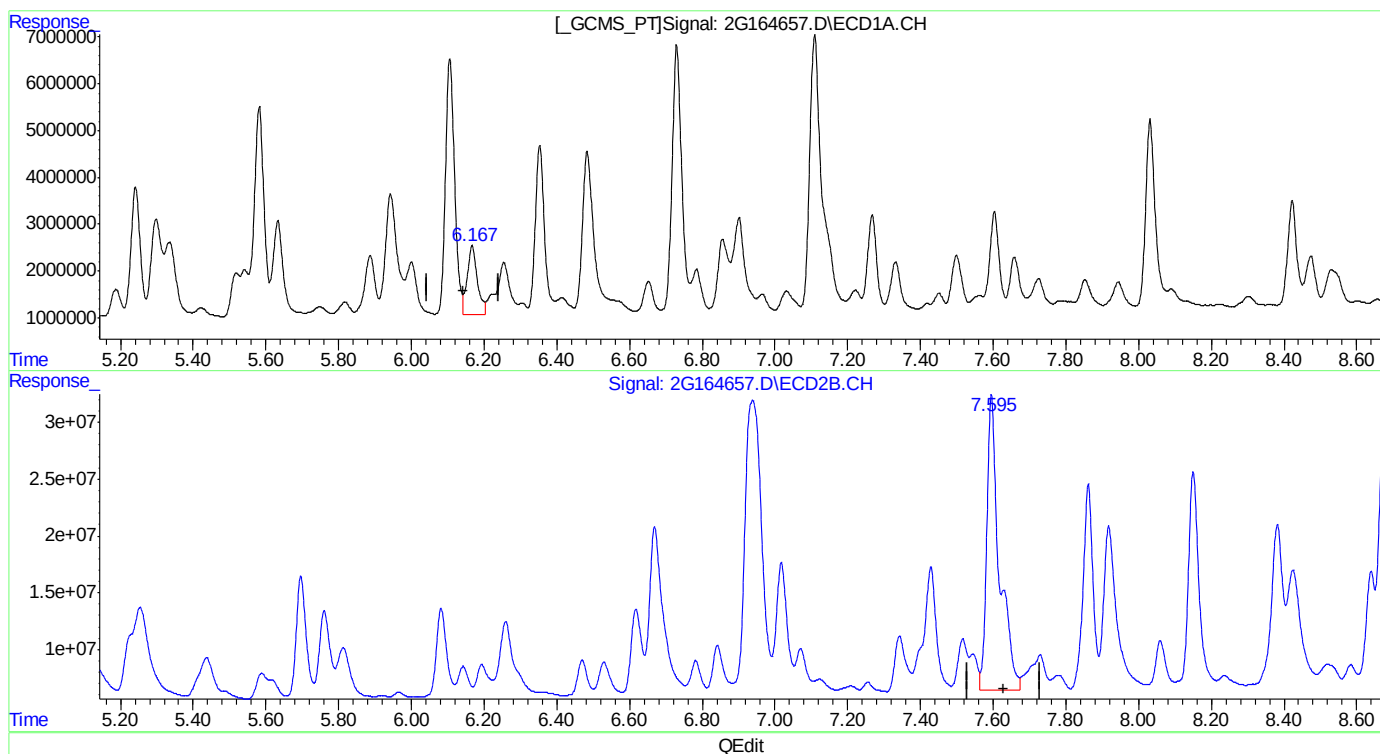
(26) AR1254-C #2  
7.429min 342.559PPB  
response 273267614

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.167min 114.519PPB  
response 28161152

(27) AR1254-D #2  
7.595min 380.940PPB  
response 622581800

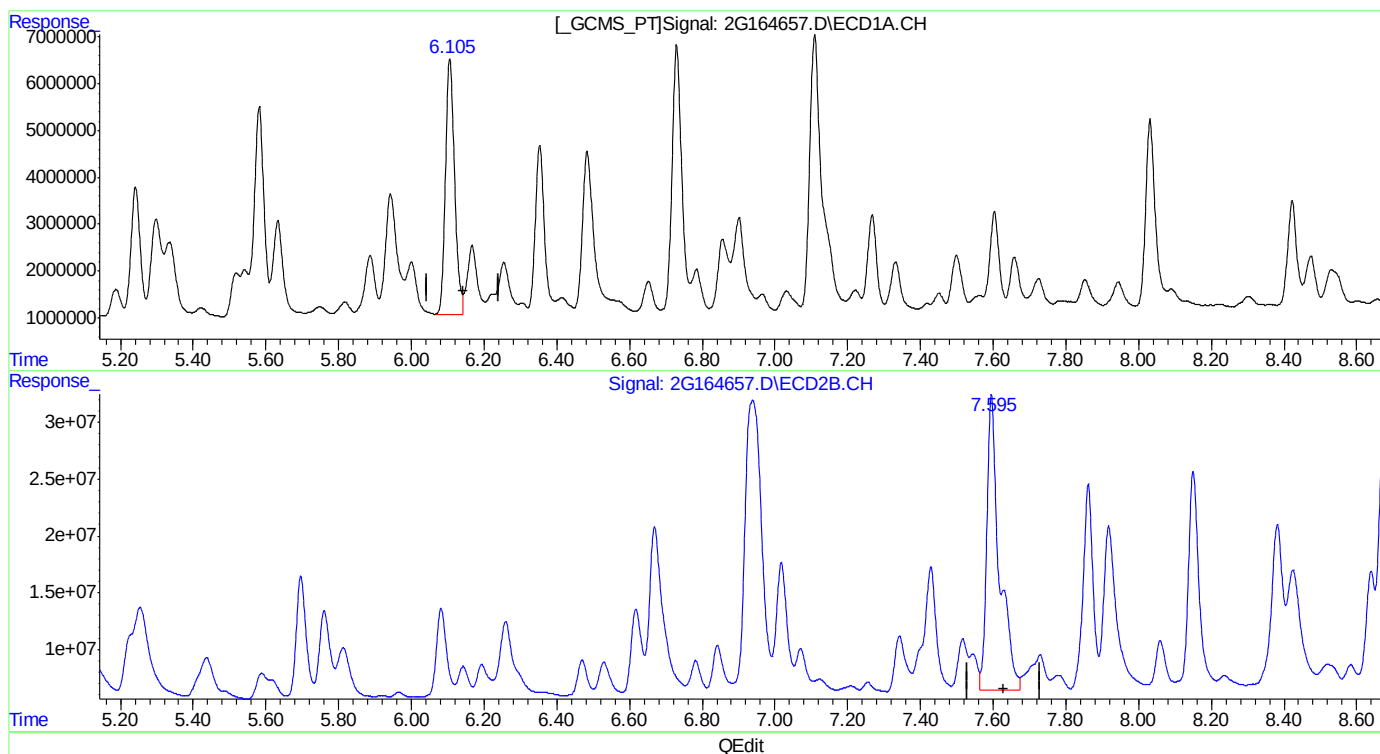


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(27) AR1254-D  
6.105min 390.571PPB m  
response 96044573

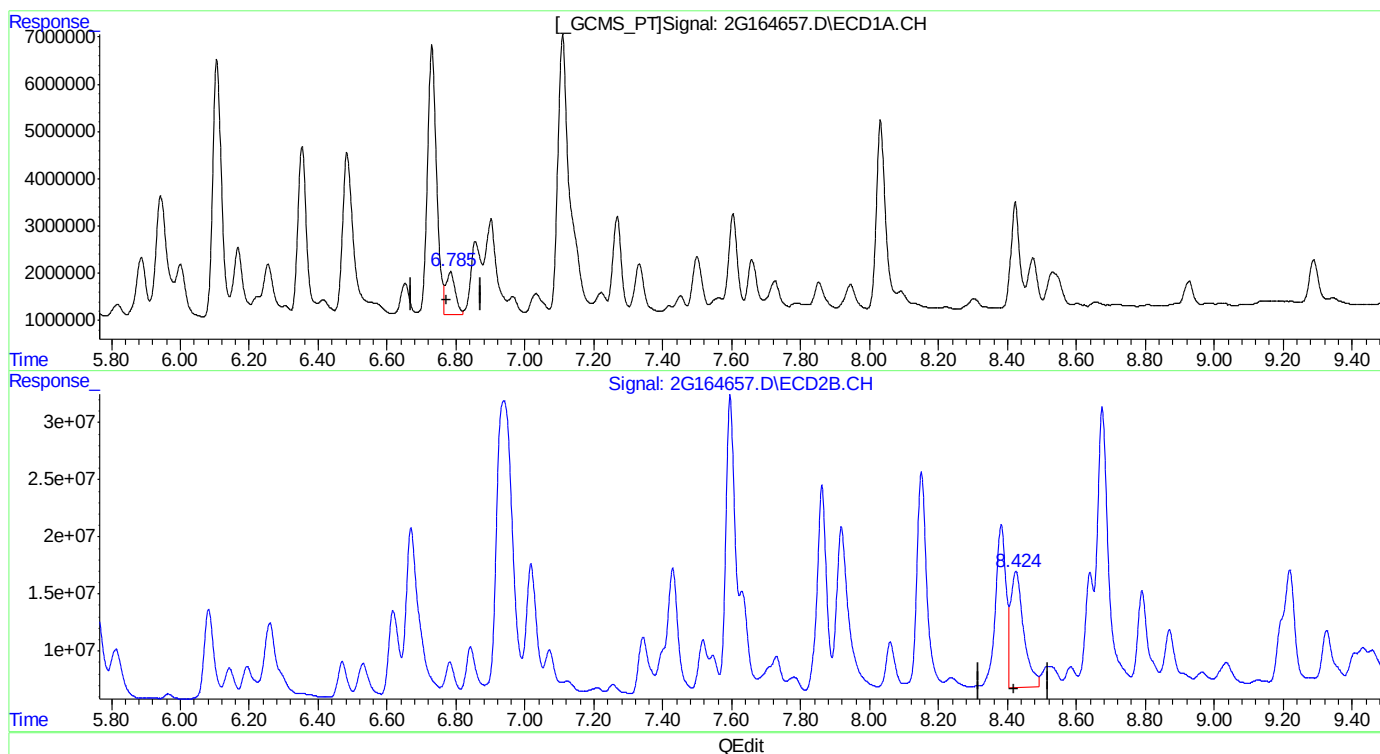
(27) AR1254-D #2  
7.595min 380.940PPB  
response 622581800

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.785min 98.798PPB  
response 16913783

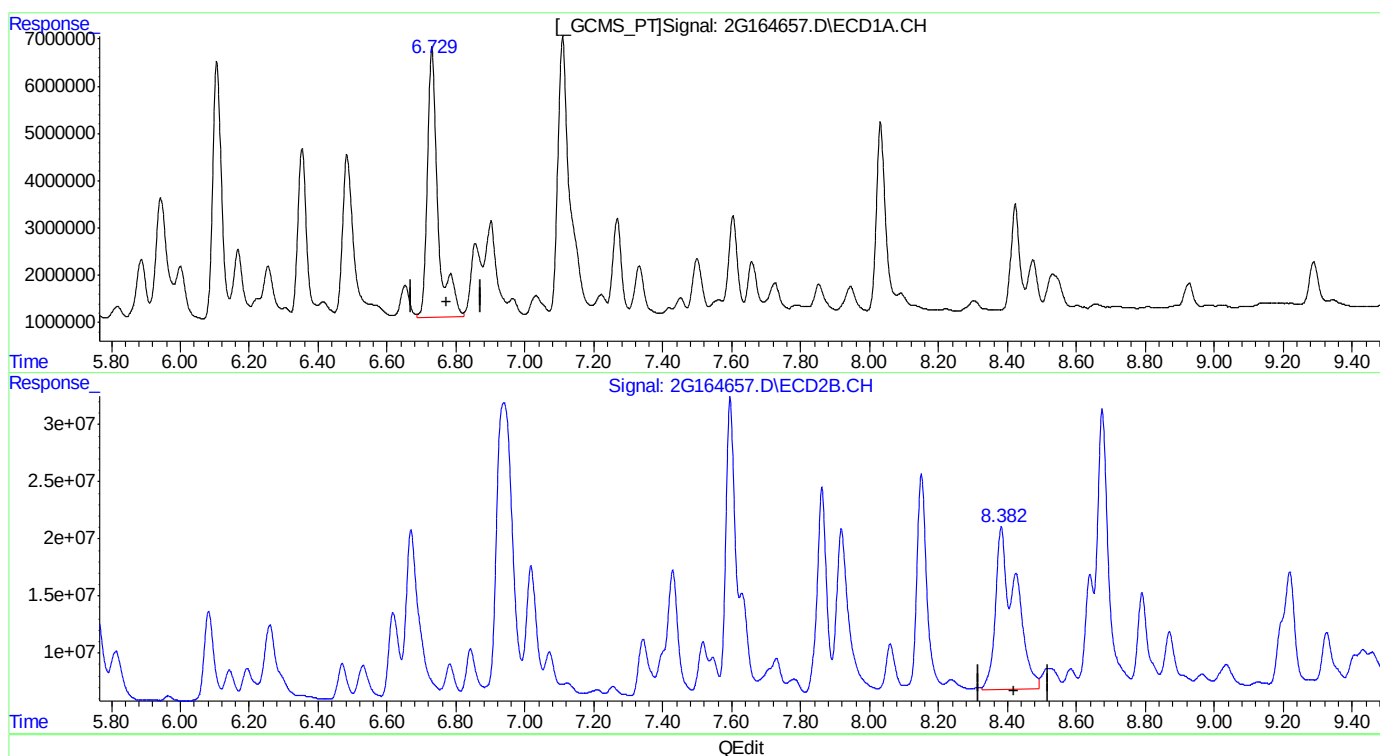
(29) AR1254-F #2  
8.424min 223.803PPB  
response 264352040

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.729min 713.327PPB m  
response 122119057

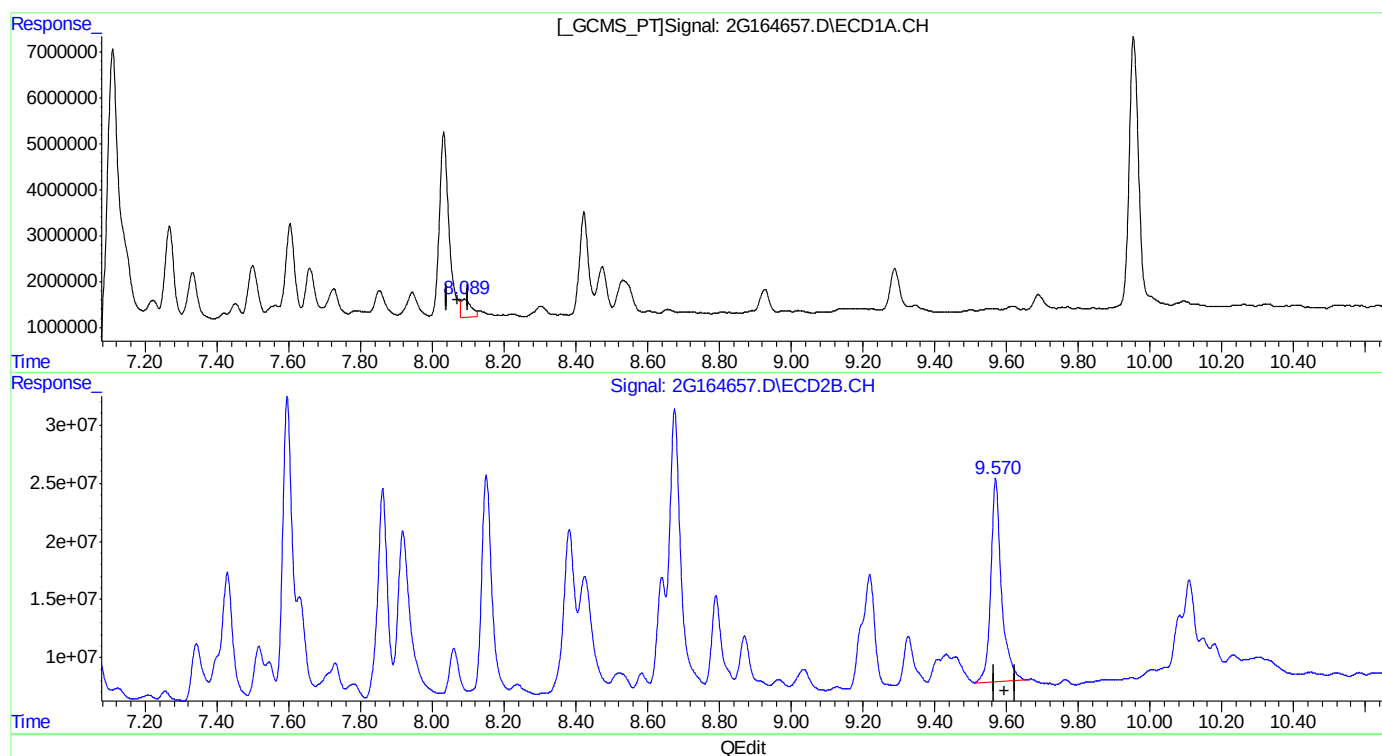
(29) AR1254-F #2  
8.382min 483.754PPB m  
response 571402241

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(39) AR1260-D  
8.090min 21.145PPB  
response 7763408

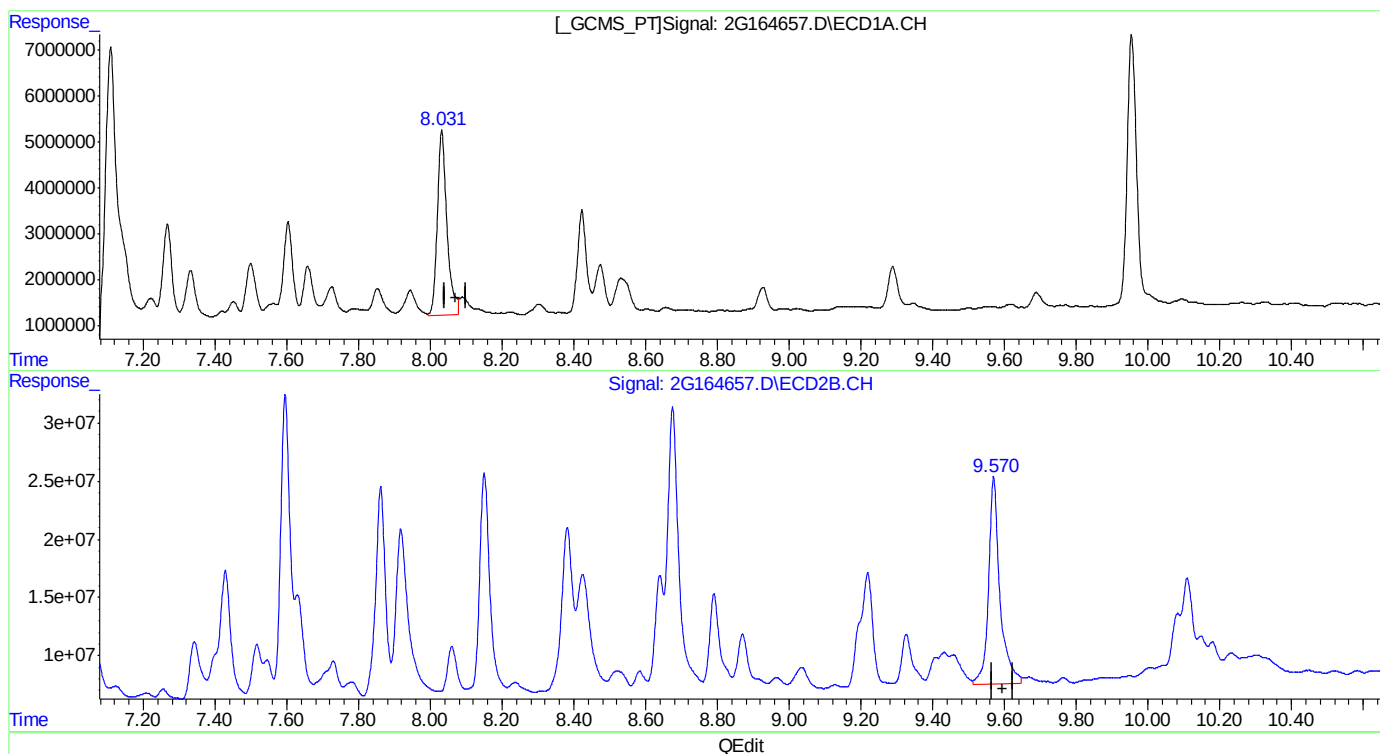
(39) AR1260-D #2  
9.570min 168.254PPB  
response 361155942

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(39) AR1260-D  
8.031min 204.183PPB m  
response 74965018

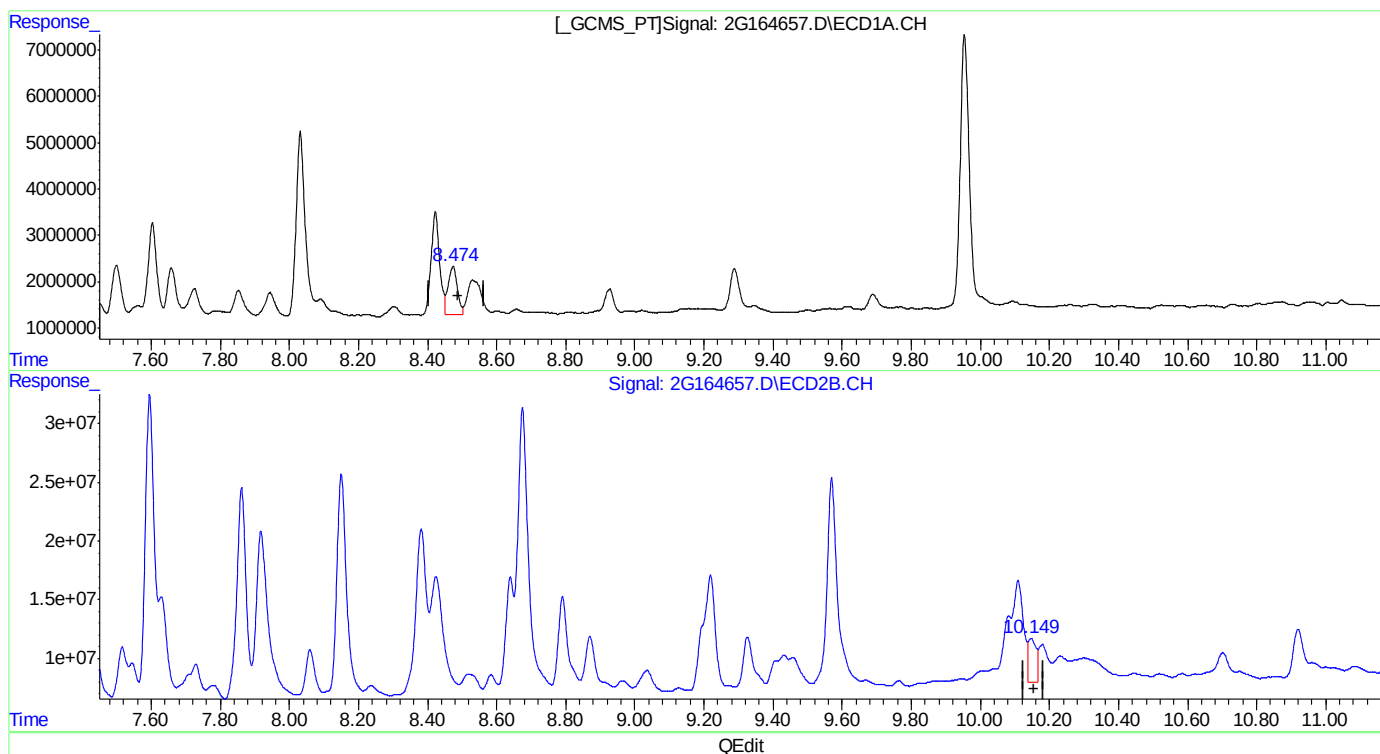
(39) AR1260-D #2  
9.570min 183.134PPB m  
response 393097368

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.474min 50.635PPB  
response 19179877

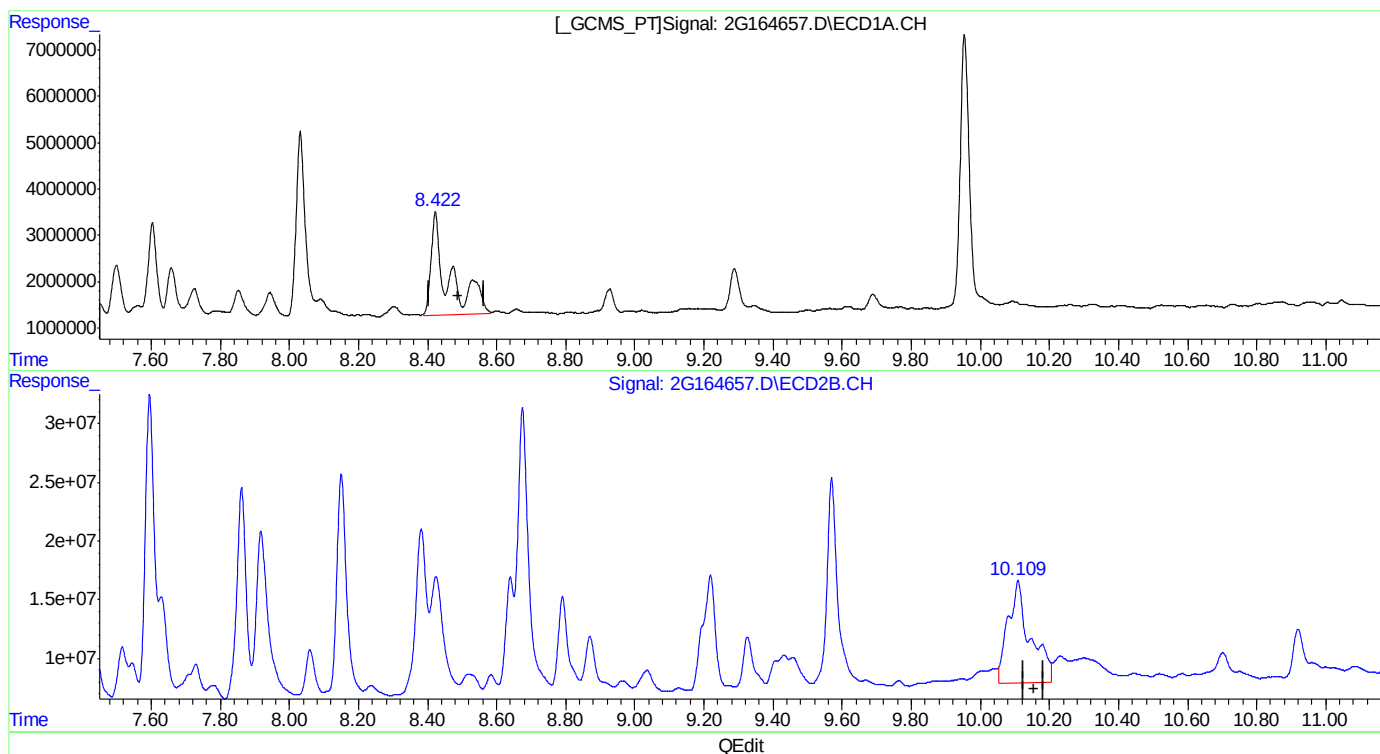
(40) AR1260-E #2  
10.147min 28.531PPB  
response 58151466

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164657.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:11 pm  
Operator : tianweir  
Sample : op12385-ms  
Misc : OP12385,G2G4350,15.9,,,10,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:18:48 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.422min 205.743PPB m  
response 77933076

(40) AR1260-E #2  
10.109min 190.048PPB m  
response 387350392

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
 Data File : 2G164658.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 1:28 pm  
 Operator : tianweir  
 Sample : op12385-msd  
 Misc : OP12385,G2G4350,15.3,,,10,1  
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 15:22:00 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 15:20:40 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb        |
|-----------------------------|----------------|--------|--------|----------|----------|----------|------------|
| -----                       |                |        |        |          |          |          |            |
| System Monitoring Compounds |                |        |        |          |          |          |            |
| 1)                          | S Tetrachlo... | 2.768  | 3.418  | 131.4E6  | 743.7E6  | 35.811   | 32.503m    |
|                             | Spiked Amount  | 40.000 |        | Recovery | =        | 89.53%   | 81.26%     |
| 51)                         | S Decachlor... | 9.954  | 11.762 | 121.6E6  | 522.1E6  | 29.982m  | 27.334     |
|                             | Spiked Amount  | 40.000 |        | Recovery | =        | 74.95%   | 68.34%     |
| Target Compounds            |                |        |        |          |          |          |            |
| 24)                         | AR1254-A       | 5.241  | 6.668  | 51666751 | 459.6E6  | 418.816  | 463.124    |
| 25)                         | AR1254-B       | 5.580  | 6.945  | 120.5E6  | 1060.2E6 | 465.603m | 1077.496 # |
| 26)                         | AR1254-C       | 5.943  | 7.428  | 63320263 | 303.2E6  | 462.355  | 380.051    |
| 27)                         | AR1254-D       | 6.105  | 7.596  | 105.0E6  | 691.0E6  | 427.105  | 422.799    |
| 28)                         | AR1254-E       | 6.484  | 7.919  | 89649169 | 433.2E6  | 491.203  | 397.864    |
| 29)                         | AR1254-F       | 6.728  | 8.380  | 136.6E6  | 642.9E6  | 798.035m | 544.278m#  |
| 32)                         | AR1016-B       | 3.536  | 4.624  | 29062889 | 162.1E6  | 213.607  | 202.293    |
| 33)                         | AR1016-C       | 4.085  | 5.255  | 62314660 | 390.4E6  | 214.904  | 225.183    |
| 34)                         | AR1016-D       | 4.243  | 5.438  | 28414043 | 144.3E6  | 240.319  | 191.818    |
| 35)                         | AR1016-E       | 4.750  | 6.082  | 41111752 | 156.3E6  | 337.163m | 304.696    |
| 37)                         | AR1260-B       | 7.266  | 8.790  | 40063006 | 196.0E6  | 277.361  | 224.174    |
| 38)                         | AR1260-C       | 7.601  | 9.218  | 41230919 | 311.0E6  | 258.940  | 304.311    |
| 39)                         | AR1260-D       | 8.031  | 9.569  | 86215819 | 447.1E6  | 234.827  | 208.296    |
| 40)                         | AR1260-E       | 8.421  | 10.111 | 95581197 | 421.1E6  | 252.335m | 206.599m   |
| -----                       |                |        |        |          |          |          |            |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

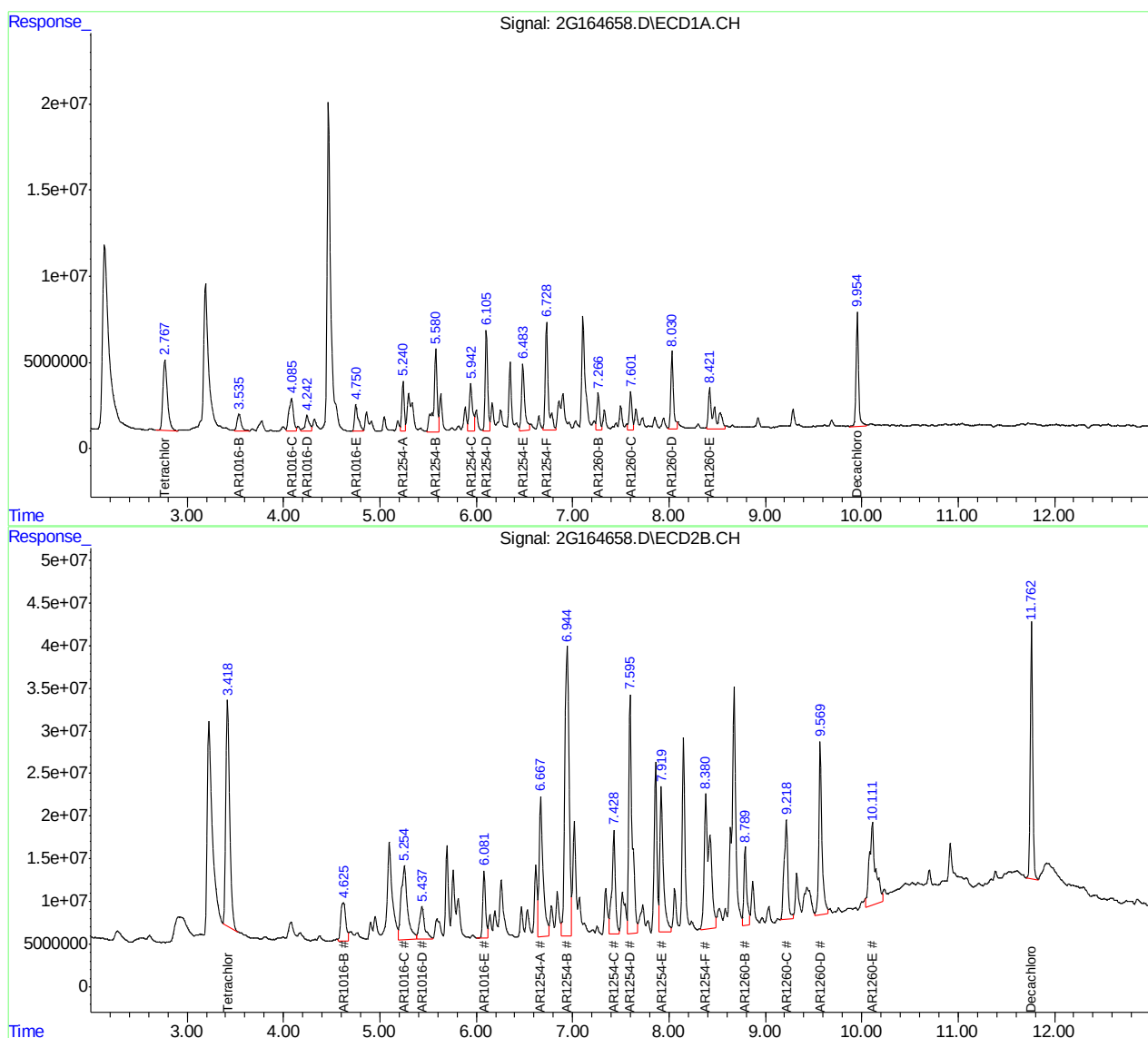


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:22:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

OP12385-MSD

Lab FileID:

2G164658.D

Injection Time:

05/31/18 13:28

Method:

SW846 8082A

Analyst approved:

05/31/18 15:24 Summer Kotb

Supervisor approved:

05/31/18 15:36 Gwendolyn Burns

| Parameter            | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|----------------------|-----------|------|----------------|-------------------------|
| Tetrachloro-m-xylene | 877-09-8  | 2    | 3.42           | Poorly defined baseline |
| AR1016-E             |           | 1    | 4.75           | Split peak              |
| AR1254-B             |           | 1    | 5.58           | Split peak              |
| AR1254-F             |           | 1    | 6.73           | Split peak              |
| AR1254-F             |           | 2    | 8.38           | Split peak              |
| AR1260-E             | 2051-24-3 | 1    | 8.42           | Split peak              |
| Decachlorobiphenyl   |           | 1    | 9.95           | Poorly defined baseline |
| AR1260-E             |           | 2    | 10.11          | Split peak              |

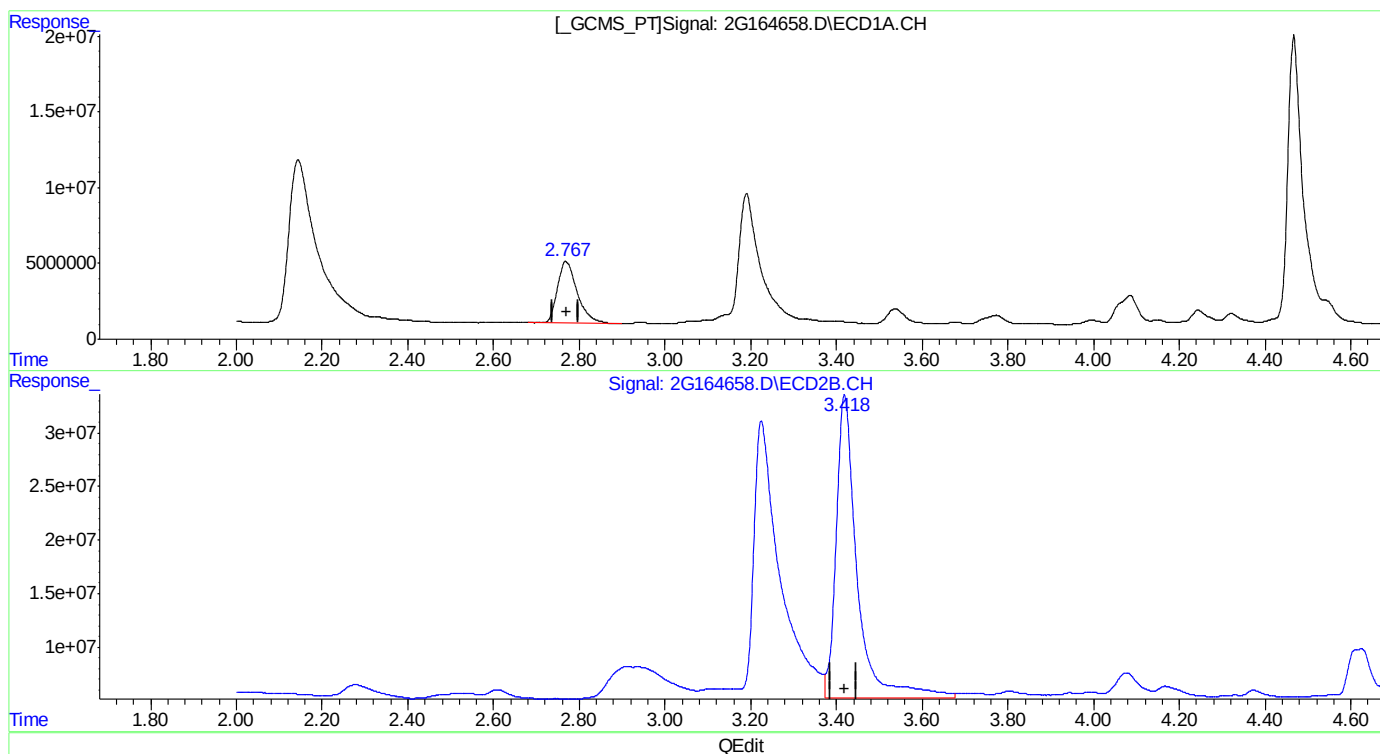
7.4.2.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(1) Tetrachloro-m-xylene (S)

2.768min 35.811ppb

response 131442004

(1) Tetrachloro-m-xylene #2 (S)

3.419min 42.273ppb

response 967307076

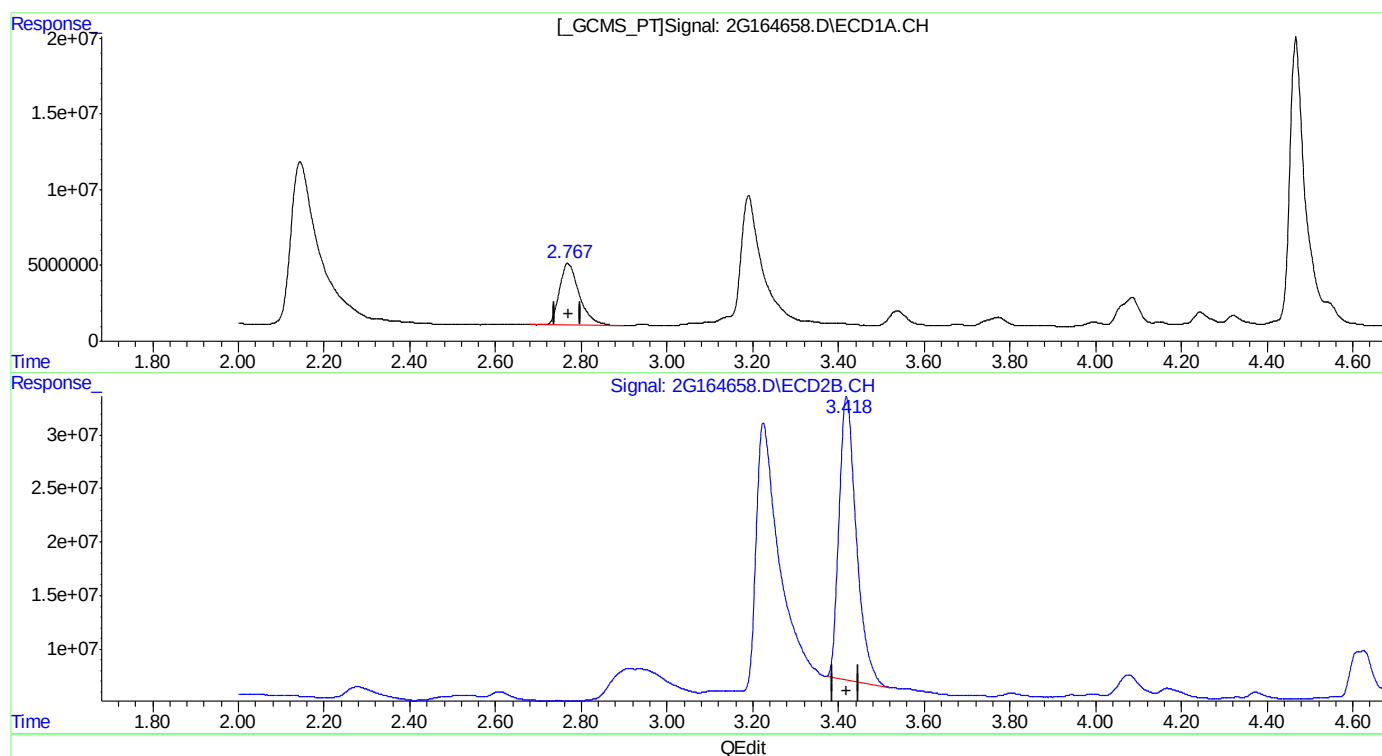
(+) = Expected Retention Time  
2PCB4311.M Thu May 31 15:21:05 2018 RPT1

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(1) Tetrachloro-m-xylene (S)

2.768min 35.811ppb

response 131442004

(1) Tetrachloro-m-xylene #2 (S)

3.418min 32.503ppb m

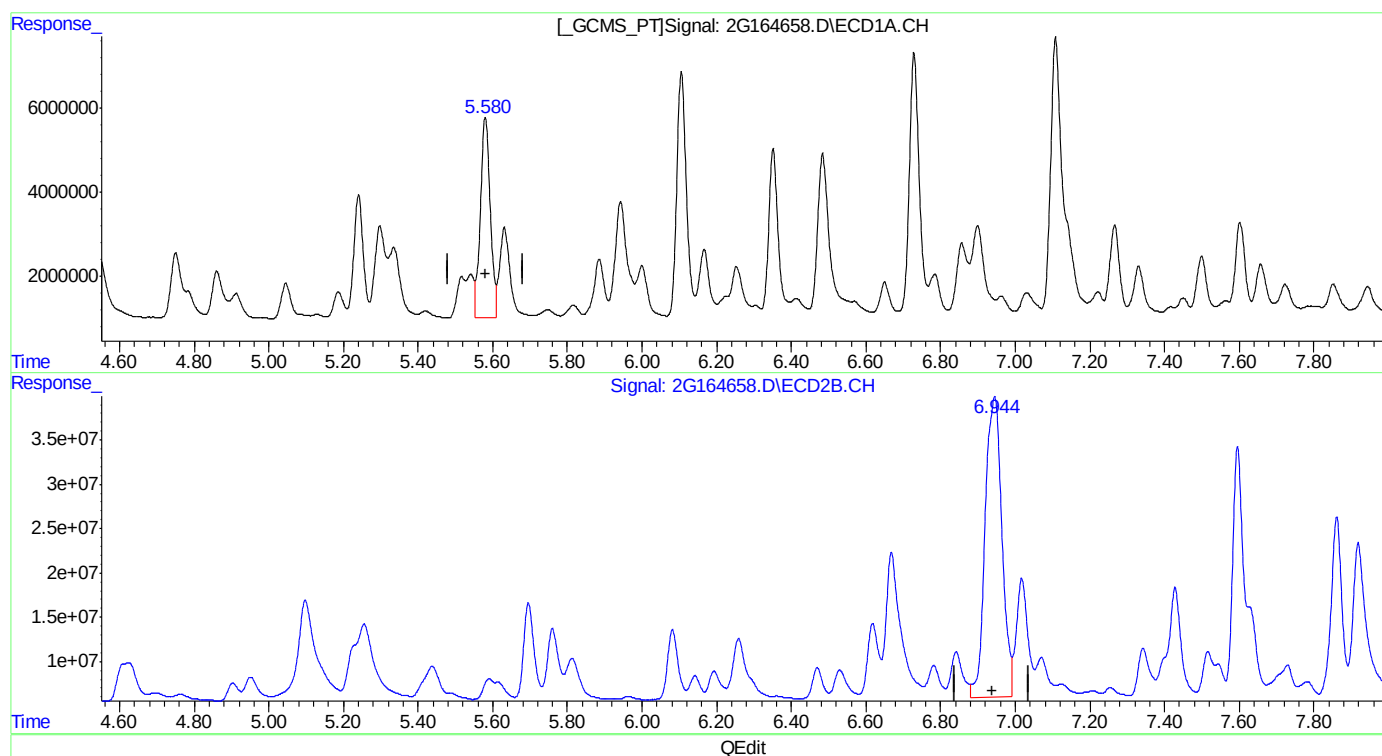
response 743741214

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 343.307PPB  
response 88831598

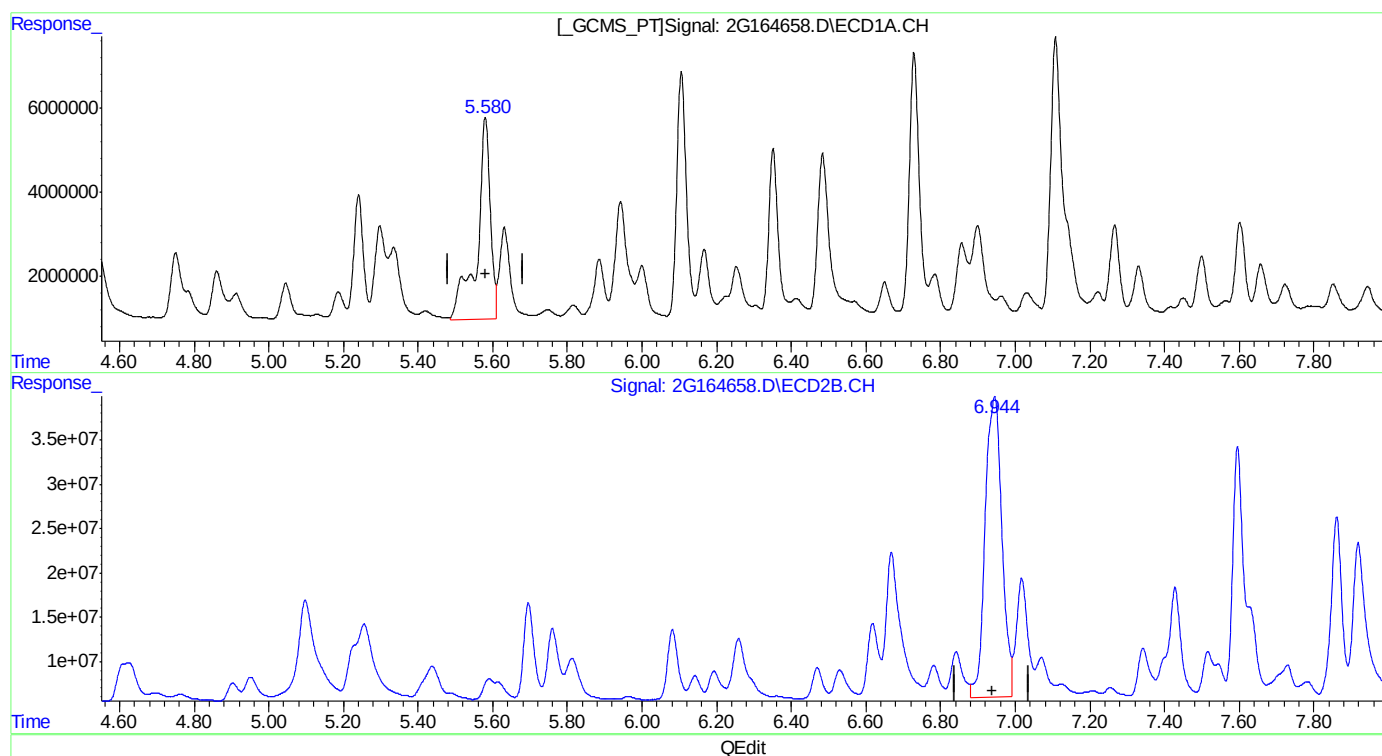
(25) AR1254-B #2  
6.945min 1077.496PPB  
response 1060164497

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.580min 465.603PPB m  
response 120476216

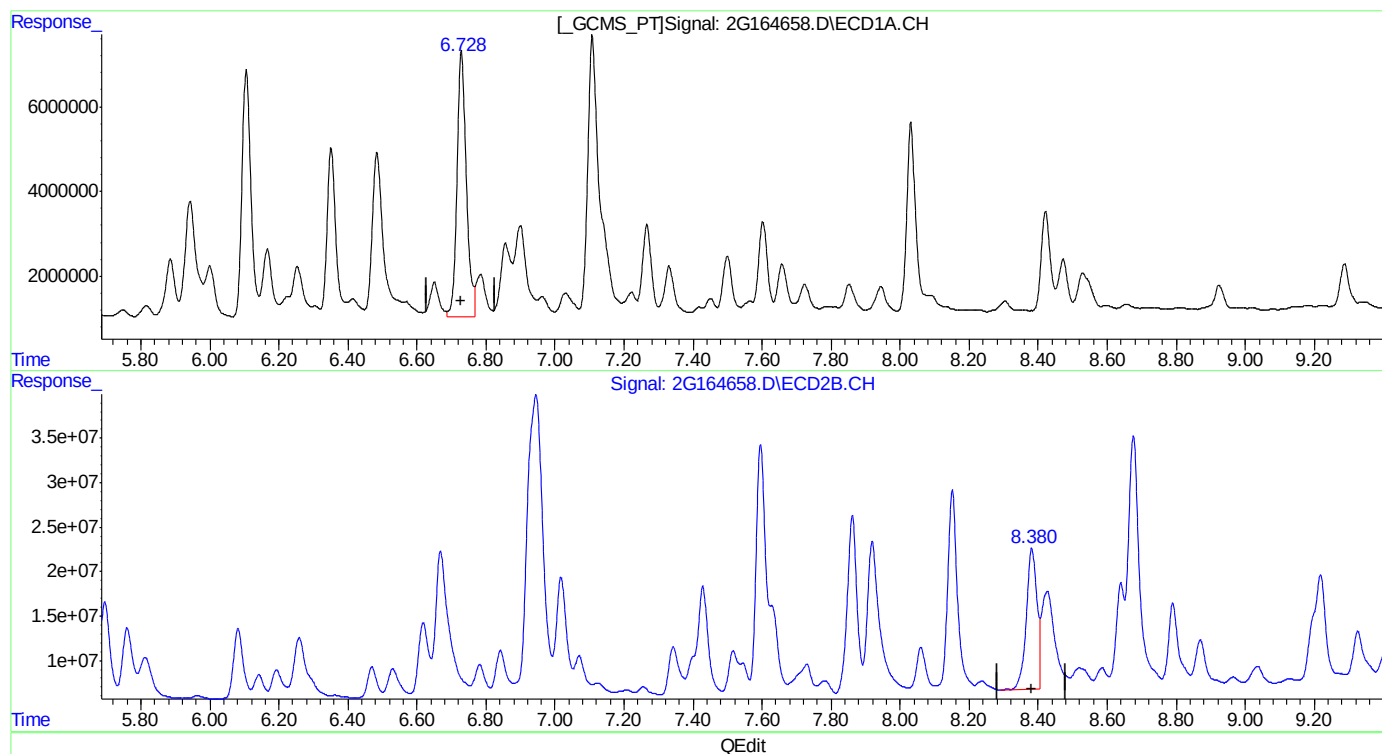
(25) AR1254-B #2  
6.945min 1077.496PPB  
response 1060164497

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.729min 684.973PPB  
response 117264918

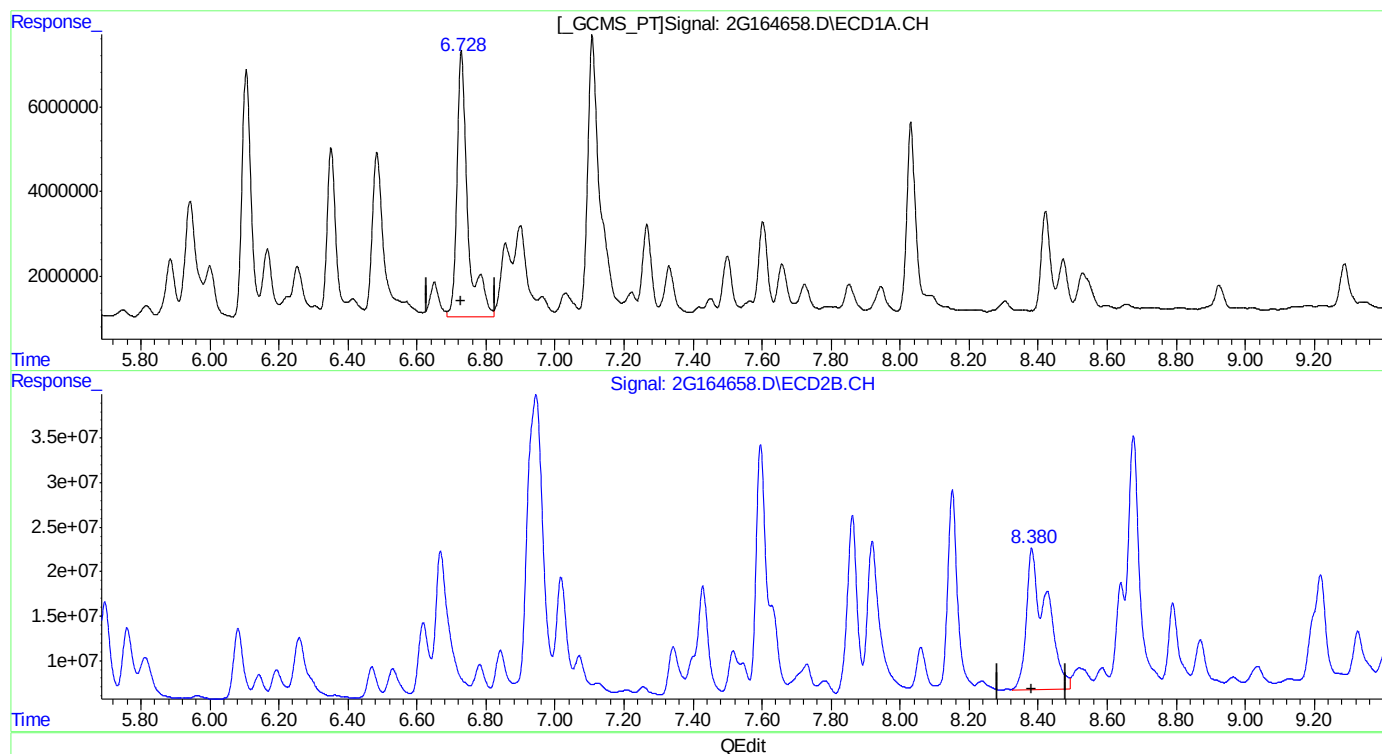
(29) AR1254-F #2  
8.382min 290.651PPB  
response 343311940

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.728min 798.035PPB m  
response 136620736

(29) AR1254-F #2  
8.380min 544.278PPB m  
response 642892500

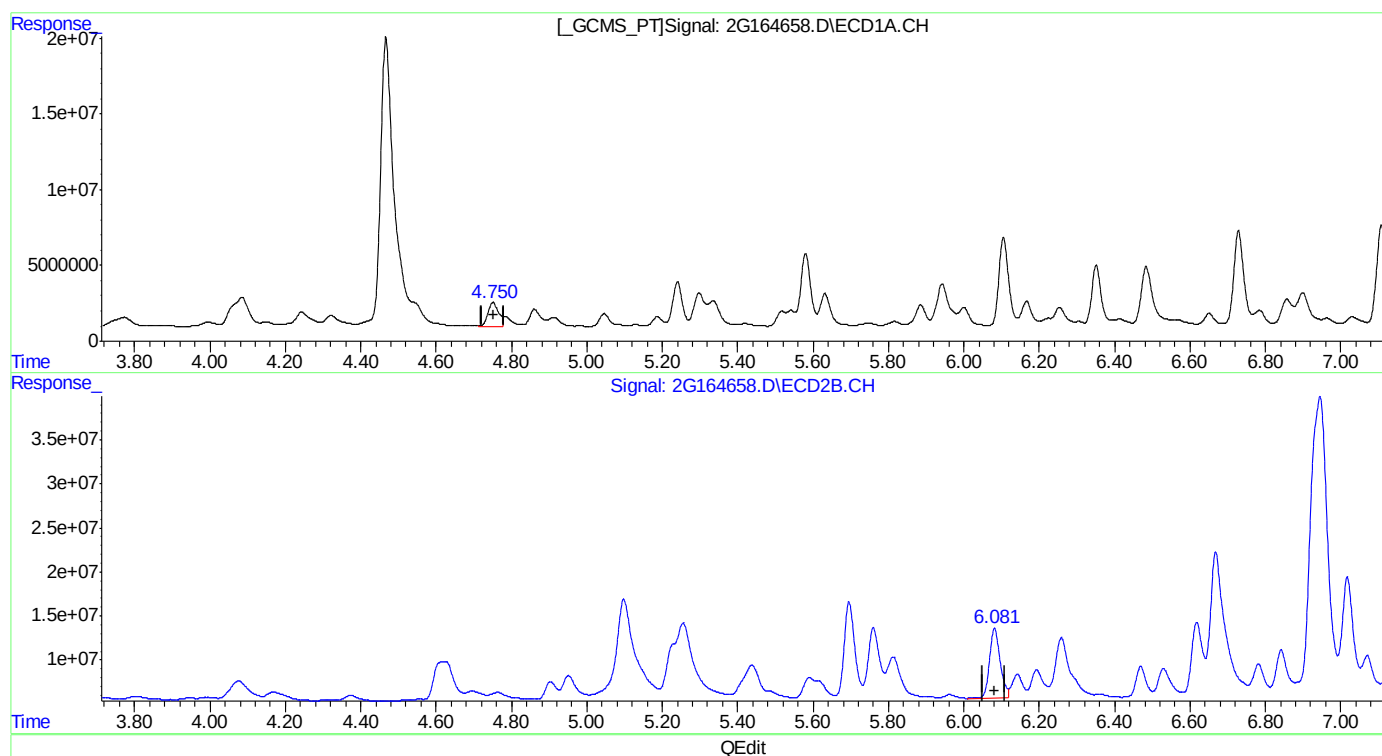


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.750min 255.081PPB  
response 31103056

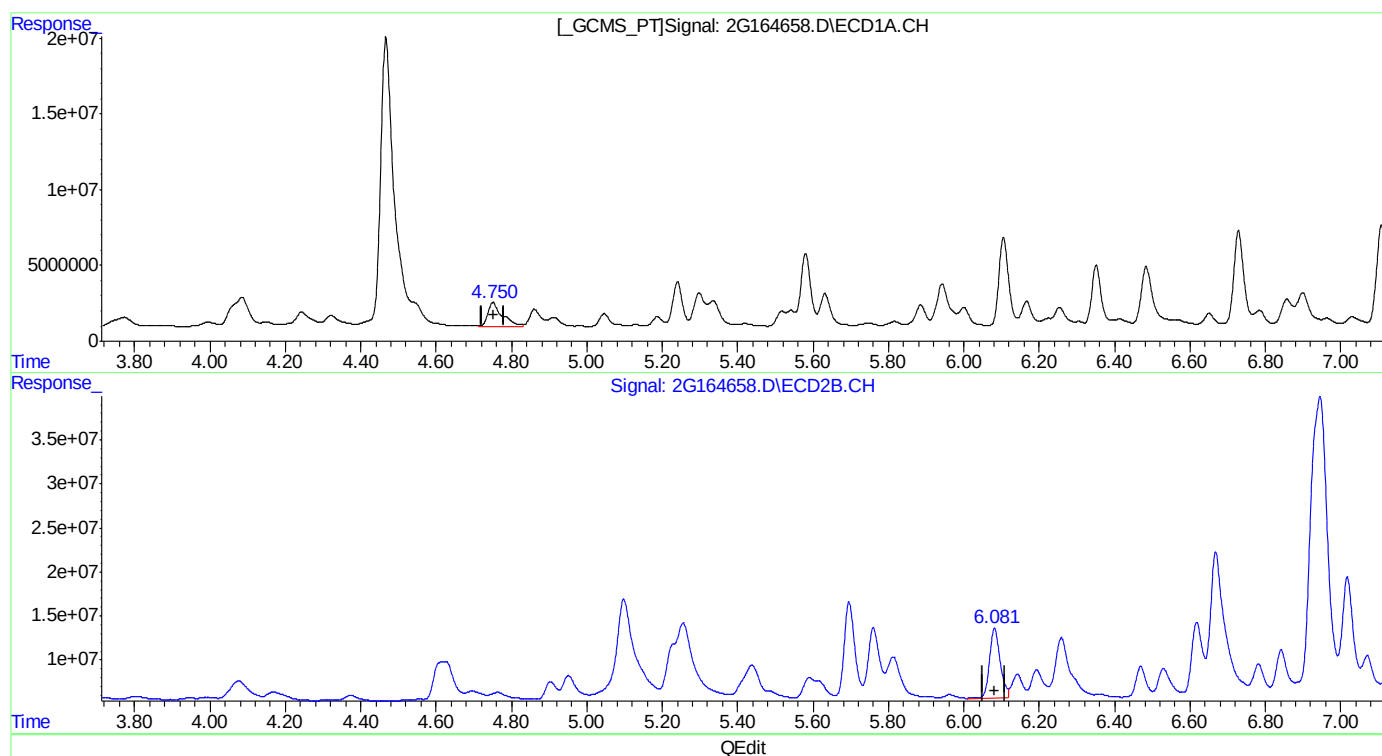
(35) AR1016-E #2  
6.082min 304.696PPB  
response 156333232

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.750min 337.163PPB m  
response 41111752

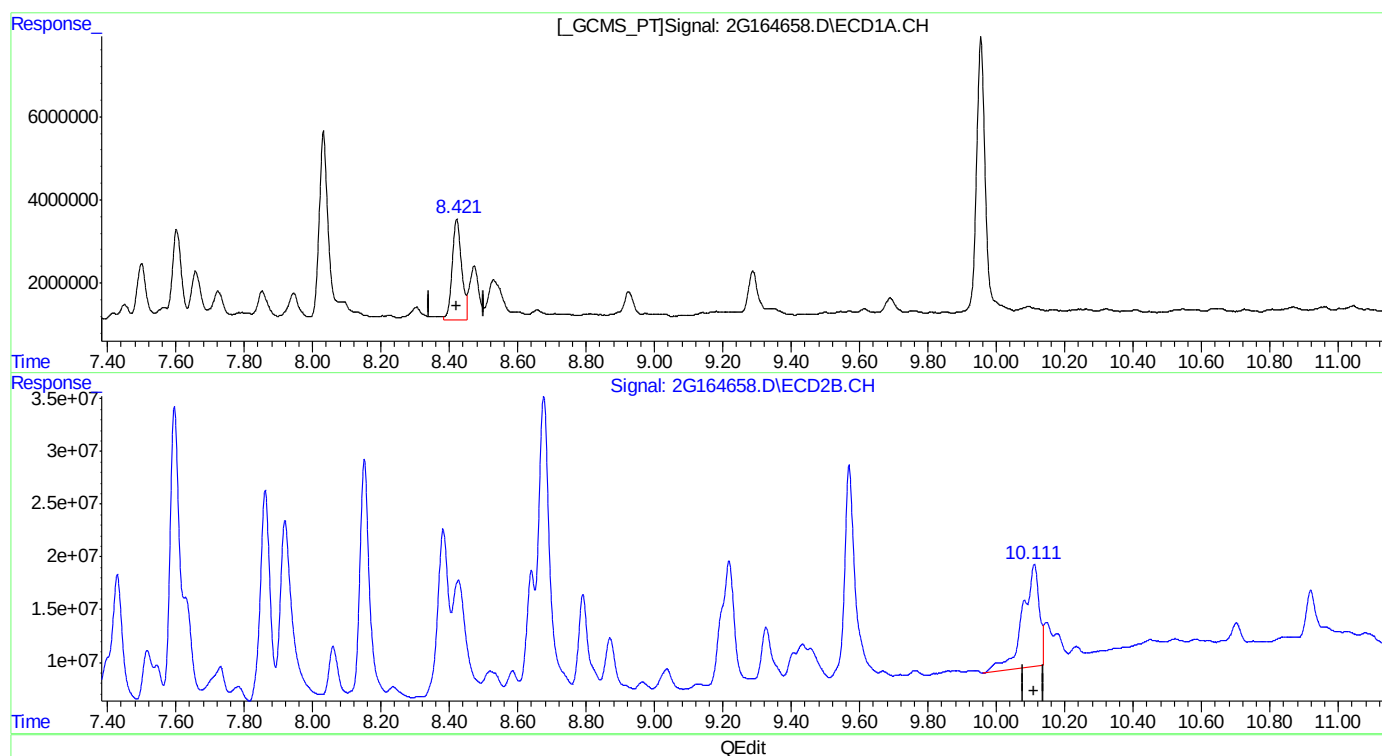
(35) AR1016-E #2  
6.082min 304.696PPB  
response 156333232

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.421min 120.069PPB  
response 45480578

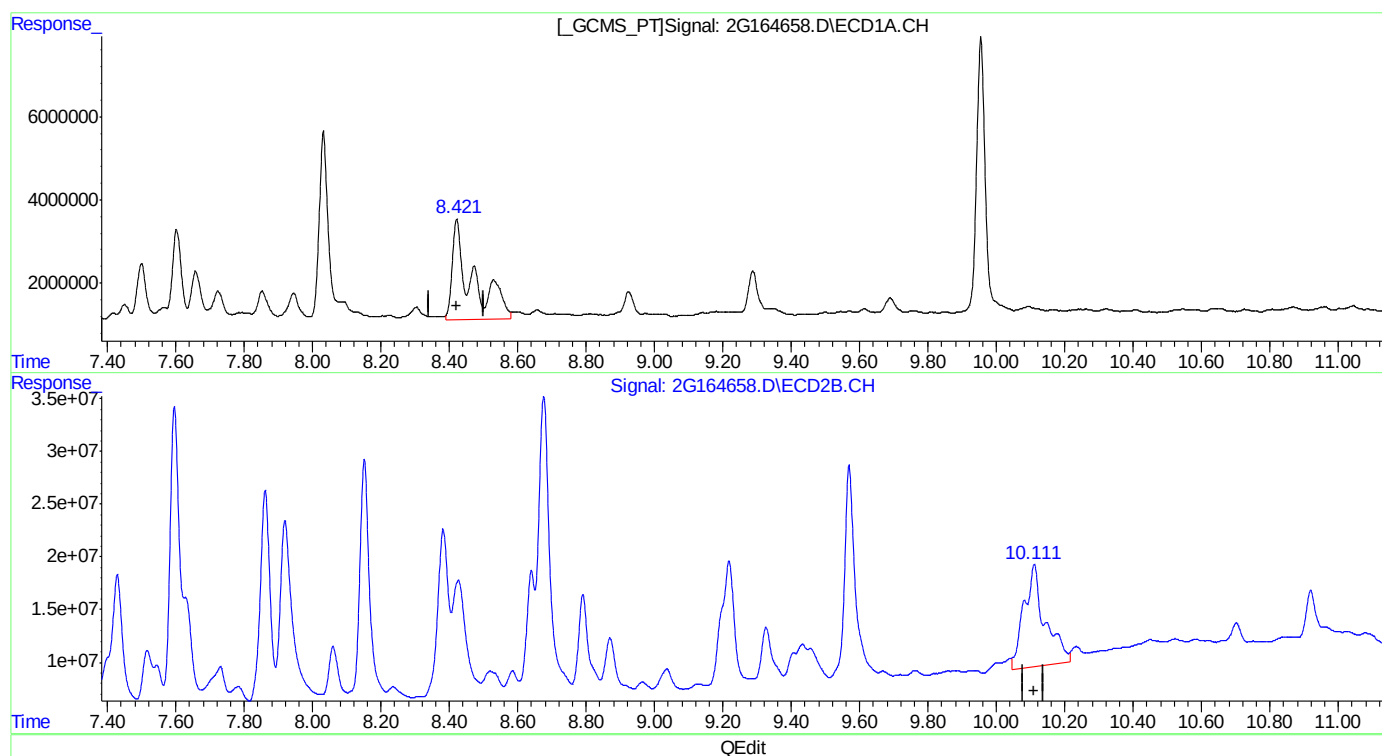
(40) AR1260-E #2  
10.111min 163.131PPB  
response 332488898

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.421min 252.335PPB m  
response 95581197

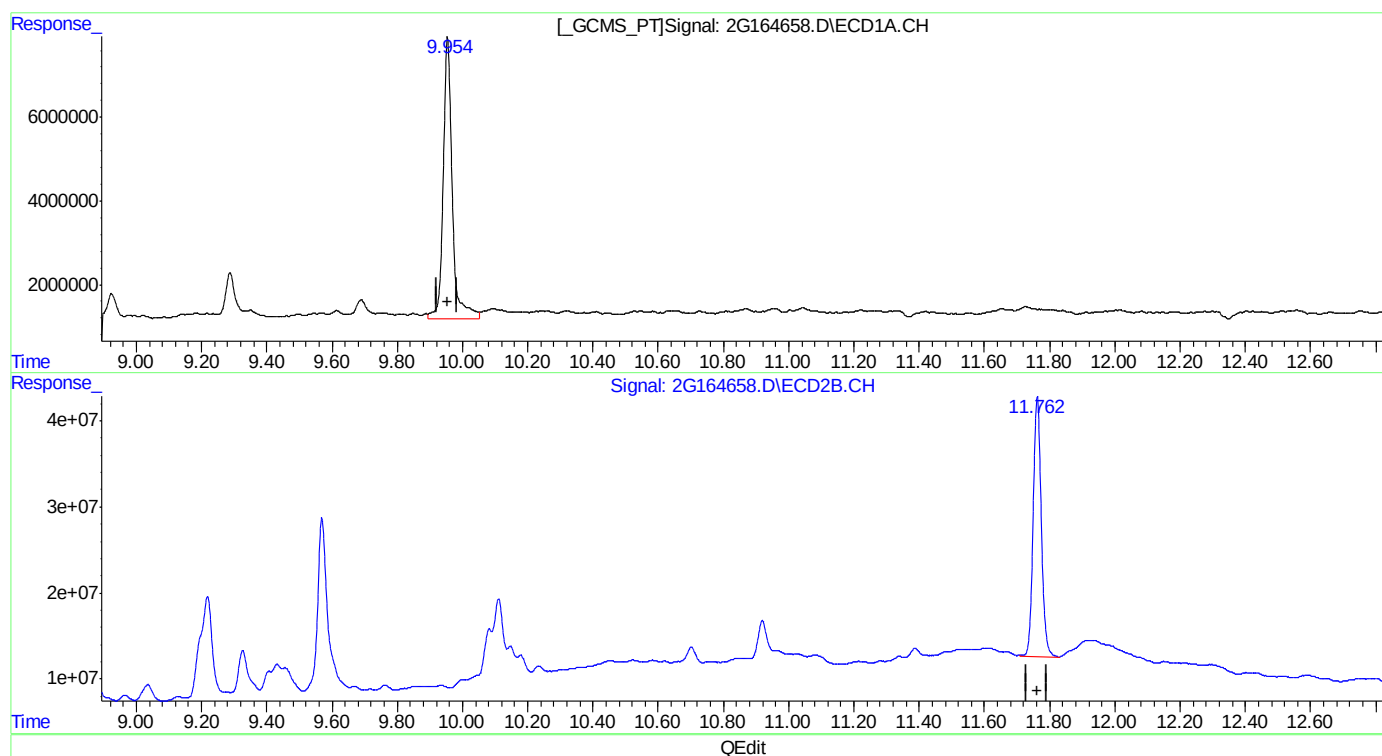
(40) AR1260-E #2  
10.111min 206.599PPB m  
response 421085272

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.954min 32.311ppb

response 131044529

(51) Decachlorobiphenyl #2 (S)

11.762min 27.334ppb

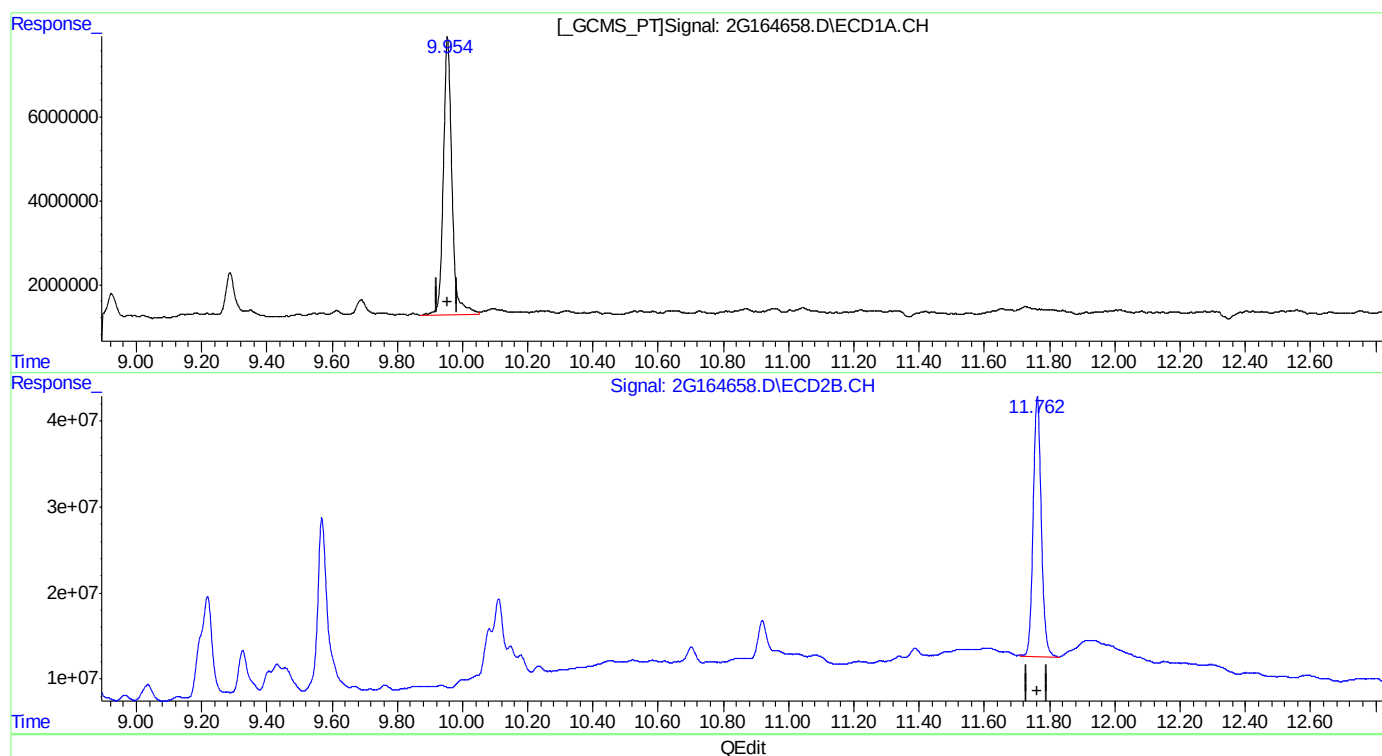
response 522068501

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164658.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 1:28 pm  
Operator : tianweir  
Sample : op12385-msd  
Misc : OP12385,G2G4350,15.3,,,10,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 15:20:44 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 15:20:40 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.954min 29.982ppb m

response 121599184

(51) Decachlorobiphenyl #2 (S)

11.762min 27.334ppb

response 522068501

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162097.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 12:28 pm  
 Operator : tianweir  
 Sample : ic4311-250  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 13:39:36 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 13:32:09 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb       |
|-----------------------------|----------------|--------|--------|----------|----------|----------|-----------|
| -----                       |                |        |        |          |          |          |           |
| System Monitoring Compounds |                |        |        |          |          |          |           |
| 1)                          | S Tetrachlo... | 2.778  | 3.431  | 34873866 | 216.1E6  | 7.981    | 7.067     |
|                             | Spiked Amount  | 40.000 |        | Recovery | =        | 19.95%   | 17.67%    |
| 51)                         | S Decachlor... | 10.016 | 11.811 | 40611685 | 184.5E6  | 9.011    | 9.735     |
|                             | Spiked Amount  | 40.000 |        | Recovery | =        | 22.53%   | 24.34%    |
| Target Compounds            |                |        |        |          |          |          |           |
| 31)                         | AR1016-A       | 3.154  | 4.096  | 19673262 | 91567470 | 215.440m | 190.191   |
| 32)                         | AR1016-B       | 3.557  | 4.632  | 34032635 | 196.2E6  | 295.735  | 203.024 # |
| 33)                         | AR1016-C       | 4.107  | 5.282  | 71006697 | 415.2E6  | 192.339  | 198.425   |
| 34)                         | AR1016-D       | 4.269  | 5.466  | 29041365 | 181.9E6  | 215.958  | 235.122   |
| 35)                         | AR1016-E       | 4.784  | 6.114  | 30667090 | 123.1E6  | 217.948  | 216.206   |
| 36)                         | AR1260-A       | 7.153  | 8.716  | 84935639 | 487.3E6  | 223.398  | 261.665m  |
| 37)                         | AR1260-B       | 7.315  | 8.831  | 34207307 | 200.8E6  | 200.258  | 206.033   |
| 38)                         | AR1260-C       | 7.653  | 9.261  | 38470552 | 237.1E6  | 232.255  | 253.148   |
| 39)                         | AR1260-D       | 8.083  | 9.615  | 84306739 | 482.4E6  | 182.500  | 205.123   |
| 40)                         | AR1260-E       | 8.476  | 10.157 | 89912203 | 468.4E6  | 206.651m | 228.844m  |
| -----                       |                |        |        |          |          |          |           |

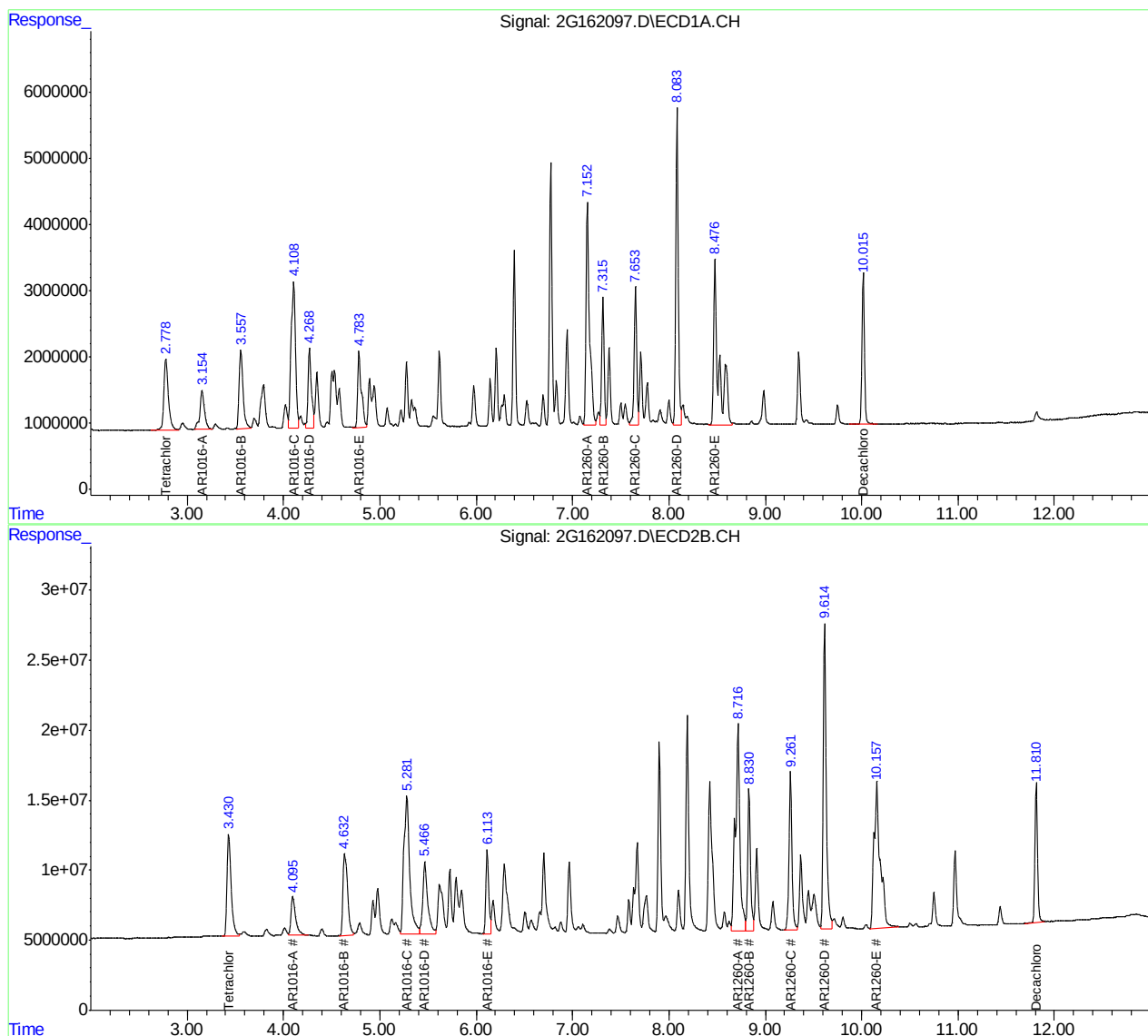
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:39:36 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Lab FileID:

2G162097.D

Injection Time:

04/19/18 12:28

Method:

SW846 8082A

Analyst approved:

04/19/18 14:54 Rebecca Krug

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-A  |     | 1    | 3.15           | Split peak |
| AR1260-E  |     | 1    | 8.48           | Split peak |
| AR1260-A  |     | 2    | 8.72           | Split peak |
| AR1260-E  |     | 2    | 10.16          | Split peak |

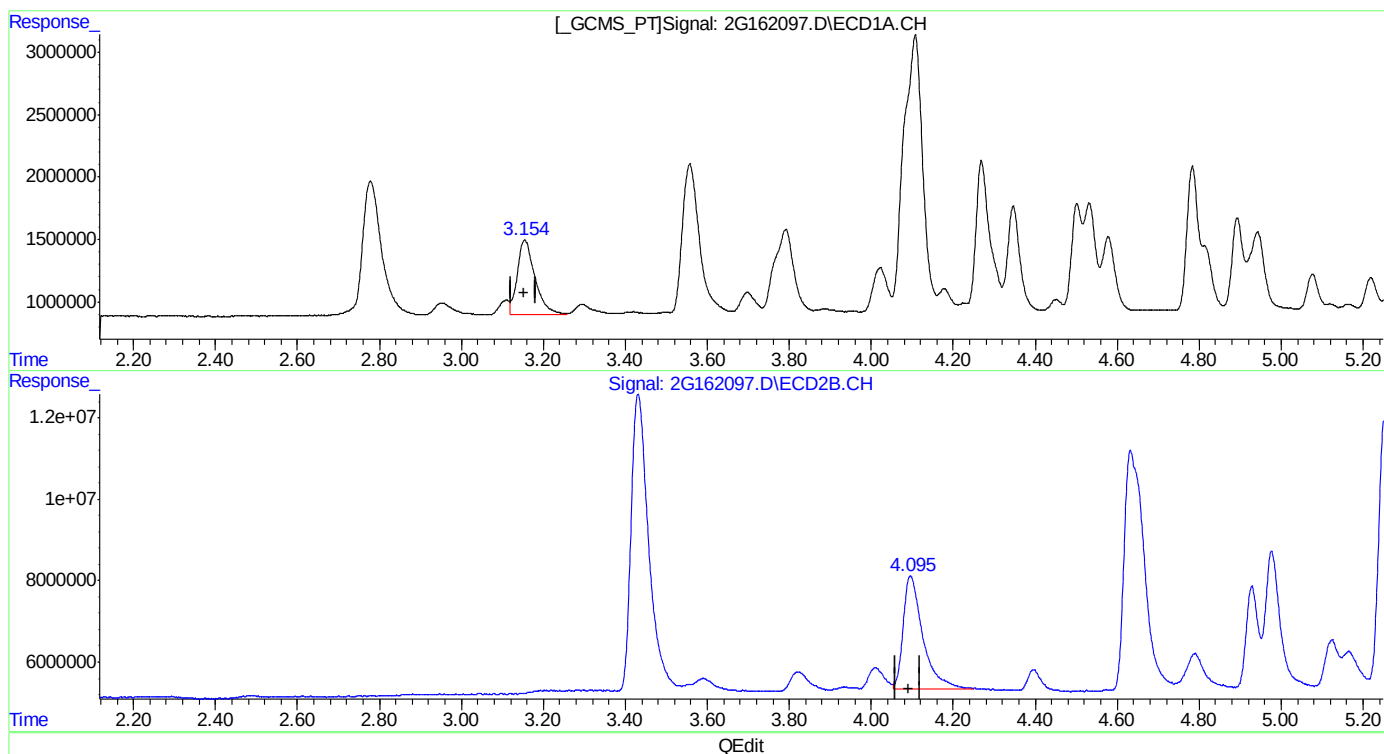
7.5.1.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.155min 194.227PPB  
response 17736162

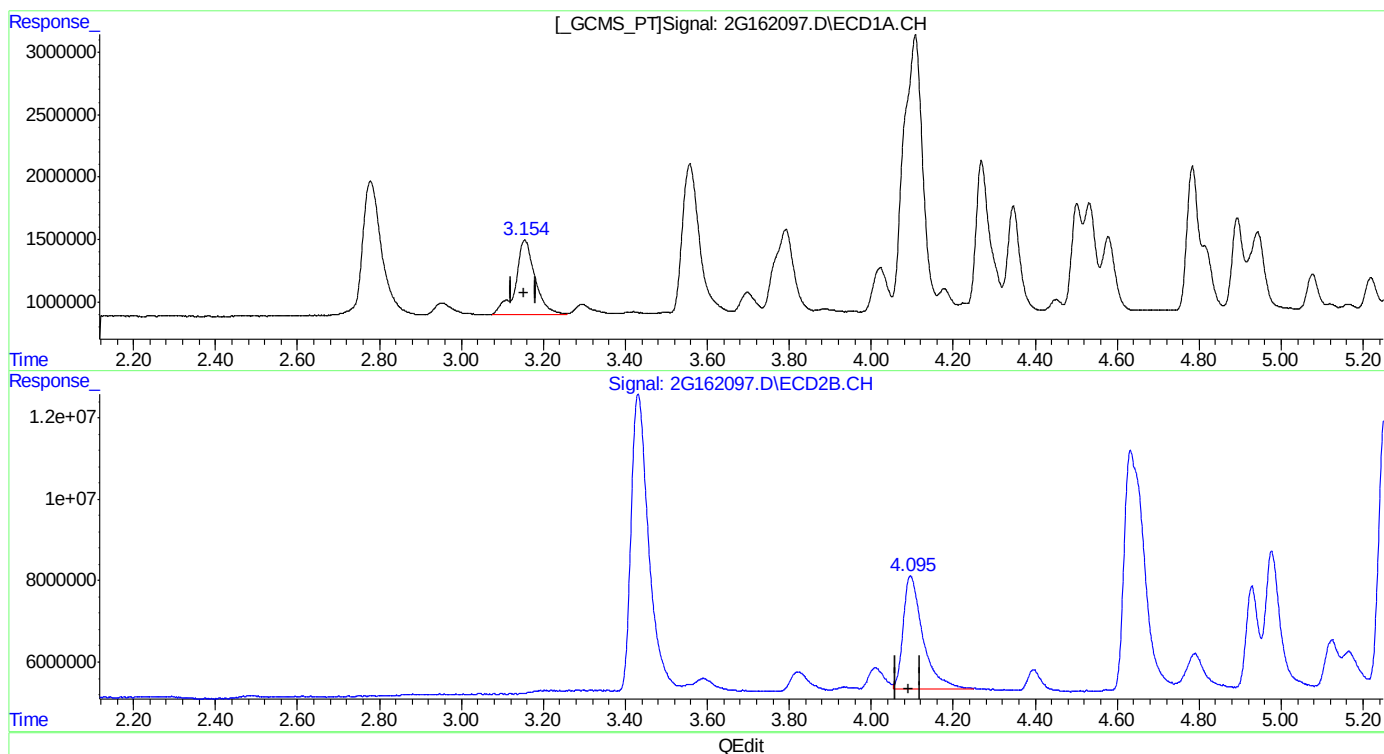
(31) AR1016-A #2  
4.096min 190.191PPB  
response 91567470

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.154min 215.440PPB m  
response 19673262

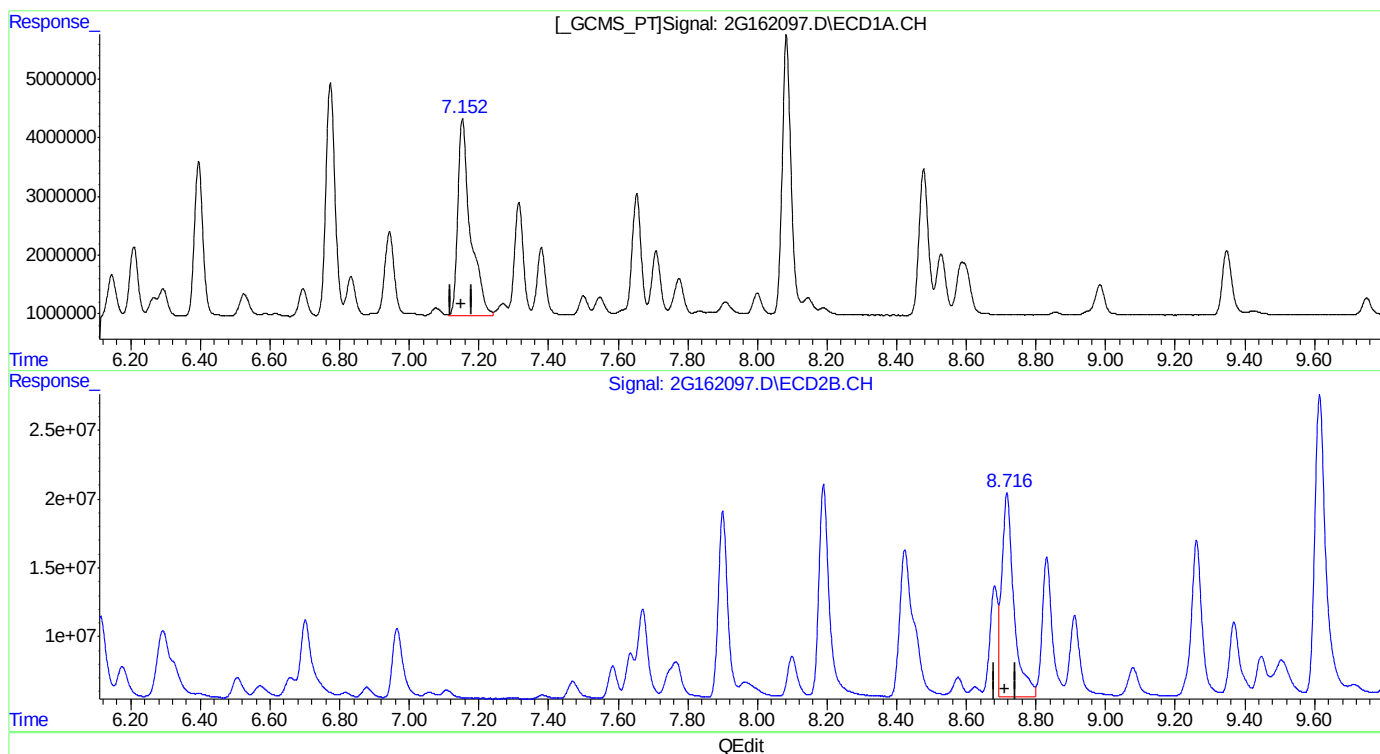
(31) AR1016-A #2  
4.096min 190.191PPB  
response 91567470

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.153min 223.398PPB  
response 84935639

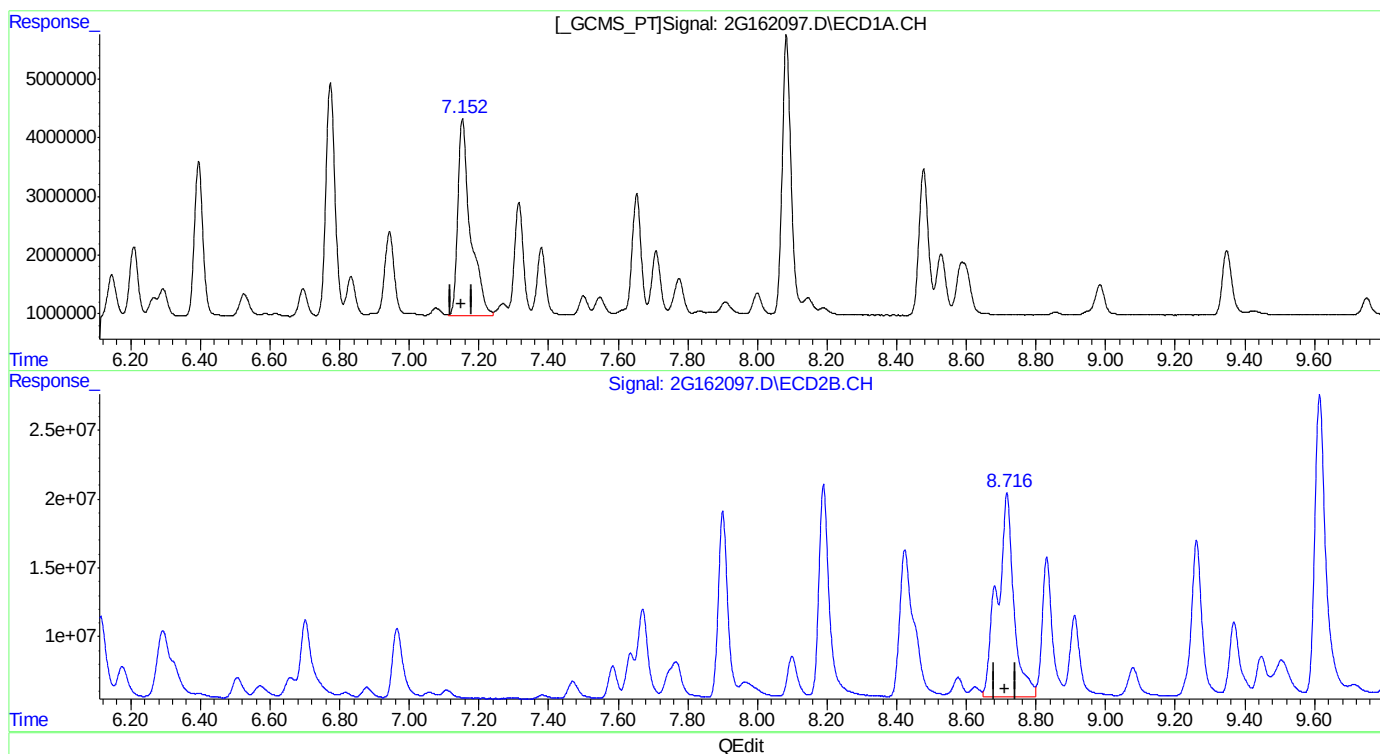
(36) AR1260-A #2  
8.717min 193.204PPB  
response 359776045

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.153min 223.398PPB  
response 84935639

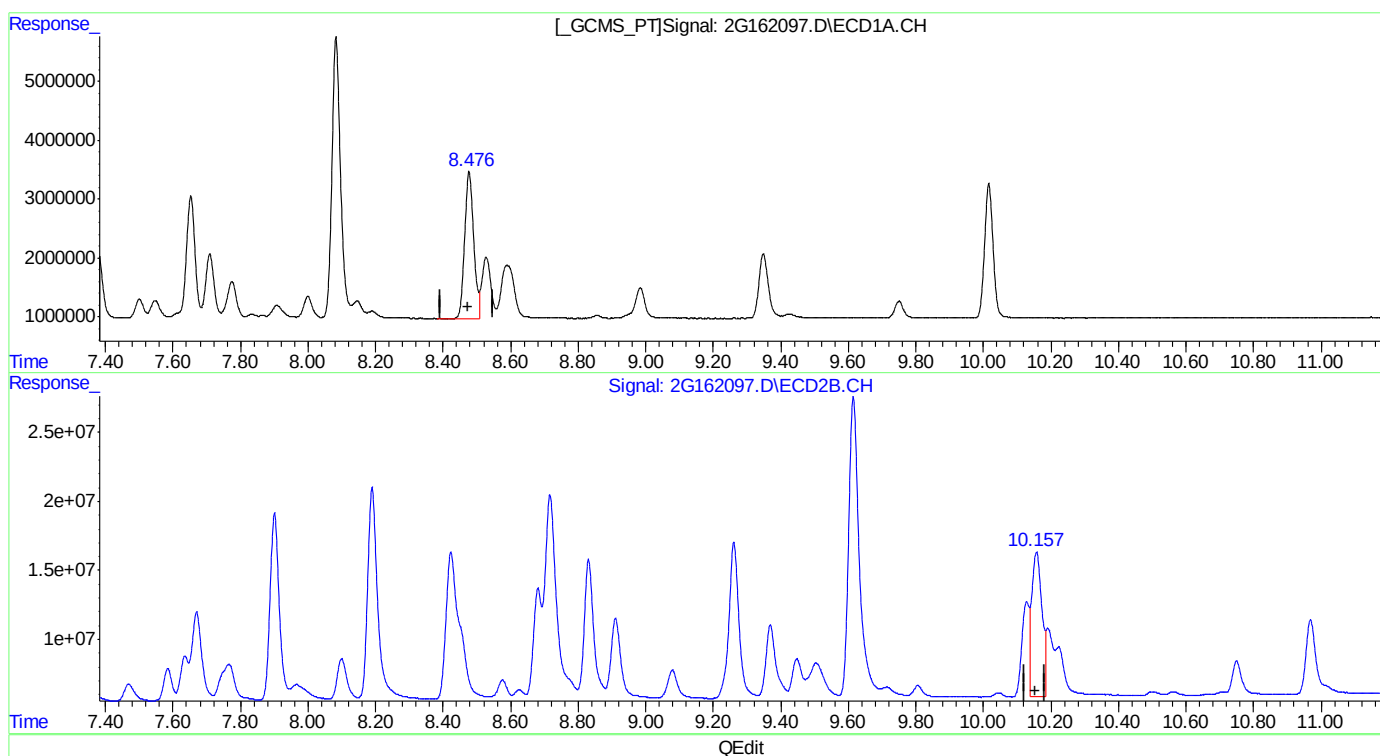
(36) AR1260-A #2  
8.716min 261.665PPB m  
response 487261202

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.477min 105.933PPB  
response 46090682

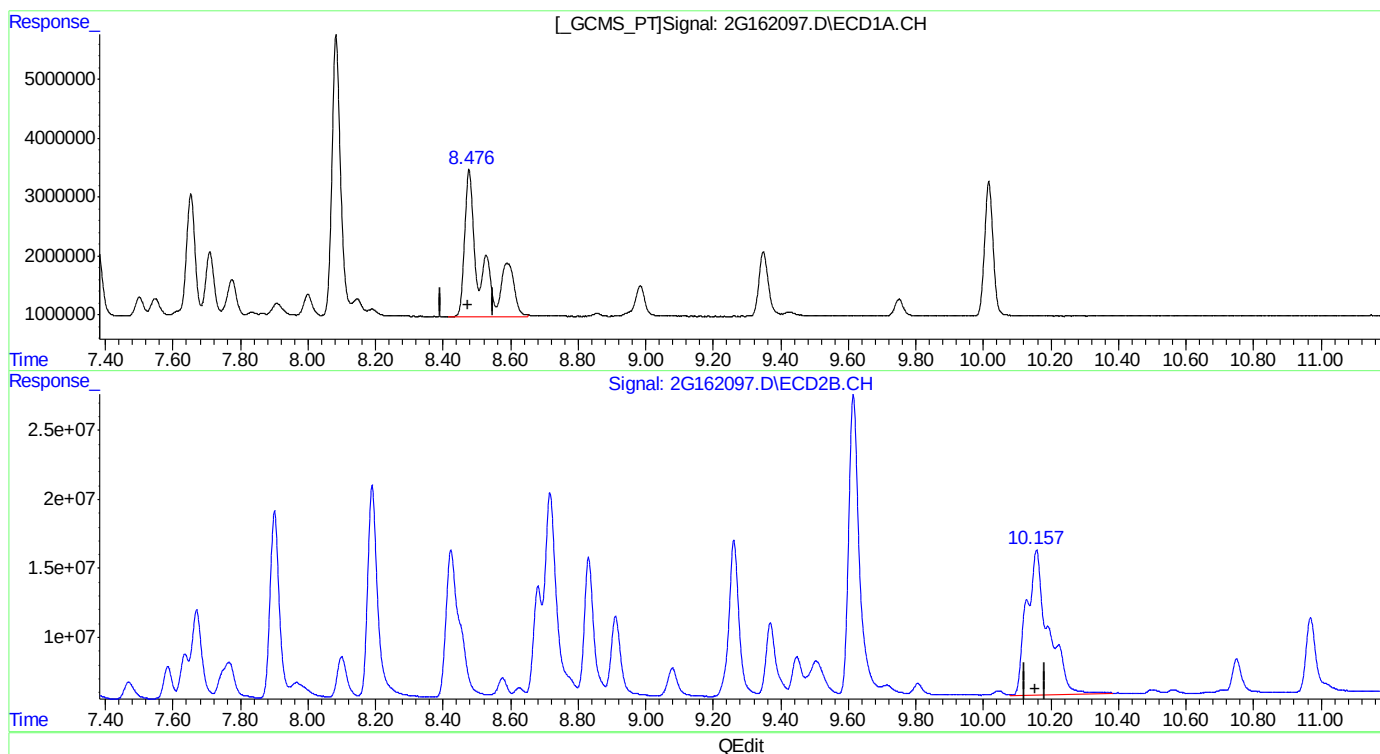
(40) AR1260-E #2  
10.157min 108.220PPB  
response 221500668

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162097.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:28 pm  
Operator : tianweir  
Sample : ic4311-250  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:38:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.476min 206.651PPB m  
response 89912203

(40) AR1260-E #2  
10.157min 228.844PPB m  
response 468390055

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162098.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 12:45 pm  
 Operator : tianweir  
 Sample : ic4311-500  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 13:37:18 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 13:32:09 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb       |
|-----------------------------|--------|--------|----------|----------|----------|-----------|
| -----                       |        |        |          |          |          |           |
| System Monitoring Compounds |        |        |          |          |          |           |
| 1) S Tetrachlo...           | 2.779  | 3.431  | 70768166 | 446.6E6  | 16.195   | 14.603    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 40.49%   | 36.51%    |
| 51) S Decachlor...          | 10.014 | 11.809 | 78475972 | 359.2E6  | 17.412   | 18.954    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 43.53%   | 47.38%    |
| Target Compounds            |        |        |          |          |          |           |
| 31) AR1016-A                | 3.154  | 4.094  | 38133288 | 177.7E6  | 417.595  | 369.093   |
| 32) AR1016-B                | 3.557  | 4.631  | 66201865 | 390.3E6  | 575.277  | 403.833 # |
| 33) AR1016-C                | 4.106  | 5.277  | 139.6E6  | 843.6E6  | 378.178  | 403.177   |
| 34) AR1016-D                | 4.269  | 5.464  | 57791829 | 364.9E6  | 429.753  | 471.601   |
| 35) AR1016-E                | 4.782  | 6.113  | 59202818 | 246.2E6  | 420.749m | 432.237   |
| 36) AR1260-A                | 7.151  | 8.714  | 153.9E6  | 910.2E6  | 404.766  | 488.798m  |
| 37) AR1260-B                | 7.313  | 8.829  | 75039708 | 448.7E6  | 439.301  | 460.504   |
| 38) AR1260-C                | 7.651  | 9.260  | 82119479 | 511.3E6  | 495.773  | 545.829   |
| 39) AR1260-D                | 8.082  | 9.611  | 187.2E6  | 1084.8E6 | 405.158  | 461.244   |
| 40) AR1260-E                | 8.474  | 10.153 | 194.8E6  | 1044.4E6 | 447.646m | 510.257m  |
| -----                       |        |        |          |          |          |           |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

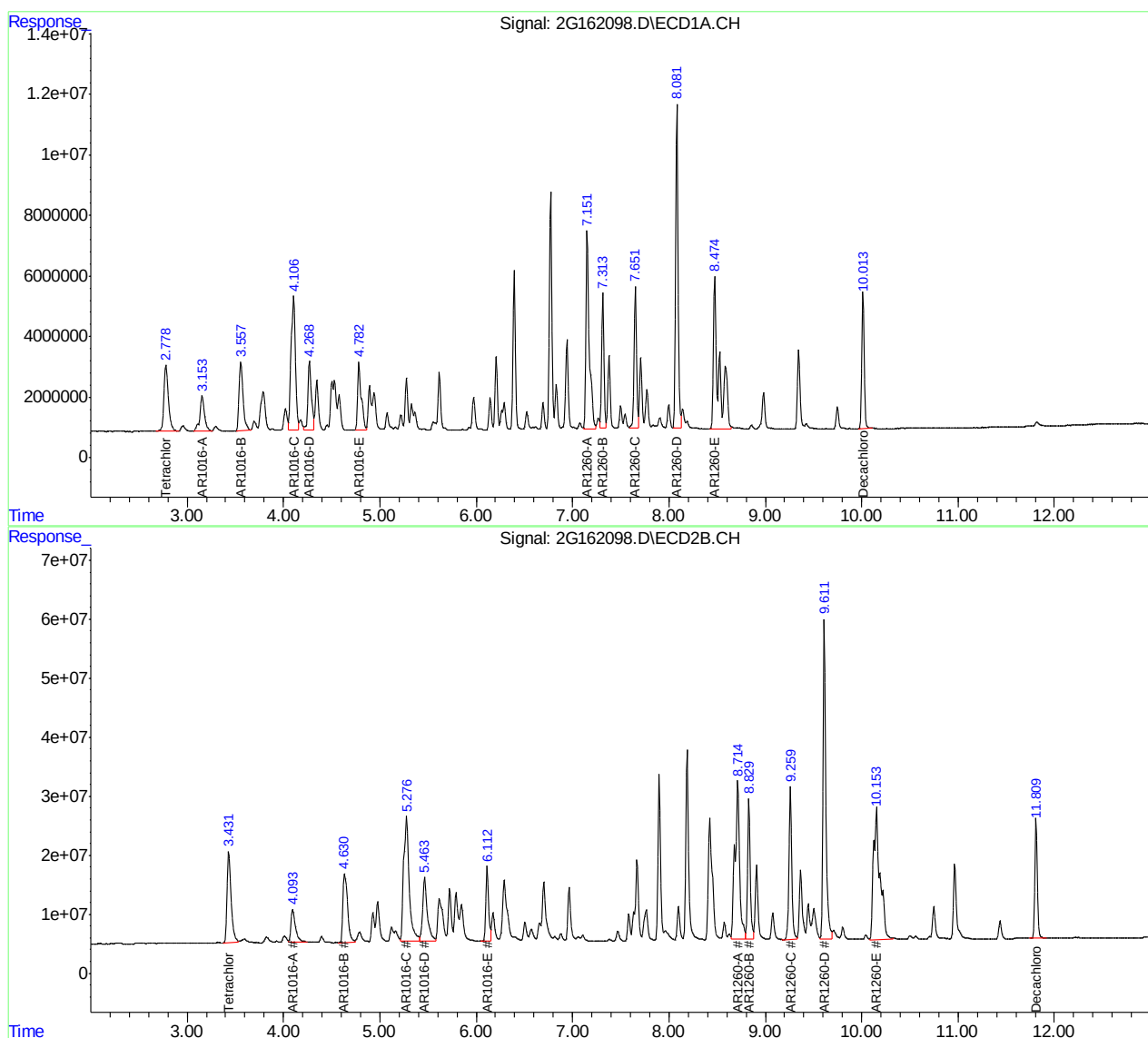


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:37:18 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Lab FileID:

2G162098.D

Injection Time:

04/19/18 12:45

Method:

SW846 8082A

Analyst approved:

04/19/18 14:54 Rebecca Krug

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-E  |     | 1    | 4.78           | Split peak |
| AR1260-E  |     | 1    | 8.47           | Split peak |
| AR1260-A  |     | 2    | 8.71           | Split peak |
| AR1260-E  |     | 2    | 10.15          | Split peak |

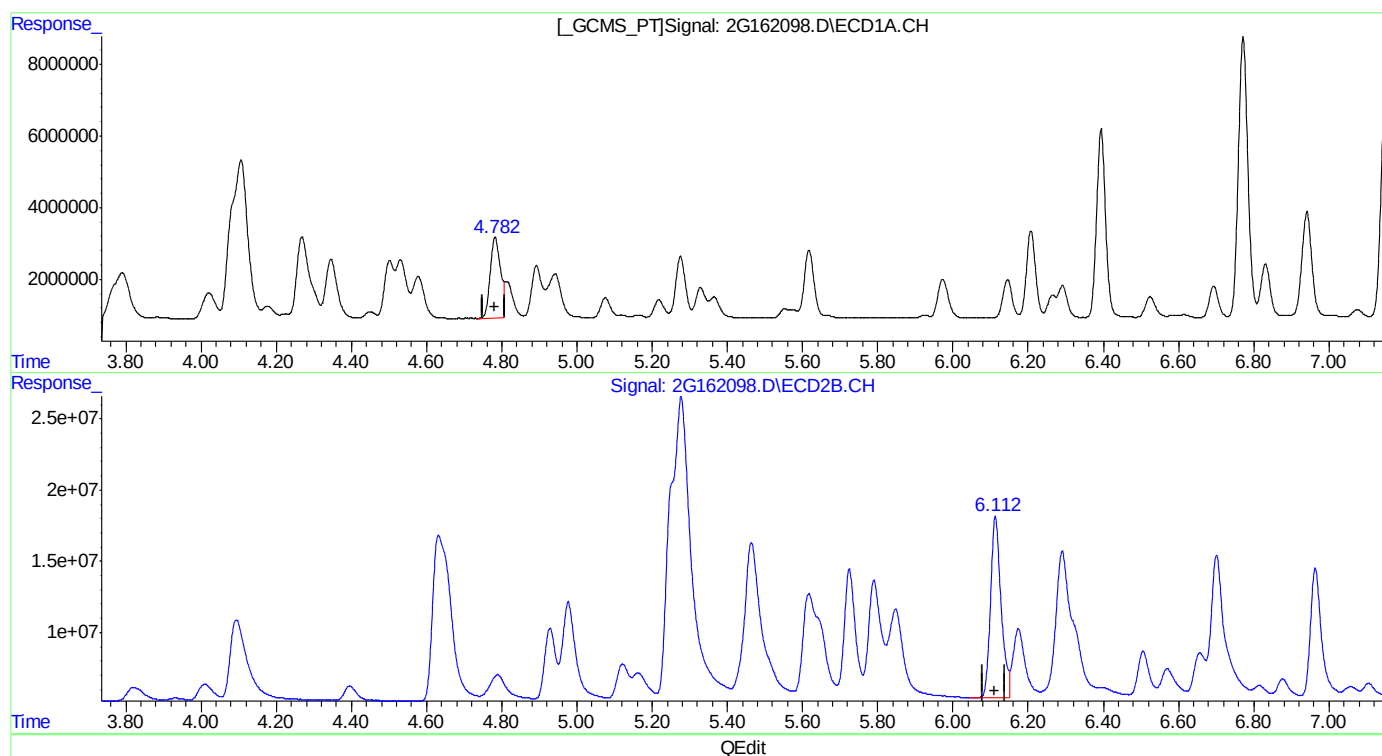
7.5.2.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.782min 306.742PPB  
response 43161068

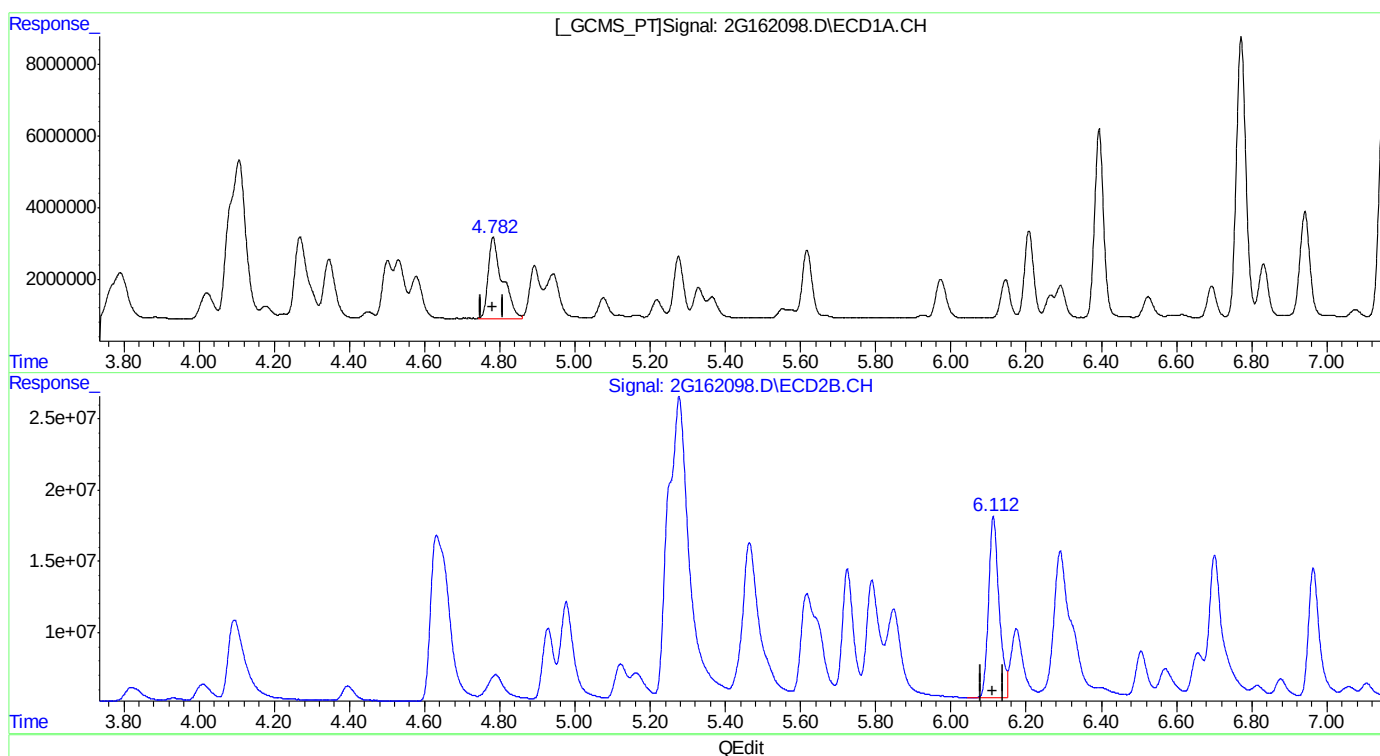
(35) AR1016-E #2  
6.113min 432.237PPB  
response 246151896

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.782min 420.749PPB m  
response 59202818

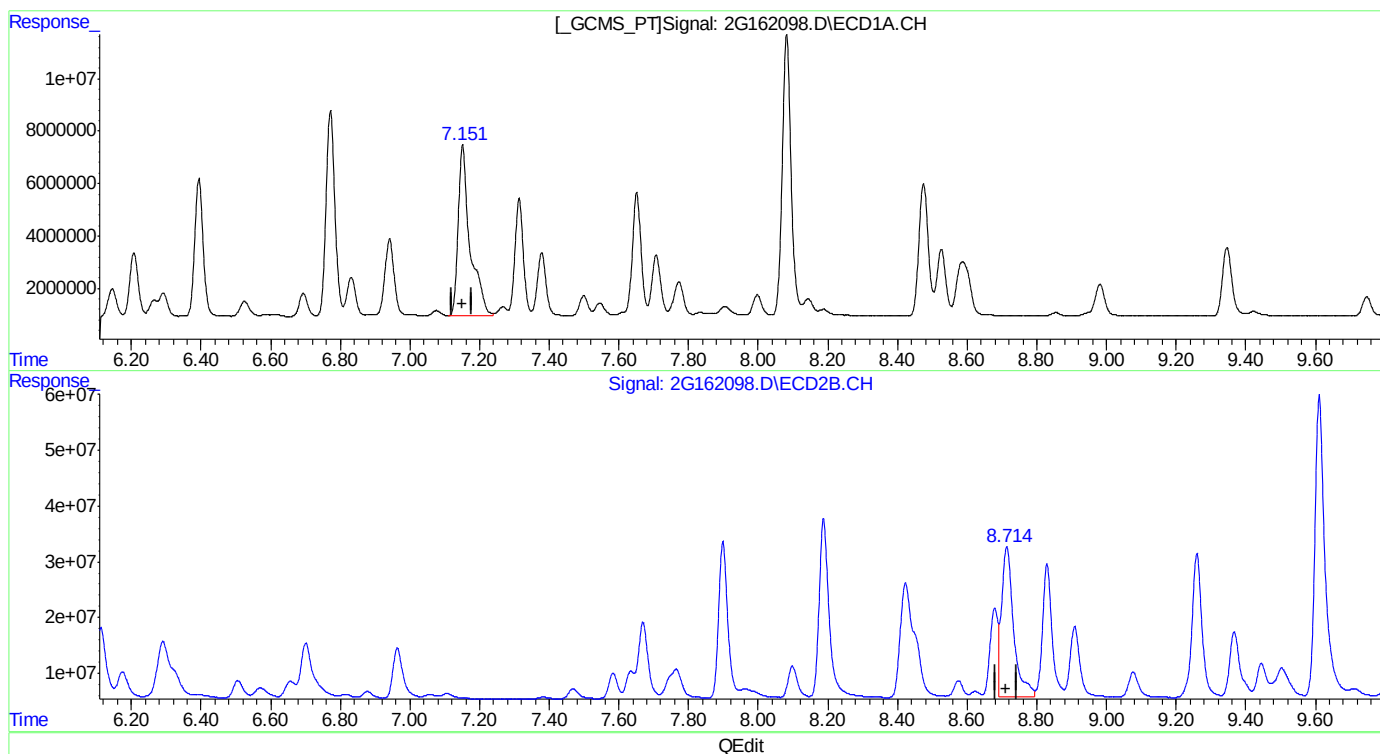
(35) AR1016-E #2  
6.113min 432.237PPB  
response 246151896

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 404.766PPB  
response 153891736

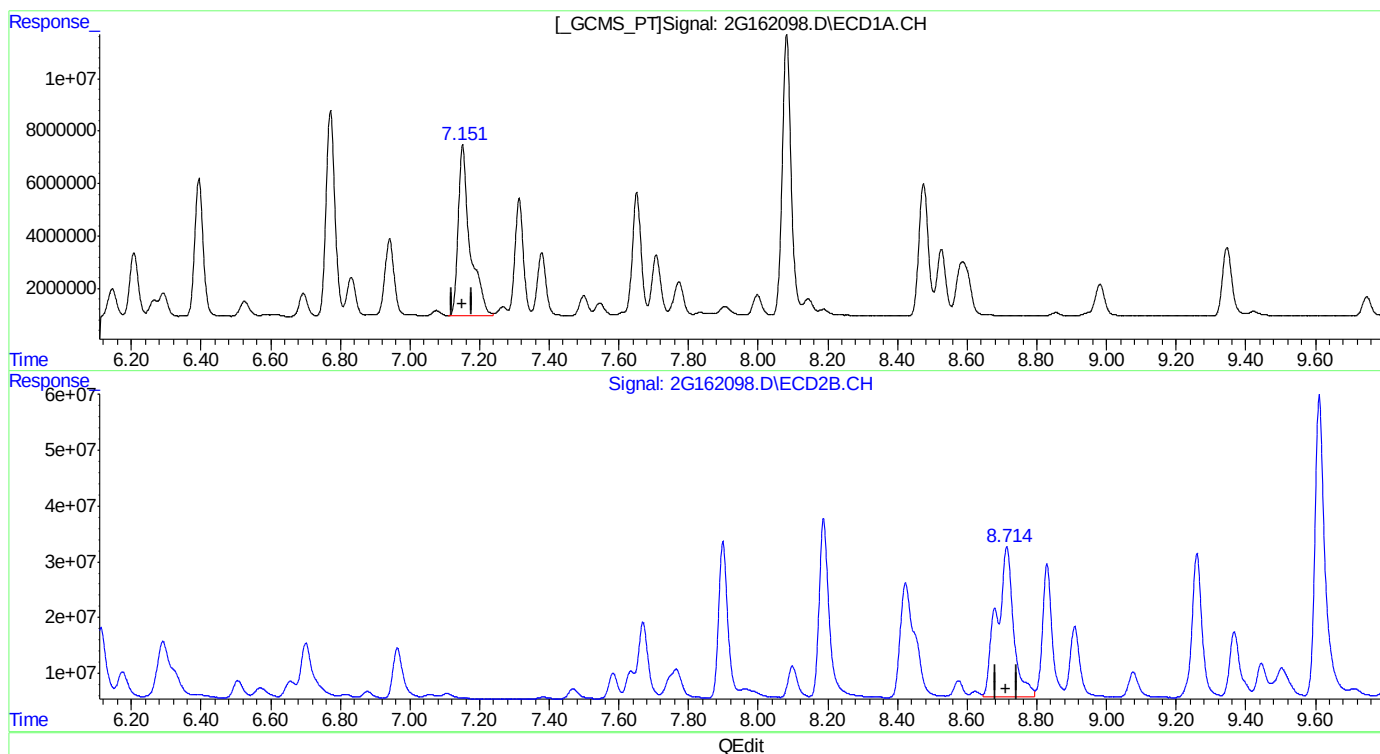
(36) AR1260-A #2  
8.714min 350.412PPB  
response 652523715

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 404.766PPB  
response 153891736

(36) AR1260-A #2  
8.714min 488.798PPB m  
response 910220199

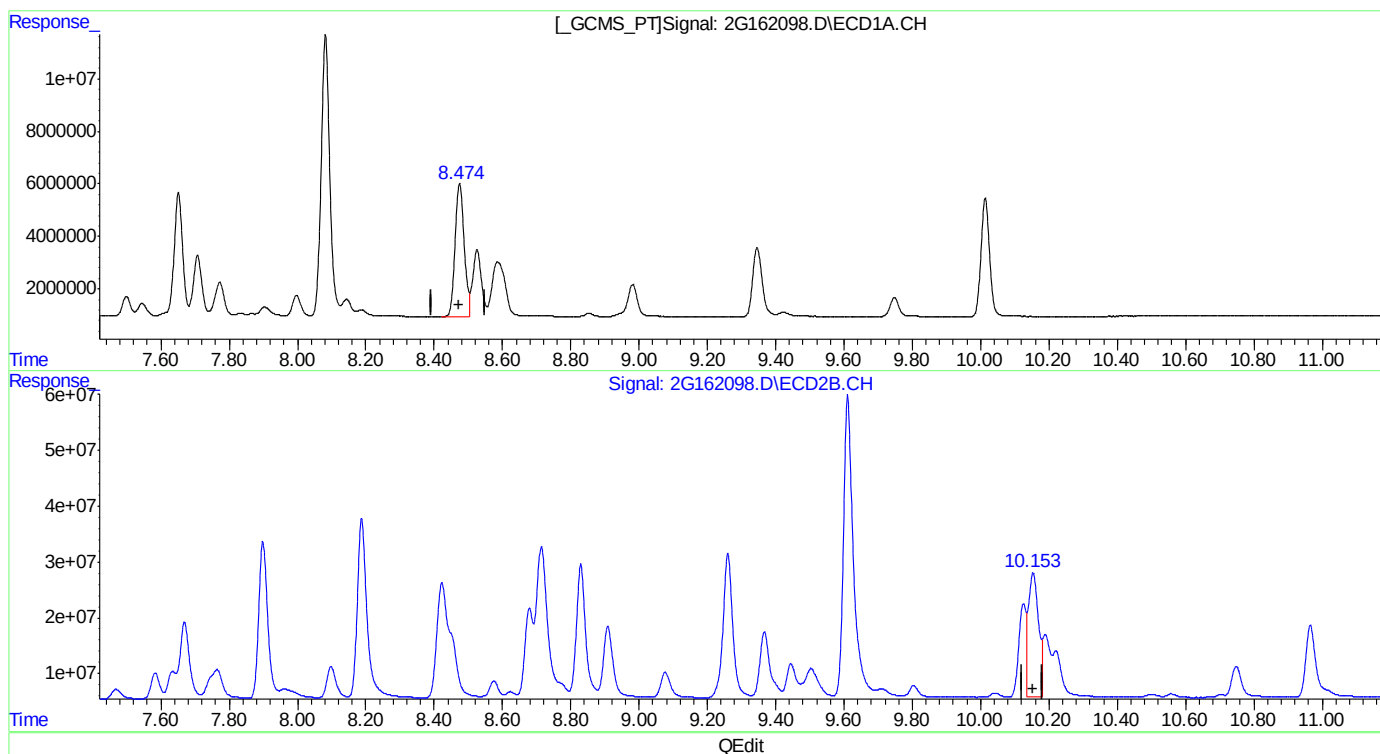
(+) = Expected Retention Time  
2PCB4311.M Thu Apr 19 13:36:43 2018 RPT1

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.475min 216.506PPB  
response 94200169

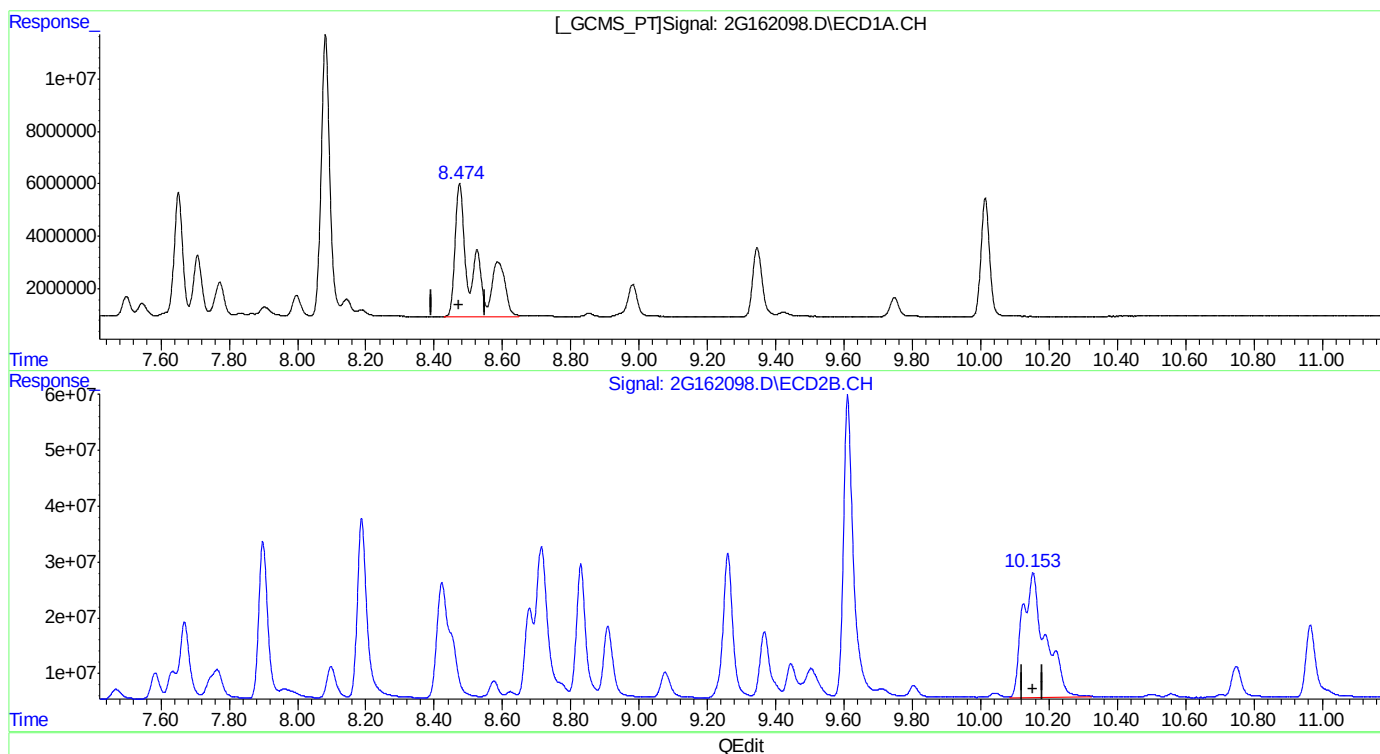
(40) AR1260-E #2  
10.154min 219.008PPB  
response 448257209

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162098.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 12:45 pm  
Operator : tianweir  
Sample : ic4311-500  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:36:06 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.474min 447.646PPB m  
response 194767242

(40) AR1260-E #2  
10.153min 510.257PPB m  
response 1044376932



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162099.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 1:02 pm  
 Operator : tianweir  
 Sample : icc4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 13:33:24 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 13:32:09 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb       |
|-----------------------------|--------|--------|----------|----------|----------|-----------|
| -----                       |        |        |          |          |          |           |
| System Monitoring Compounds |        |        |          |          |          |           |
| 1) S Tetrachlo...           | 2.778  | 3.432  | 147.7E6  | 928.7E6  | 33.797   | 30.364    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 84.49%   | 75.91%    |
| 51) S Decachlor...          | 10.013 | 11.809 | 157.2E6  | 749.6E6  | 34.886   | 39.555    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 87.22%   | 98.89%    |
| Target Compounds            |        |        |          |          |          |           |
| 31) AR1016-A                | 3.155  | 4.092  | 75576037 | 366.7E6  | 827.627  | 761.652   |
| 32) AR1016-B                | 3.557  | 4.630  | 130.4E6  | 777.2E6  | 1133.202 | 804.122 # |
| 33) AR1016-C                | 4.107  | 5.275  | 285.4E6  | 1744.2E6 | 773.001  | 833.586   |
| 34) AR1016-D                | 4.268  | 5.461  | 115.7E6  | 737.8E6  | 860.556  | 953.596   |
| 35) AR1016-E                | 4.782  | 6.112  | 117.6E6  | 502.9E6  | 835.629m | 883.134   |
| 36) AR1260-A                | 7.151  | 8.712  | 317.8E6  | 1882.4E6 | 835.813  | 1010.865m |
| 37) AR1260-B                | 7.312  | 8.828  | 153.0E6  | 917.3E6  | 895.825  | 941.444   |
| 38) AR1260-C                | 7.650  | 9.260  | 169.0E6  | 1051.3E6 | 1020.047 | 1122.233  |
| 39) AR1260-D                | 8.080  | 9.610  | 395.3E6  | 2256.3E6 | 855.811  | 959.373   |
| 40) AR1260-E                | 8.472  | 10.153 | 402.6E6  | 2144.0E6 | 925.282m | 1047.495m |
| -----                       |        |        |          |          |          |           |

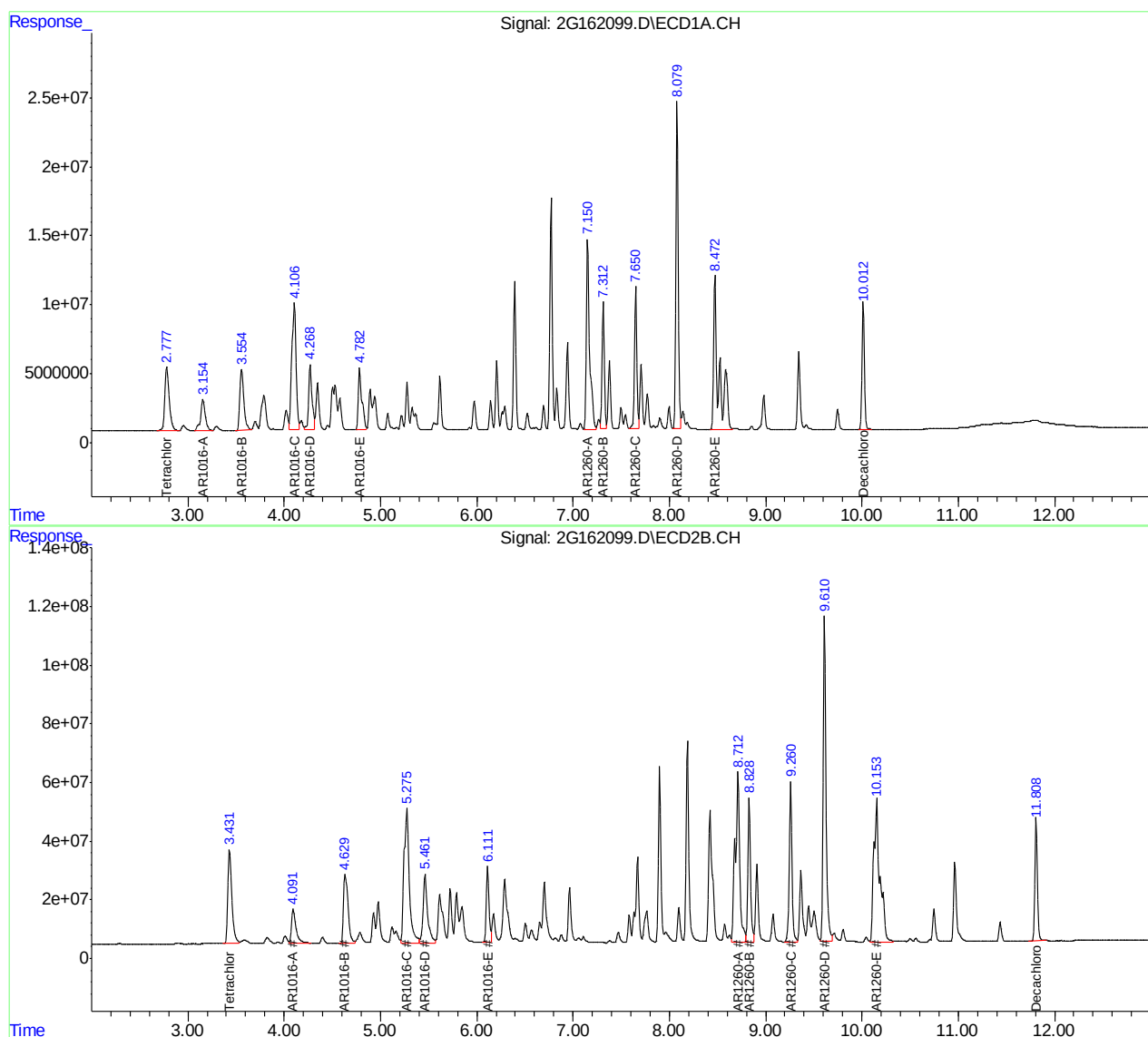
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:33:24 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: G2G4311-ICC4311

Method: SW846 8082A

Lab FileID: 2G162099.D

Analyst approved: 04/19/18 14:54 Rebecca Krug

Injection Time: 04/19/18 13:02

Supervisor approved: 04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-E  |     | 1    | 4.78           | Split peak |
| AR1260-E  |     | 1    | 8.47           | Split peak |
| AR1260-A  |     | 2    | 8.71           | Split peak |
| AR1260-E  |     | 2    | 10.15          | Split peak |

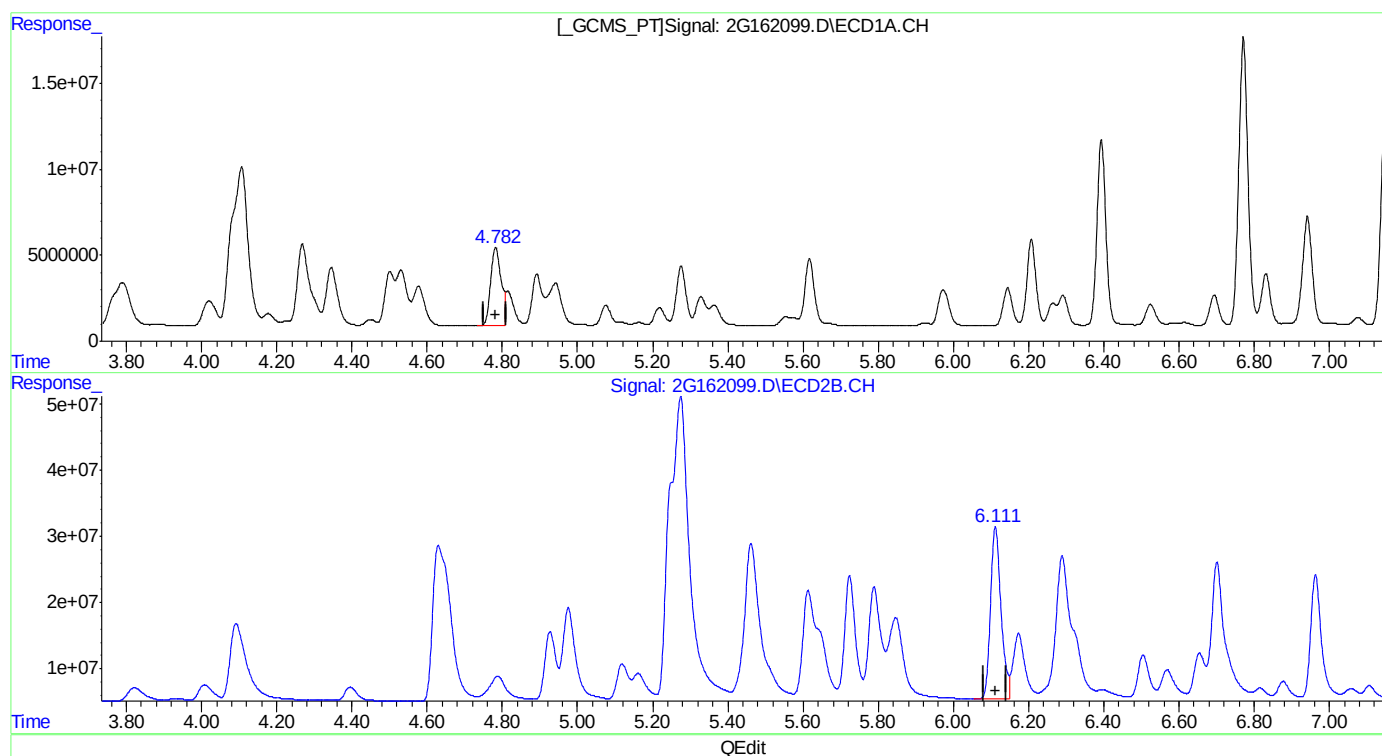
7.5.3.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.782min 619.178PPB  
response 87123426

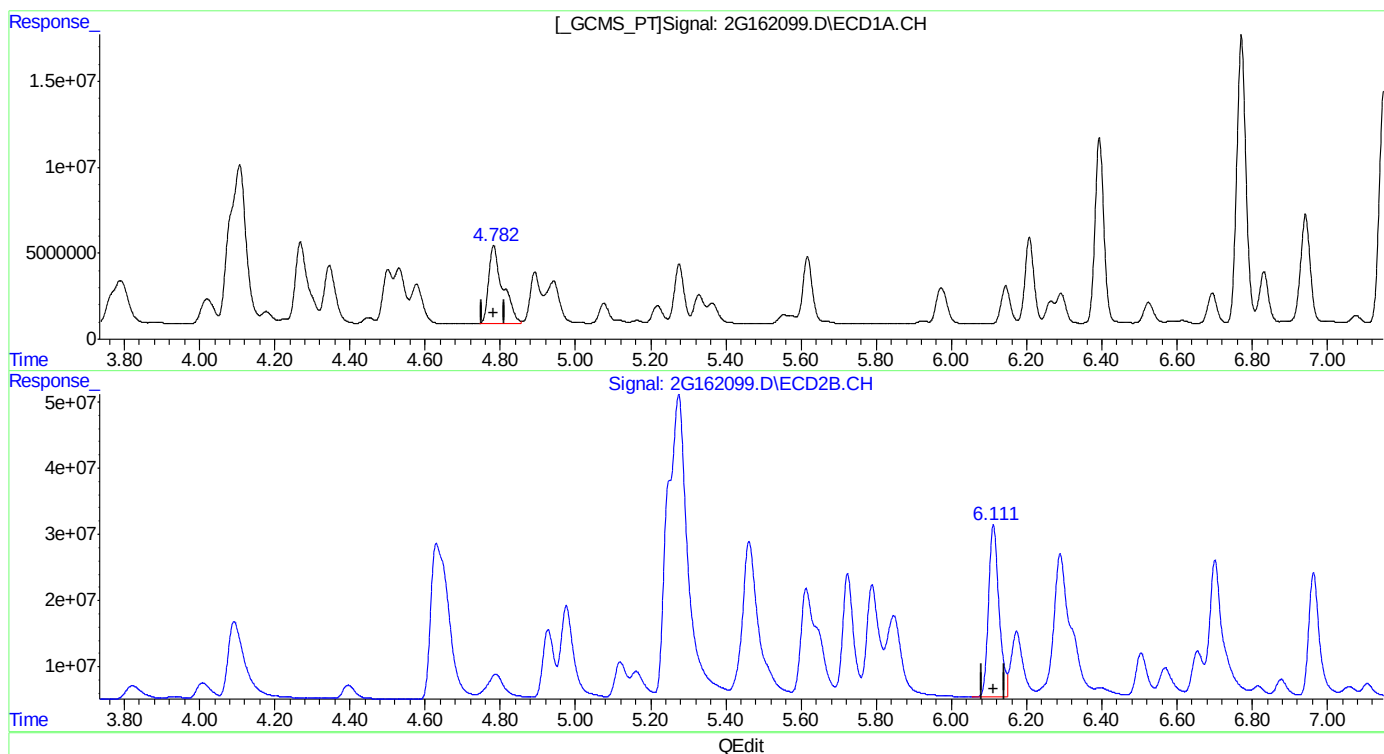
(35) AR1016-E #2  
6.112min 883.134PPB  
response 502930503

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.782min 835.629PPB m  
response 117579859

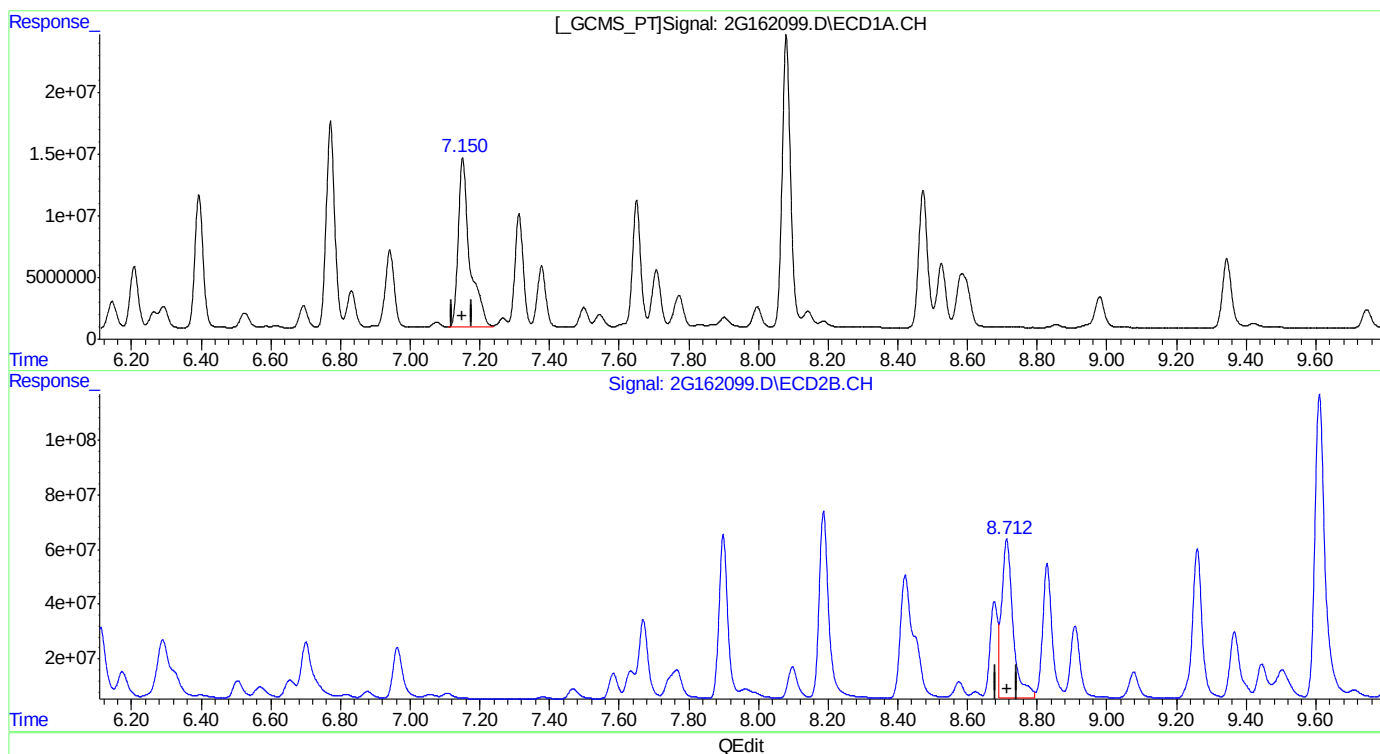
(35) AR1016-E #2  
6.112min 883.134PPB  
response 502930503

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 835.813PPB  
response 317775802

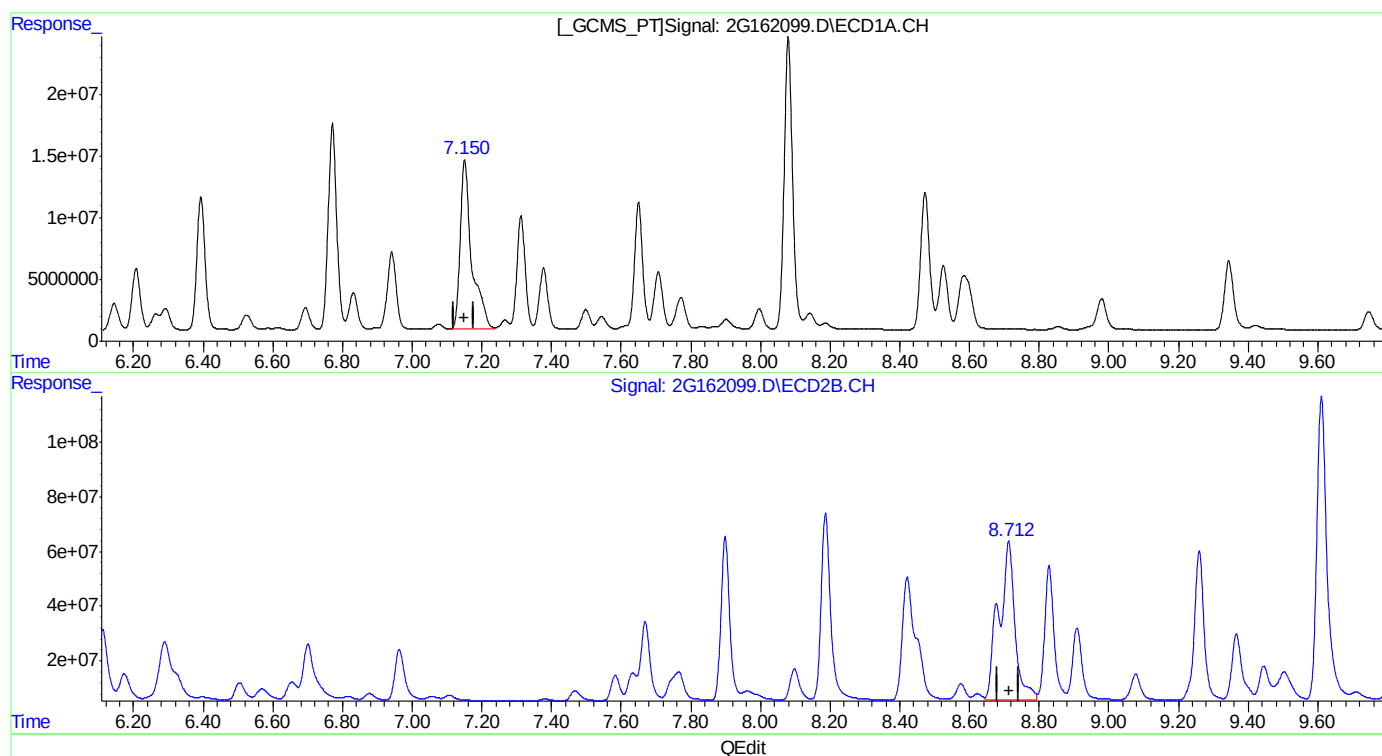
(36) AR1260-A #2  
8.713min 713.165PPB  
response 1328026831

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 835.813PPB  
response 317775802

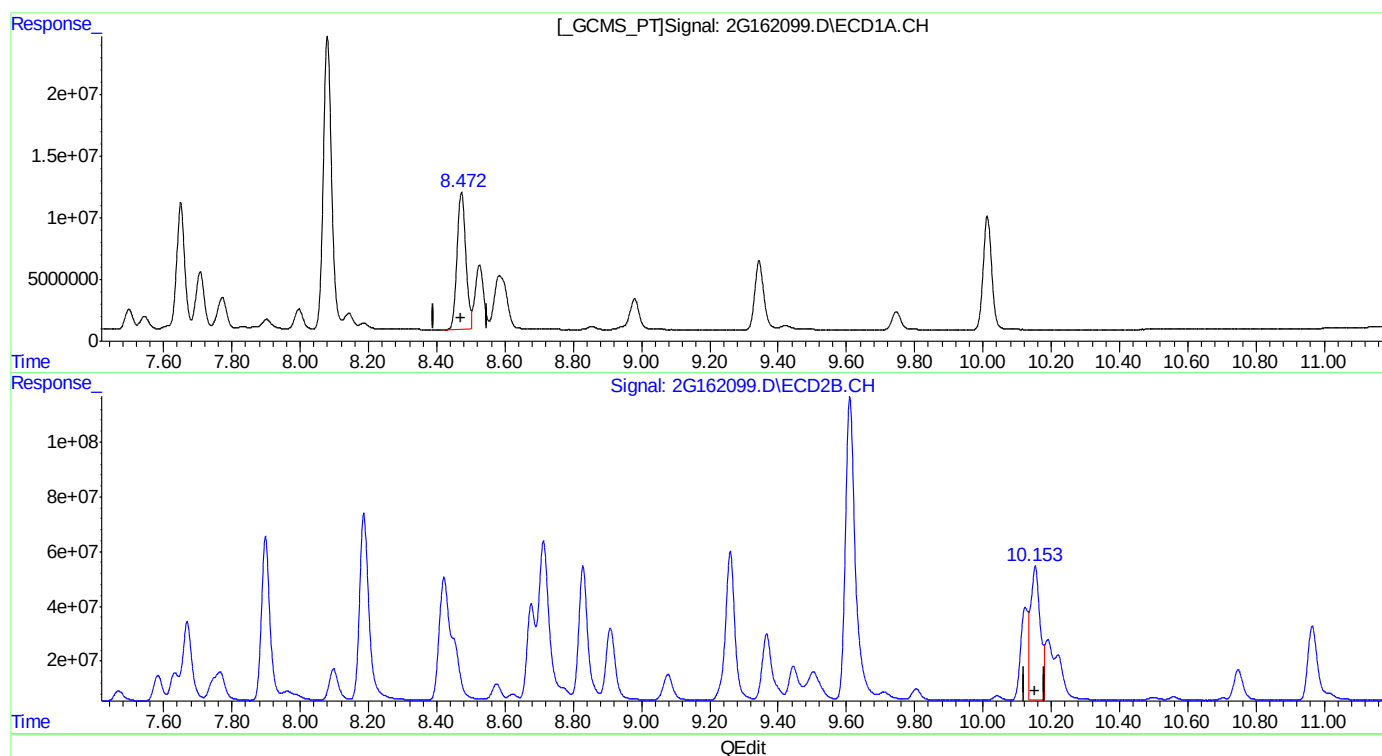
(36) AR1260-A #2  
8.712min 1010.865PPB m  
response 1882392227

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.473min 455.176PPB  
response 198043542

(40) AR1260-E #2  
10.153min 470.111PPB  
response 962206715

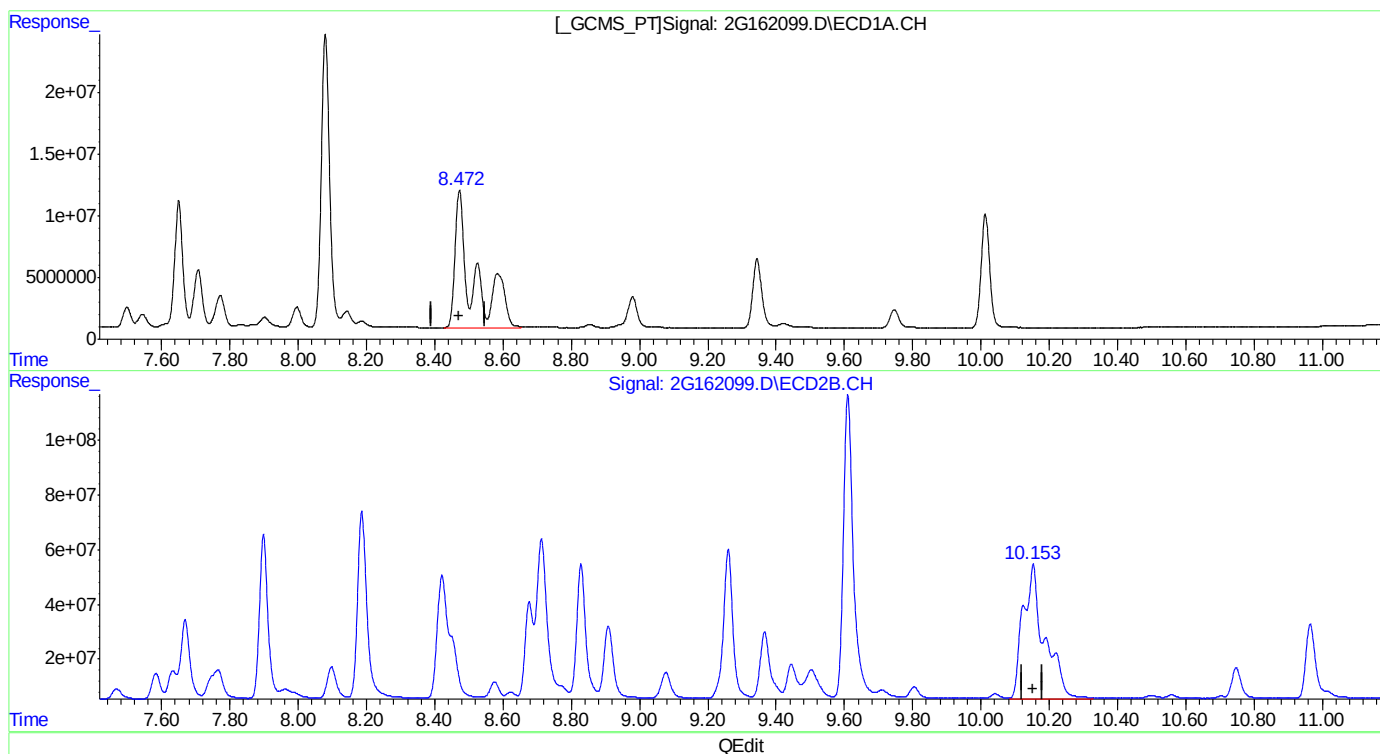


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162099.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:02 pm  
Operator : tianweir  
Sample : icc4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:32:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.472min 925.282PPB m  
response 402582918

(40) AR1260-E #2  
10.153min 1047.495PPB m  
response 2143977225

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162100.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 1:19 pm  
 Operator : tianweir  
 Sample : ic4311-2000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 13:35:07 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 13:32:09 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb        |
|-----------------------------|--------|--------|----------|----------|-----------|------------|
| -----                       |        |        |          |          |           |            |
| System Monitoring Compounds |        |        |          |          |           |            |
| 1) S Tetrachlo...           | 2.779  | 3.431  | 293.4E6  | 1839.9E6 | 67.140    | 60.158     |
| Spiked Amount               | 40.000 |        | Recovery | =        | 167.85%   | 150.40%    |
| 51) S Decachlor...          | 10.011 | 11.809 | 306.0E6  | 1473.2E6 | 67.895    | 77.733     |
| Spiked Amount               | 40.000 |        | Recovery | =        | 169.74%   | 194.33%    |
| Target Compounds            |        |        |          |          |           |            |
| 31) AR1016-A                | 3.154  | 4.088  | 142.5E6  | 706.5E6  | 1560.748  | 1467.398   |
| 32) AR1016-B                | 3.557  | 4.628  | 248.4E6  | 1468.7E6 | 2158.143  | 1519.571 # |
| 33) AR1016-C                | 4.105  | 5.269  | 559.4E6  | 3437.9E6 | 1515.198  | 1643.034m  |
| 34) AR1016-D                | 4.267  | 5.458  | 223.8E6  | 1423.4E6 | 1664.568  | 1839.787   |
| 35) AR1016-E                | 4.781  | 6.109  | 229.0E6  | 1004.6E6 | 1627.184m | 1764.070   |
| 36) AR1260-A                | 7.150  | 8.710  | 694.6E6  | 4085.5E6 | 1826.832  | 2193.943m  |
| 37) AR1260-B                | 7.312  | 8.828  | 263.3E6  | 1607.9E6 | 1541.300  | 1650.207   |
| 38) AR1260-C                | 7.649  | 9.259  | 296.0E6  | 1960.0E6 | 1786.948  | 2092.348   |
| 39) AR1260-D                | 8.079  | 9.607  | 724.1E6  | 4125.5E6 | 1567.540  | 1754.127   |
| 40) AR1260-E                | 8.470  | 10.150 | 722.1E6  | 3867.0E6 | 1659.737m | 1889.312m  |
| -----                       |        |        |          |          |           |            |

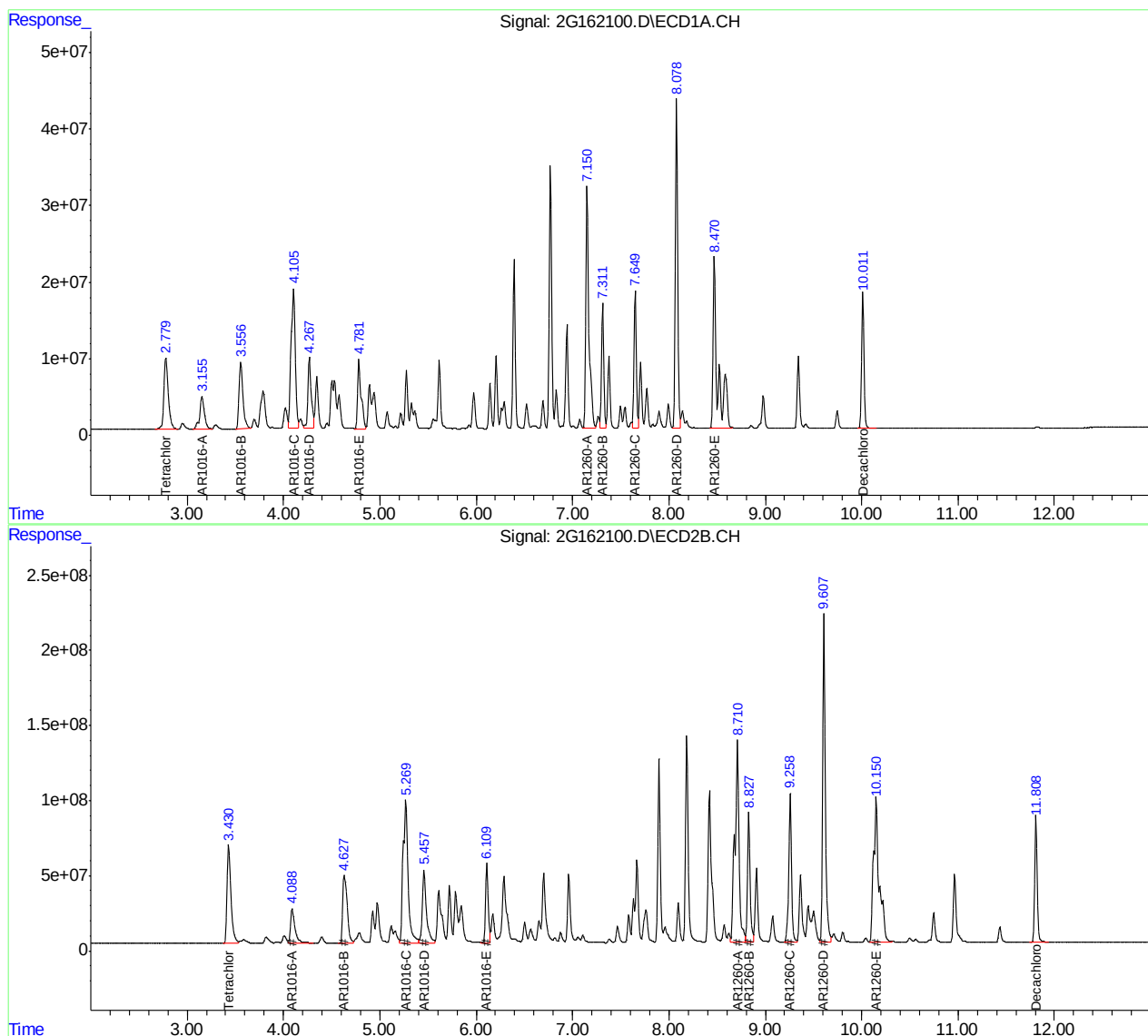
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:35:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Lab FileID:

2G162100.D

Injection Time:

04/19/18 13:19

Method:

SW846 8082A

Analyst approved:

04/19/18 14:54 Rebecca Krug

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-E  |     | 1    | 4.78           | Split peak |
| AR1016-C  |     | 2    | 5.27           | Split peak |
| AR1260-E  |     | 1    | 8.47           | Split peak |
| AR1260-A  |     | 2    | 8.71           | Split peak |
| AR1260-E  |     | 2    | 10.15          | Split peak |

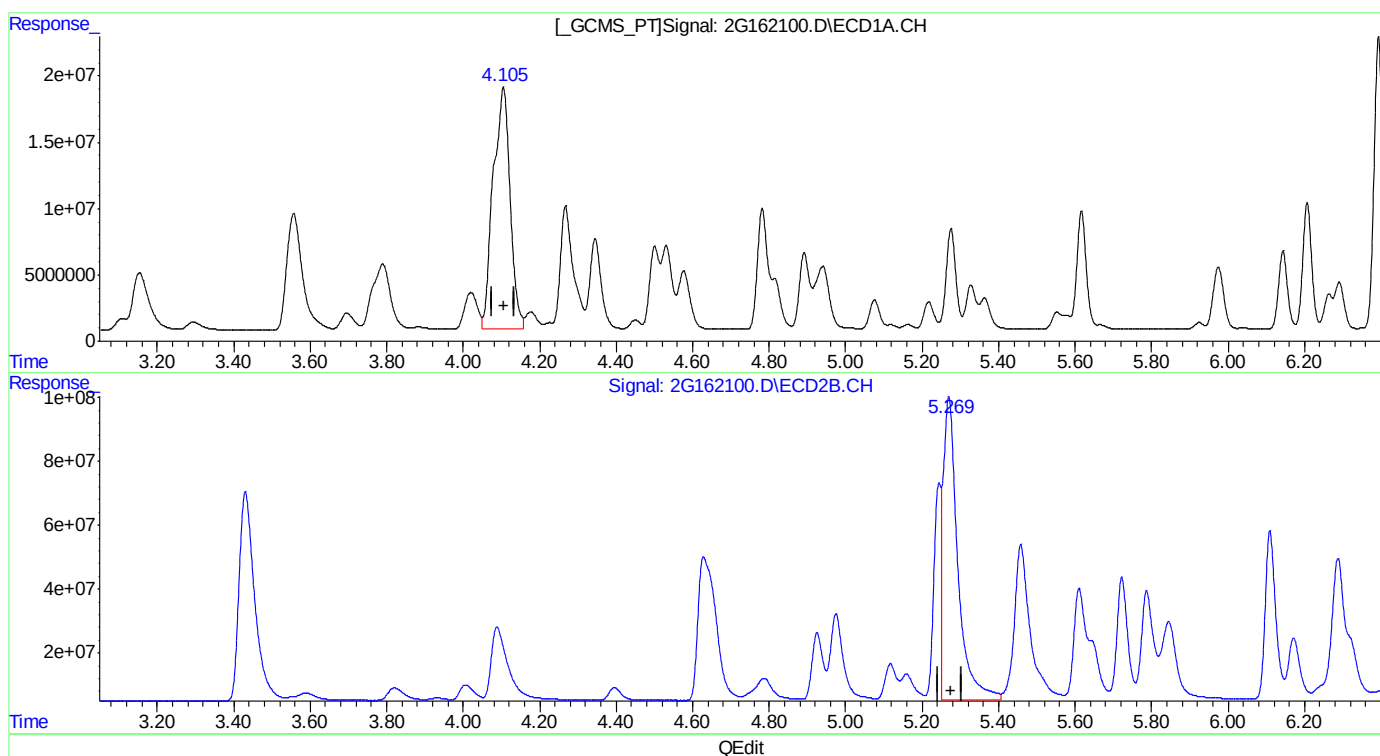
7.5.4.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(33) AR1016-C  
4.105min 1515.198PPB  
response 559372601

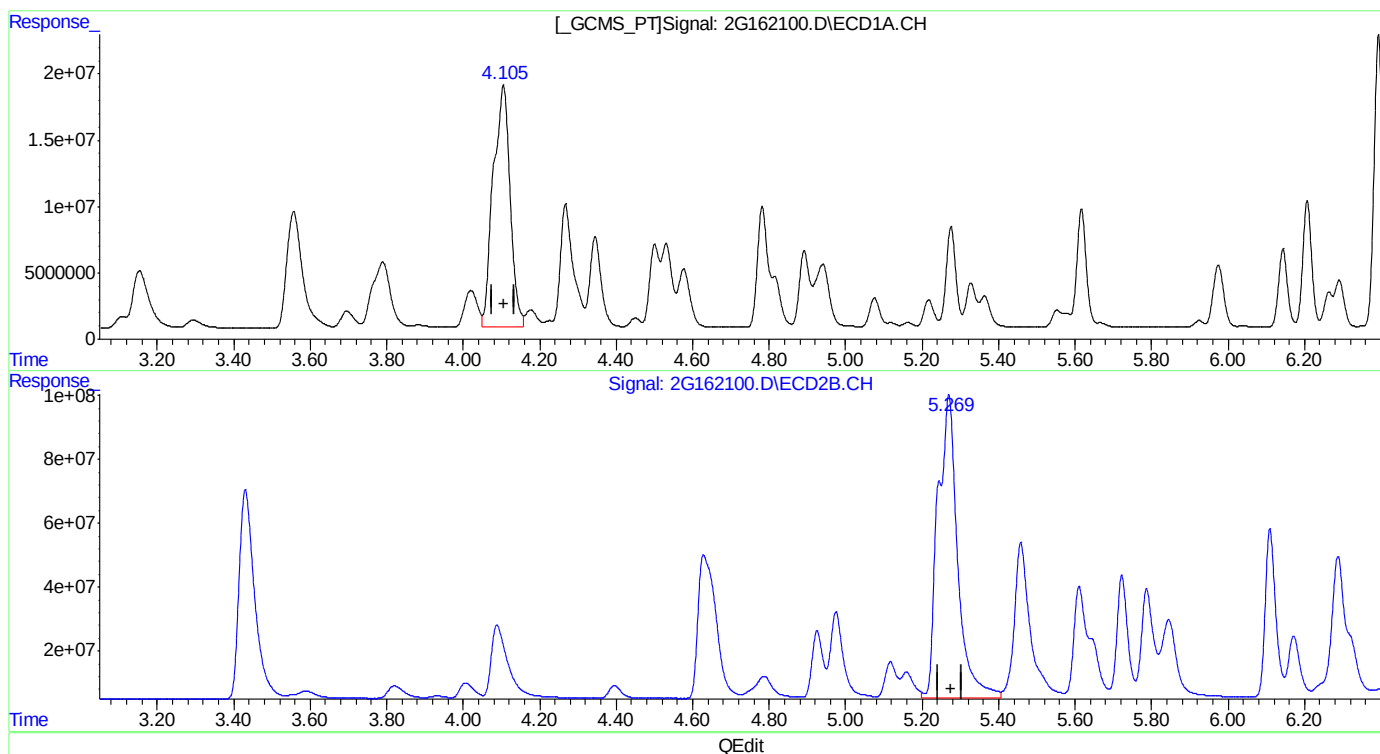
(33) AR1016-C #2  
5.270min 1223.870PPB  
response 2560828231

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(33) AR1016-C  
4.105min 1515.198PPB  
response 559372601

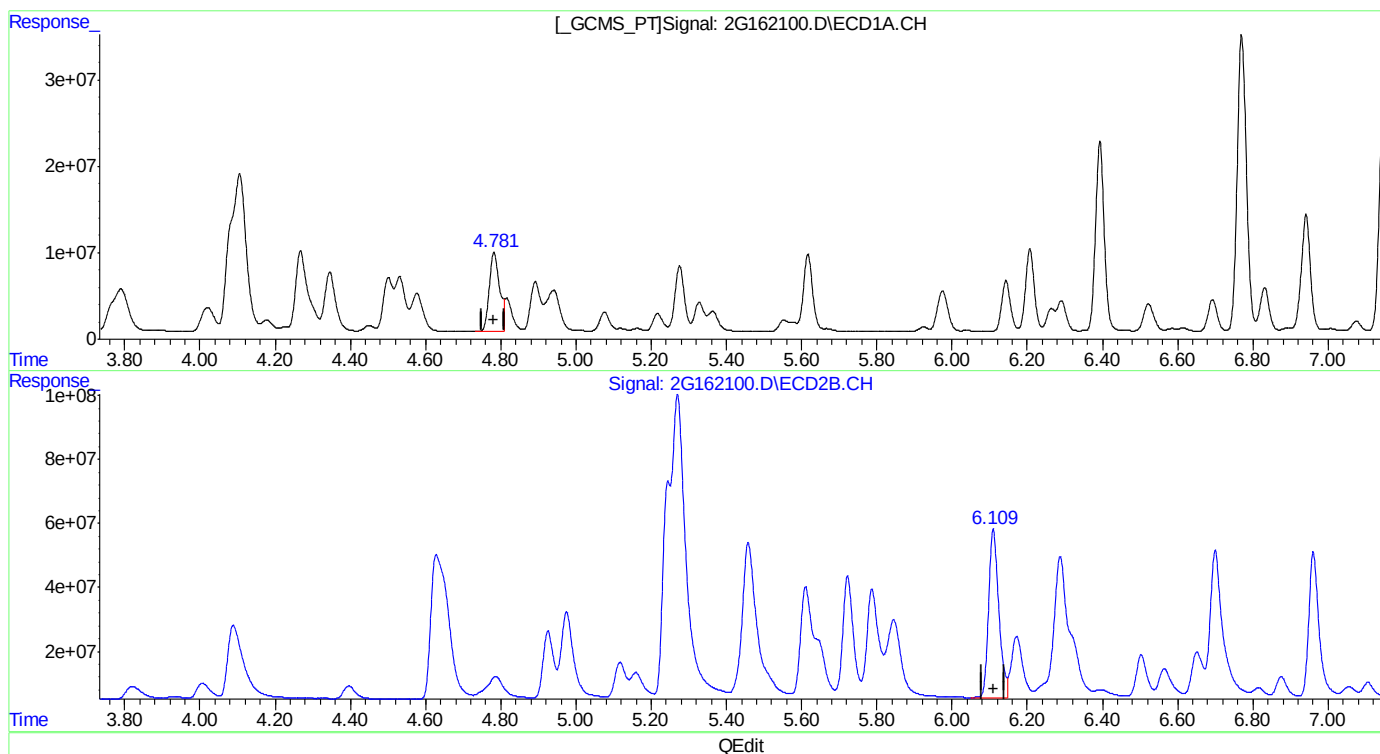
(33) AR1016-C #2  
5.269min 1643.034PPB m  
response 3437887302

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.782min 1217.083PPB  
response 171253502

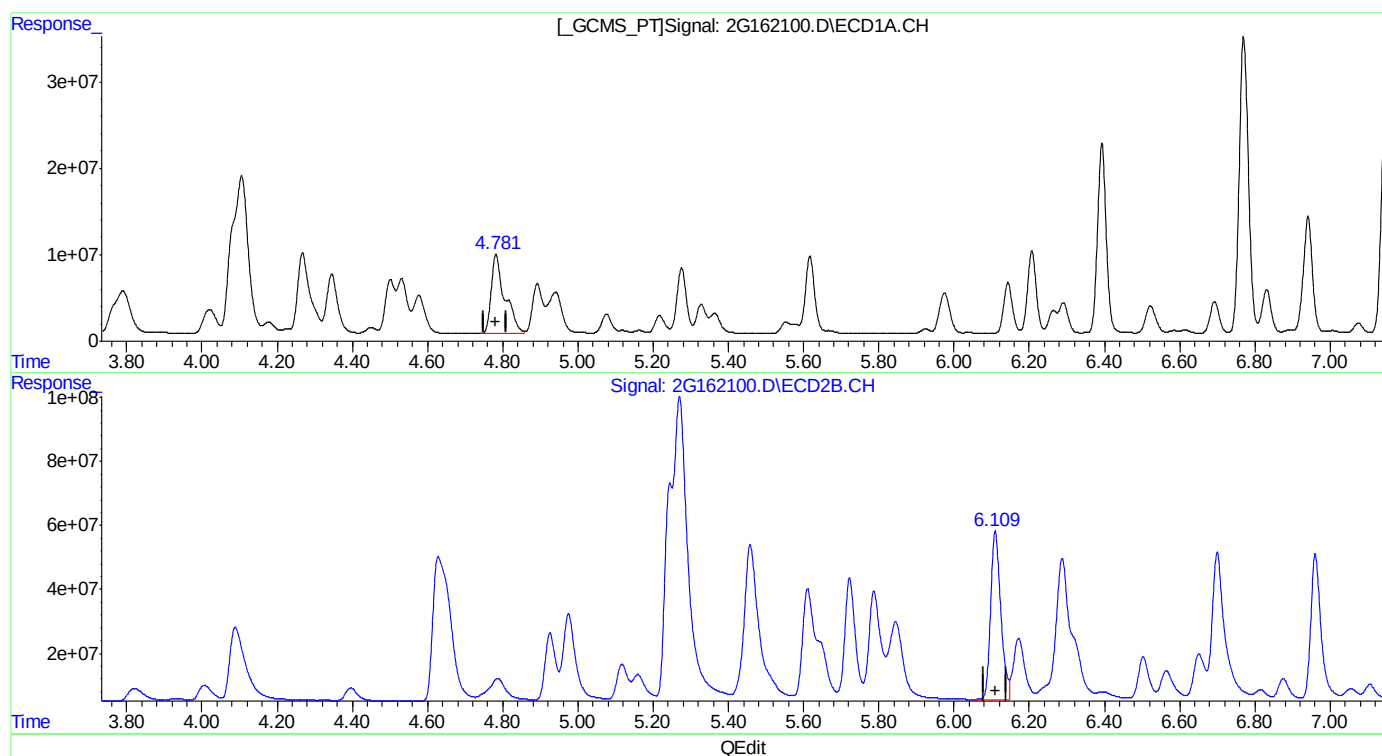
(35) AR1016-E #2  
6.109min 1764.070PPB  
response 1004609723

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.781min 1627.184PPB m  
response 228958036

(35) AR1016-E #2  
6.109min 1764.070PPB  
response 1004609723

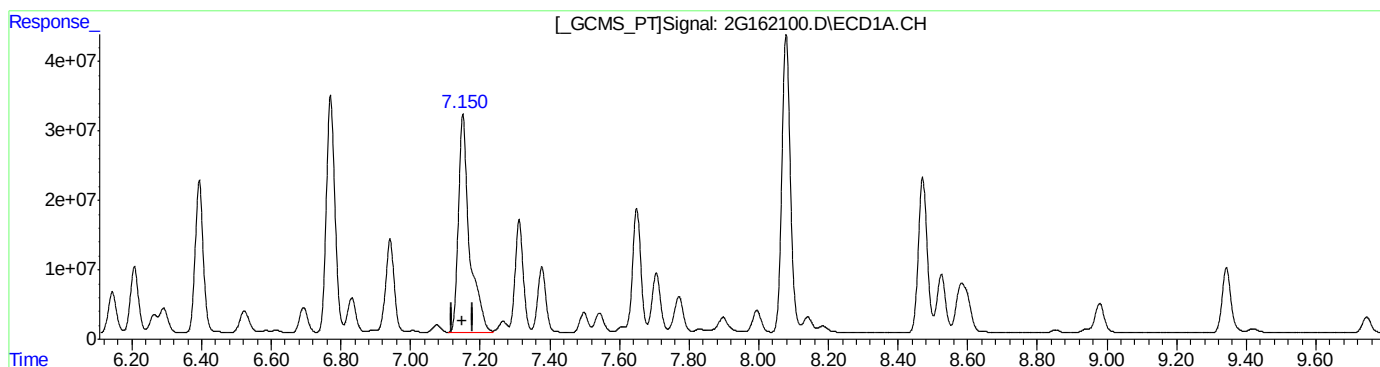


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.150min 1826.832PPB  
response 694560748

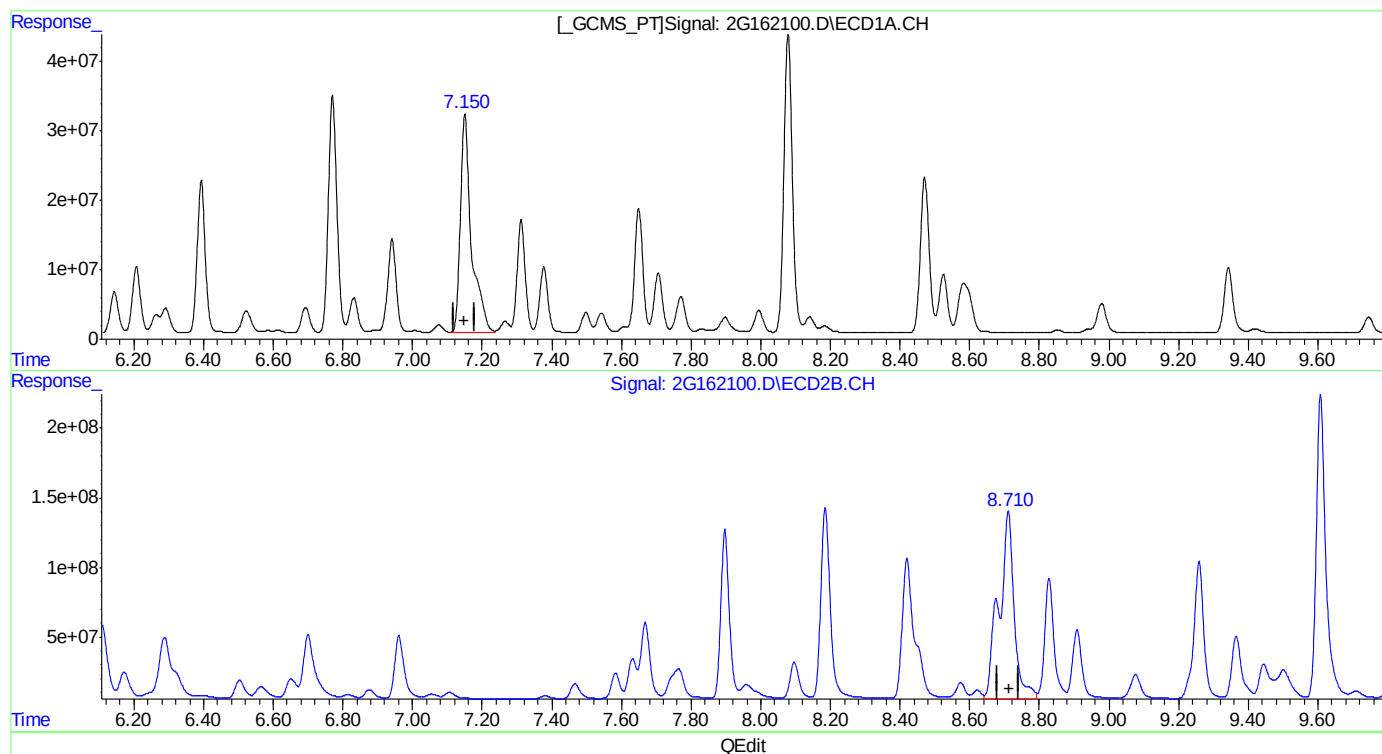
(36) AR1260-A #2  
8.711min 1587.197PPB  
response 2955615106

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.150min 1826.832PPB  
response 694560748

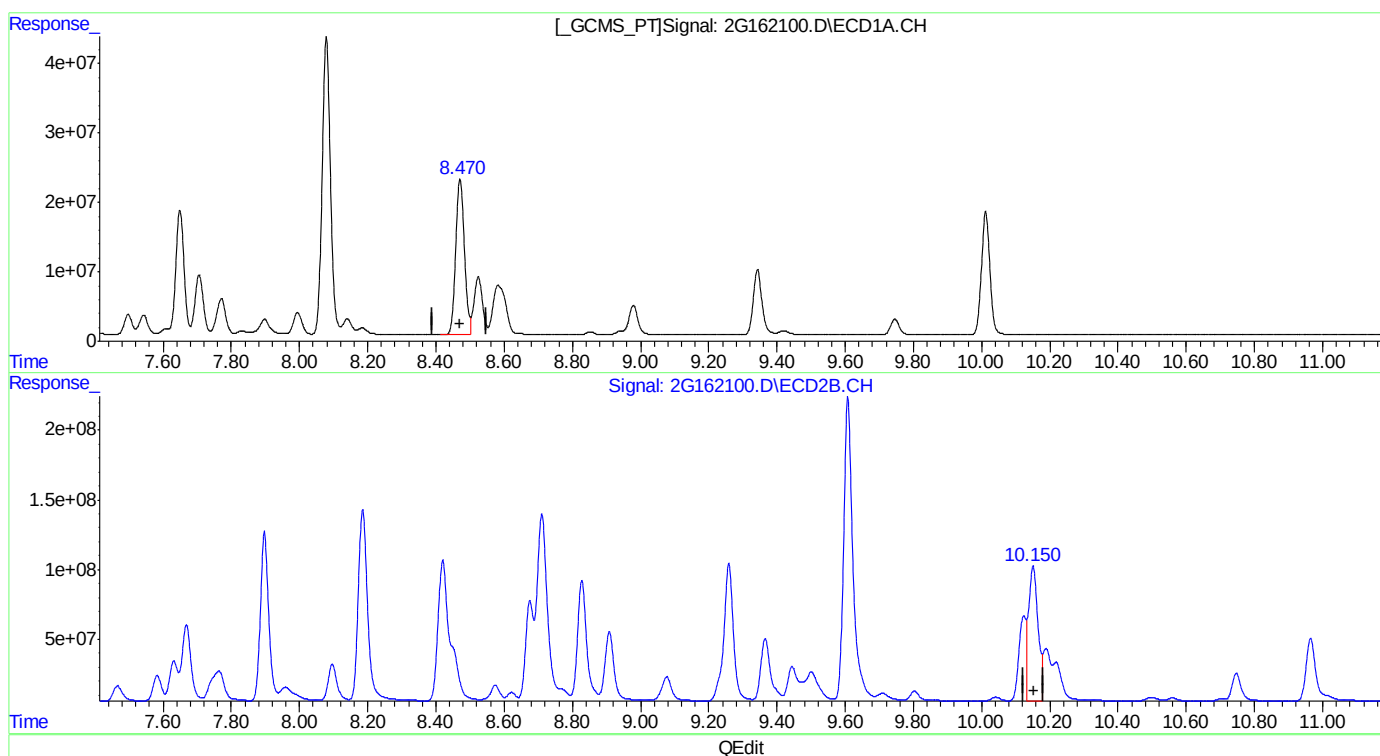
(36) AR1260-A #2  
8.710min 2193.943PPB m  
response 4085472504

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.470min 902.190PPB  
response 392535672

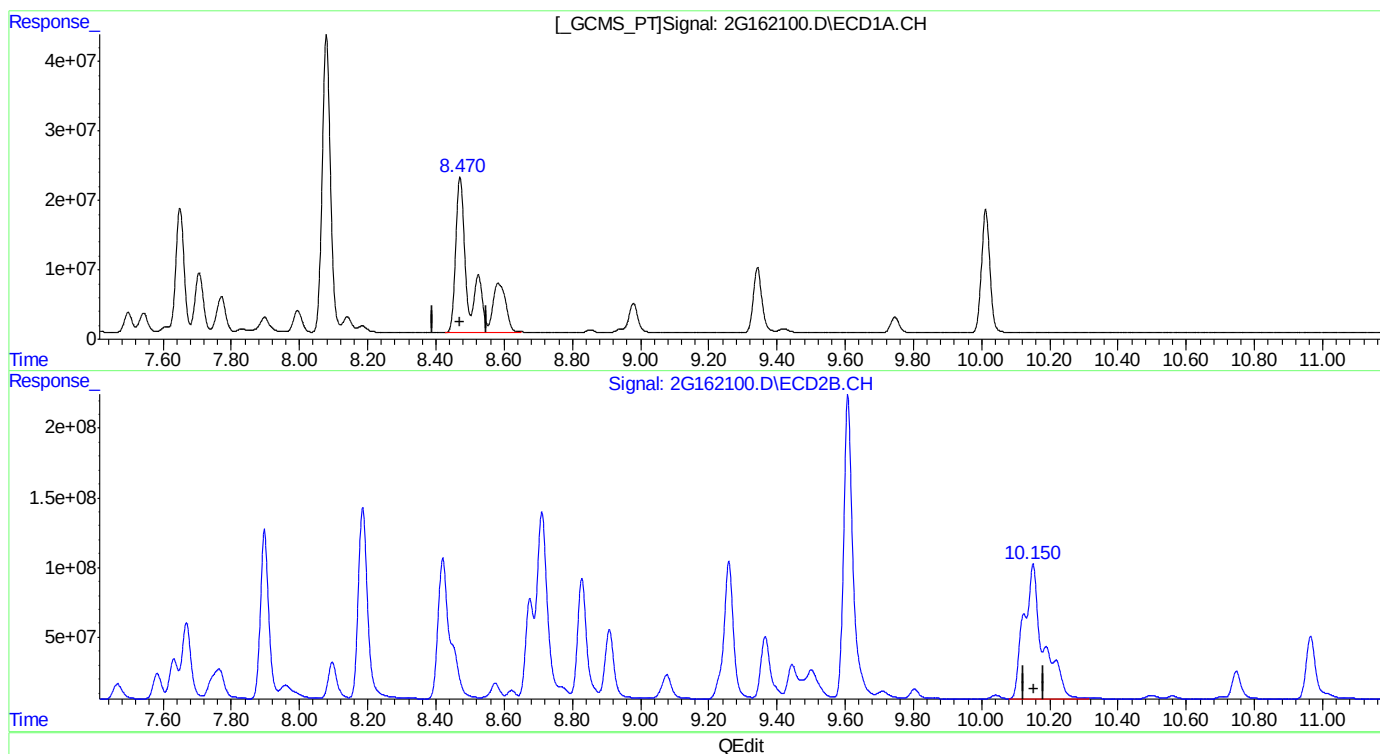
(40) AR1260-E #2  
10.151min 932.845PPB  
response 1909314979

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162100.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:19 pm  
Operator : tianweir  
Sample : ic4311-2000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:34:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:32:09 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.470min 1659.737PPB m  
response 722138384

(40) AR1260-E #2  
10.150min 1889.312PPB m  
response 3866977621

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162101.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 1:35 pm  
 Operator : tianweir  
 Sample : ic4311-3000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 13:51:35 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 13:46:18 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.780  | 3.430  | 454.2E6  | 2825.0E6 | 127.609   | 126.507   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 319.02%   | 316.27%   |
| 51) S Decachlor...          | 10.012 | 11.807 | 467.6E6  | 2260.6E6 | 123.371   | 132.472   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 308.43%   | 331.18%   |
| Target Compounds            |        |        |          |          |           |           |
| 31) AR1016-A                | 3.154  | 4.088  | 213.2E6  | 1079.0E6 | 2920.892m | 3078.922  |
| 32) AR1016-B                | 3.558  | 4.629  | 374.2E6  | 2164.2E6 | 3145.582  | 2856.820  |
| 33) AR1016-C                | 4.105  | 5.268  | 856.1E6  | 5162.9E6 | 3078.179  | 3140.786  |
| 34) AR1016-D                | 4.268  | 5.457  | 341.9E6  | 2126.9E6 | 3104.332  | 3163.789  |
| 35) AR1016-E                | 4.782  | 6.109  | 348.3E6  | 1537.2E6 | 3038.759  | 3205.970  |
| 36) AR1260-A                | 7.149  | 8.708  | 1069.8E6 | 6243.4E6 | 3385.833  | 3502.573m |
| 37) AR1260-B                | 7.311  | 8.827  | 404.6E6  | 2447.4E6 | 2923.094  | 3045.990  |
| 38) AR1260-C                | 7.649  | 9.257  | 458.0E6  | 3017.1E6 | 3056.095  | 3297.017  |
| 39) AR1260-D                | 8.078  | 9.606  | 1113.6E6 | 6341.4E6 | 3124.355  | 3182.969  |
| 40) AR1260-E                | 8.468  | 10.150 | 1100.5E6 | 5911.5E6 | 3048.503m | 3181.045m |
| -----                       |        |        |          |          |           |           |

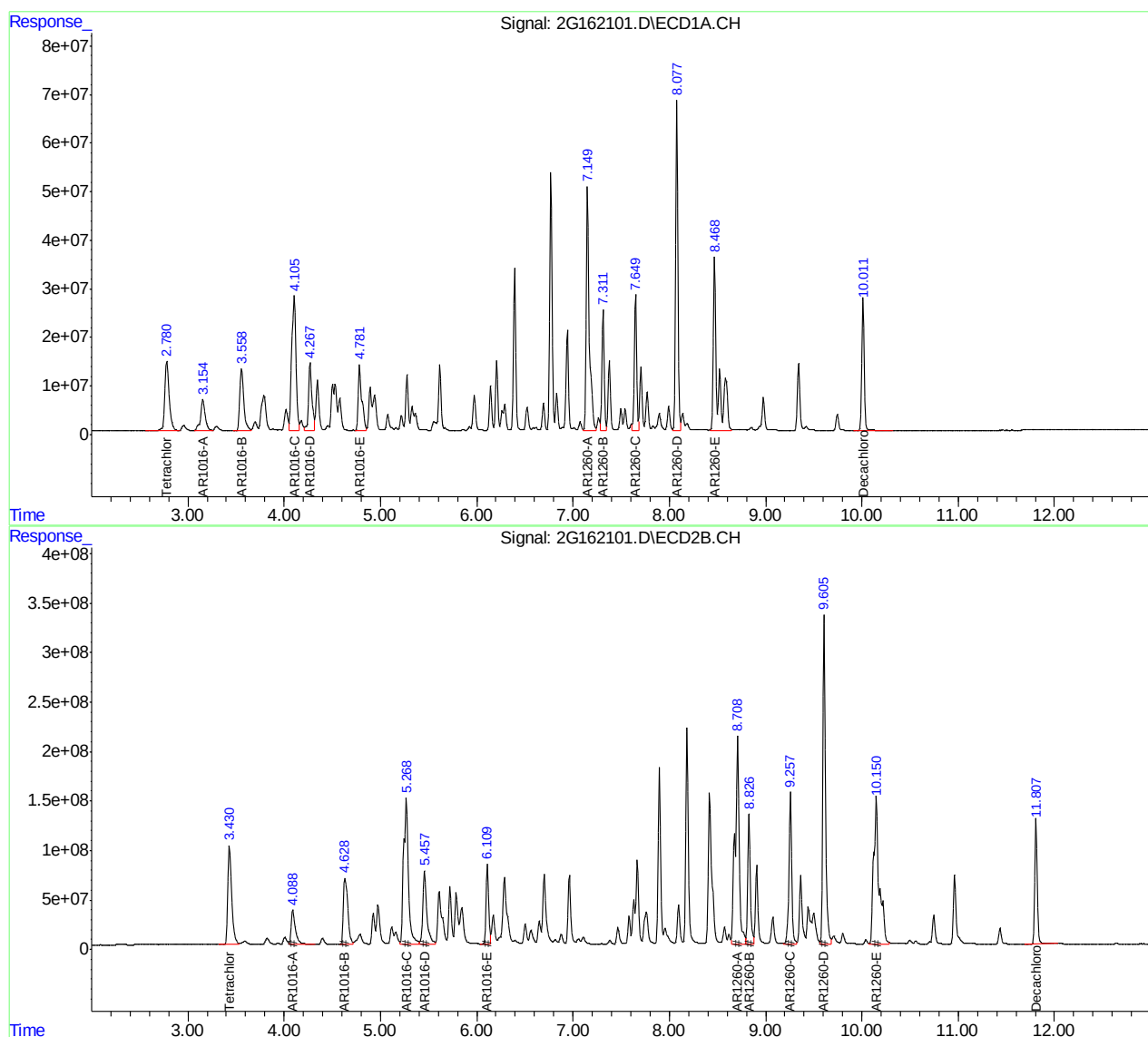
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:51:35 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Method:

SW846 8082A

Lab FileID:

2G162101.D

Analyst approved:

04/19/18 14:54 Rebecca Krug

Injection Time:

04/19/18 13:35

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-A  |     | 1    | 3.15           | Split peak |
| AR1260-E  |     | 1    | 8.47           | Split peak |
| AR1260-A  |     | 2    | 8.71           | Split peak |
| AR1260-E  |     | 2    | 10.15          | Split peak |

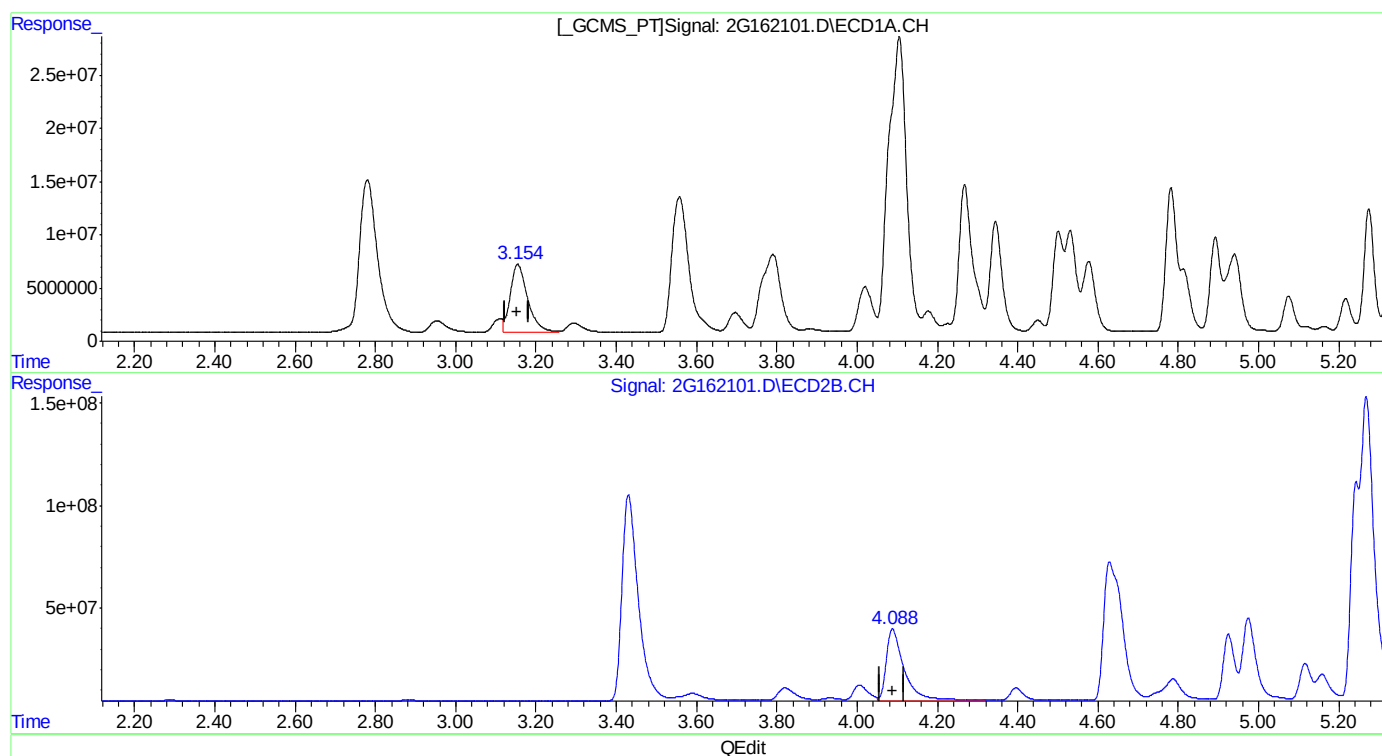
7.5.5.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.154min 2622.894PPB  
response 191409629

(31) AR1016-A #2  
4.088min 3078.922PPB  
response 1078973022

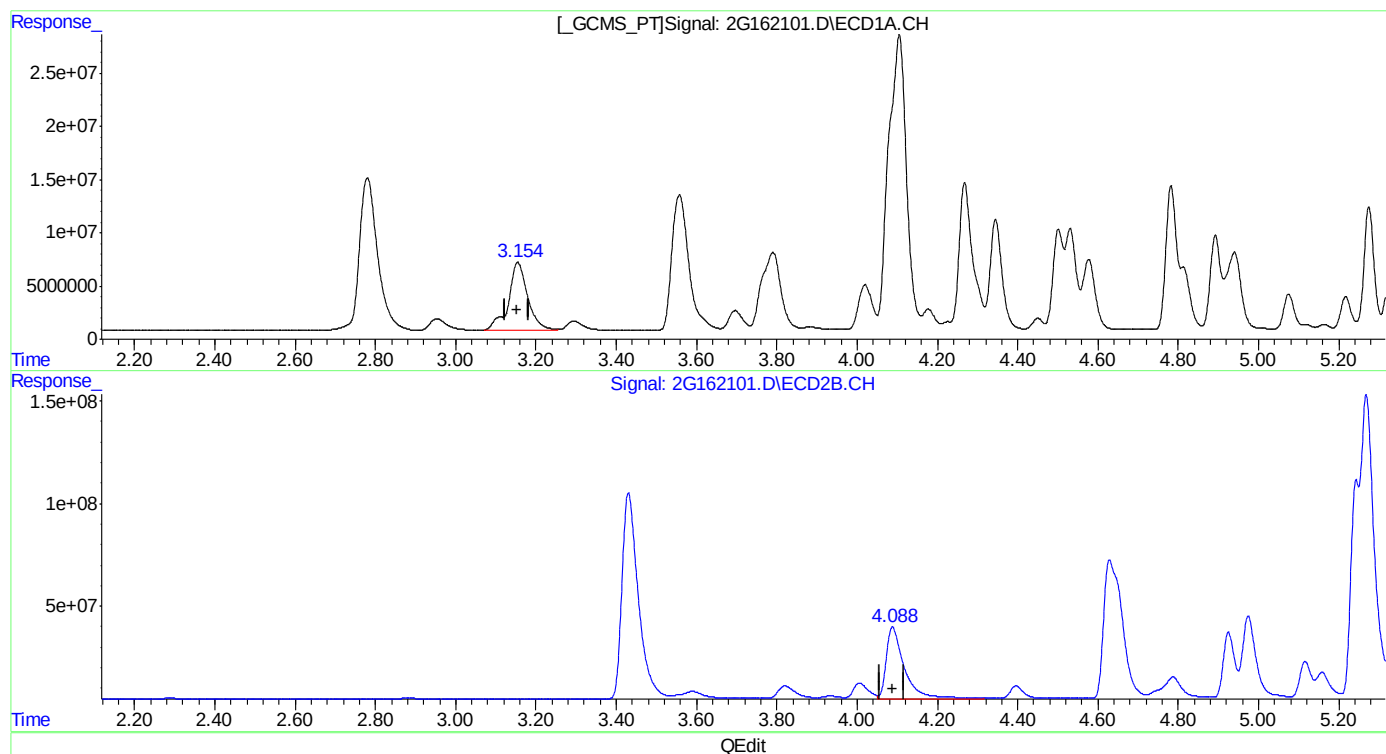


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.154min 2920.892PPB m  
response 213156448

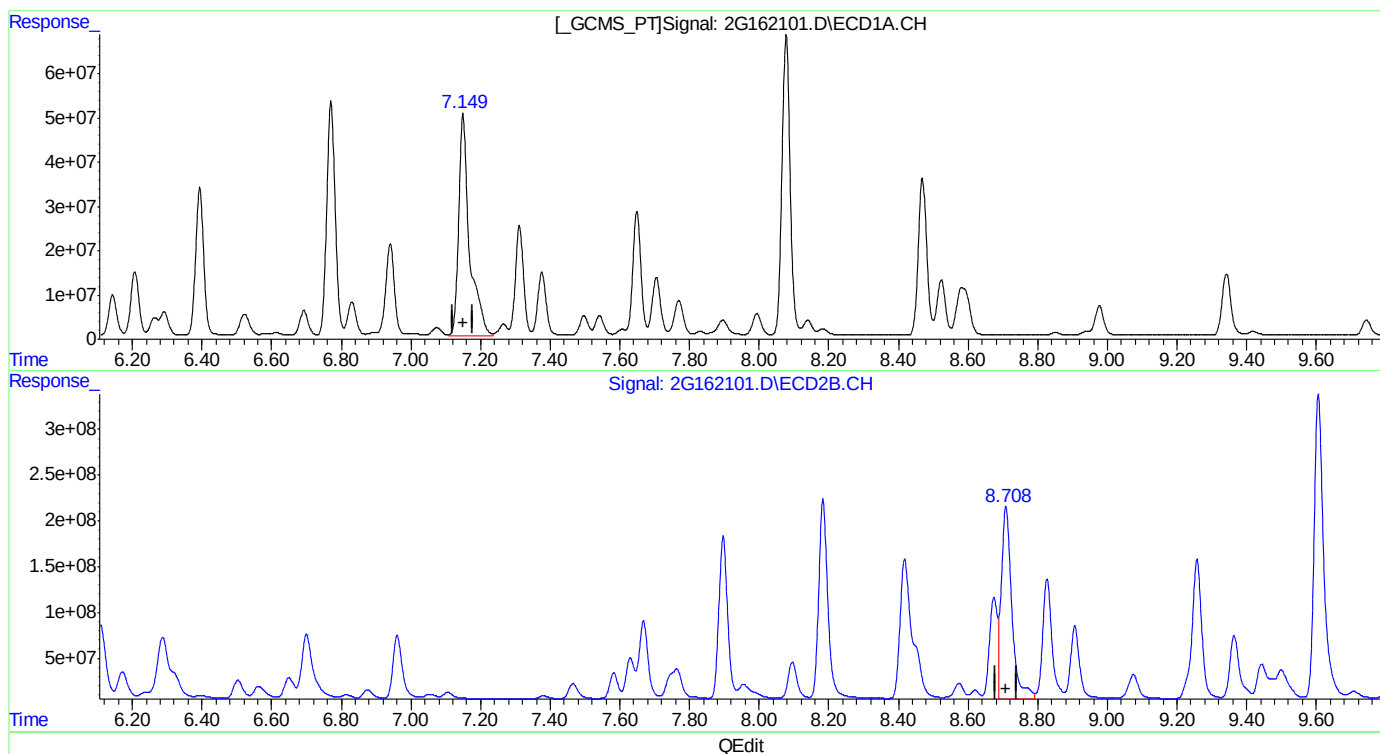
(31) AR1016-A #2  
4.088min 3078.922PPB  
response 1078973022

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.149min 3385.833PPB  
response 1069799181

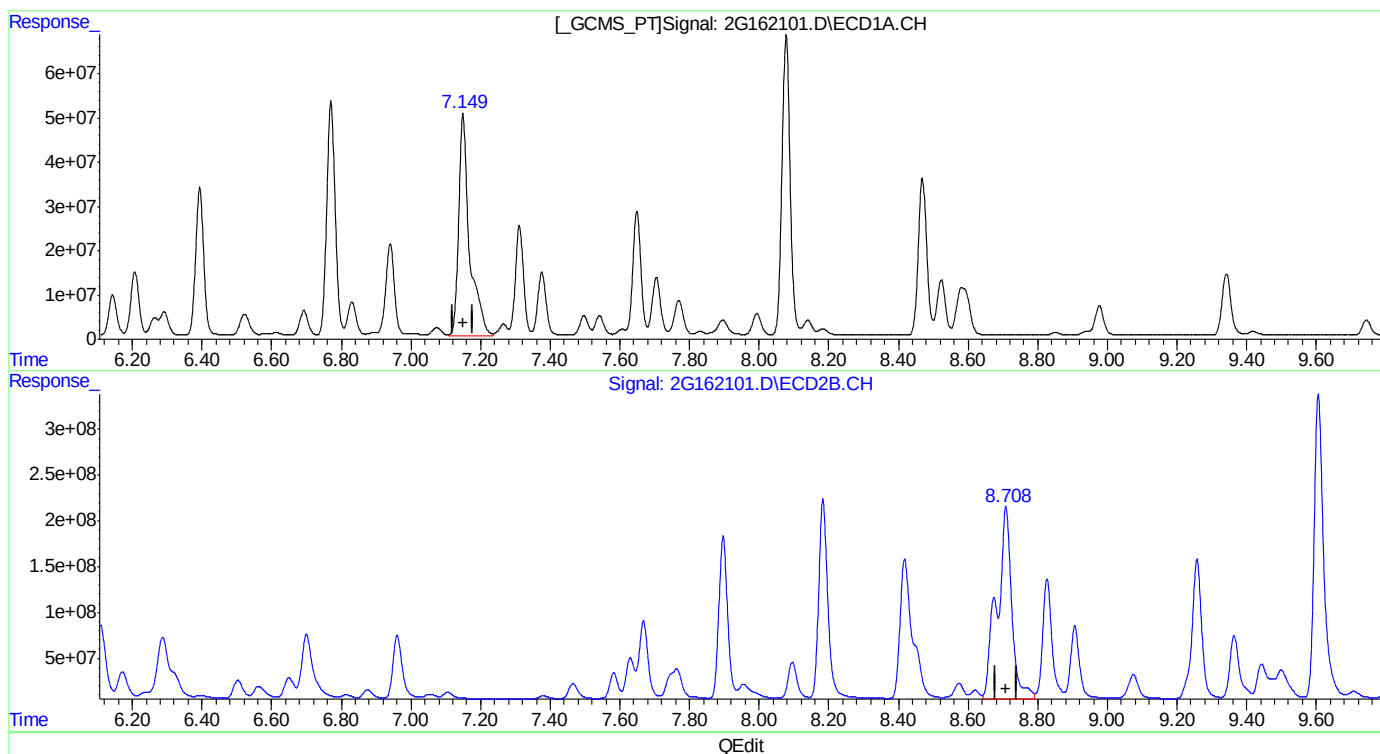
(36) AR1260-A #2  
8.709min 2533.443PPB  
response 4515883739

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.149min 3385.833PPB  
response 1069799181

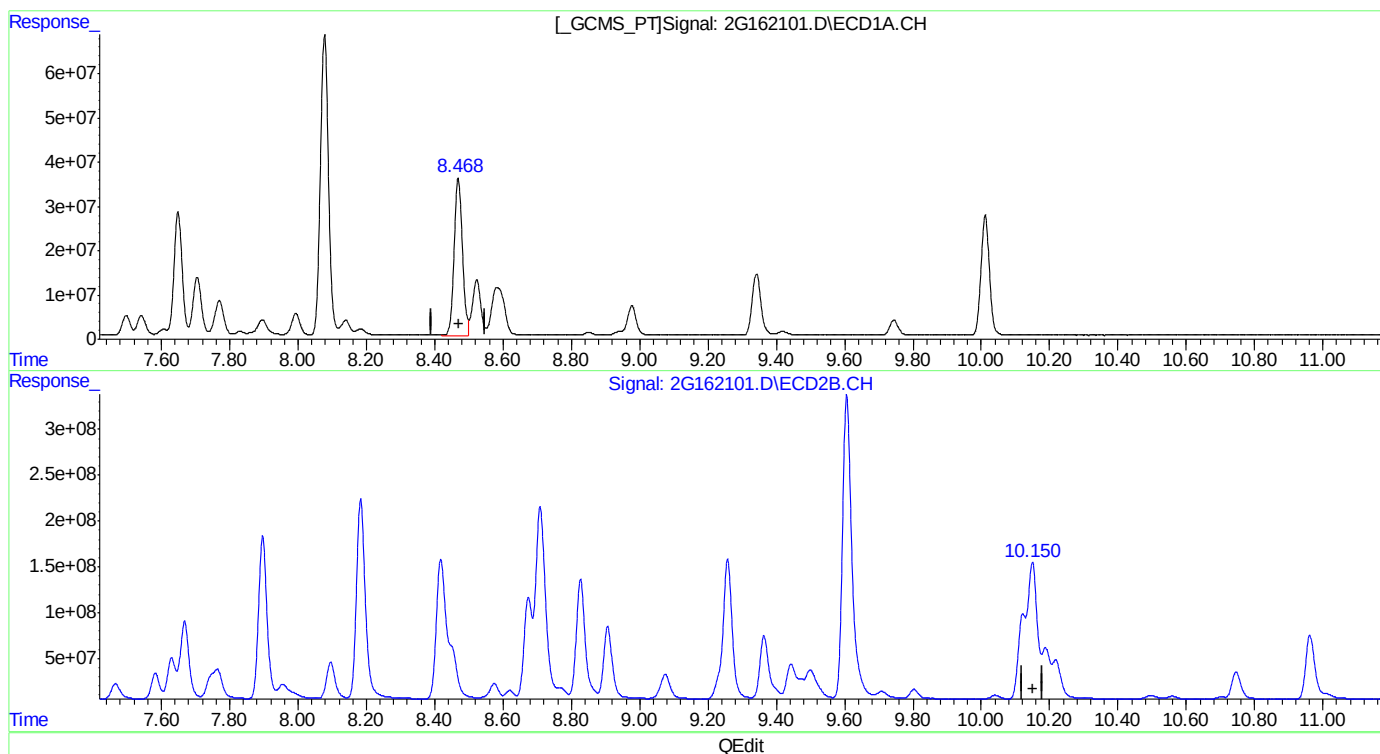
(36) AR1260-A #2  
8.708min 3502.573PPB m  
response 6243366528

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.469min 1680.775PPB  
response 606744282

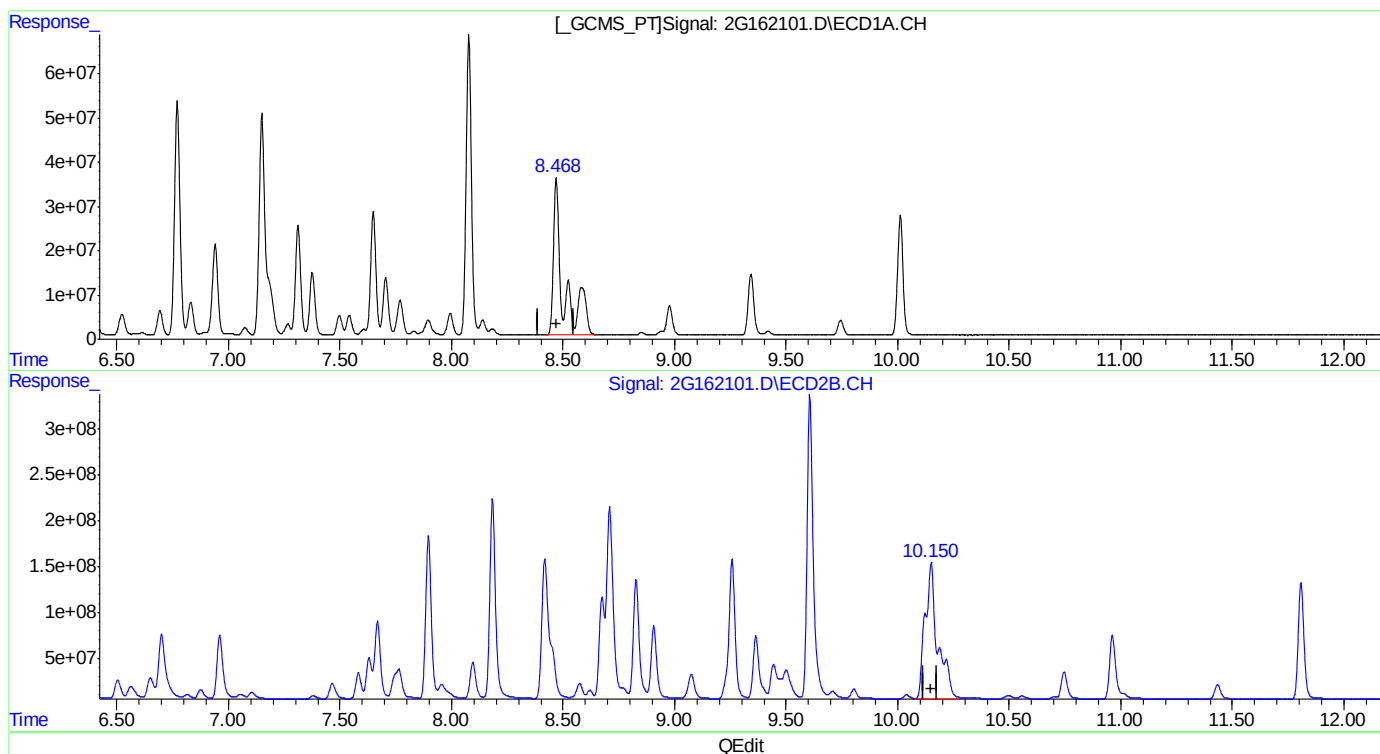
(40) AR1260-E #2  
10.150min 2285.710PPB  
response 4247666513

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162101.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:35 pm  
Operator : tianweir  
Sample : ic4311-3000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 13:50:21 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 13:46:18 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.468min 3048.503PPB m  
response 1100481096

(40) AR1260-E #2  
10.150min 3181.045PPB m  
response 5911517860

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162102.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 1:52 pm  
 Operator : tianweir  
 Sample : ic4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 14:24:01 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 14:23:00 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.779  | 3.431  | 163.8E6  | 987.2E6  | 47.199    | 46.623    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 118.00%   | 116.56%   |
| 51) S Decachlor...          | 10.013 | 11.809 | 165.0E6  | 806.7E6  | 44.682    | 46.281    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 111.71%   | 115.70%   |
| Target Compounds            |        |        |          |          |           |           |
| 2) AR1221-A                 | 2.282  | 2.875  | 28967496 | 140.9E6  | 1023.276  | 1085.901  |
| 3) AR1221-B                 | 2.954  | 3.821  | 42022816 | 250.7E6  | 983.648   | 970.364   |
| 4) AR1221-C                 | 3.153  | 4.091  | 128.8E6  | 655.8E6  | 950.947m  | 1092.099  |
| 5) AR1221-D                 | 3.558  | 4.650  | 14656903 | 122.2E6  | 1190.489  | 1041.062  |
| 6) AR1221-E                 | 3.699  | 4.770  | 14363624 | 88492068 | 1222.278  | 1236.269  |
| 24) AR1254-A                | 5.275  | 6.700  | 123.4E6  | 992.5E6  | 961.679   | 1070.842  |
| 25) AR1254-B                | 5.616  | 6.960  | 258.8E6  | 983.9E6  | 1032.998m | 1051.674  |
| 26) AR1254-C                | 5.981  | 7.464  | 137.0E6  | 797.7E6  | 999.447   | 1078.993  |
| 27) AR1254-D                | 6.143  | 7.630  | 245.9E6  | 1634.3E6 | 996.318   | 1197.753  |
| 28) AR1254-E                | 6.519  | 7.955  | 182.5E6  | 1088.9E6 | 1178.826  | 1169.607  |
| 29) AR1254-F                | 6.772  | 8.419  | 171.2E6  | 1181.2E6 | 1099.087  | 1059.697m |
| 30) AR1254-G                | 7.152  | 8.714  | 251.8E6  | 1510.8E6 | 1013.161  | 1105.727  |
| -----                       |        |        |          |          |           |           |

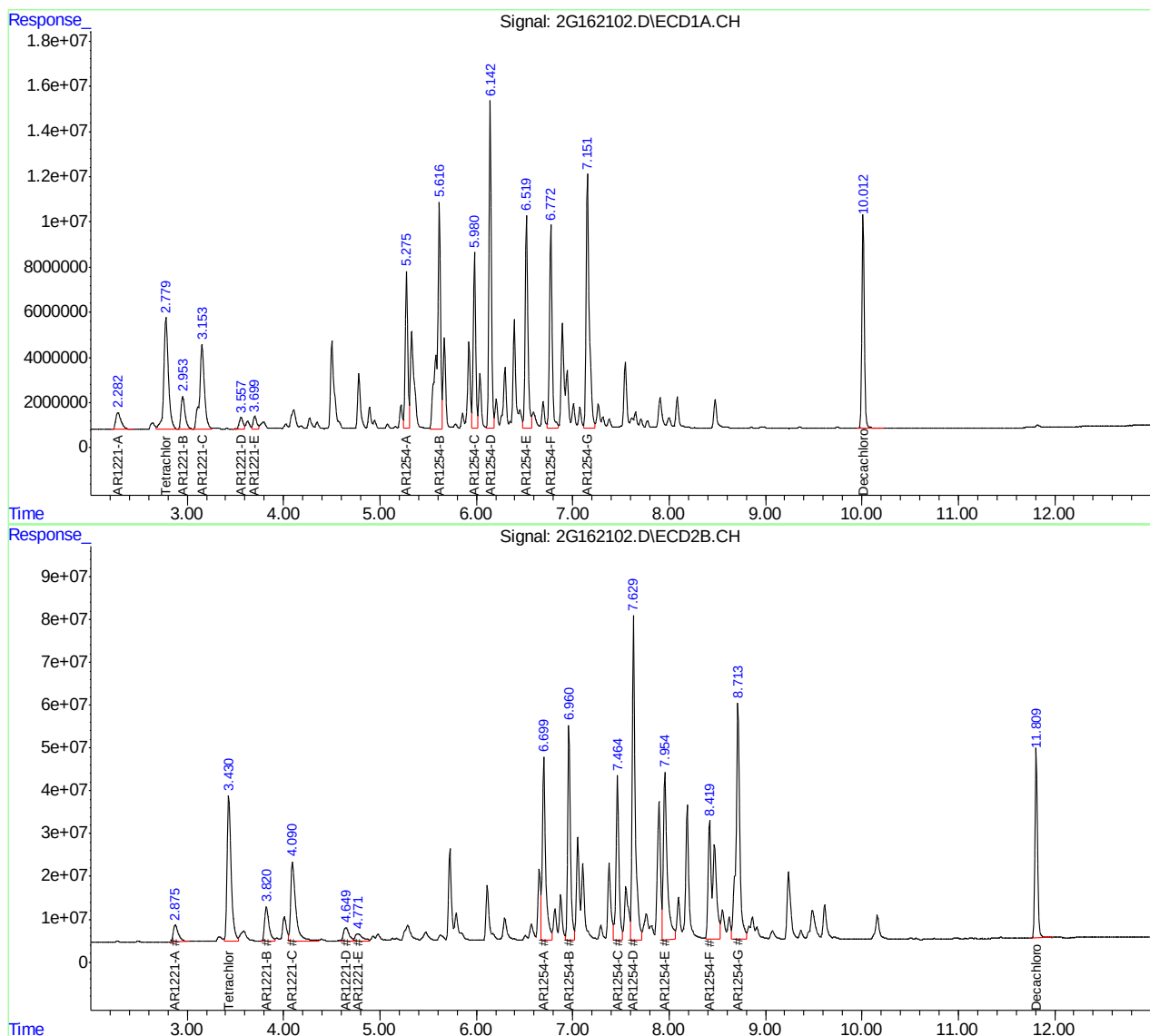
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:01 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Method:

SW846 8082A

Lab FileID:

2G162102.D

Analyst approved:

04/19/18 14:54 Rebecca Krug

Injection Time:

04/19/18 13:52

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1221-C  |     | 1    | 3.15           | Split peak |
| AR1254-B  |     | 1    | 5.62           | Split peak |
| AR1254-F  |     | 2    | 8.42           | Split peak |

7.5.6.1  
7

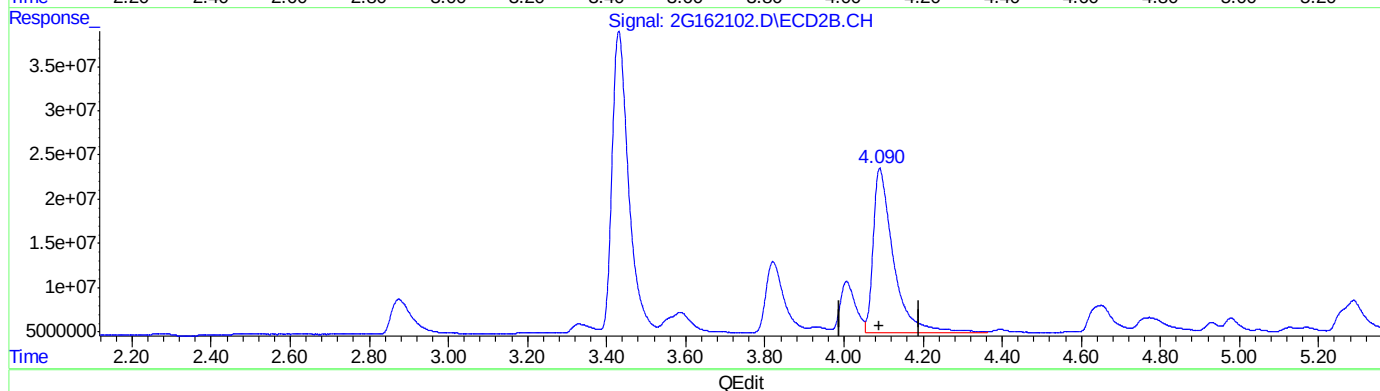
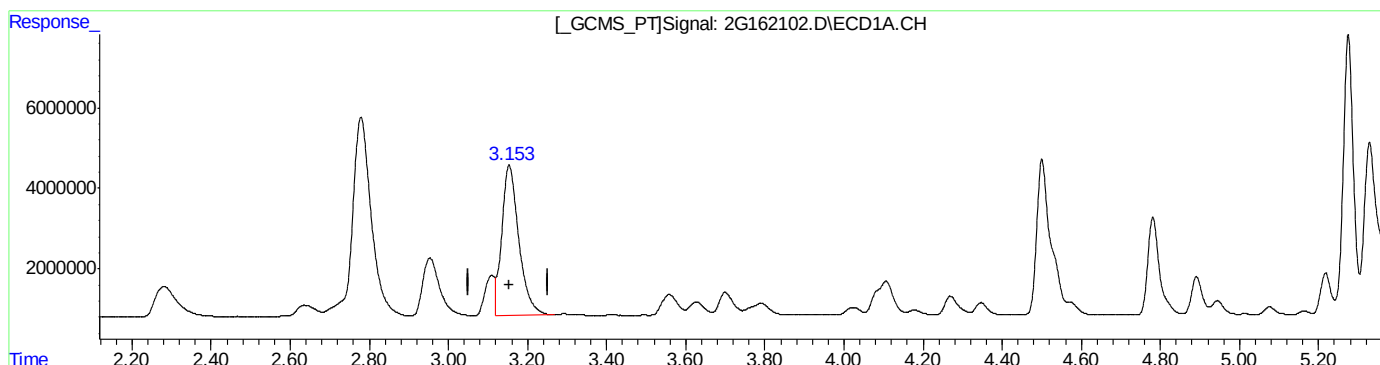


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(4) AR1221-C  
3.154min 827.639PPB  
response 112094551

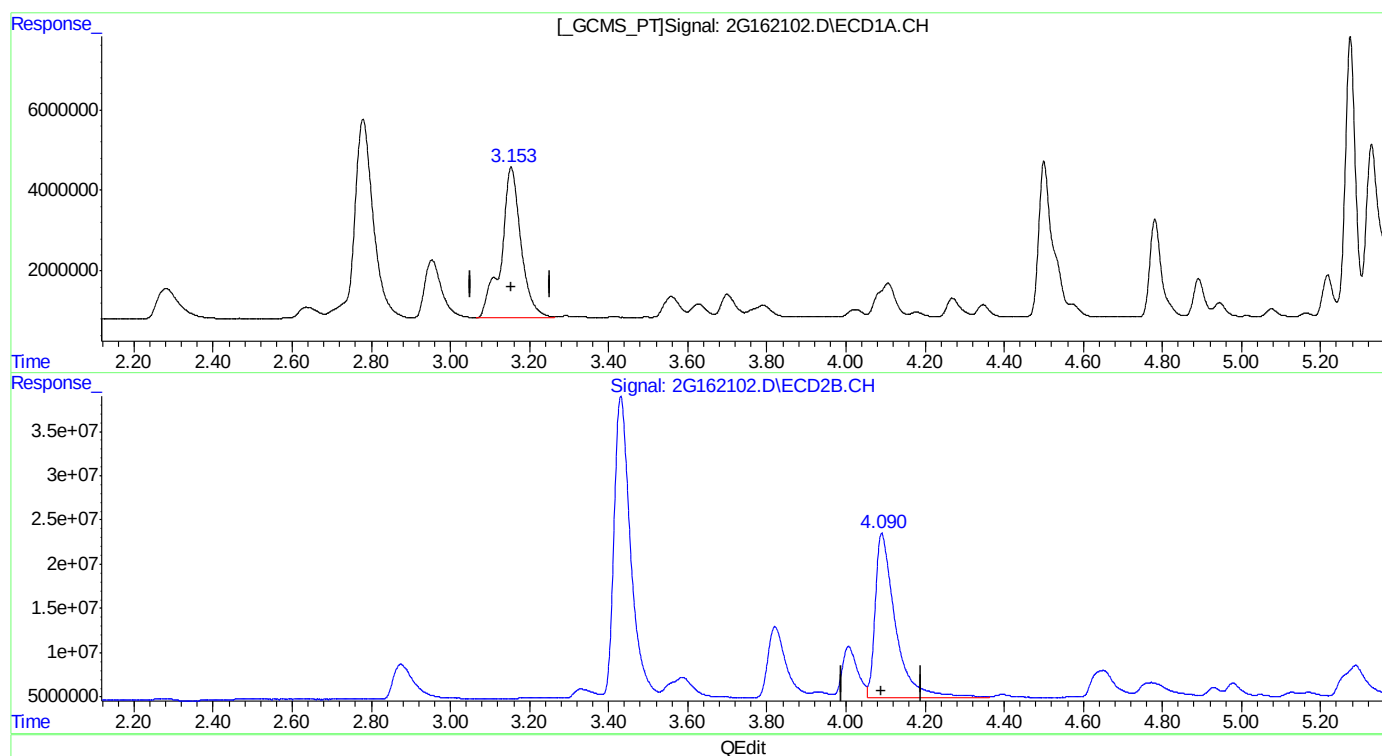
(4) AR1221-C #2  
4.091min 1092.099PPB  
response 655831170

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(4) AR1221-C  
3.153min 950.947PPB m  
response 128795146

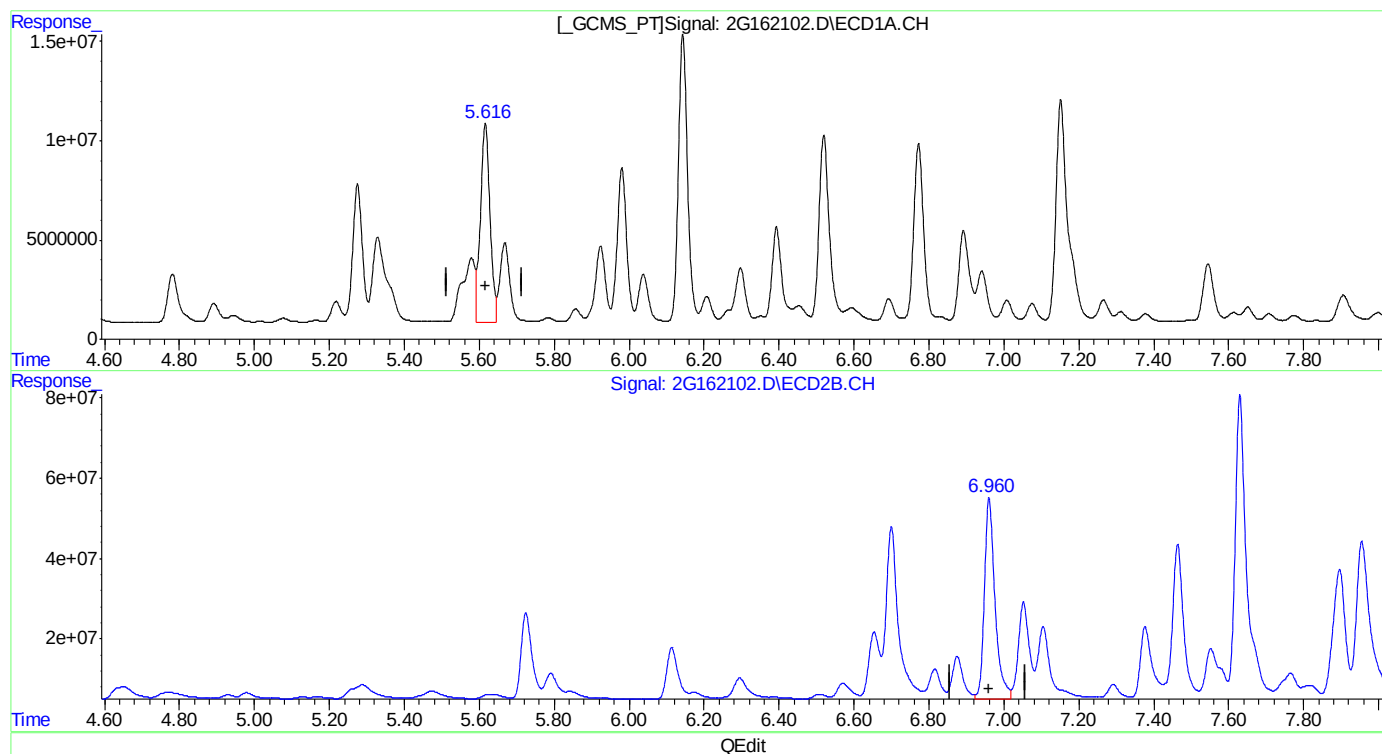
(4) AR1221-C #2  
4.091min 1092.099PPB  
response 655831170

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.616min 709.159PPB  
response 177635290

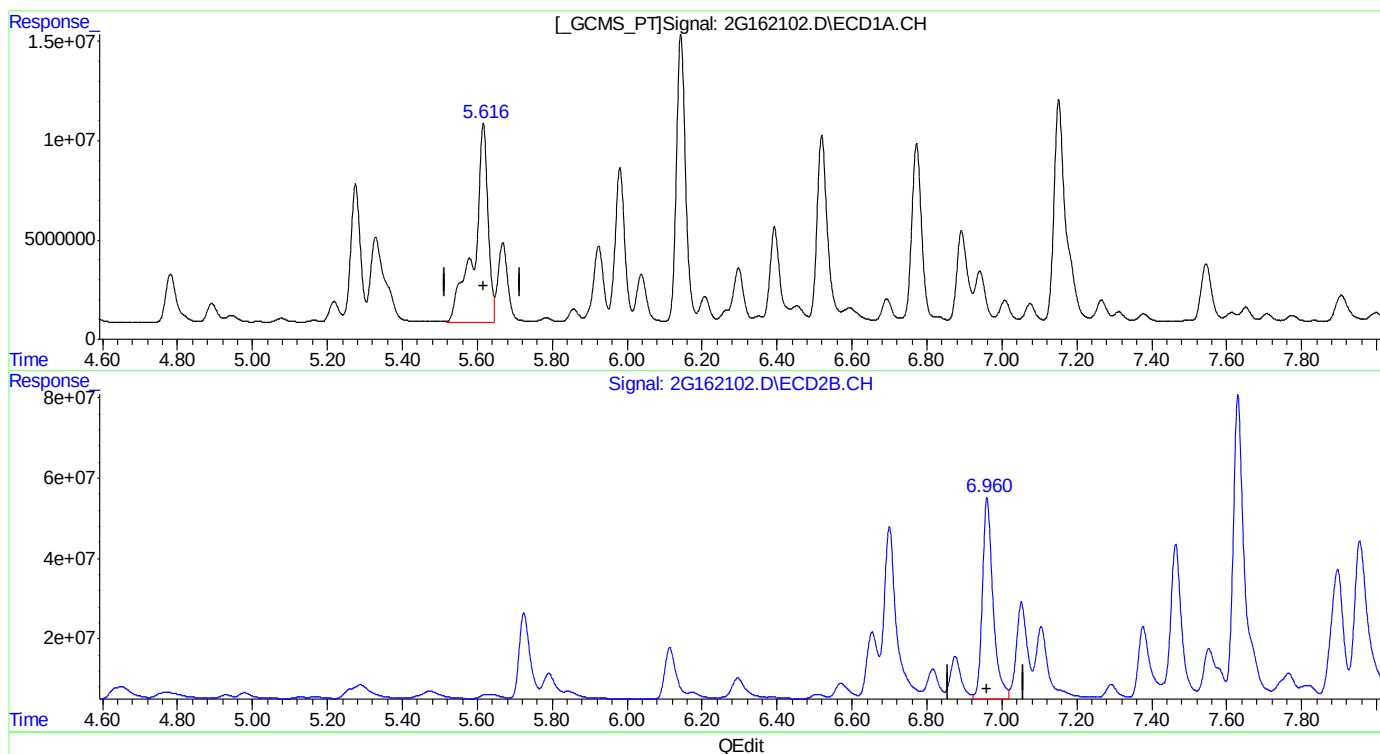
(25) AR1254-B #2  
6.960min 1051.674PPB  
response 983915450

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.616min 1032.998PPB m  
response 258752851

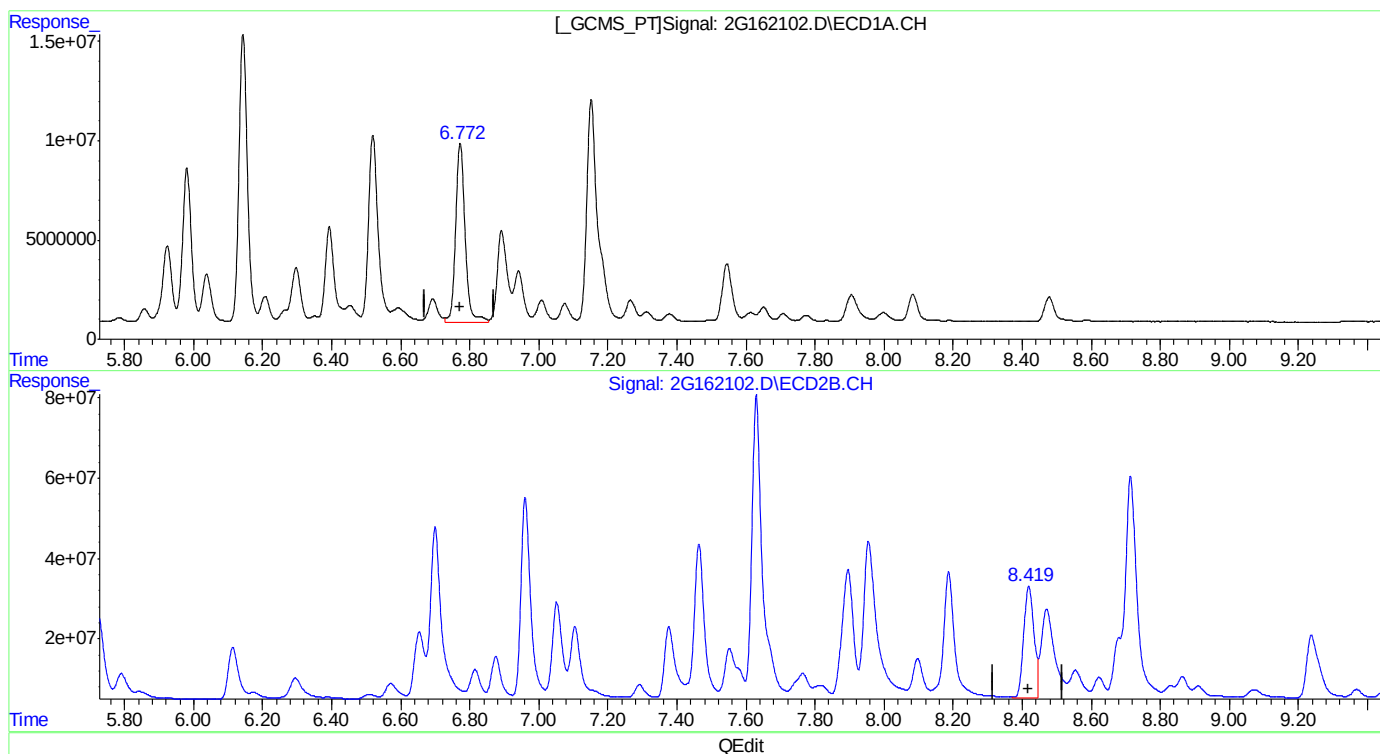
(25) AR1254-B #2  
6.960min 1051.674PPB  
response 983915450

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.772min 1099.087PPB  
response 171196421

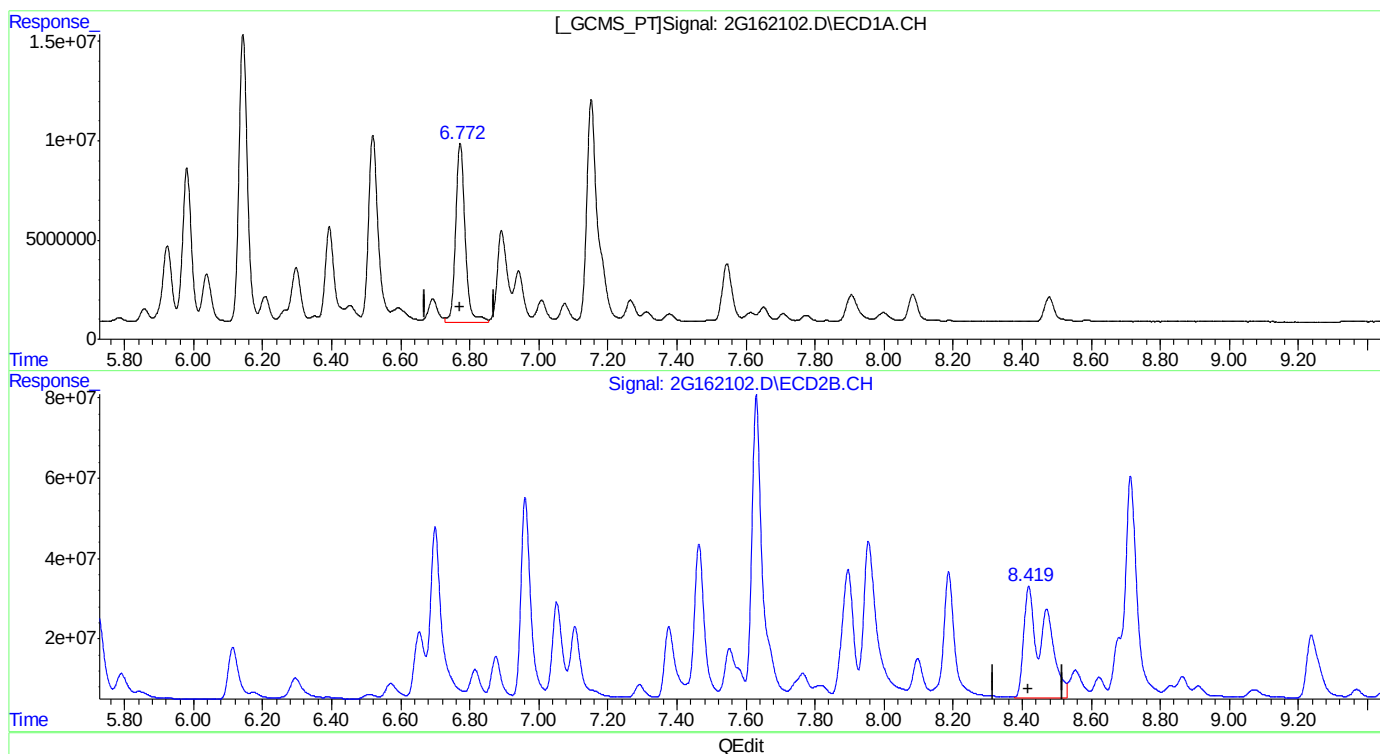
(29) AR1254-F #2  
8.419min 520.534PPB  
response 580209378

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 1:52 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:23:07 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.772min 1099.087PPB  
response 171196421

(29) AR1254-F #2  
8.419min 1059.697PPB m  
response 1181183477

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162102a.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 2:09 pm  
 Operator : tianweir  
 Sample : ic4311-50  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 14:25:10 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 14:23:00 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb     | ppb     |
|-----------------------------|--------|--------|----------|----------|---------|---------|
| -----                       |        |        |          |          |         |         |
| System Monitoring Compounds |        |        |          |          |         |         |
| 1) S Tetrachlo...           | 2.777  | 3.432  | 7705780  | 47182156 | 2.221   | 2.228   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 5.55%   | 5.57%   |
| 51) S Decachlor...          | 10.016 | 11.810 | 9394071  | 44386432 | 2.544   | 2.546m  |
| Spiked Amount               | 40.000 |        | Recovery | =        | 6.36%   | 6.37%   |
| Target Compounds            |        |        |          |          |         |         |
| 31) AR1016-A                | 3.156  | 4.101  | 4725440  | 22318435 | 67.432  | 67.210  |
| 32) AR1016-B                | 3.557  | 4.637  | 8425348  | 50396309 | 69.113  | 70.606  |
| 33) AR1016-C                | 4.106  | 5.292f | 16305396 | 93502826 | 61.928  | 59.389  |
| 34) AR1016-D                | 4.269  | 5.476f | 6801446  | 44893365 | 63.529  | 68.043  |
| 35) AR1016-E                | 4.782  | 6.117  | 7118301  | 28801035 | 64.212  | 61.534  |
| 36) AR1260-A                | 7.155  | 8.722  | 18795761 | 111.1E6  | 60.840  | 61.504m |
| 37) AR1260-B                | 7.315  | 8.832  | 8011237  | 50431926 | 60.941  | 64.703  |
| 38) AR1260-C                | 7.654  | 9.264  | 8382243  | 56197808 | 57.713  | 60.728  |
| 39) AR1260-D                | 8.088  | 9.620  | 18135811 | 117.3E6  | 53.709  | 60.365  |
| 40) AR1260-E                | 8.483f | 10.162 | 19653146 | 110.9E6  | 56.372m | 60.092m |
| -----                       |        |        |          |          |         |         |

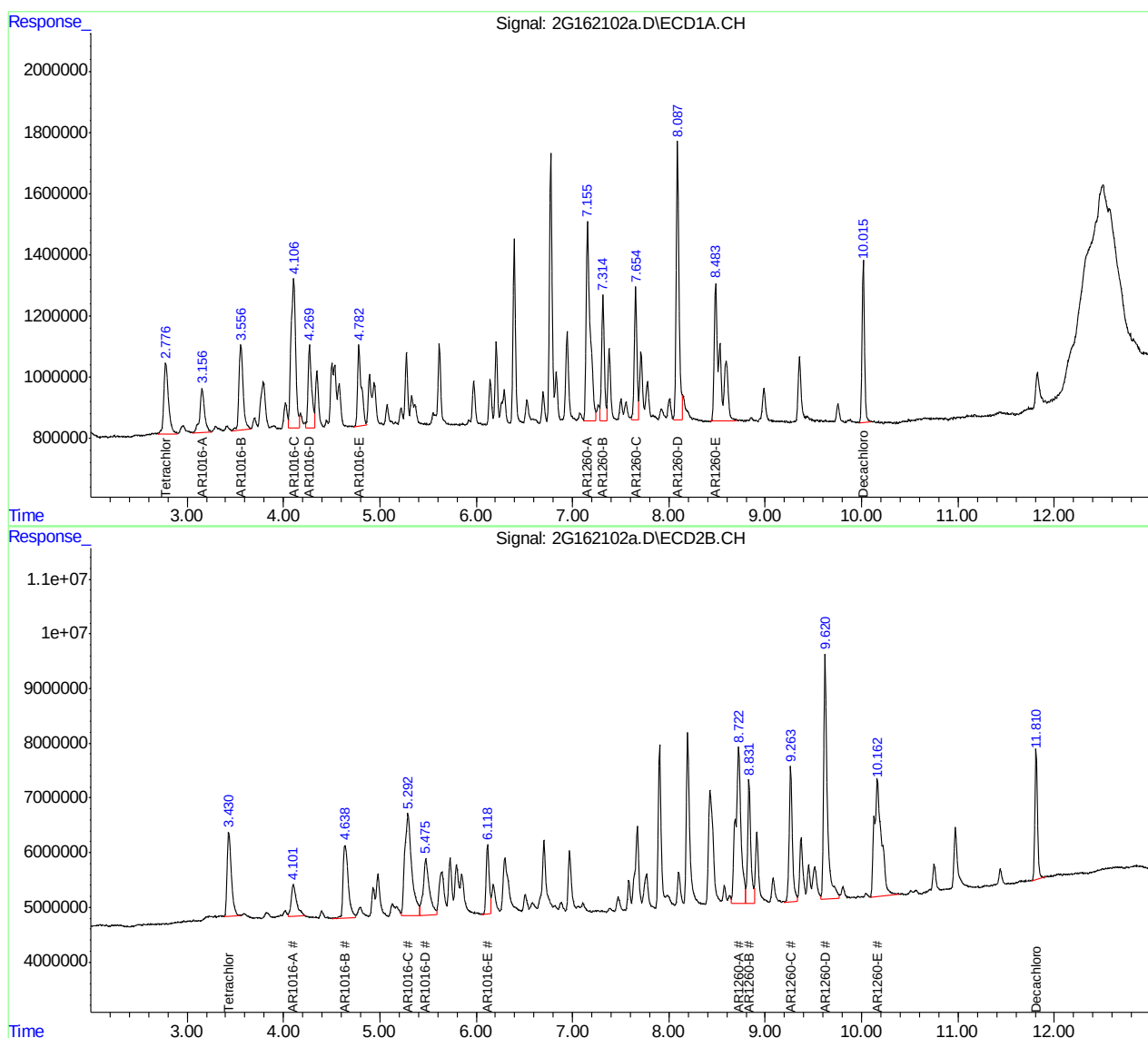
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:25:10 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Lab FileID:

2G162102A.D

Injection Time:

04/19/18 14:09

Method:

SW846 8082A

Analyst approved:

04/19/18 14:54 Rebecca Krug

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1260-E           |           | 1    | 8.48           | Split peak              |
| AR1260-A           |           | 2    | 8.72           | Split peak              |
| AR1260-E           |           | 2    | 10.16          | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.81          | Poorly defined baseline |

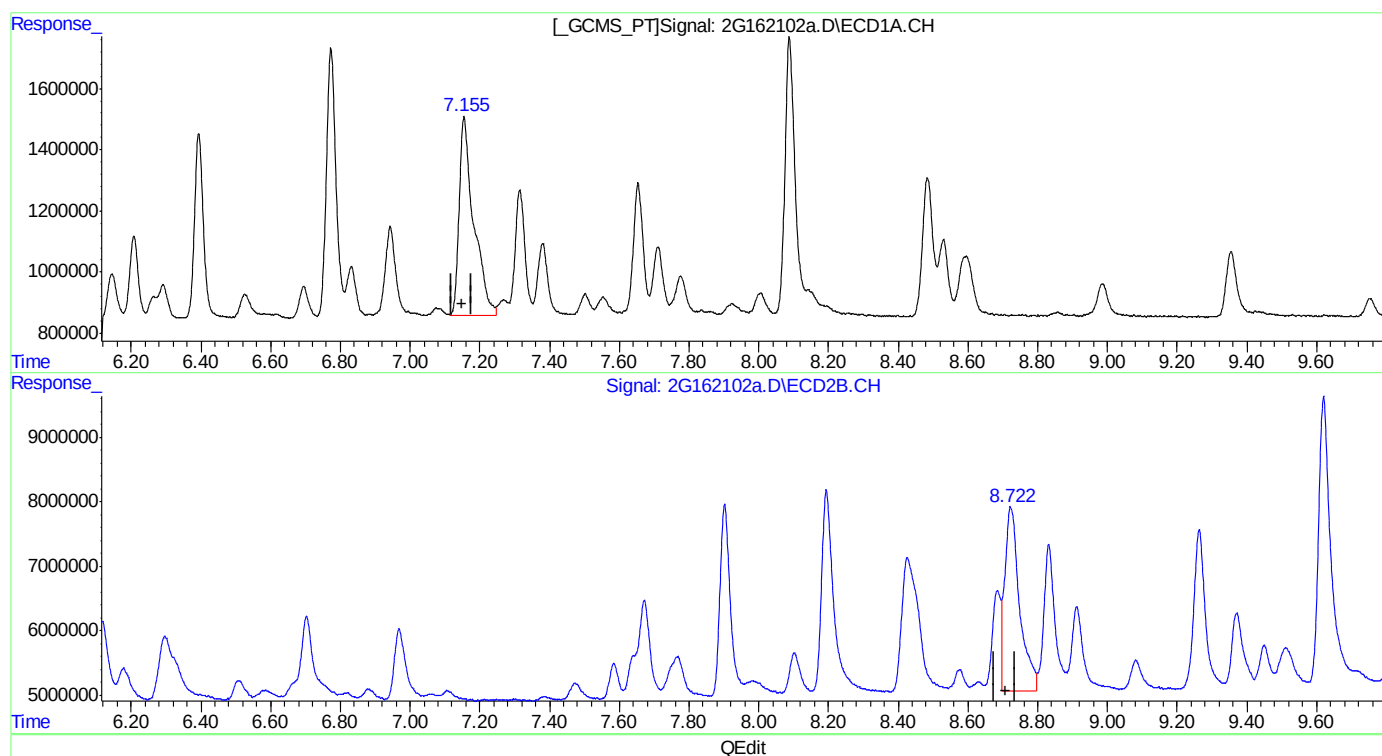
7.5.7.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.155min 60.840PPB  
response 18795761

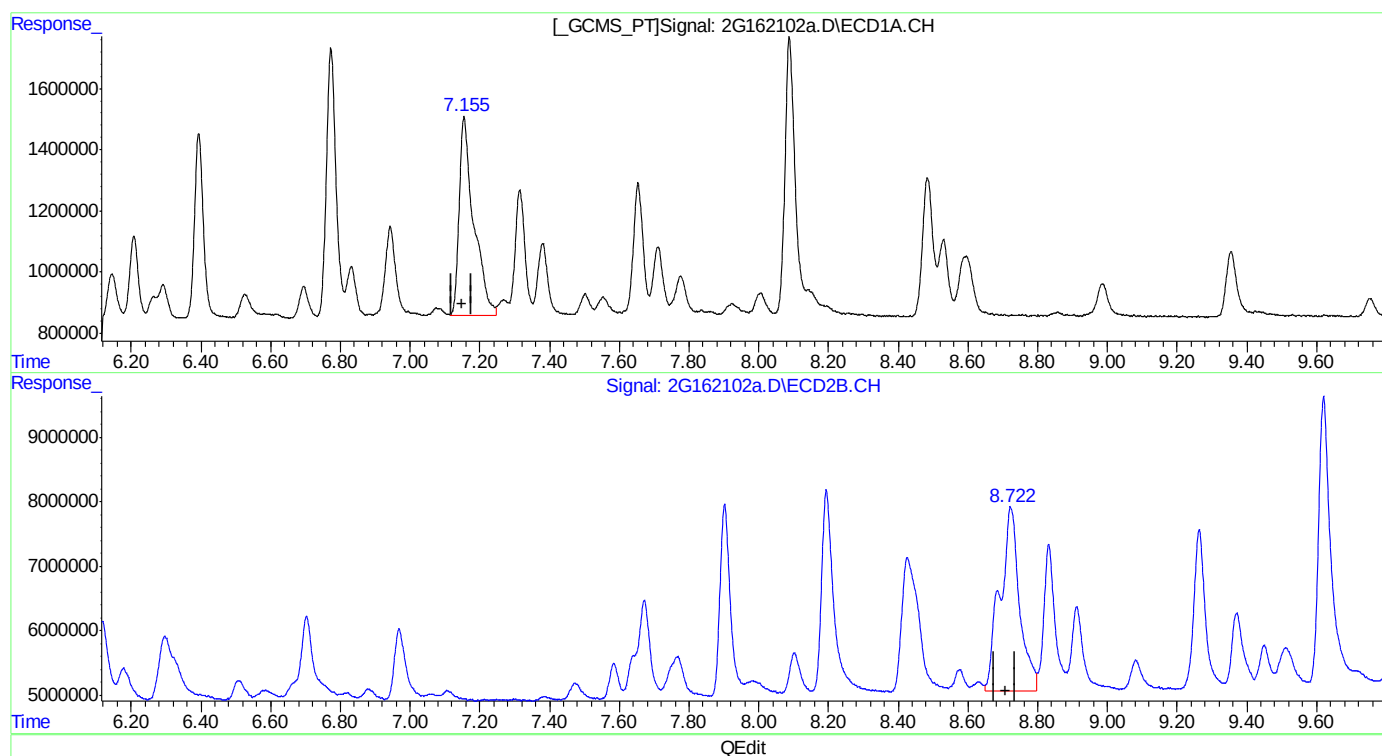
(36) AR1260-A #2  
8.723min 47.426PPB  
response 85684677

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.155min 60.840PPB  
response 18795761

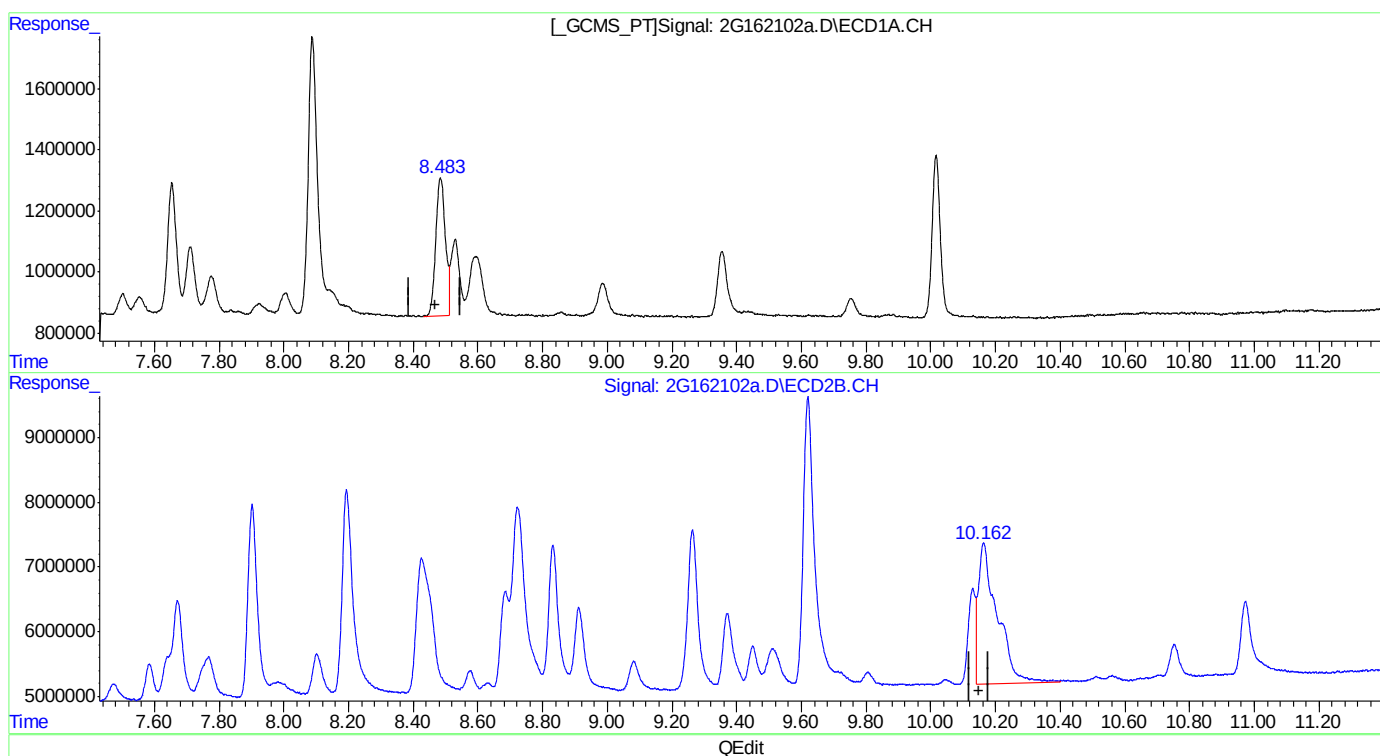
(36) AR1260-A #2  
8.722min 61.504PPB m  
response 111120316

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.484min 26.587PPB  
response 9269256

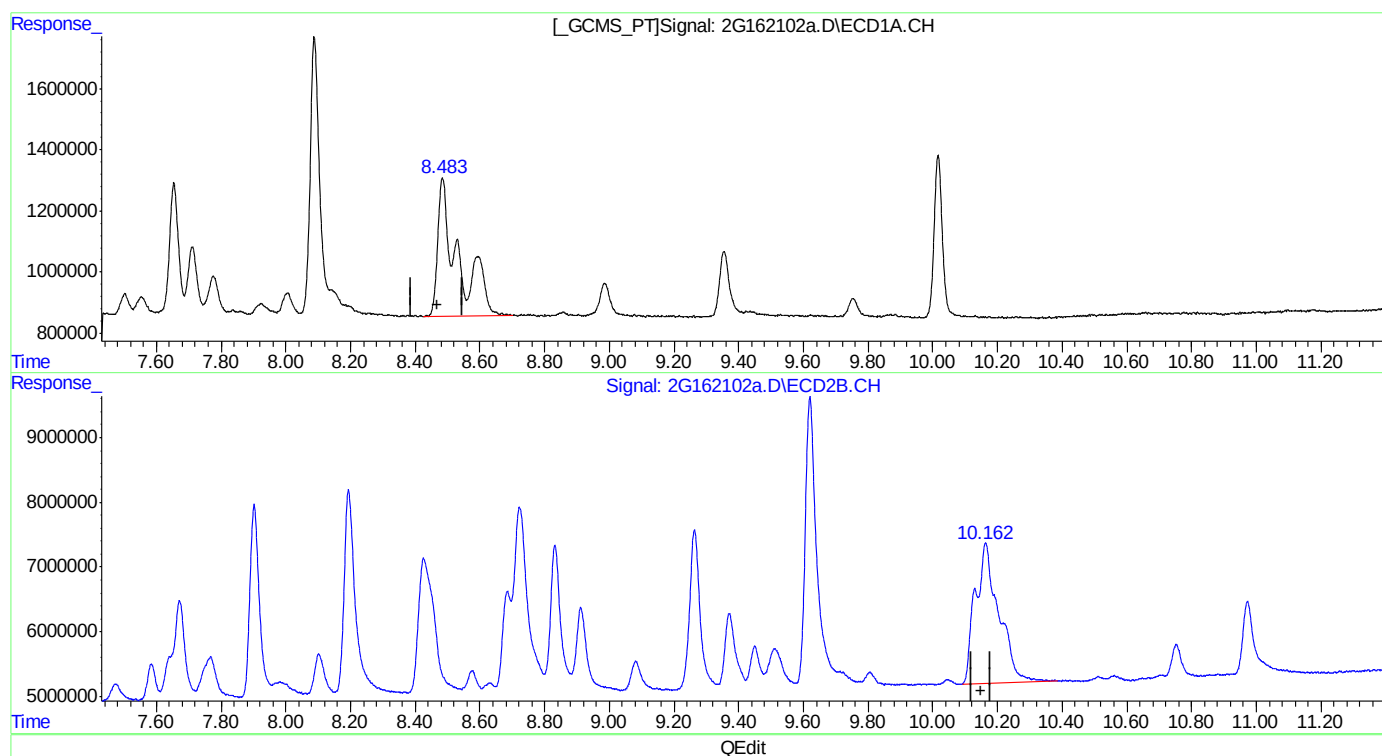
(40) AR1260-E #2  
10.164min 48.556PPB  
response 89641017

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.483min 56.372PPB m  
response 19653146

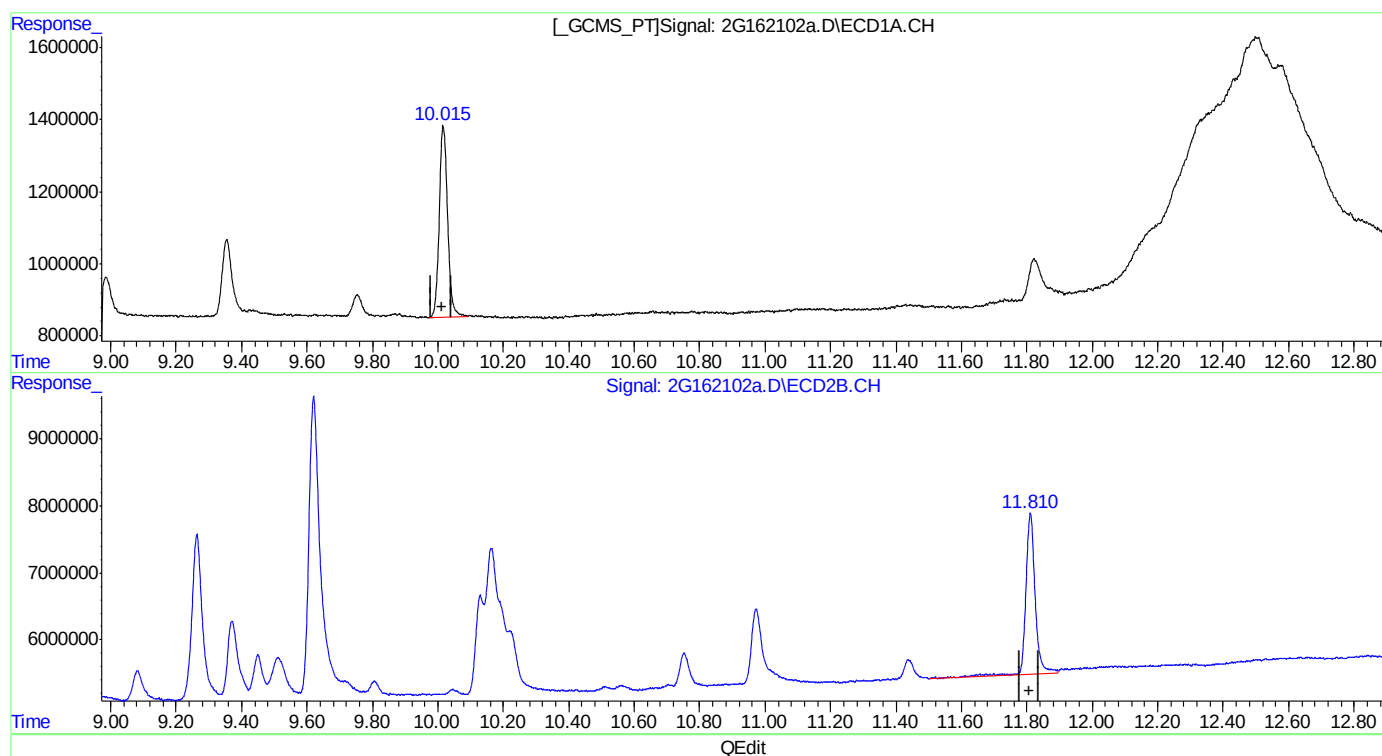
(40) AR1260-E #2  
10.162min 60.092PPB m  
response 110937248

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

10.016min 2.544ppb

response 9394071

(51) Decachlorobiphenyl #2 (S)

11.811min 2.825ppb

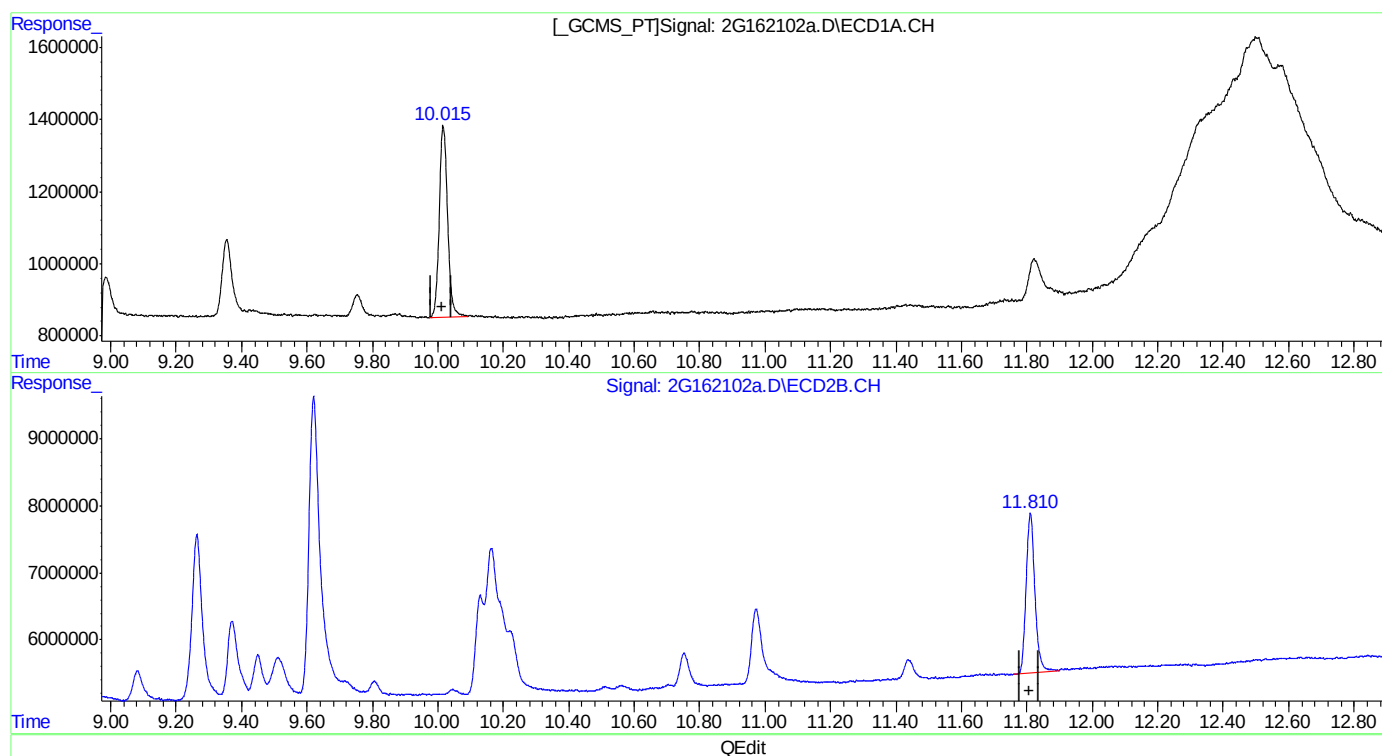
response 49237177

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162102a.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:09 pm  
Operator : tianweir  
Sample : ic4311-50  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:24:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:23:00 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

10.016min 2.544ppb

response 9394071

(51) Decachlorobiphenyl #2 (S)

11.810min 2.546ppb m

response 44386432

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162103.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 2:27 pm  
 Operator : tianweir  
 Sample : ic4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 14:52:49 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 14:51:59 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb       |
|-----------------------------|--------|--------|----------|----------|----------|-----------|
| -----                       |        |        |          |          |          |           |
| System Monitoring Compounds |        |        |          |          |          |           |
| 1) S Tetrachlo...           | 2.780  | 3.431  | 169.1E6  | 1049.9E6 | 9.839    | 9.841     |
| Spiked Amount               | 40.000 |        | Recovery | =        | 24.60%   | 24.60%    |
| 51) S Decachlor...          | 10.014 | 11.809 | 173.1E6  | 864.6E6  | 9.763    | 9.860     |
| Spiked Amount               | 40.000 |        | Recovery | =        | 24.41%   | 24.65%    |
| Target Compounds            |        |        |          |          |          |           |
| 7) AR1232-A                 | 3.155  | 4.093  | 97343092 | 502.0E6  | 807.139m | 801.687   |
| 8) AR1232-B                 | 3.559  | 4.634  | 66842636 | 393.5E6  | 814.432  | 795.791   |
| 9) AR1232-C                 | 4.109  | 5.281  | 130.5E6  | 815.2E6  | 748.996  | 817.807   |
| 10) AR1232-D                | 4.271  | 5.467  | 54473697 | 361.5E6  | 844.210  | 954.940   |
| 11) AR1232-E                | 4.785  | 6.115  | 51489431 | 217.3E6  | 836.532  | 879.986   |
| 41) AR1262-A                | 6.772  | 8.187  | 193.5E6  | 1044.2E6 | 608.178  | 987.107 # |
| 42) AR1262-B                | 7.314  | 8.828  | 242.4E6  | 1428.2E6 | 818.303  | 912.354   |
| 43) AR1262-C                | 7.651  | 9.260  | 227.0E6  | 1336.0E6 | 936.108  | 1081.334  |
| 44) AR1262-D                | 8.081  | 9.610  | 485.4E6  | 2732.2E6 | 759.581  | 918.956   |
| 45) AR1262-E                | 8.525  | 10.123 | 558.8E6  | 3034.4E6 | 795.650m | 942.420m  |
| -----                       |        |        |          |          |          |           |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

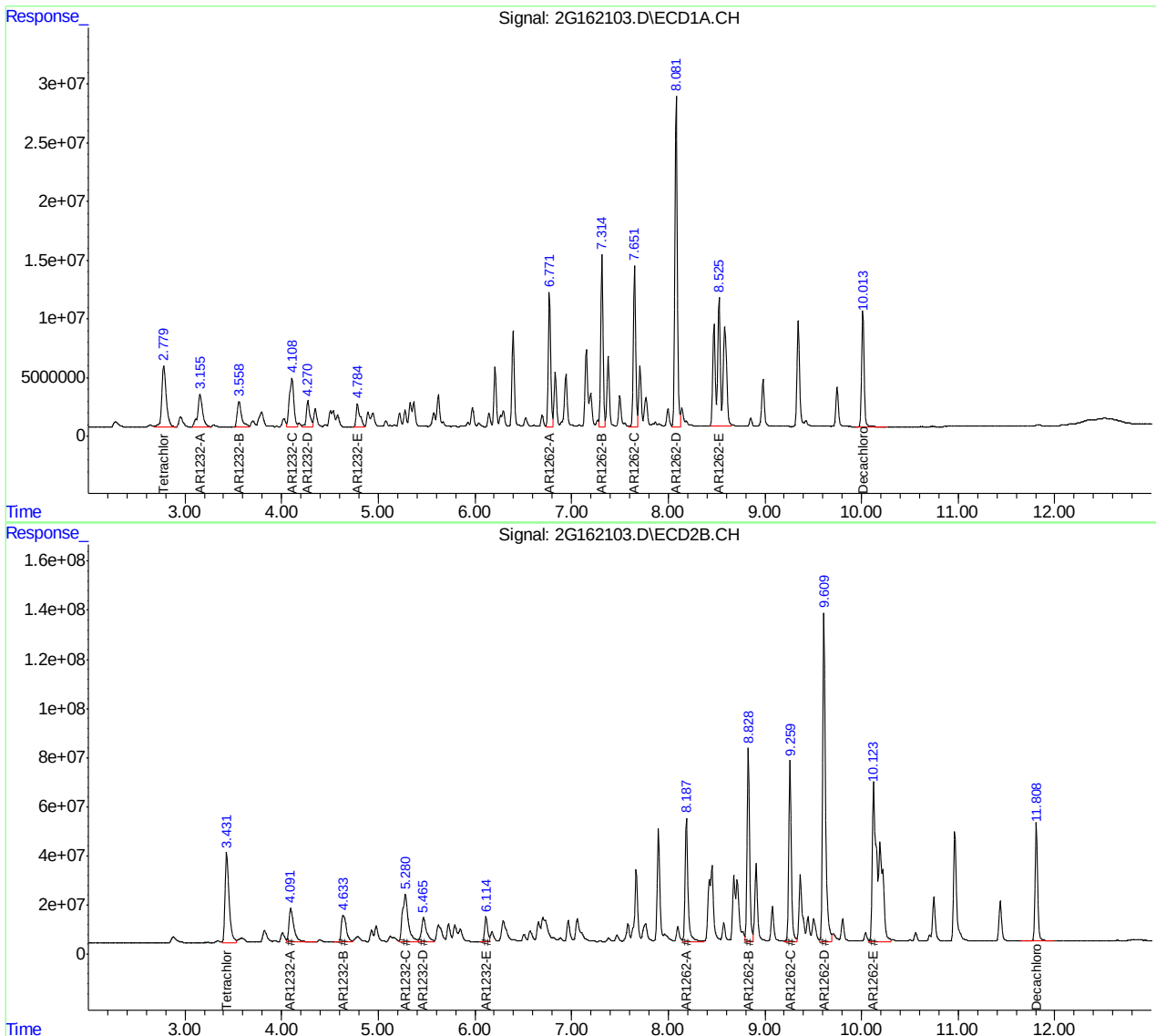


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162103.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:27 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:52:49 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:51:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Method:

SW846 8082A

Lab FileID:

2G162103.D

Analyst approved:

04/19/18 14:54 Rebecca Krug

Injection Time:

04/19/18 14:27

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason |
|-----------|-----|------|----------------|--------|
|-----------|-----|------|----------------|--------|

|          |  |   |       |            |
|----------|--|---|-------|------------|
| AR1232-A |  | 1 | 3.16  | Split peak |
| AR1262-E |  | 1 | 8.53  | Split peak |
| AR1262-E |  | 2 | 10.12 | Split peak |

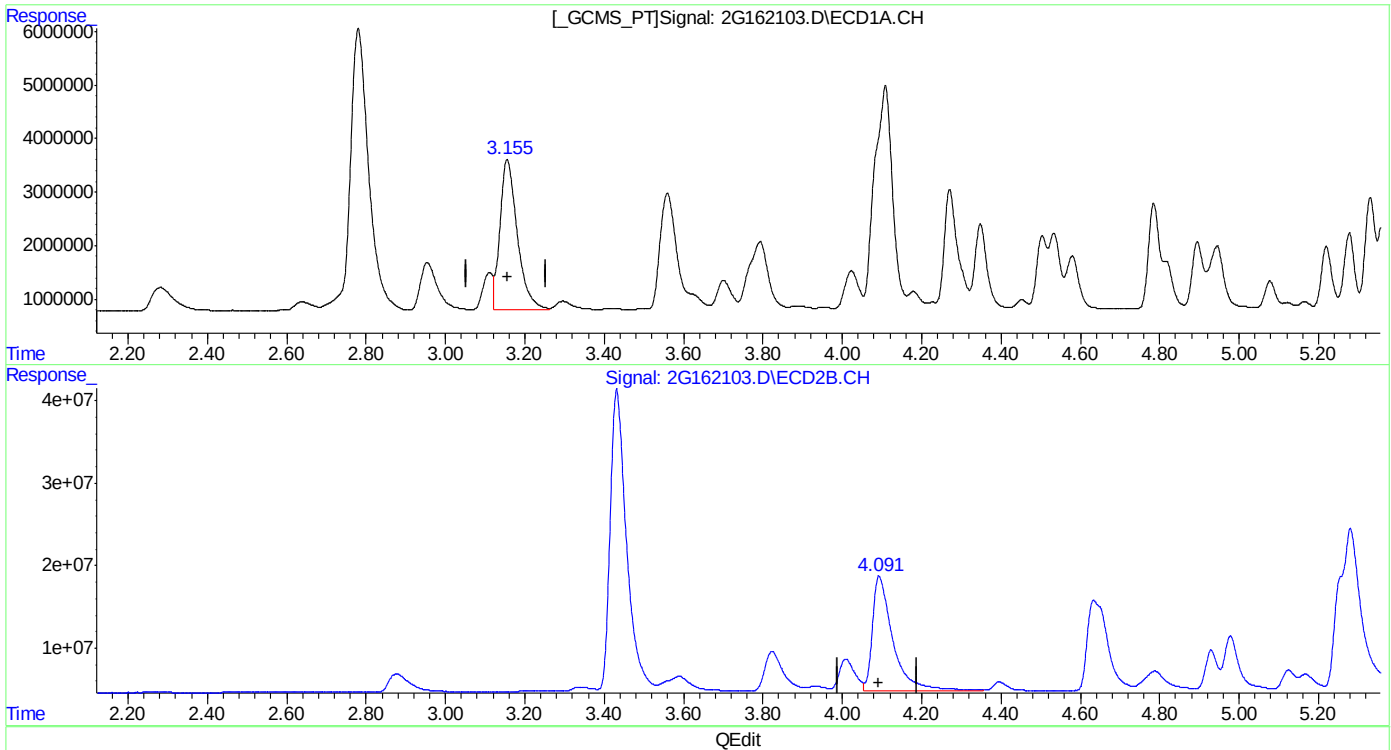
7.5.8.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162103.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:27 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:52:03 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:51:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(7) AR1232-A  
3.155min 706.063PPB  
response 85153150

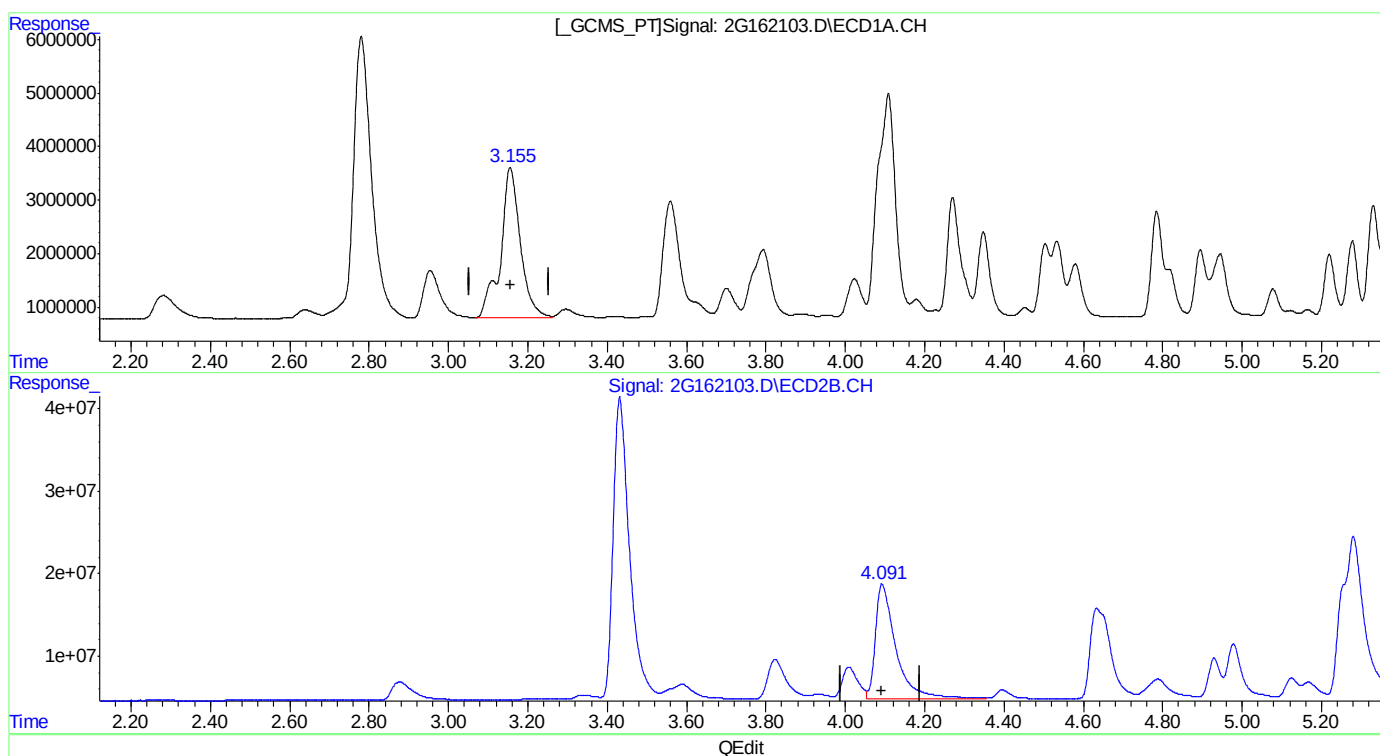
(7) AR1232-A #2  
4.093min 801.687PPB  
response 501961094

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162103.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:27 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:52:03 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:51:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(7) AR1232-A  
3.155min 807.139PPB m  
response 97343092

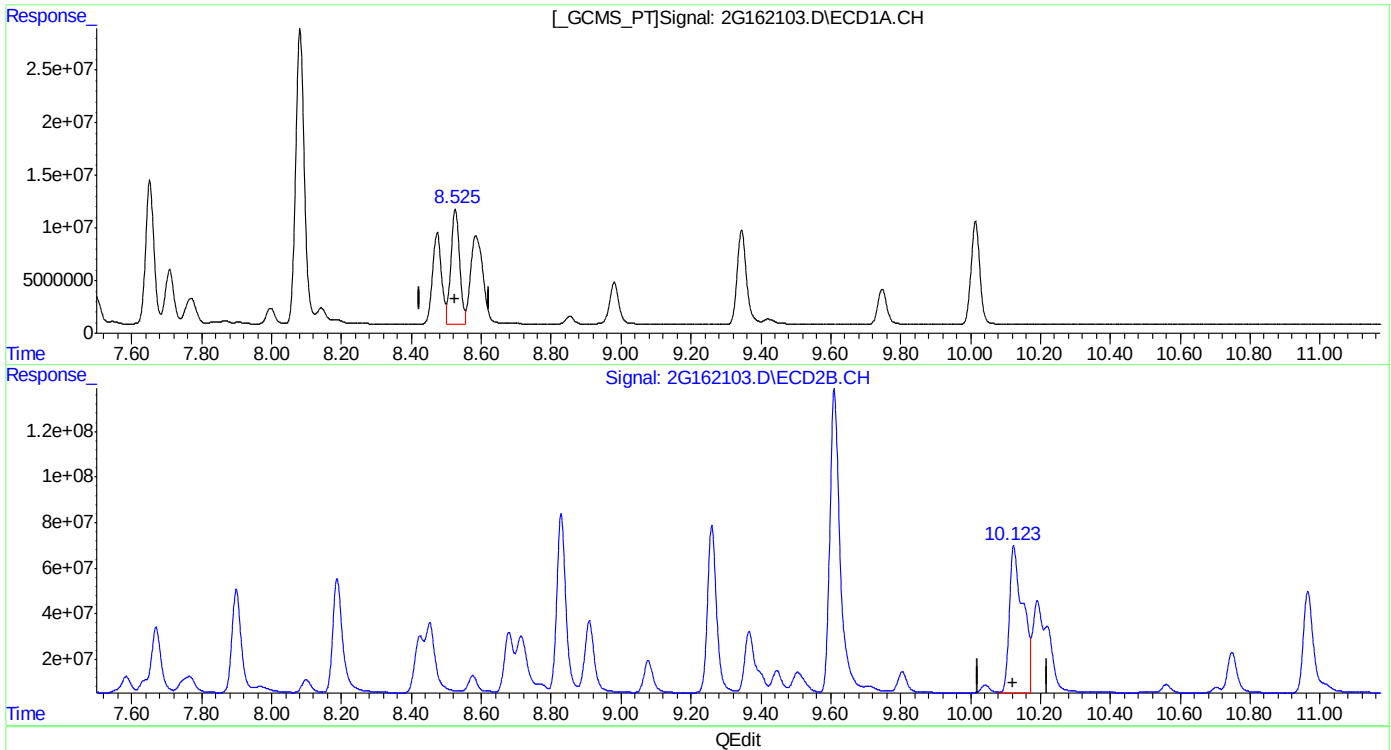
(7) AR1232-A #2  
4.093min 801.687PPB  
response 501961094

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162103.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:27 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:52:03 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:51:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(45) AR1262-E  
8.526min 274.213PPB  
response 192578186

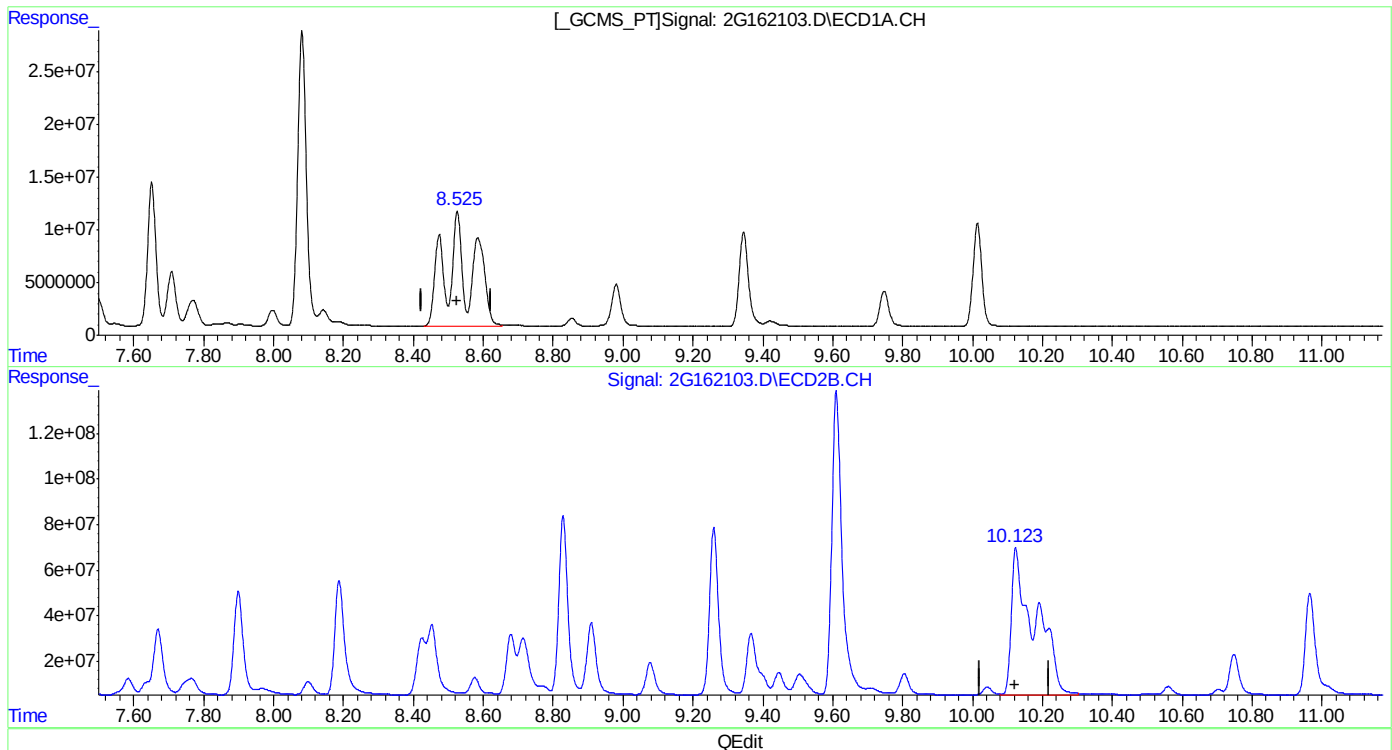
(45) AR1262-E #2  
10.124min 545.743PPB  
response 1757206907

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162103.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:27 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 14:52:03 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 14:51:59 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(45) AR1262-E  
8.525min 795.650PPB m  
response 558779236

(45) AR1262-E #2  
10.123min 942.420PPB m  
response 3034443708

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162104.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 2:44 pm  
 Operator : tianweir  
 Sample : ic4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 15:35:12 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 15:34:50 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb     | ppb        |
|-----------------------------|--------|--------|----------|----------|---------|------------|
| -----                       |        |        |          |          |         |            |
| System Monitoring Compounds |        |        |          |          |         |            |
| 1) S Tetrachlo...           | 2.779  | 3.432  | 164.4E6  | 1042.8E6 | 9.788   | 9.829      |
| Spiked Amount               | 40.000 |        | Recovery | =        | 24.47%  | 24.57%     |
| 51) S Decachlor...          | 10.010 | 11.807 | 482.0E6  | 2362.8E6 | 11.088  | 11.117     |
| Spiked Amount               | 40.000 |        | Recovery | =        | 27.72%  | 27.79%     |
| Target Compounds            |        |        |          |          |         |            |
| 12) AR1242-A                | 3.557  | 4.630  | 119.8E6  | 705.4E6  | 833.841 | 769.896    |
| 13) AR1242-B                | 4.106  | 5.276  | 252.5E6  | 1547.7E6 | 766.774 | 823.562    |
| 14) AR1242-C                | 4.268  | 5.463  | 105.4E6  | 666.8E6  | 881.574 | 956.816    |
| 15) AR1242-D                | 4.782  | 6.113  | 109.0E6  | 456.4E6  | 869.789 | 894.747    |
| 16) AR1242-E                | 5.364  | 6.725  | 92980758 | 634.3E6  | 872.039 | 977.929    |
| 46) AR1268-A                | 8.523  | 10.121 | 575.4E6  | 3085.9E6 | 840.878 | 938.864    |
| 47) AR1268-B                | 8.578  | 10.189 | 567.3E6  | 3099.0E6 | 712.876 | 817.926    |
| 48) AR1268-C                | 8.851  | 10.557 | 473.0E6  | 2498.5E6 | 752.872 | 873.269    |
| 49) AR1268-D                | 9.340  | 10.962 | 199.2E6  | 1037.7E6 | 826.458 | 946.346    |
| 50) AR1268-E                | 9.742  | 11.430 | 1615.1E6 | 8238.1E6 | 809.035 | 1044.134 # |
| -----                       |        |        |          |          |         |            |

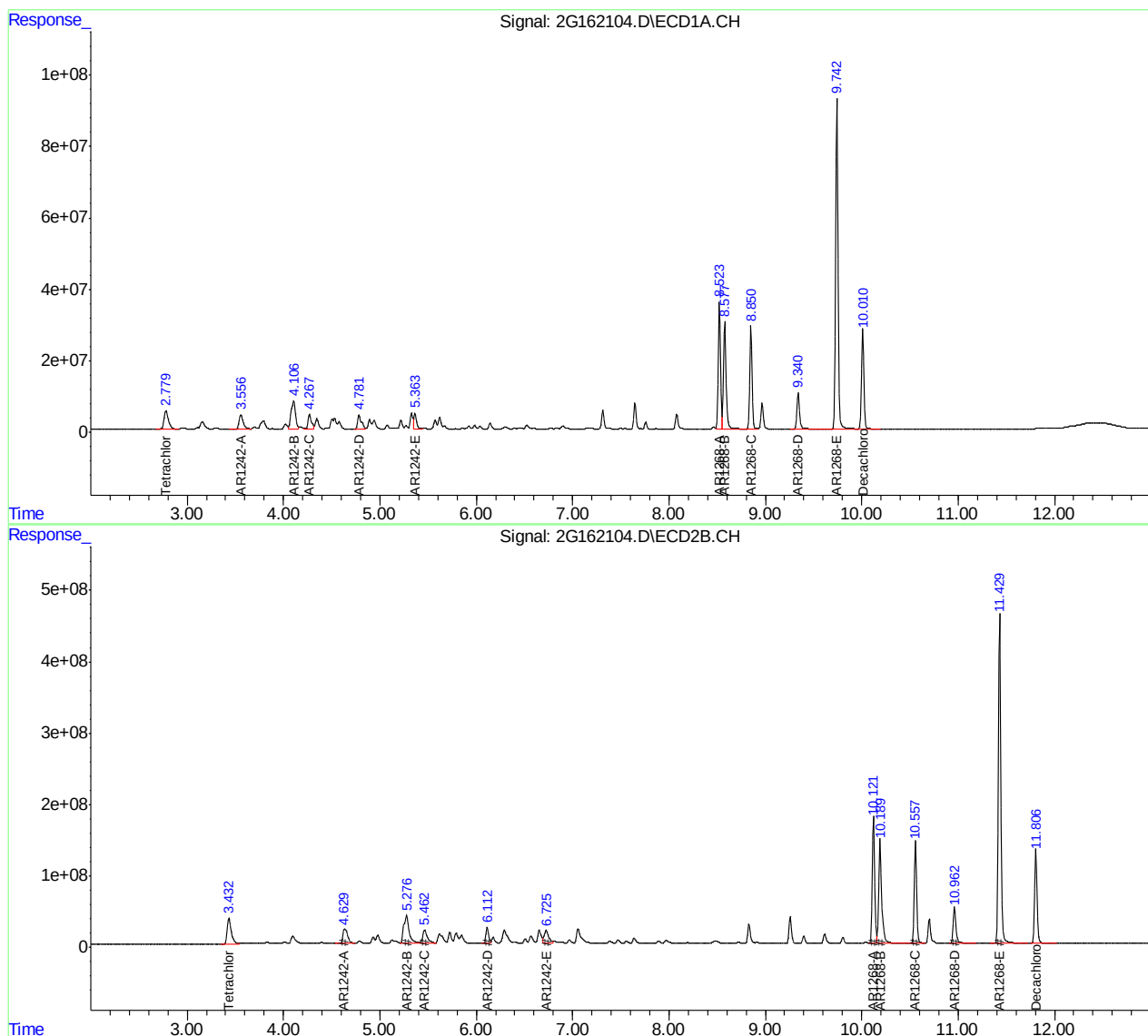
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162104.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 2:44 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:35:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:34:50 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162105.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 3:00 pm  
 Operator : tianweir  
 Sample : ic4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 15:38:22 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 15:36:57 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb        |
|-----------------------------|--------|--------|----------|----------|----------|------------|
| -----                       |        |        |          |          |          |            |
| System Monitoring Compounds |        |        |          |          |          |            |
| 1) S Tetrachlo...           | 2.778  | 3.432  | 160.3E6  | 1054.2E6 | 9.743    | 9.848      |
| Spiked Amount               | 40.000 |        | Recovery | =        | 24.36%   | 24.62%     |
| 51) S Decachlor...          | 10.014 | 11.810 | 174.1E6  | 851.3E6  | 9.773    | 9.833      |
| Spiked Amount               | 40.000 |        | Recovery | =        | 24.43%   | 24.58%     |
| Target Compounds            |        |        |          |          |          |            |
| 17) AR1248-A                | 3.555  | 4.632  | 59173660 | 362.7E6  | 826.748  | 812.103    |
| 18) AR1248-B                | 4.105  | 5.281  | 154.4E6  | 954.8E6  | 820.696  | 837.930m   |
| 19) AR1248-C                | 4.501  | 5.724  | 165.2E6  | 569.7E6  | 812.299m | 907.464    |
| 20) AR1248-D                | 4.782  | 6.112  | 159.8E6  | 727.1E6  | 860.353  | 930.188    |
| 21) AR1248-E                | 4.892  | 6.291  | 142.1E6  | 879.9E6  | 855.462m | 1021.118   |
| 22) AR1248-F                | 5.364  | 6.722  | 140.2E6  | 1097.1E6 | 782.480  | 1016.890 # |
| 23) AR1248-G                | 5.620  | 7.053  | 157.2E6  | 1220.2E6 | 600.449m | 1102.458m# |
| -----                       |        |        |          |          |          |            |

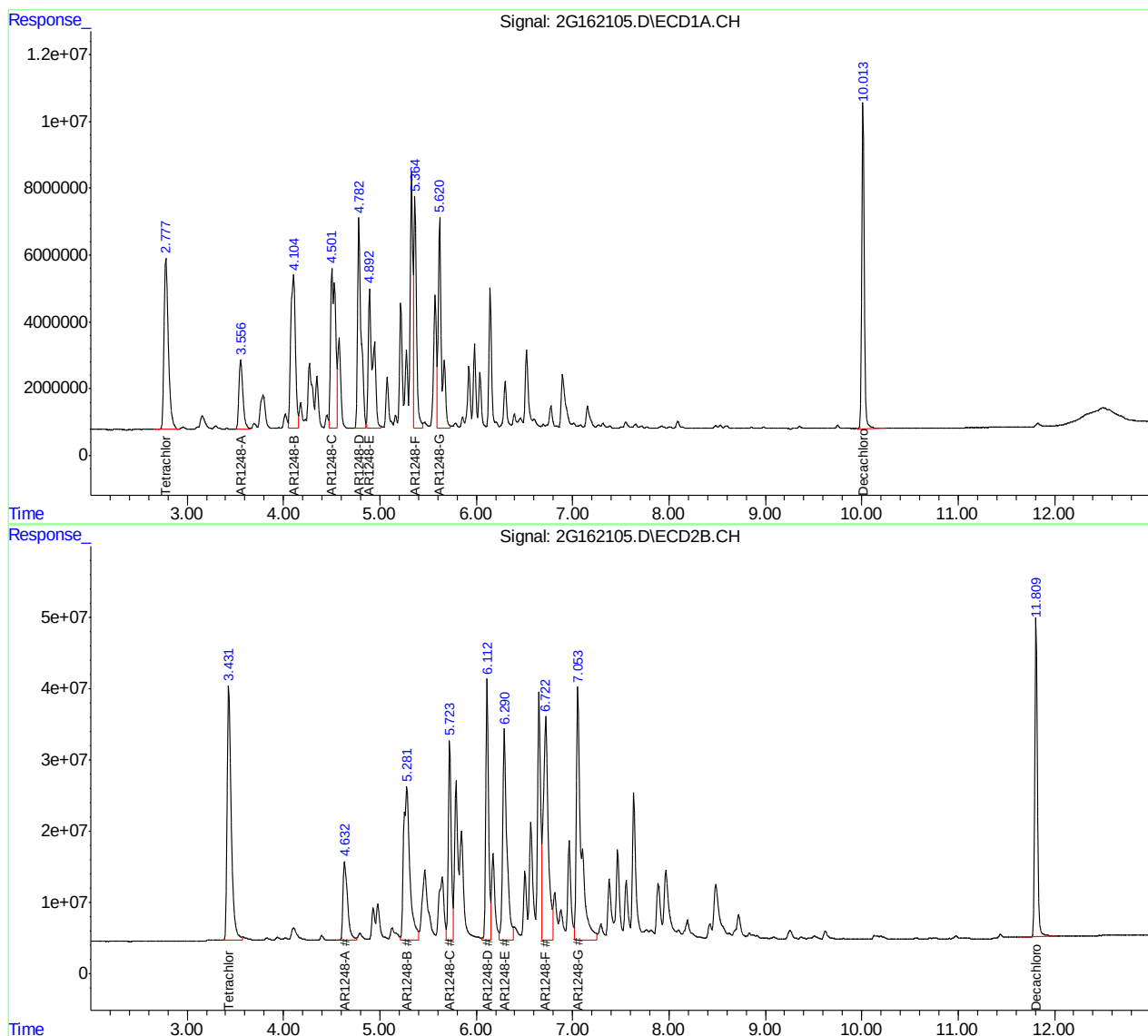
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:38:22 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-IC4311

Method:

SW846 8082A

Lab FileID:

2G162105.D

Analyst approved:

04/19/18 15:39 Rebecca Krug

Injection Time:

04/19/18 15:00

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1248-C  |     | 1    | 4.50           | Split peak |
| AR1248-E  |     | 1    | 4.89           | Split peak |
| AR1248-B  |     | 2    | 5.28           | Split peak |
| Ar1248-G  |     | 1    | 5.62           | Split peak |
| Ar1248-G  |     | 2    | 7.05           | Split peak |

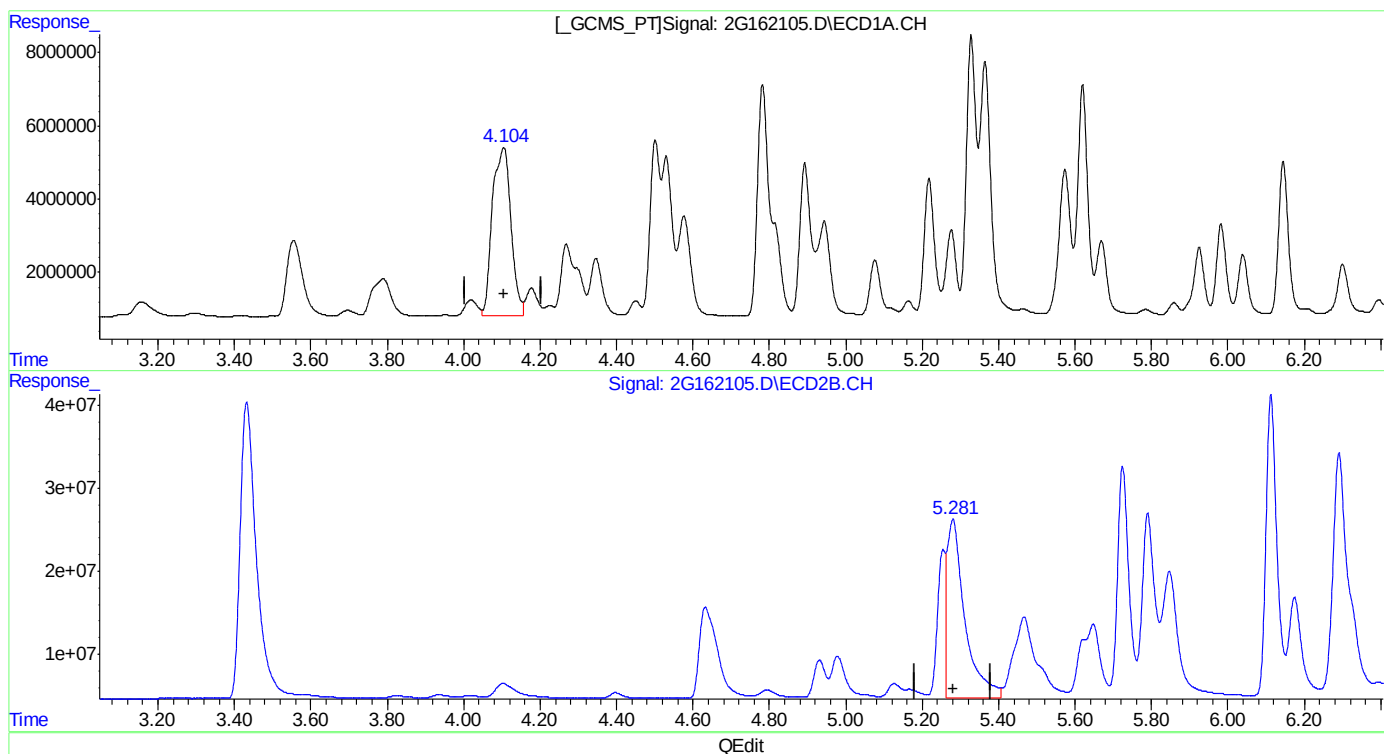
7.5.10.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(18) AR1248-B  
4.105min 820.696PPB  
response 154397514

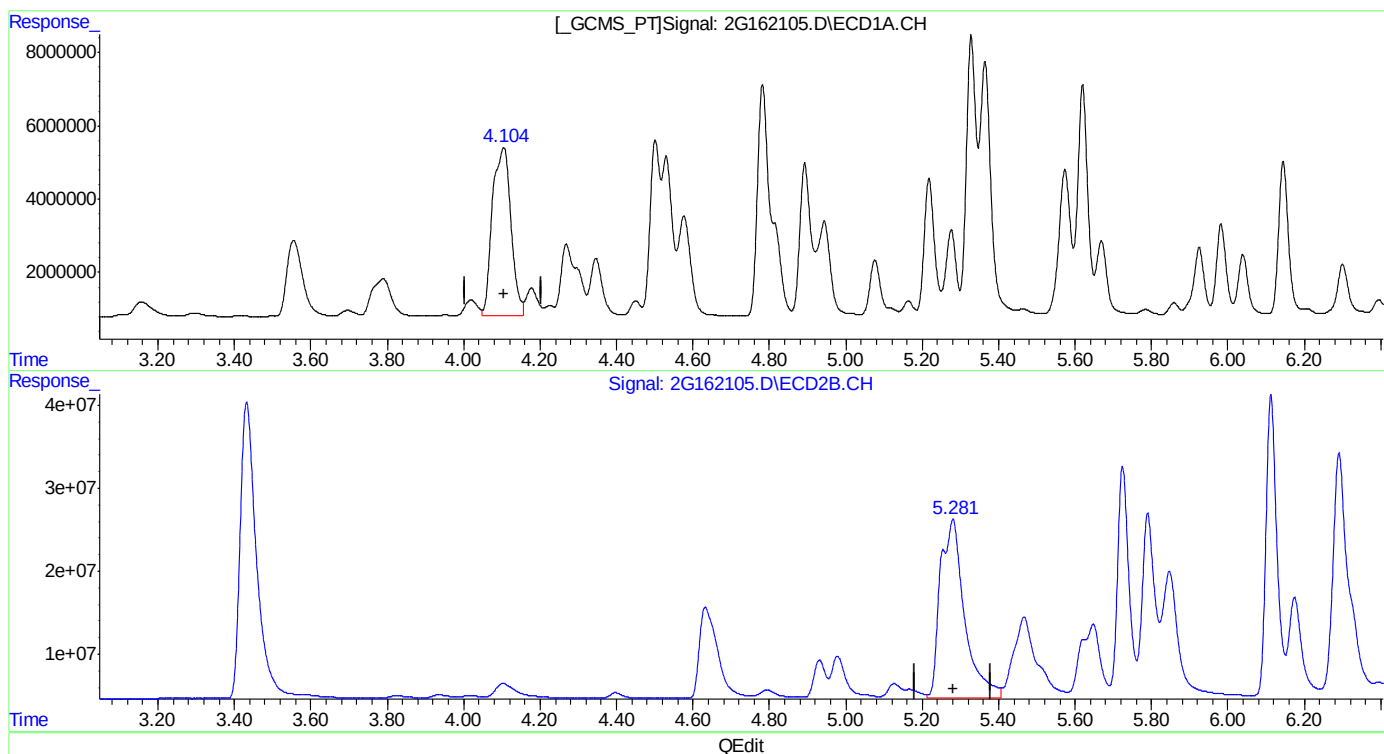
(18) AR1248-B #2  
5.281min 621.062PPB  
response 707673669

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(18) AR1248-B  
4.105min 820.696PPB  
response 154397514

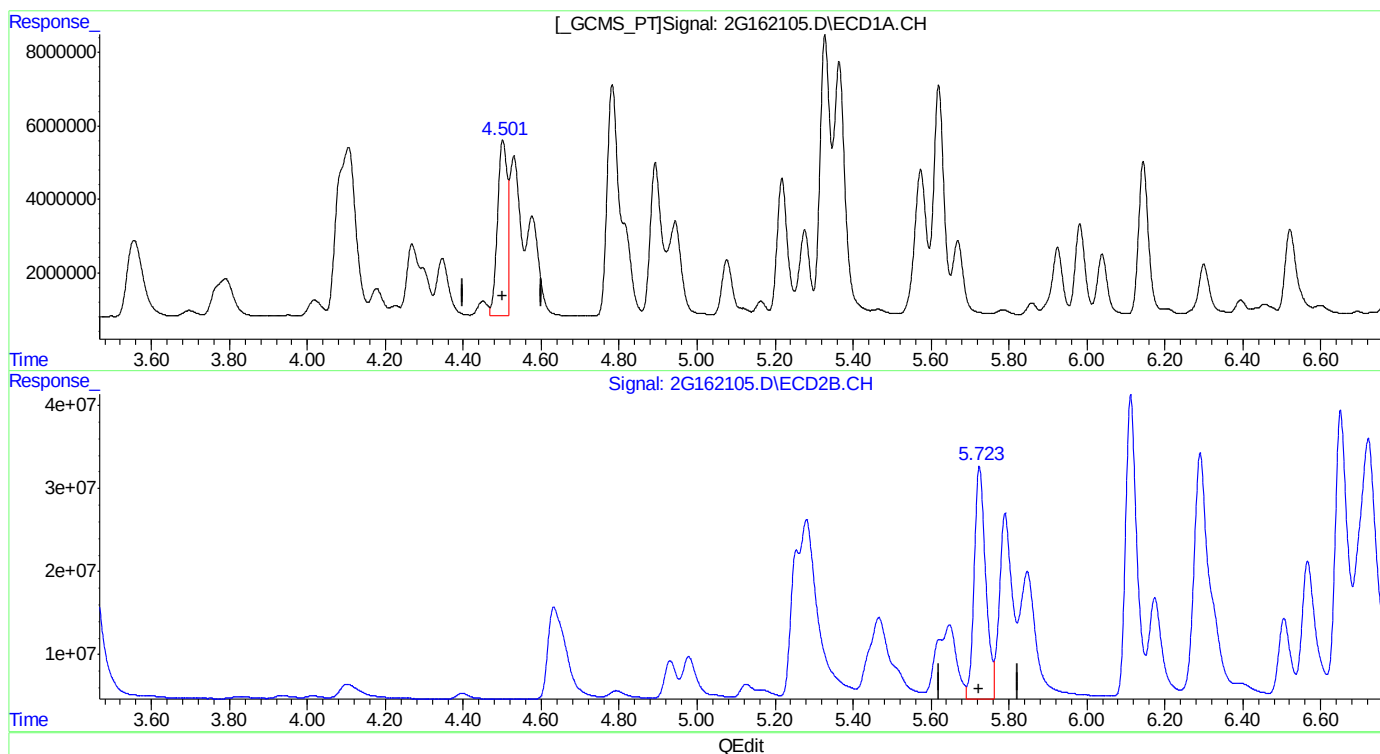
(18) AR1248-B #2  
5.281min 837.930PPB m  
response 954786244

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(19) AR1248-C  
4.501min 415.086PPB  
response 84420896

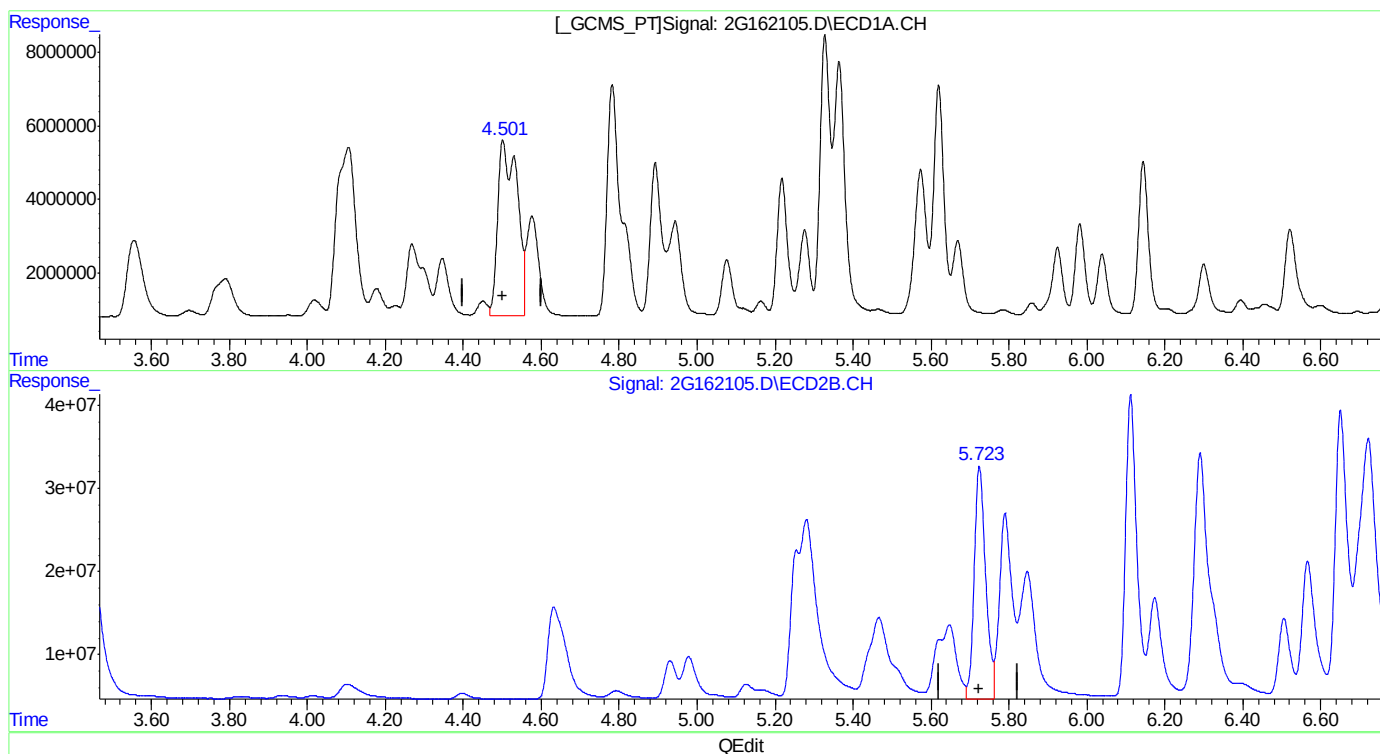
(19) AR1248-C #2  
5.724min 907.464PPB  
response 569681418

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(19) AR1248-C  
4.501min 812.299PPB m  
response 165206685

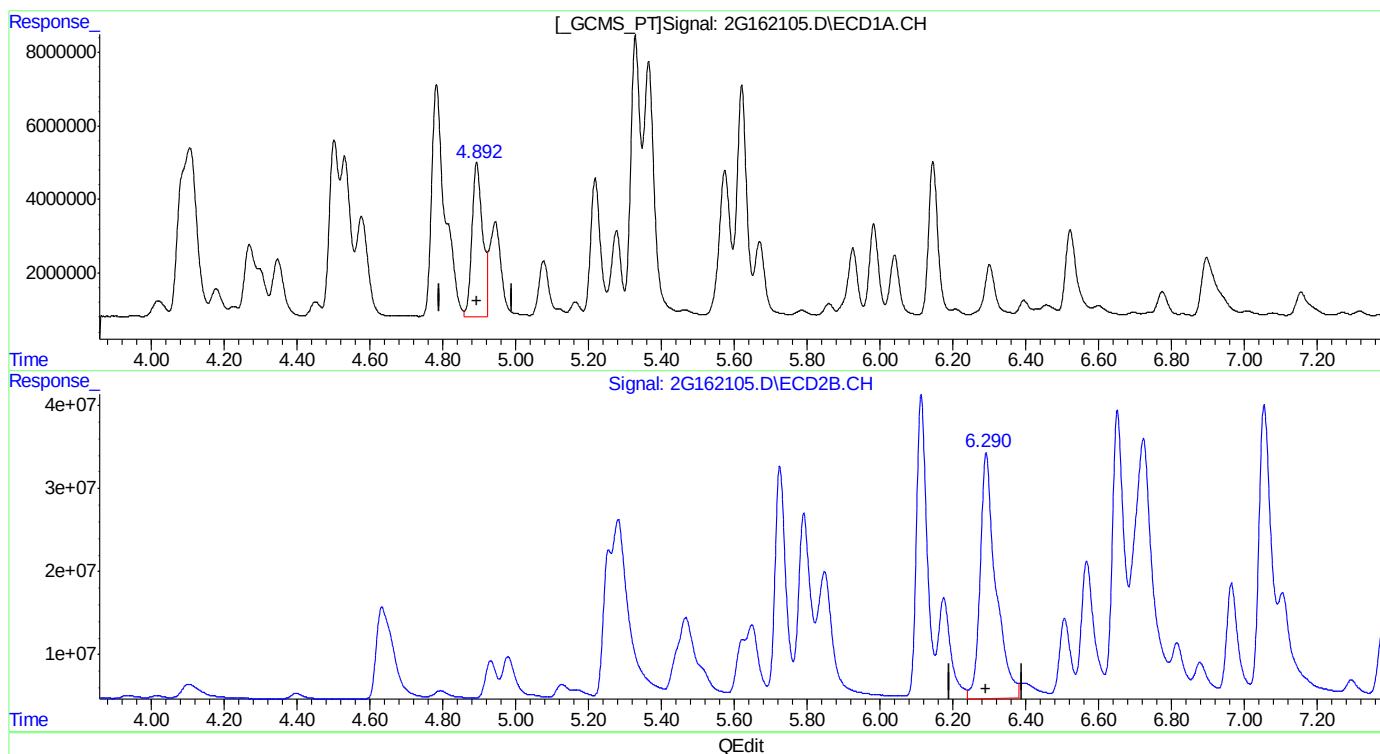
(19) AR1248-C #2  
5.724min 907.464PPB  
response 569681418

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(21) AR1248-E  
4.893min 501.078PPB  
response 83213803

(21) AR1248-E #2  
6.291min 1021.118PPB  
response 879893668

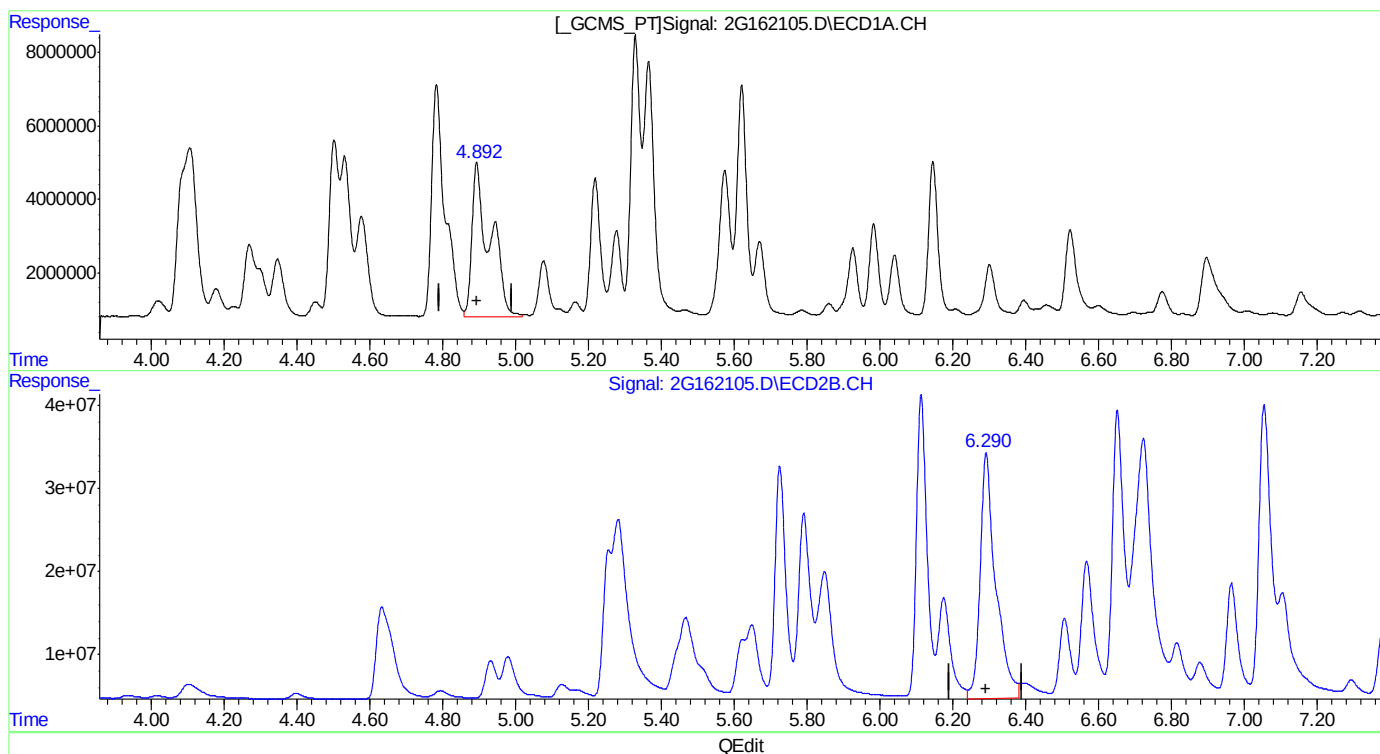


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(21) AR1248-E  
4.892min 855.462PPB m  
response 142066418

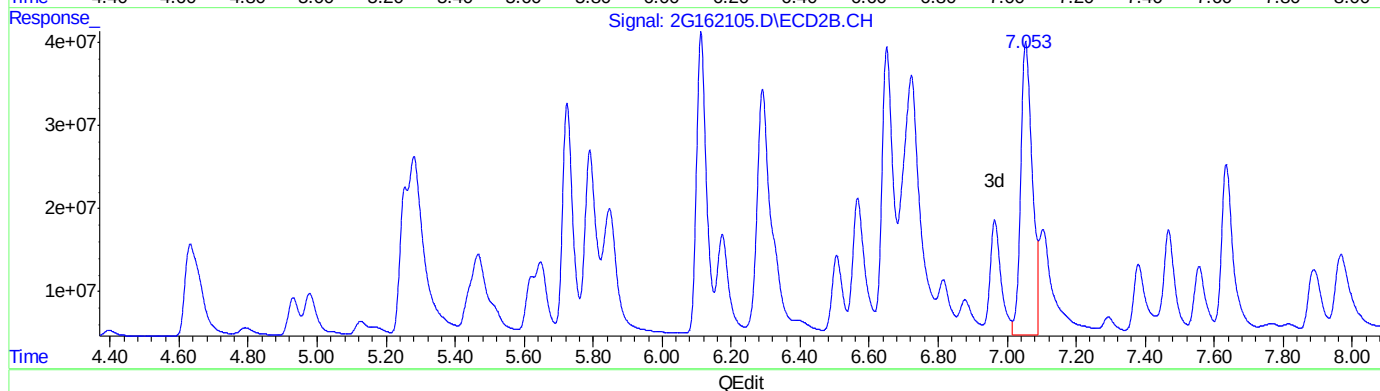
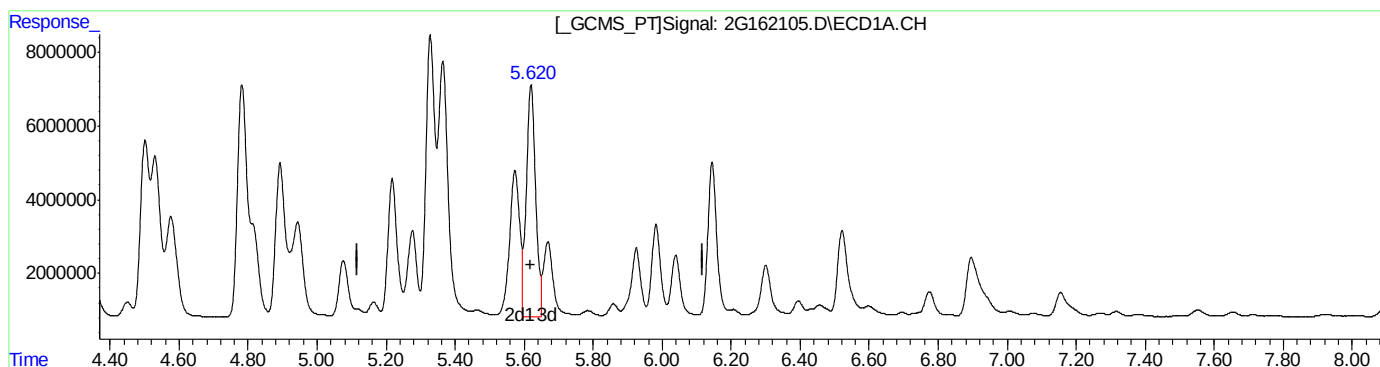
(21) AR1248-E #2  
6.291min 1021.118PPB  
response 879893668

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(23) AR1248-G  
5.620min 448.393  
response 117406237

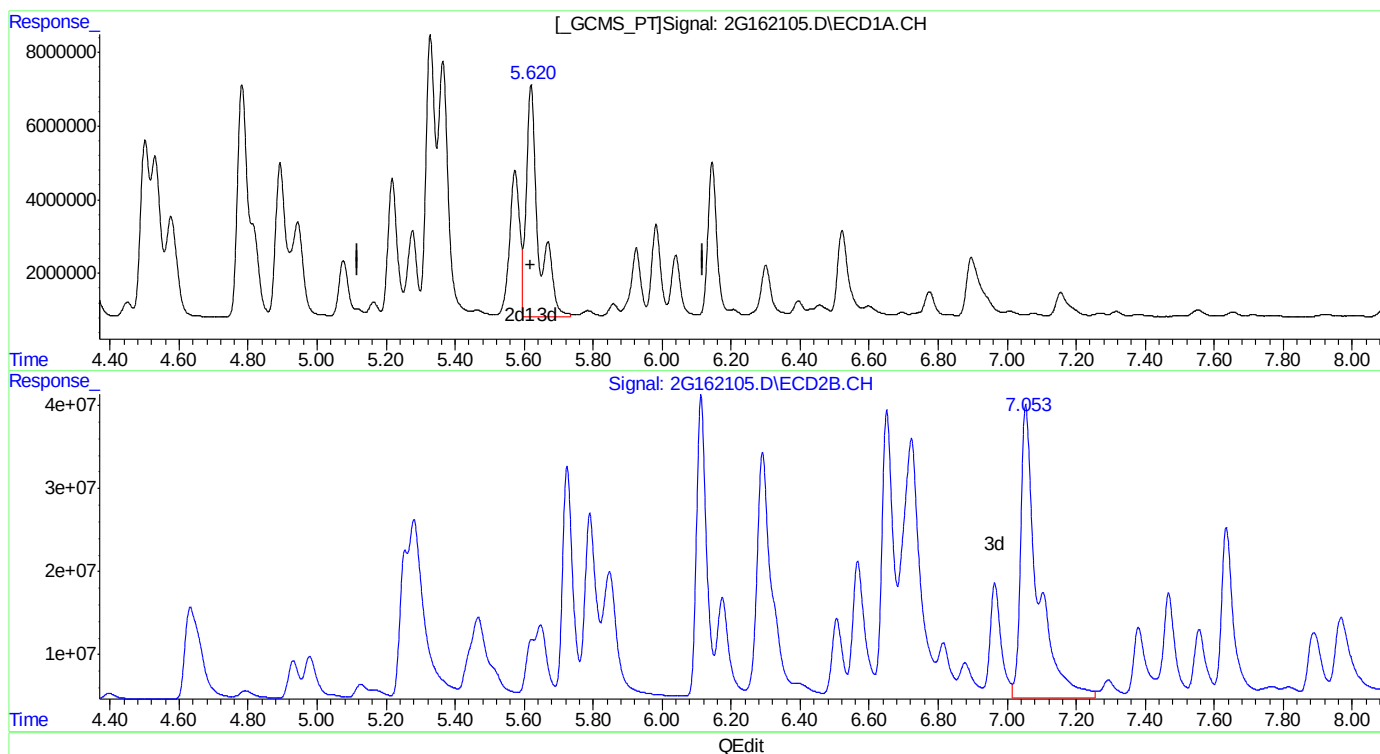
(23) AR1248-G #2  
7.054min 746.941  
response 826706821

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162105.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:00 pm  
Operator : tianweir  
Sample : ic4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:37:02 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:36:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(23) AR1248-G  
5.620min 600.449 m  
response 157220035

(23) AR1248-G #2  
7.053min 1102.458 m  
response 1220188241

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:43:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.778  | 3.432  | 159.0E6  | 1008.0E6 | 43.317    | 44.054    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 108.29%   | 110.14%   |
| 51) S Decachlor...          | 10.012 | 11.809 | 160.3E6  | 748.7E6  | 39.512    | 39.200    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 98.78%    | 98.00%    |
| Target Compounds            |        |        |          |          |           |           |
| 31) AR1016-A                | 3.154  | 4.095  | 76685525 | 415.7E6  | 984.499m  | 1109.784  |
| 32) AR1016-B                | 3.557  | 4.631  | 141.9E6  | 845.4E6  | 1043.301  | 1055.279  |
| 33) AR1016-C                | 4.107  | 5.276  | 305.7E6  | 1899.1E6 | 1054.364  | 1095.395  |
| 34) AR1016-D                | 4.268  | 5.463  | 126.3E6  | 823.4E6  | 1068.073  | 1094.620  |
| 35) AR1016-E                | 4.782  | 6.113  | 124.4E6  | 544.0E6  | 1019.904  | 1060.291  |
| 36) AR1260-A                | 7.151  | 8.713  | 344.4E6  | 2060.4E6 | 1010.285  | 1030.370m |
| 37) AR1260-B                | 7.312  | 8.829  | 147.9E6  | 904.9E6  | 1023.613  | 1034.883  |
| 38) AR1260-C                | 7.650  | 9.260  | 170.1E6  | 1070.9E6 | 1068.306  | 1047.844  |
| 39) AR1260-D                | 8.080  | 9.611  | 387.2E6  | 2253.5E6 | 1054.515  | 1049.838  |
| 40) AR1260-E                | 8.472  | 10.153 | 394.8E6  | 2121.6E6 | 1042.160m | 1040.922m |
| -----                       |        |        |          |          |           |           |

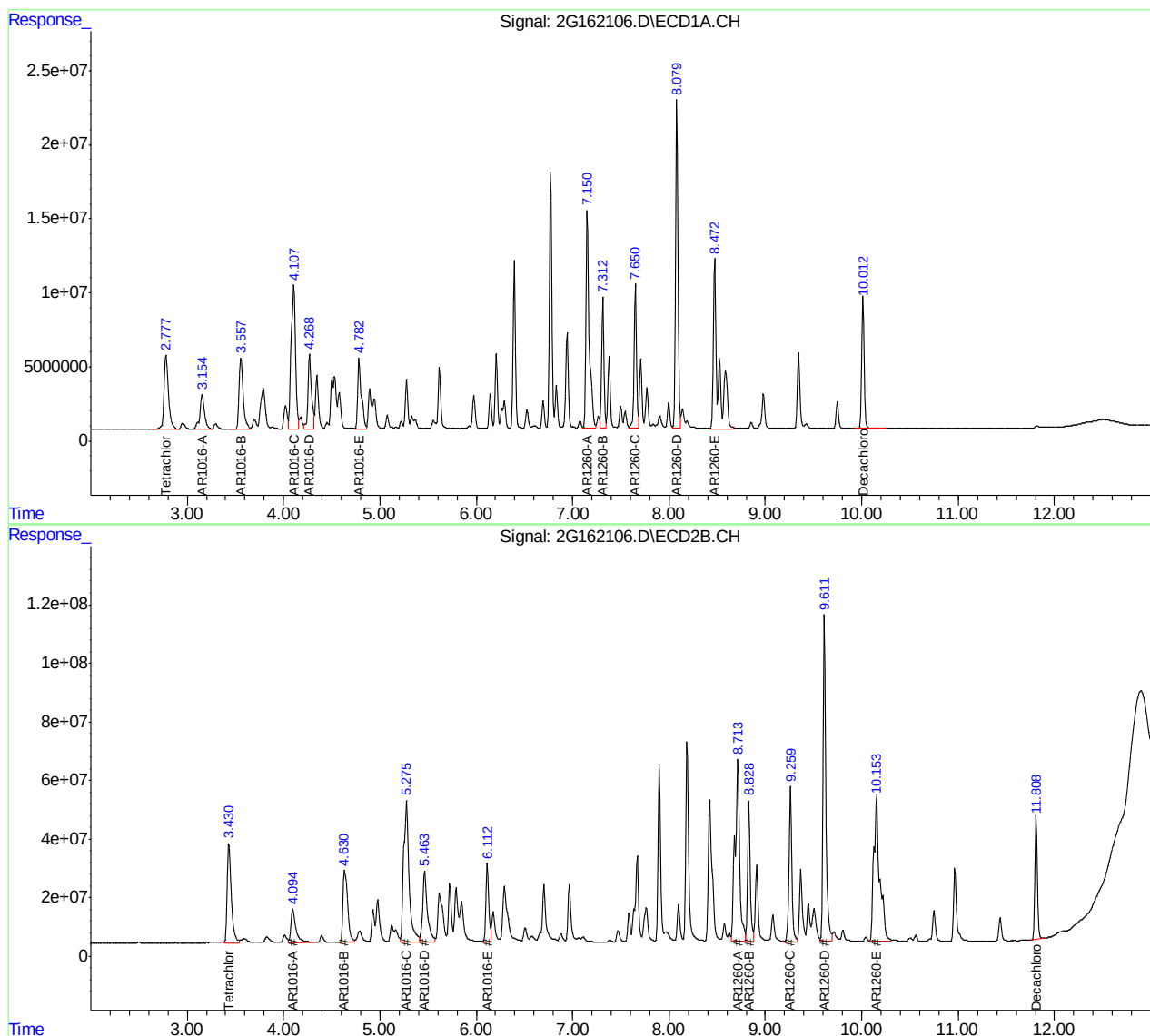
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:43:00 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-ICV4311

Method:

SW846 8082A

Lab FileID:

2G162106.D

Analyst approved:

04/19/18 15:45 Rebecca Krug

Injection Time:

04/19/18 15:17

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-A  |     | 1    | 3.15           | Split peak |
| AR1260-E  |     | 1    | 8.47           | Split peak |
| AR1260-A  |     | 2    | 8.71           | Split peak |
| AR1260-E  |     | 2    | 10.15          | Split peak |

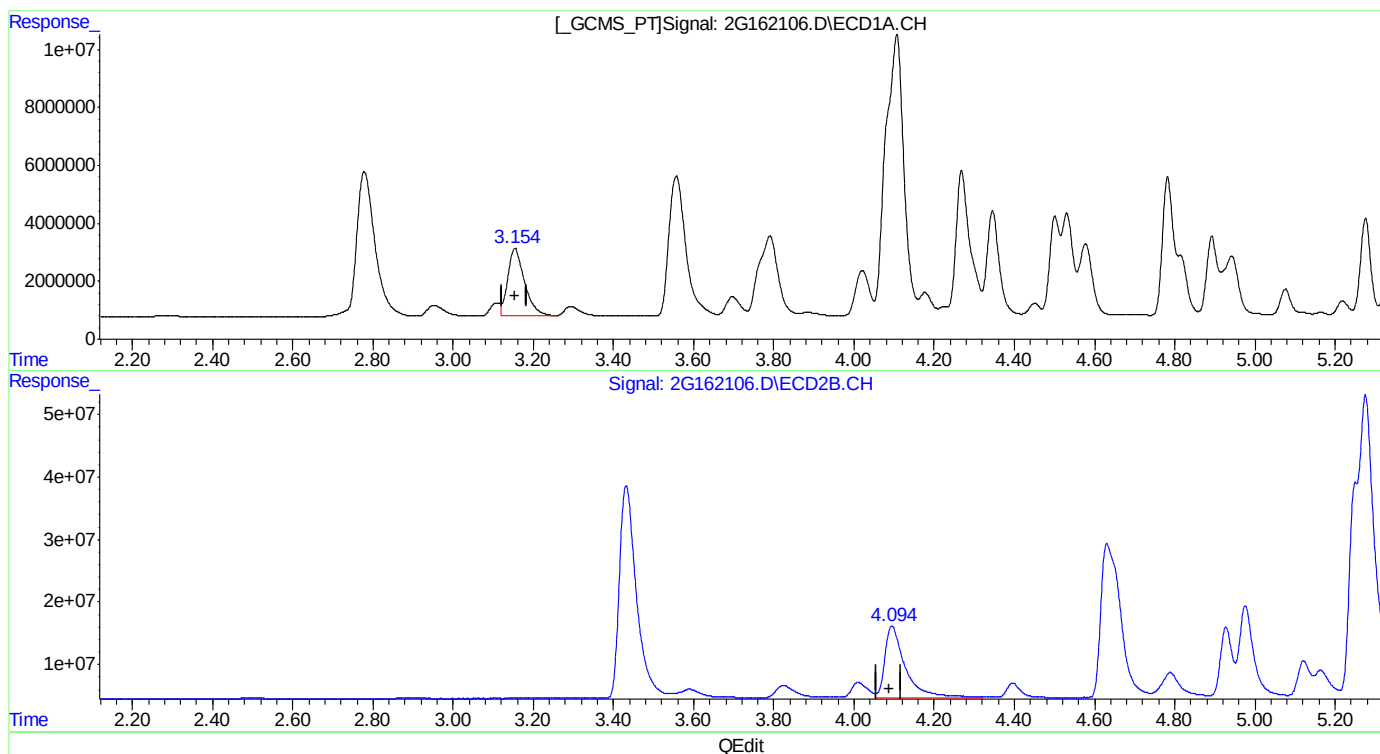
7.5.11.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.154min 882.944PPB  
response 68775101

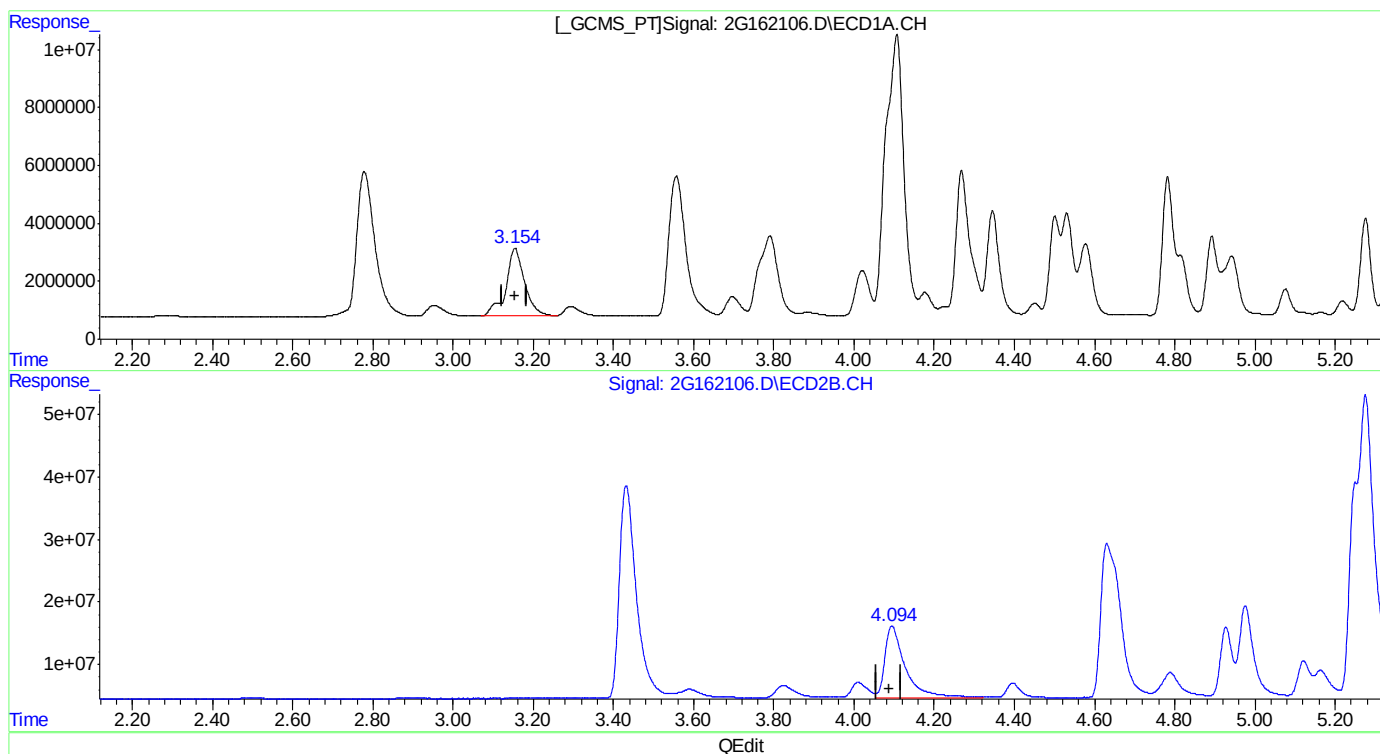
(31) AR1016-A #2  
4.095min 1109.784PPB  
response 415731305

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(31) AR1016-A  
3.154min 984.499PPB m  
response 76685525

(31) AR1016-A #2  
4.095min 1109.784PPB  
response 415731305

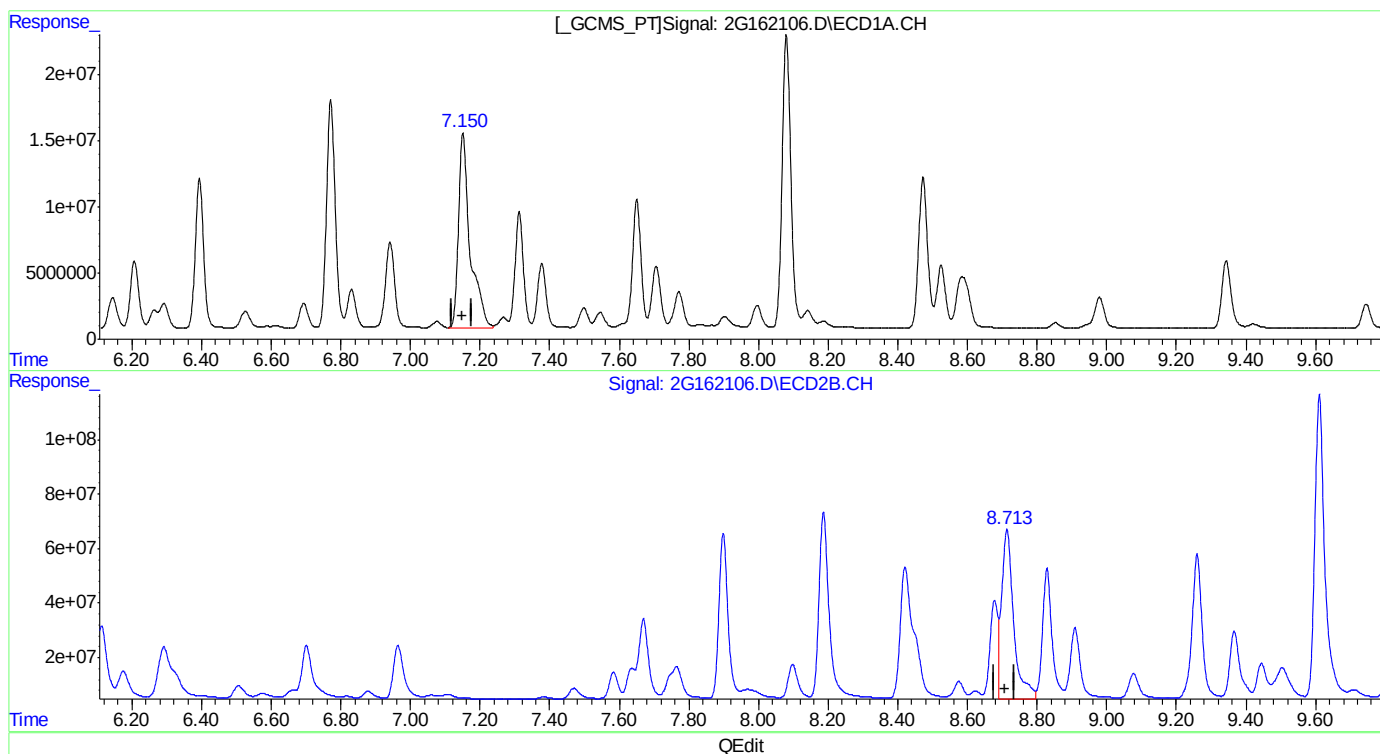


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 1010.285PPB  
response 344355330

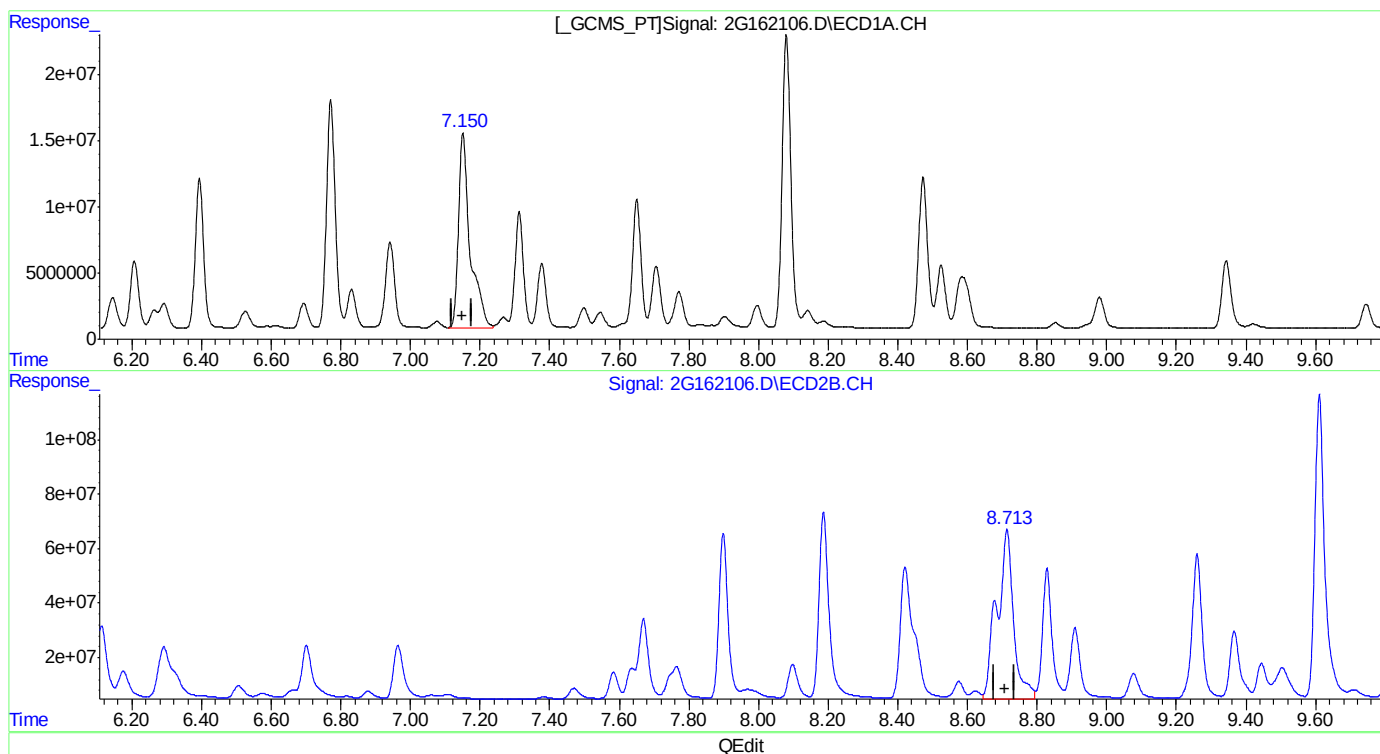
(36) AR1260-A #2  
8.713min 747.301PPB  
response 1494370201

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.151min 1010.285PPB  
response 344355330

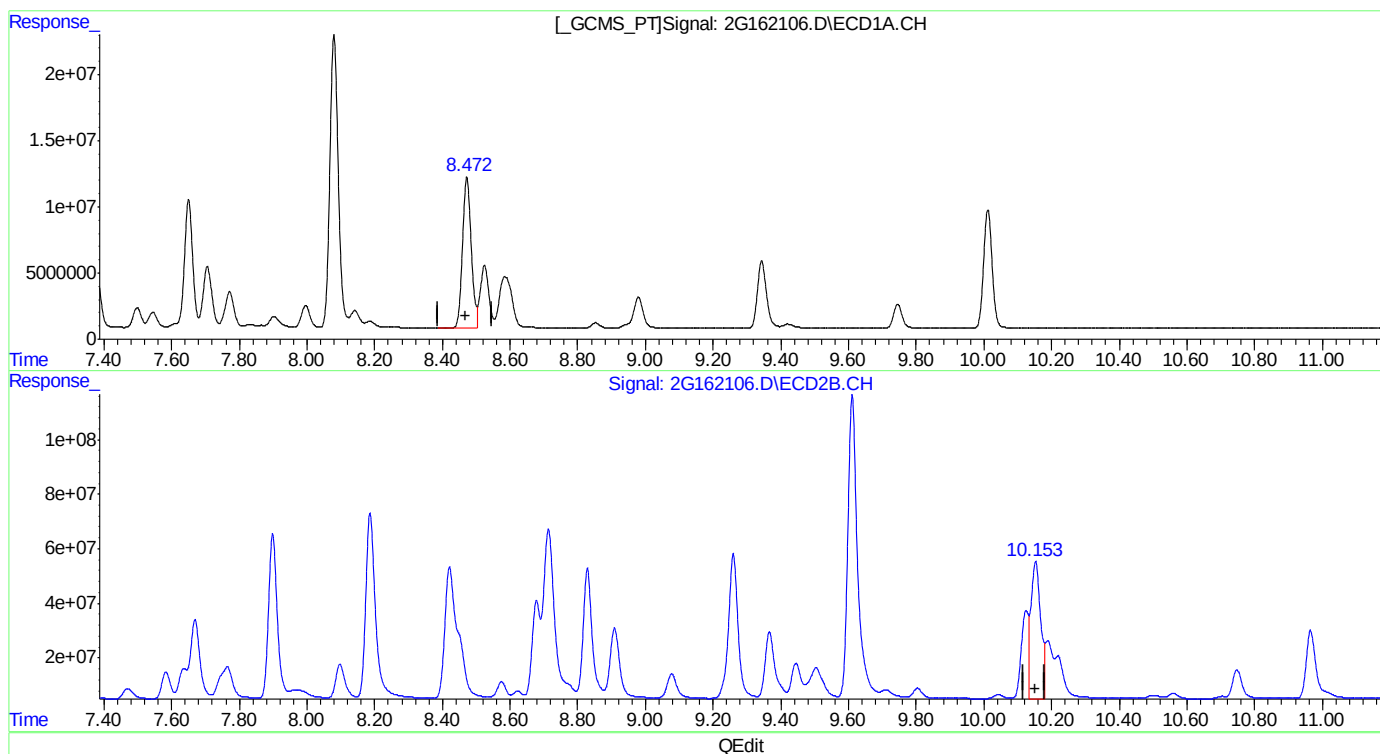
(36) AR1260-A #2  
8.713min 1030.370PPB m  
response 2060420586

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.472min 544.539PPB  
response 206264619

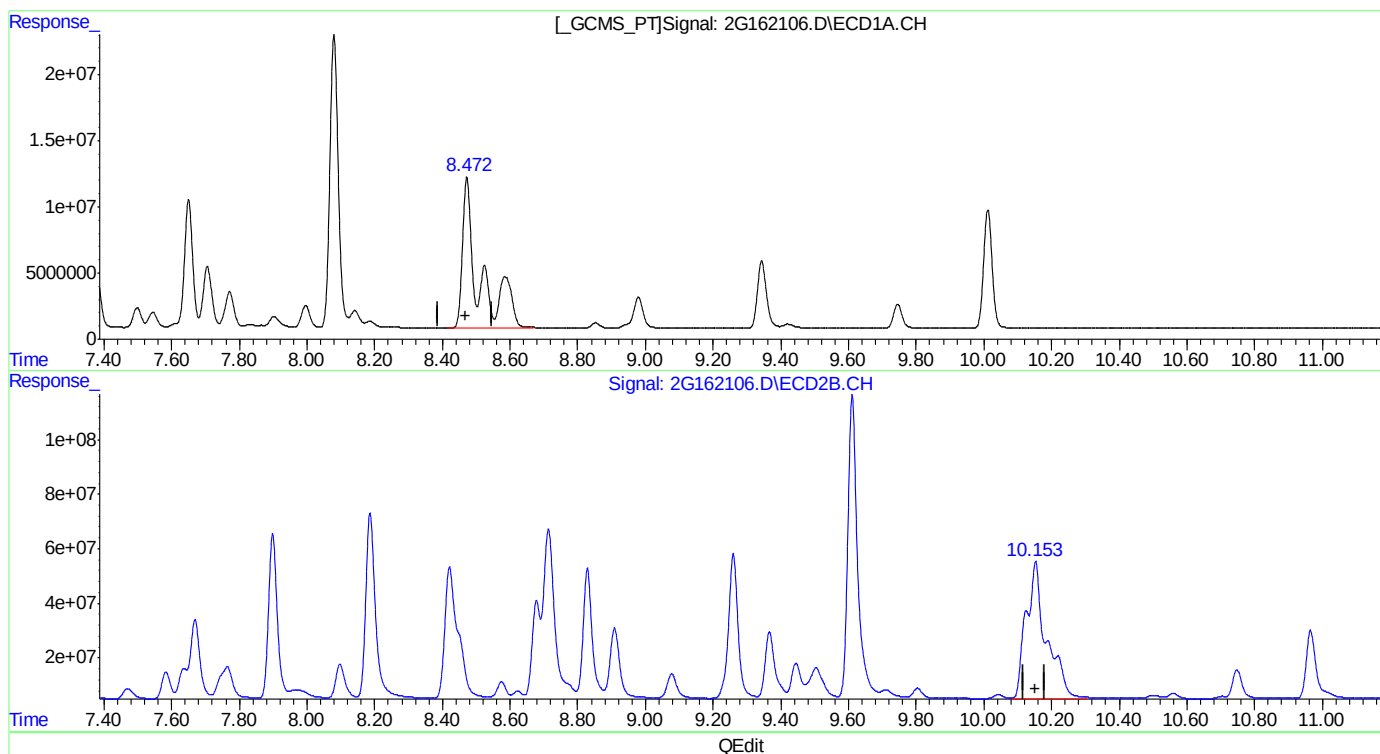
(40) AR1260-E #2  
10.153min 504.699PPB  
response 1028663455

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162106.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:17 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 15:42:09 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.472min 1042.160PPB m  
response 394757340

(40) AR1260-E #2  
10.153min 1040.922PPB m  
response 2121578641

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162107.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 3:34 pm  
 Operator : tianweir  
 Sample : icv4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 16:14:25 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 15:41:07 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.779  | 3.431  | 153.3E6  | 920.0E6  | 41.757    | 40.204    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 104.39%   | 100.51%   |
| 51) S Decachlor...          | 10.014 | 11.809 | 140.0E6  | 673.0E6  | 34.519    | 35.236m   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 86.30%    | 88.09%    |
| Target Compounds            |        |        |          |          |           |           |
| 2) AR1221-A                 | 2.279  | 2.875  | 30230560 | 146.0E6  | 1043.603  | 1036.235  |
| 3) AR1221-B                 | 2.954  | 3.822  | 40285056 | 252.3E6  | 958.647   | 1006.331  |
| 4) AR1221-C                 | 3.154  | 4.092  | 122.7E6  | 636.2E6  | 952.714m  | 970.047   |
| 5) AR1221-D                 | 3.559  | 4.652  | 11965333 | 105.9E6  | 816.362   | 866.763   |
| 6) AR1221-E                 | 3.701  | 4.775  | 14535418 | 89521998 | 1011.960  | 1011.639  |
| 24) AR1254-A                | 5.275  | 6.700  | 129.5E6  | 1052.0E6 | 1049.498  | 1059.947  |
| 25) AR1254-B                | 5.616  | 6.961  | 268.8E6  | 1037.4E6 | 1038.943m | 1054.345  |
| 26) AR1254-C                | 5.981  | 7.465  | 143.6E6  | 839.2E6  | 1048.265  | 1052.001  |
| 27) AR1254-D                | 6.144  | 7.630  | 257.6E6  | 1719.0E6 | 1047.563  | 1051.825  |
| 28) AR1254-E                | 6.519  | 7.958  | 189.8E6  | 1135.8E6 | 1040.097  | 1043.025  |
| 29) AR1254-F                | 6.772  | 8.419  | 179.8E6  | 1231.4E6 | 1050.190  | 1042.487m |
| 30) AR1254-G                | 7.152  | 8.715  | 263.4E6  | 1614.8E6 | 1046.353  | 1068.898  |
| -----                       |        |        |          |          |           |           |

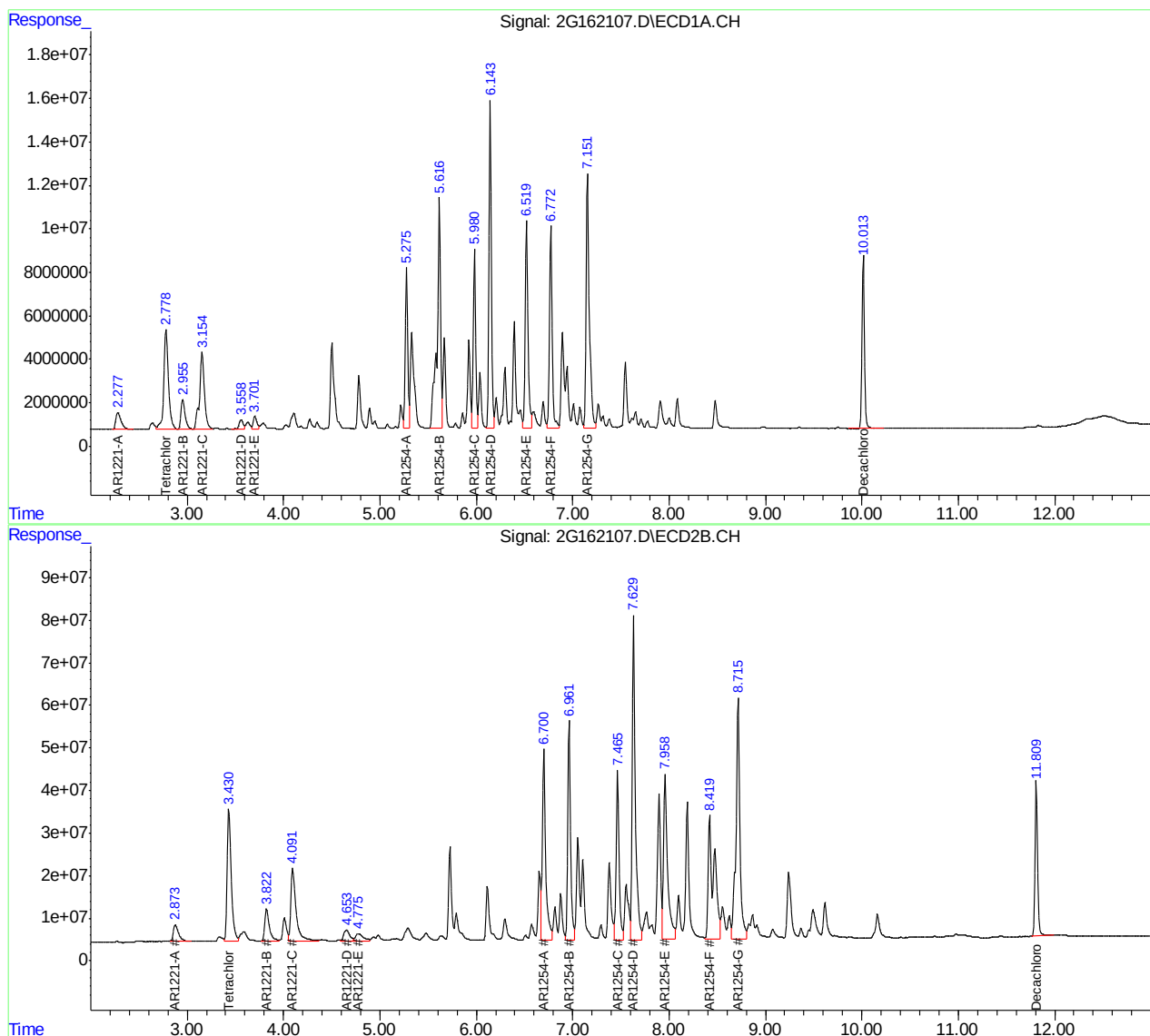
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:14:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: G2G4311-ICV4311

Method: SW846 8082A

Lab FileID: 2G162107.D

Analyst approved: 04/19/18 16:16 Rebecca Krug

Injection Time: 04/19/18 15:34

Supervisor approved: 04/20/18 09:13 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1221-C           |           | 1    | 3.15           | Split peak              |
| AR1254-B           |           | 1    | 5.62           | Split peak              |
| AR1254-F           |           | 2    | 8.42           | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.81          | Poorly defined baseline |

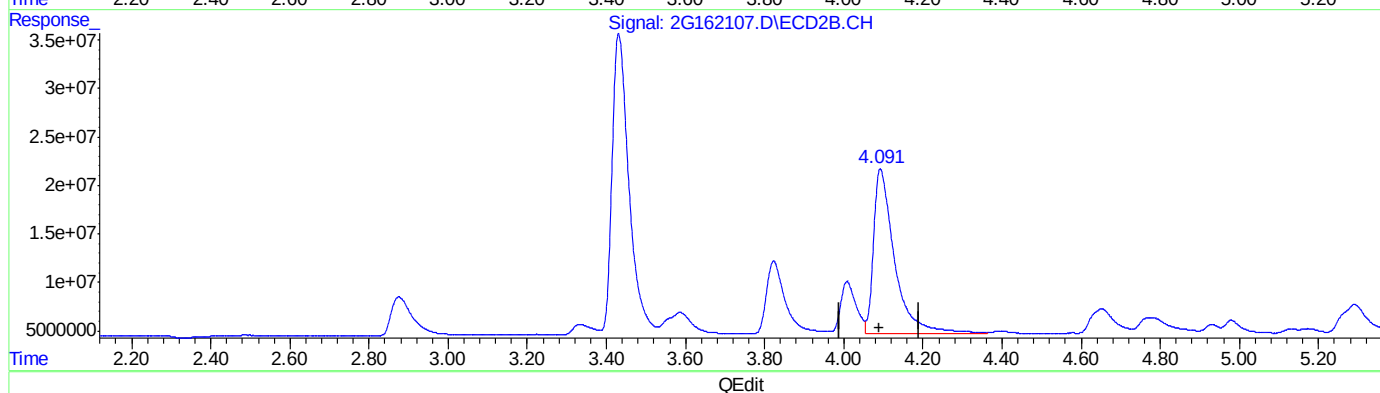
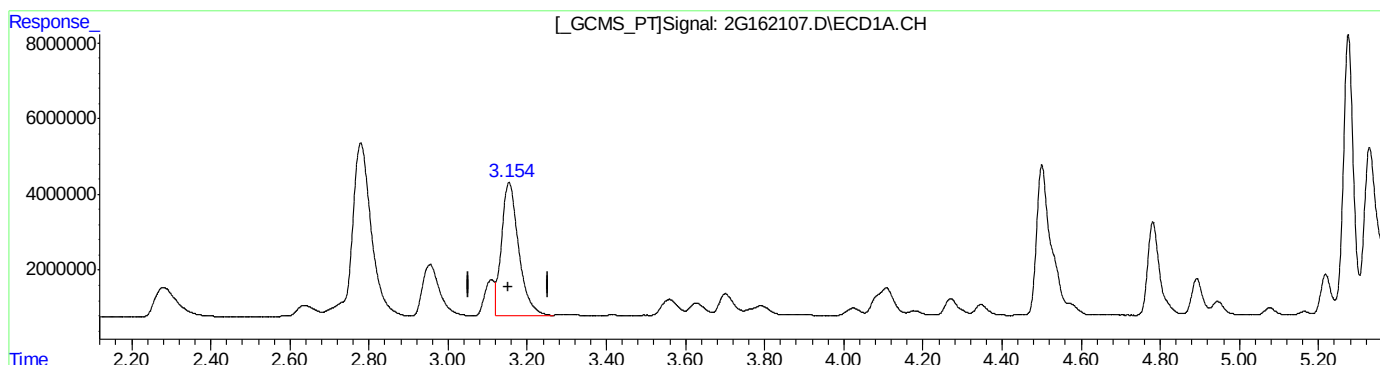
7.5.12.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(4) AR1221-C  
3.154min 823.443PPB  
response 106055438

(4) AR1221-C #2  
4.092min 970.047PPB  
response 636187286

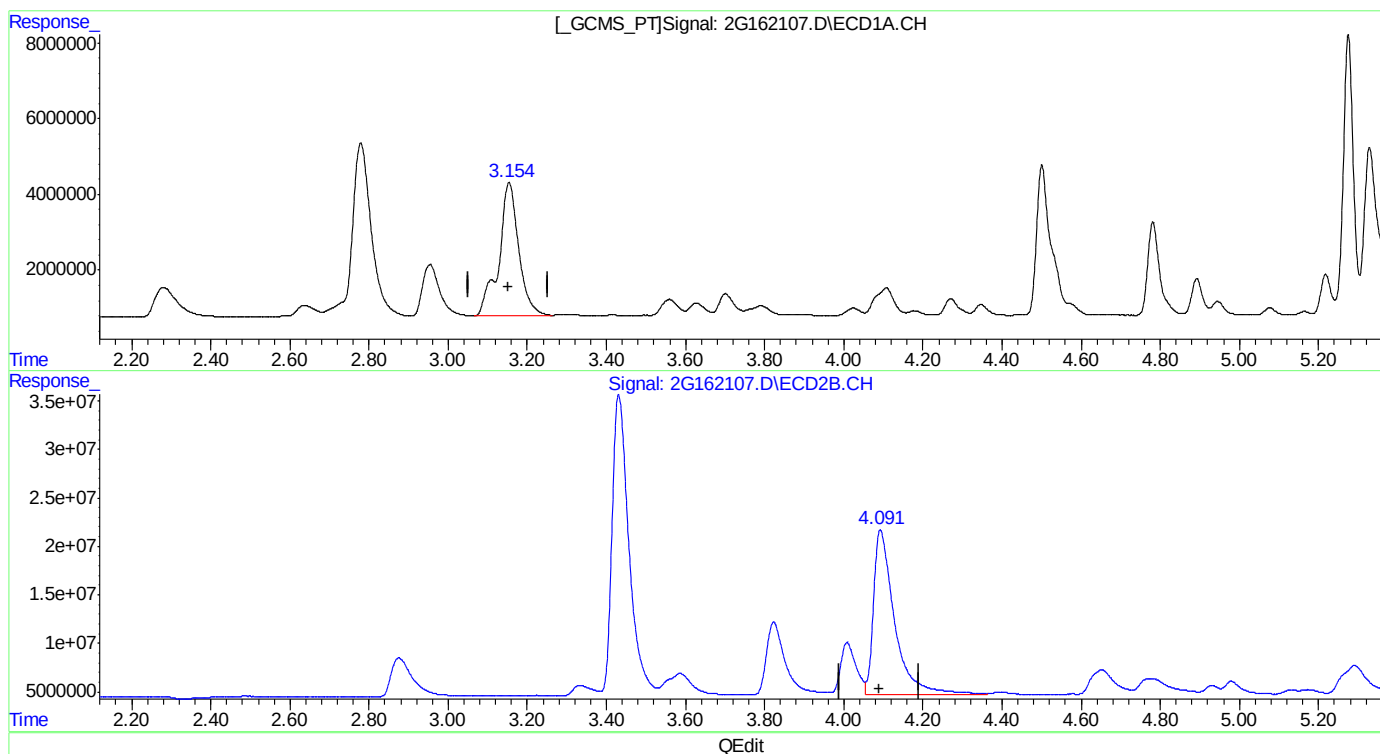


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(4) AR1221-C  
3.154min 952.714PPB m  
response 122704980

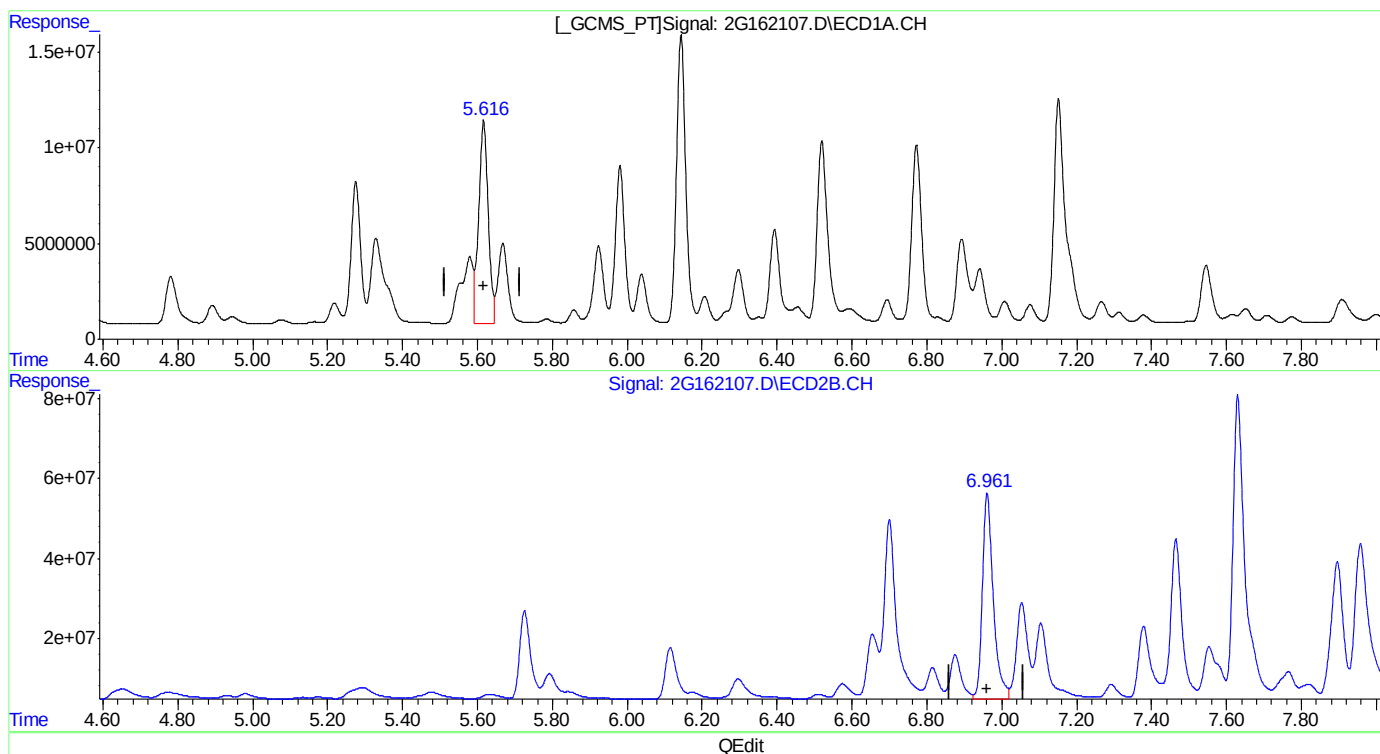
(4) AR1221-C #2  
4.092min 970.047PPB  
response 636187286

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.616min 725.809PPB  
response 187805126

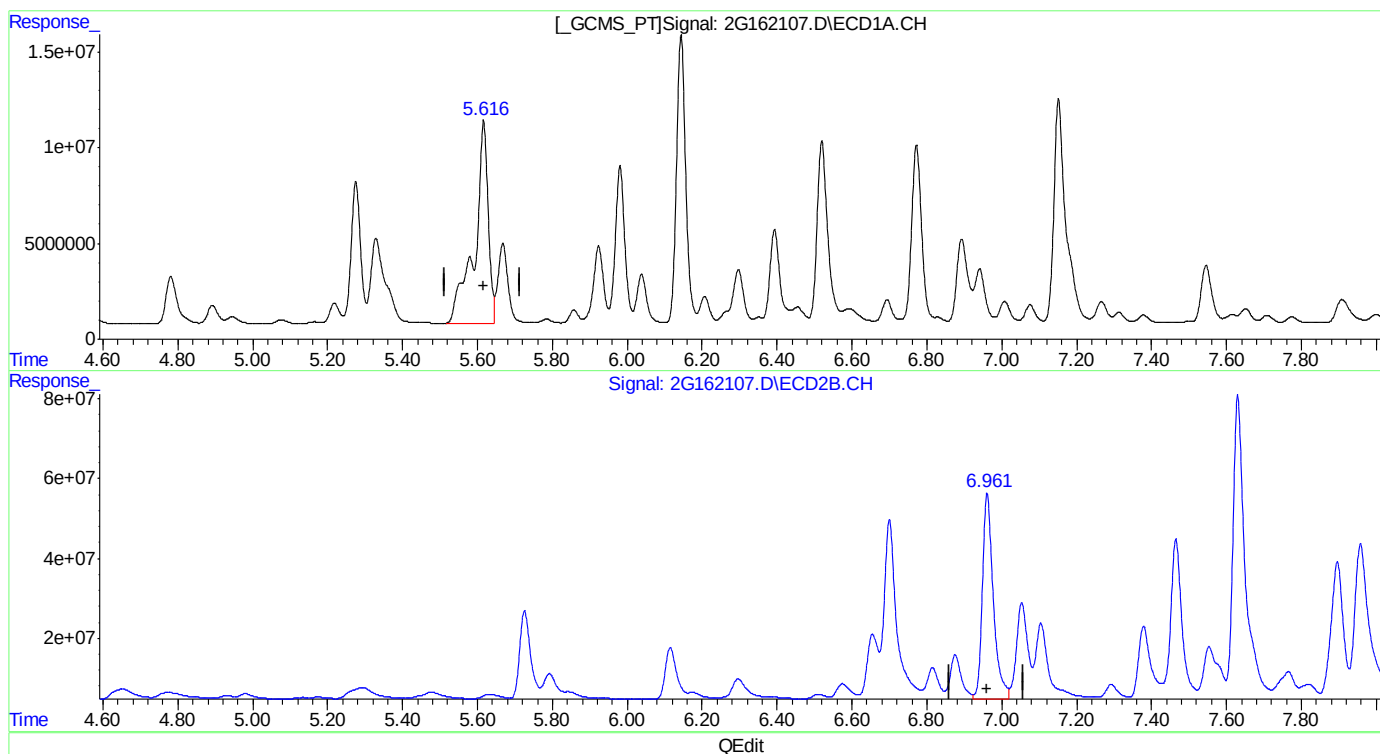
(25) AR1254-B #2  
6.961min 1054.345PPB  
response 1037386452

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B  
5.616min 1038.943PPB m  
response 268829390

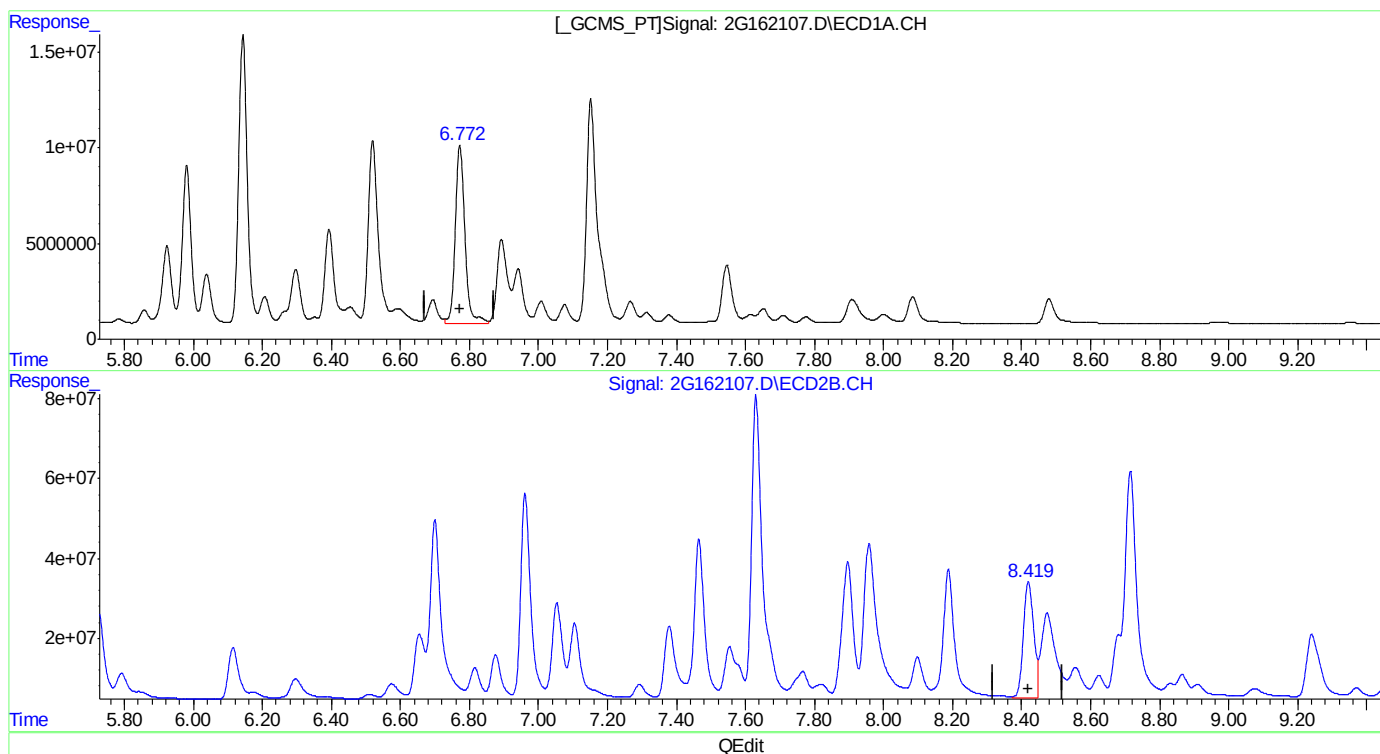
(25) AR1254-B #2  
6.961min 1054.345PPB  
response 1037386452

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.772min 1050.190PPB  
response 179788782

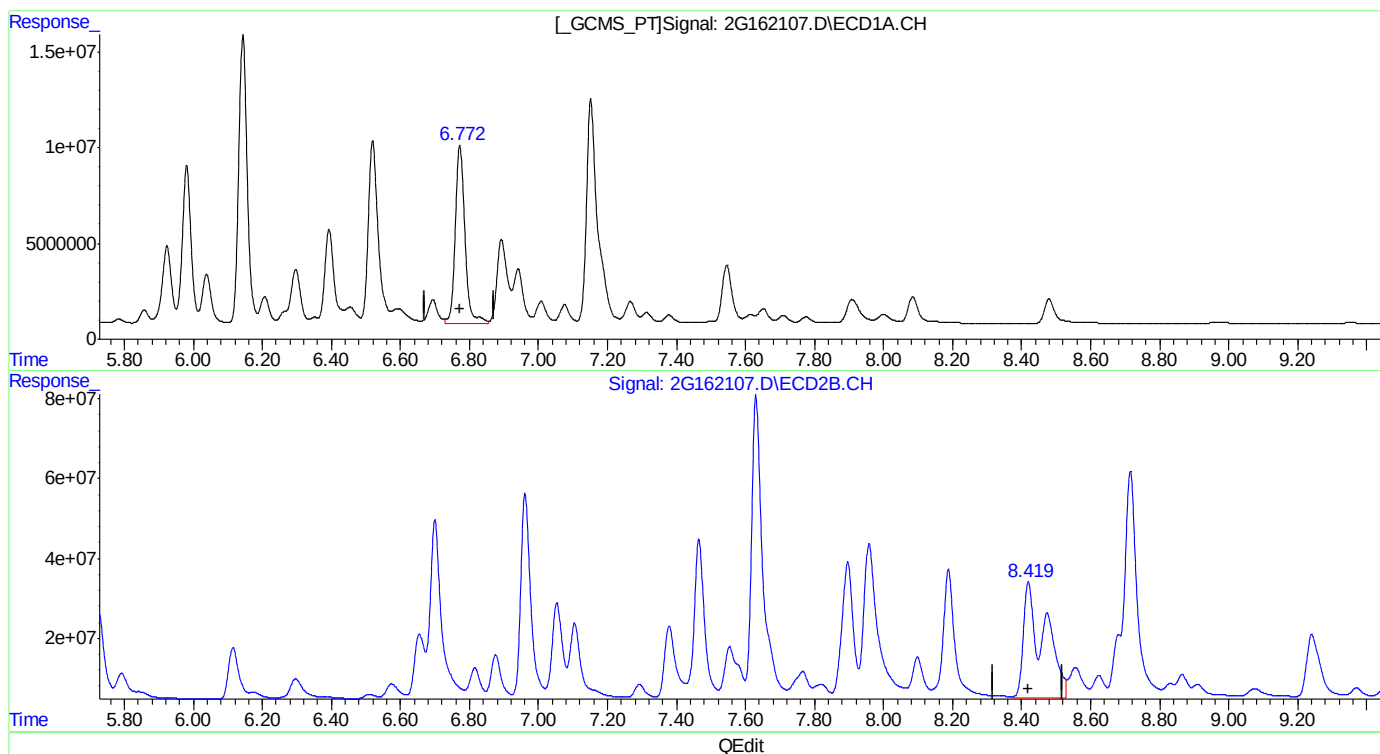
(29) AR1254-F #2  
8.420min 520.166PPB  
response 614411351

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F  
6.772min 1050.190PPB  
response 179788782

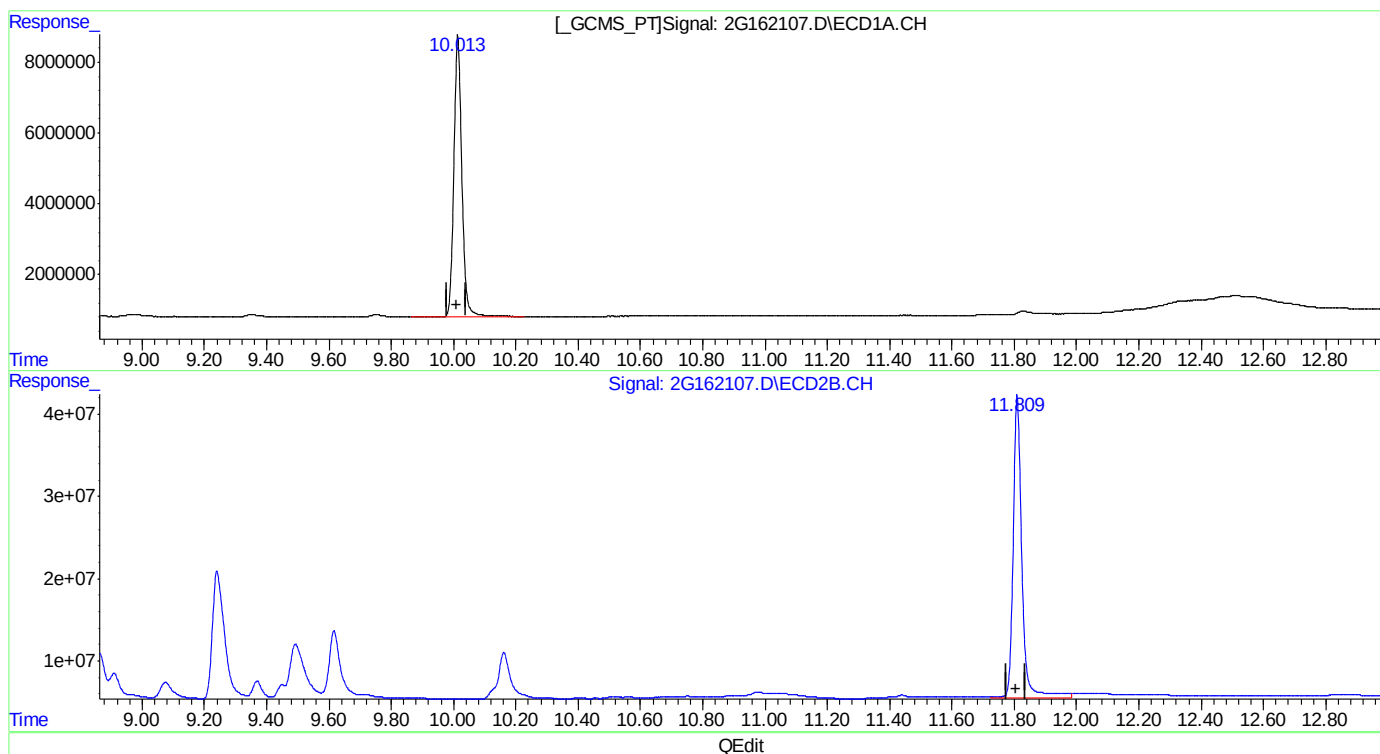
(29) AR1254-F #2  
8.419min 1042.487PPB m  
response 1231368568

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)  
10.014min 34.519ppb  
response 140003082

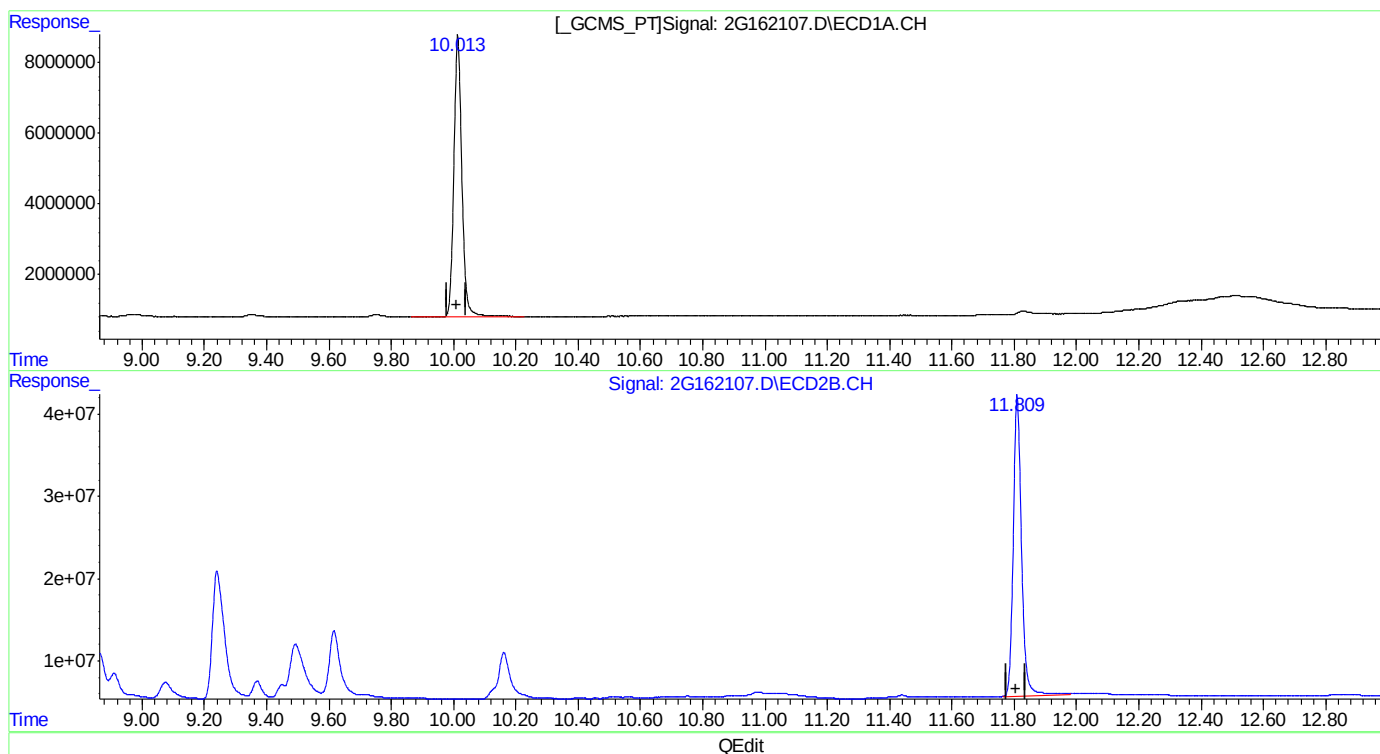
(51) Decachlorobiphenyl #2 (S)  
11.809min 37.606ppb  
response 718253484

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162107.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:34 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:13:26 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)  
10.014min 34.519ppb  
response 140003082

(51) Decachlorobiphenyl #2 (S)  
11.809min 35.236ppb m  
response 672981588

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:15:34 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.781  | 3.433  | 170.6E6  | 1052.0E6 | 46.480    | 45.976    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 116.20%   | 114.94%   |
| 51) S Decachlor...          | 10.013 | 11.810 | 170.8E6  | 815.2E6  | 42.102    | 42.680    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 105.25%   | 106.70%   |
| Target Compounds            |        |        |          |          |           |           |
| 7) AR1232-A                 | 3.154  | 4.095  | 98365261 | 512.2E6  | 1010.501m | 1020.405  |
| 8) AR1232-B                 | 3.559  | 4.636  | 68498112 | 401.6E6  | 1024.767  | 1020.600  |
| 9) AR1232-C                 | 4.108  | 5.283  | 135.9E6  | 827.1E6  | 1041.459  | 1014.523  |
| 10) AR1232-D                | 4.269  | 5.470  | 56766203 | 372.0E6  | 1042.085  | 1028.928  |
| 11) AR1232-E                | 4.784  | 6.116  | 53116179 | 220.0E6  | 1031.594  | 1012.367  |
| 41) AR1262-A                | 6.771  | 8.188  | 203.7E6  | 1084.4E6 | 1052.988  | 1038.504  |
| 42) AR1262-B                | 7.313  | 8.829  | 258.5E6  | 1494.9E6 | 1066.632  | 1046.686  |
| 43) AR1262-C                | 7.651  | 9.260  | 238.6E6  | 1393.4E6 | 1051.048  | 1042.970  |
| 44) AR1262-D                | 8.080  | 9.611  | 514.2E6  | 2841.1E6 | 1059.463  | 1039.845  |
| 45) AR1262-E                | 8.525  | 10.124 | 598.9E6  | 3168.8E6 | 1071.837m | 1044.277m |
| -----                       |        |        |          |          |           |           |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

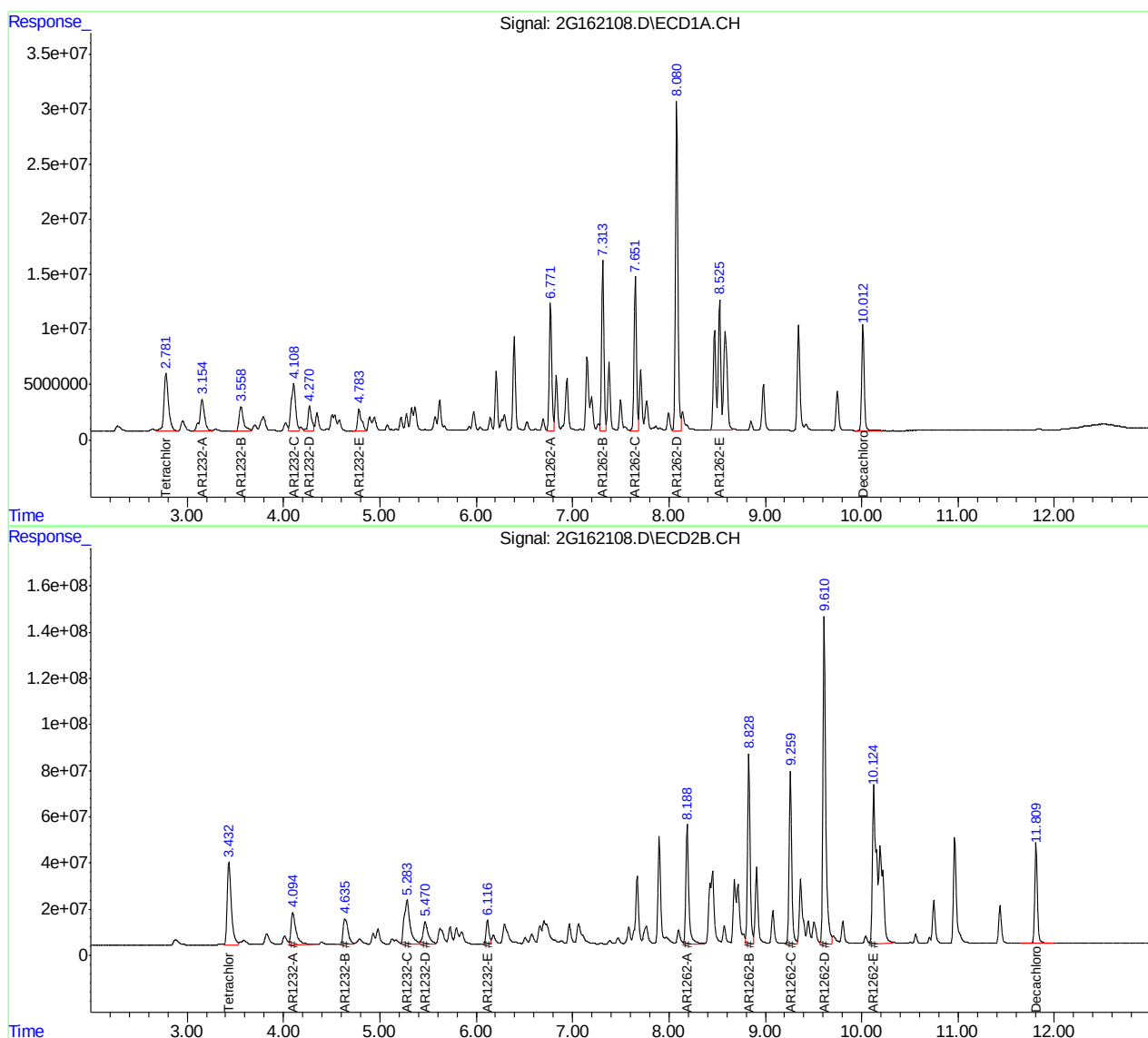


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:15:34 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: G2G4311-ICV4311

Method: SW846 8082A

Lab FileID: 2G162108.D

Analyst approved: 04/19/18 16:16 Rebecca Krug

Injection Time: 04/19/18 15:51

Supervisor approved: 04/20/18 09:13 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1232-A  |     | 1    | 3.15           | Split peak |
| AR1262-E  |     | 1    | 8.53           | Split peak |
| AR1262-E  |     | 2    | 10.12          | Split peak |

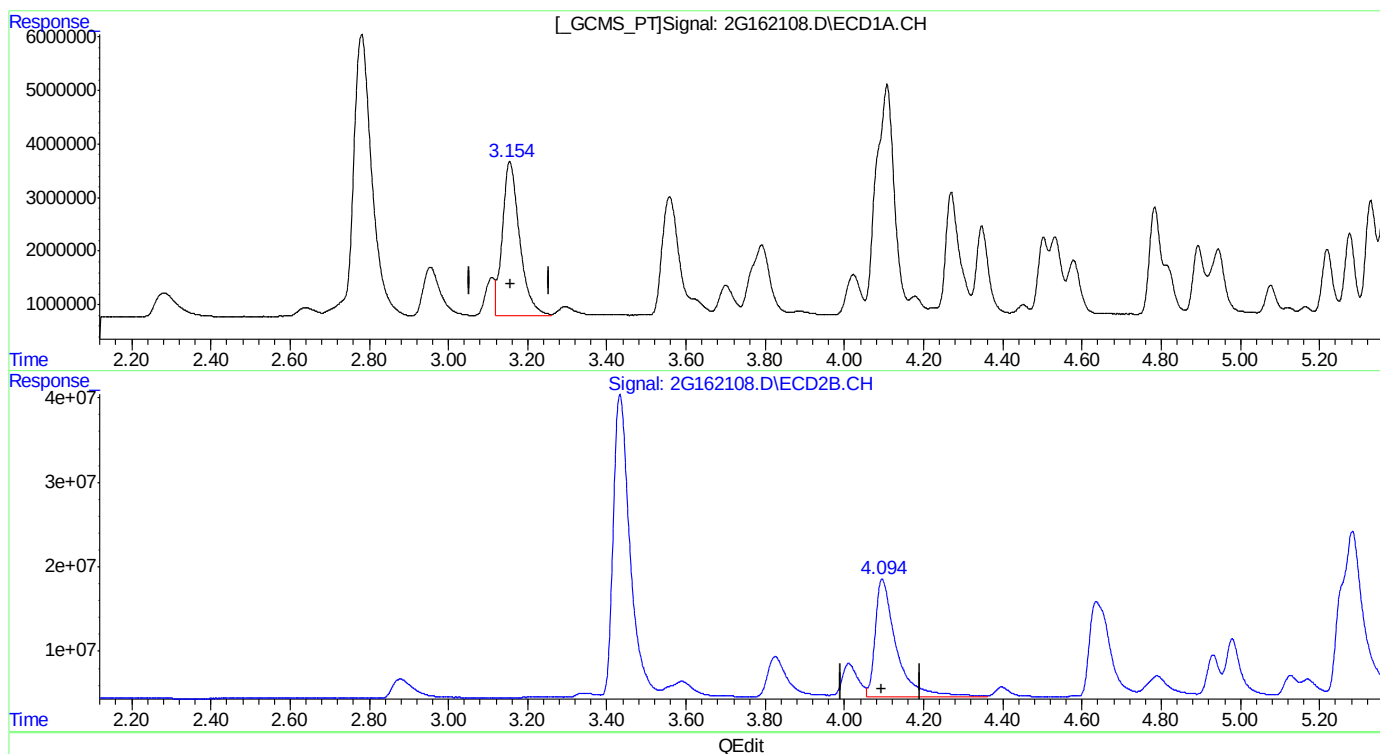
7.5.13.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:14:40 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(7) AR1232-A  
3.155min 889.288PPB  
response 86566070

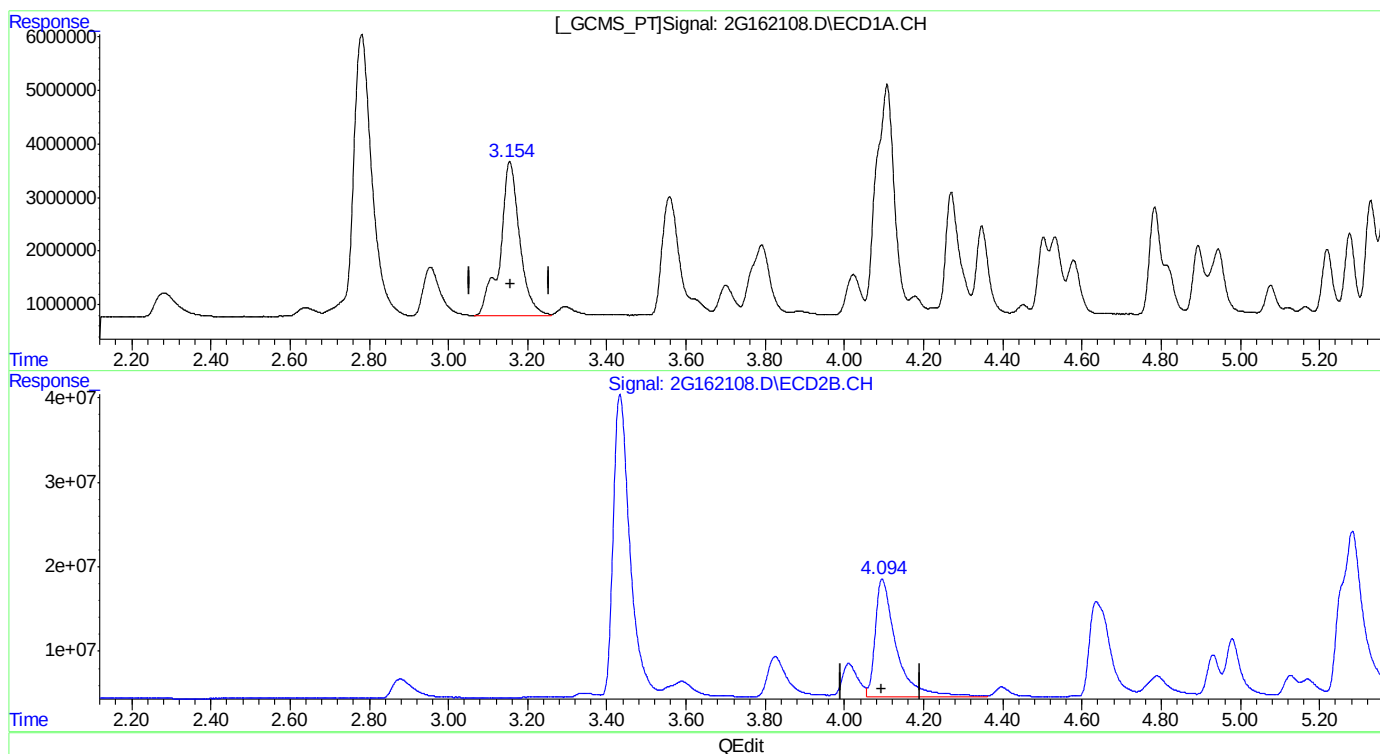
(7) AR1232-A #2  
4.095min 1020.405PPB  
response 512203545

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:14:40 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(7) AR1232-A  
3.154min 1010.501PPB m  
response 98365261

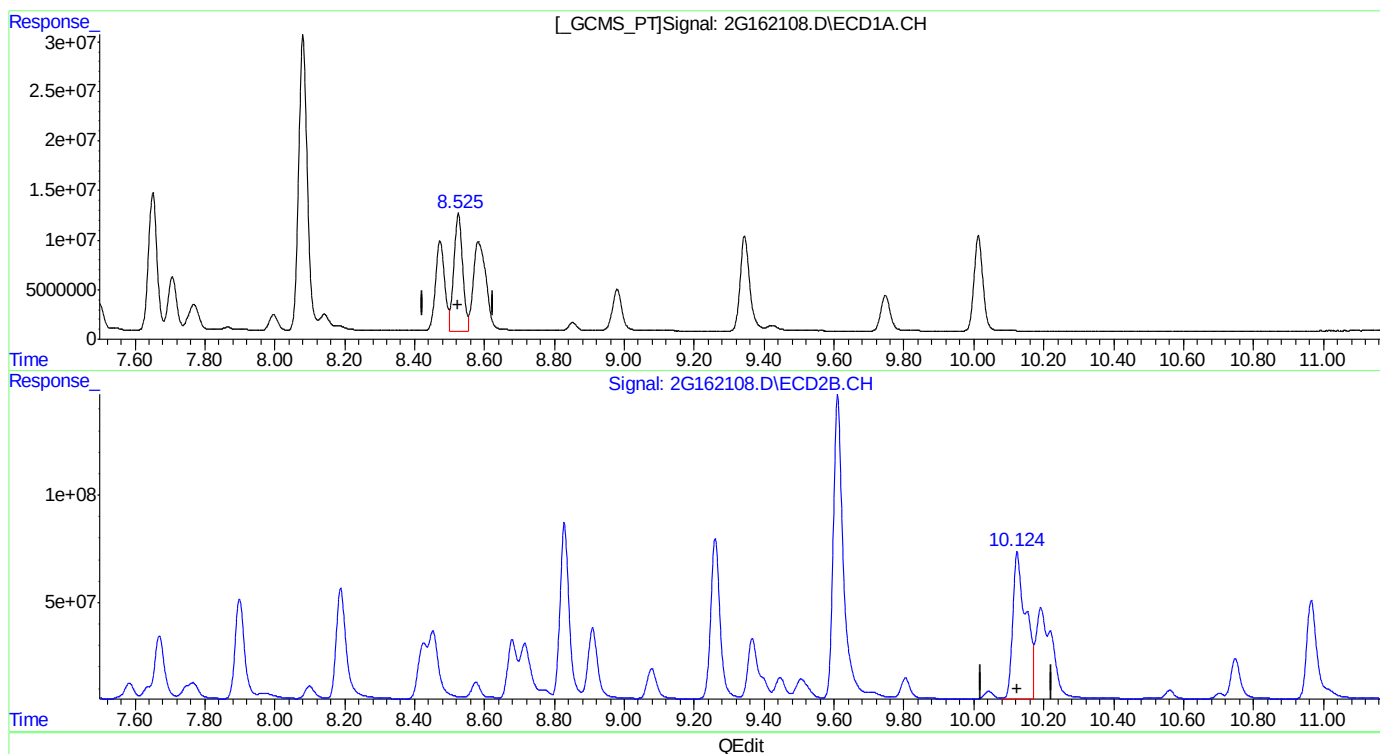
(7) AR1232-A #2  
4.095min 1020.405PPB  
response 512203545

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:14:40 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(45) AR1262-E  
8.525min 372.421PPB  
response 208100944

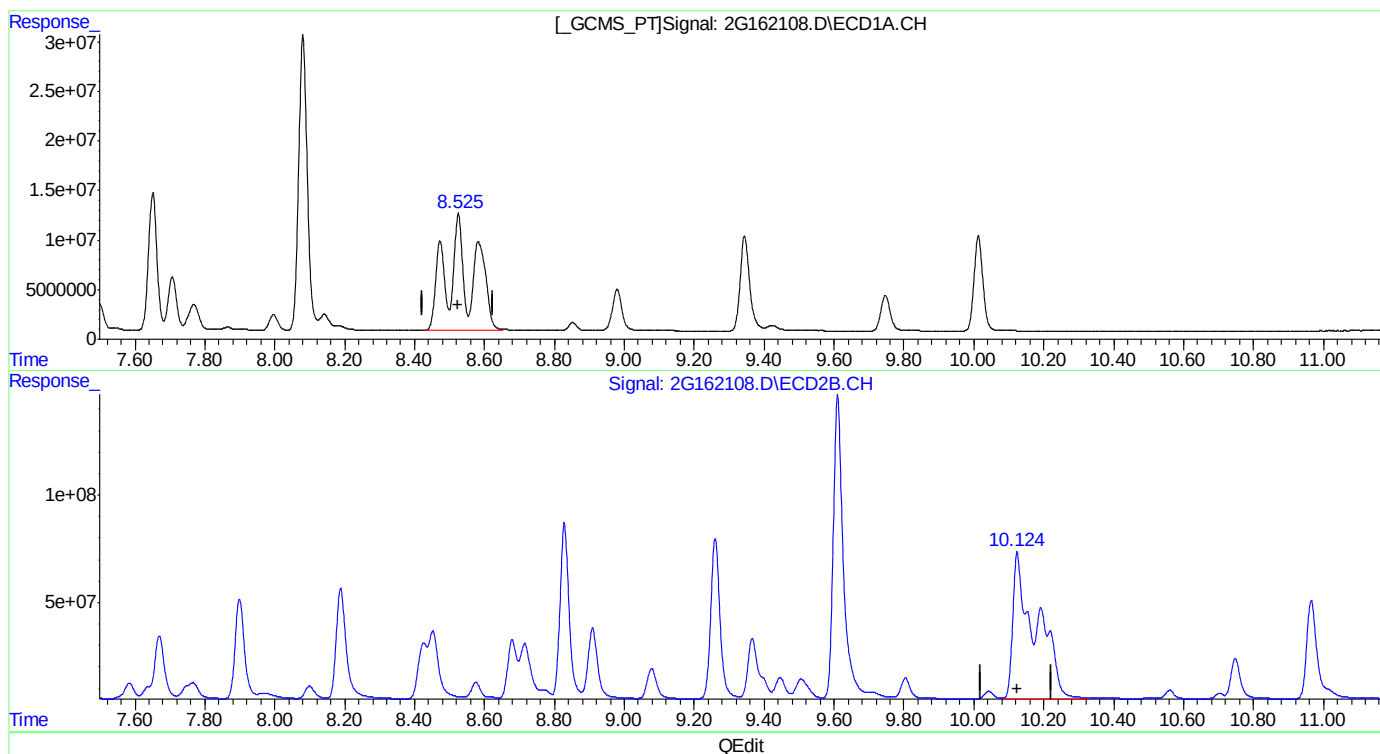
(45) AR1262-E #2  
10.124min 596.212PPB  
response 1809171074

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162108.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 3:51 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:14:40 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(45) AR1262-E  
8.525min 1071.837PPB m  
response 598920161

(45) AR1262-E #2  
10.124min 1044.277PPB m  
response 3168798686

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
 Data File : 2G162109.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 19 Apr 2018 4:08 pm  
 Operator : tianweir  
 Sample : icv4311-1000  
 Misc : OP11095,G2G4311,15.0,,,10.0,1  
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Apr 19 16:22:59 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu Apr 19 15:41:07 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb      |
|-----------------------------|--------|--------|----------|----------|----------|----------|
| -----                       |        |        |          |          |          |          |
| System Monitoring Compounds |        |        |          |          |          |          |
| 1) S Tetrachlo...           | 2.779  | 3.433  | 170.1E6  | 1071.4E6 | 46.334   | 46.824   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 115.83%  | 117.06%  |
| 51) S Decachlor...          | 10.011 | 11.808 | 484.9E6  | 2297.4E6 | 119.548  | 120.287  |
| Spiked Amount               | 40.000 |        | Recovery | =        | 298.87%  | 300.72%  |
| Target Compounds            |        |        |          |          |          |          |
| 12) AR1242-A                | 3.557  | 4.632  | 114.9E6  | 679.7E6  | 959.253  | 963.525  |
| 13) AR1242-B                | 4.107  | 5.279  | 244.9E6  | 1499.1E6 | 969.788  | 968.618  |
| 14) AR1242-C                | 4.269  | 5.466  | 101.8E6  | 667.6E6  | 965.352  | 1001.218 |
| 15) AR1242-D                | 4.783  | 6.115  | 102.5E6  | 438.9E6  | 940.947  | 961.639  |
| 16) AR1242-E                | 5.365  | 6.729  | 87846237 | 601.3E6  | 944.779  | 947.908  |
| 46) AR1268-A                | 8.524  | 10.124 | 581.9E6  | 3010.5E6 | 1011.408 | 975.558  |
| 47) AR1268-B                | 8.579  | 10.191 | 583.9E6  | 3067.7E6 | 1029.222 | 989.902  |
| 48) AR1268-C                | 8.851  | 10.558 | 487.0E6  | 2443.7E6 | 1029.490 | 978.062  |
| 49) AR1268-D                | 9.342  | 10.964 | 204.7E6  | 1041.8E6 | 1027.571 | 1004.017 |
| 50) AR1268-E                | 9.744  | 11.432 | 1646.4E6 | 7834.9E6 | 1019.371 | 951.057  |
| -----                       |        |        |          |          |          |          |

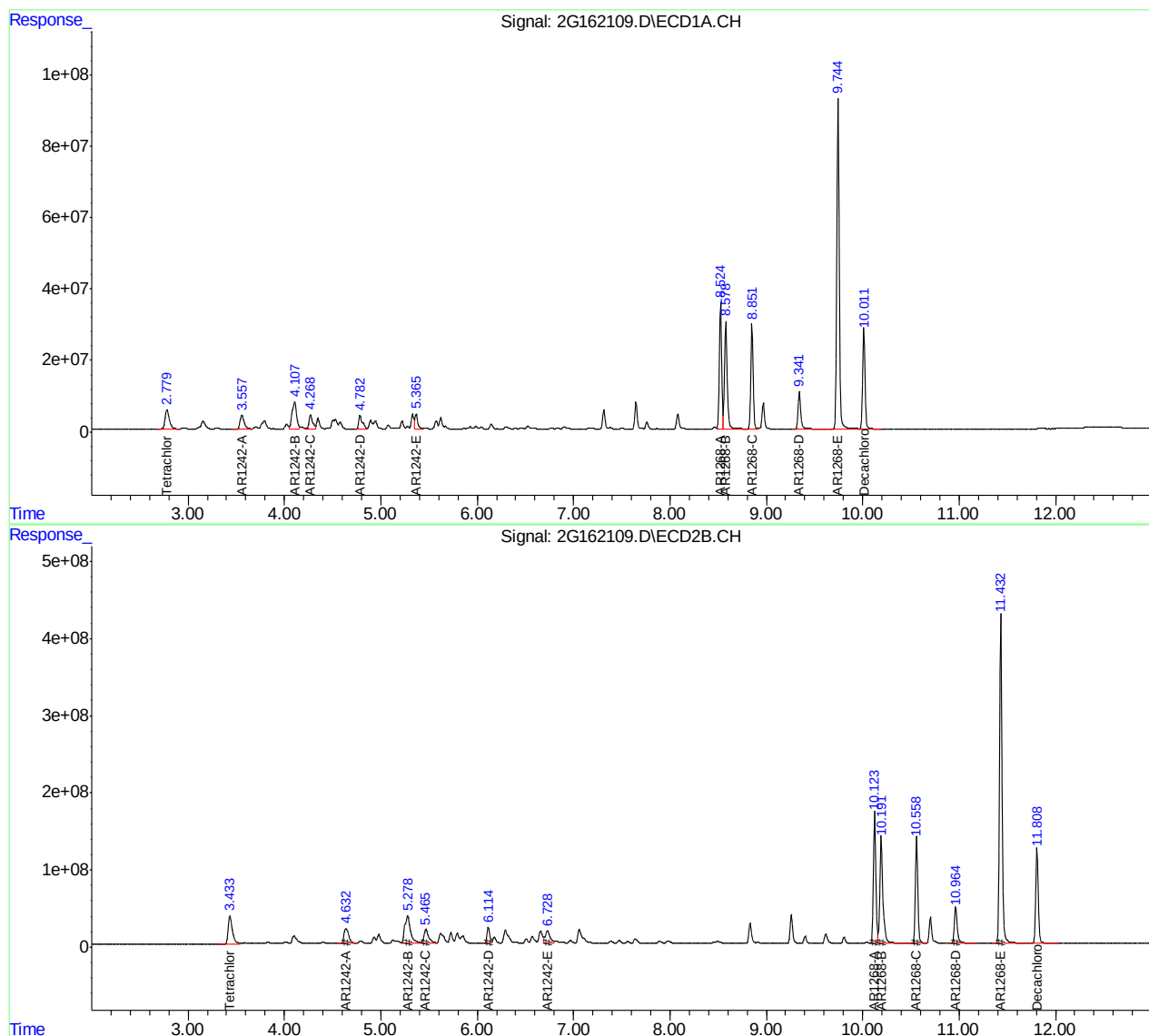
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162109.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:08 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:22:59 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:40:55 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.780  | 3.432  | 166.8E6  | 1120.3E6 | 45.447    | 48.962    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 113.62%   | 122.41%   |
| 51) S Decachlor...          | 10.014 | 11.809 | 181.0E6  | 849.3E6  | 44.625    | 44.465m   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 111.56%   | 111.16%   |
| Target Compounds            |        |        |          |          |           |           |
| 17) AR1248-A                | 3.555  | 4.633  | 55493048 | 338.8E6  | 937.800   | 933.925   |
| 18) AR1248-B                | 4.106  | 5.282  | 154.8E6  | 932.7E6  | 1002.483  | 976.877m  |
| 19) AR1248-C                | 4.502  | 5.726  | 165.4E6  | 573.0E6  | 1001.355m | 1005.821  |
| 20) AR1248-D                | 4.783  | 6.113  | 164.0E6  | 735.7E6  | 1025.894  | 1011.756  |
| 21) AR1248-E                | 4.892  | 6.291  | 146.3E6  | 914.0E6  | 1030.010m | 1038.805  |
| 22) AR1248-F                | 5.364  | 6.722  | 154.2E6  | 1158.1E6 | 1099.867  | 1055.670  |
| 23) AR1248-G                | 5.620  | 7.055  | 169.0E6  | 1306.3E6 | 1074.742m | 1070.589m |
| -----                       |        |        |          |          |           |           |

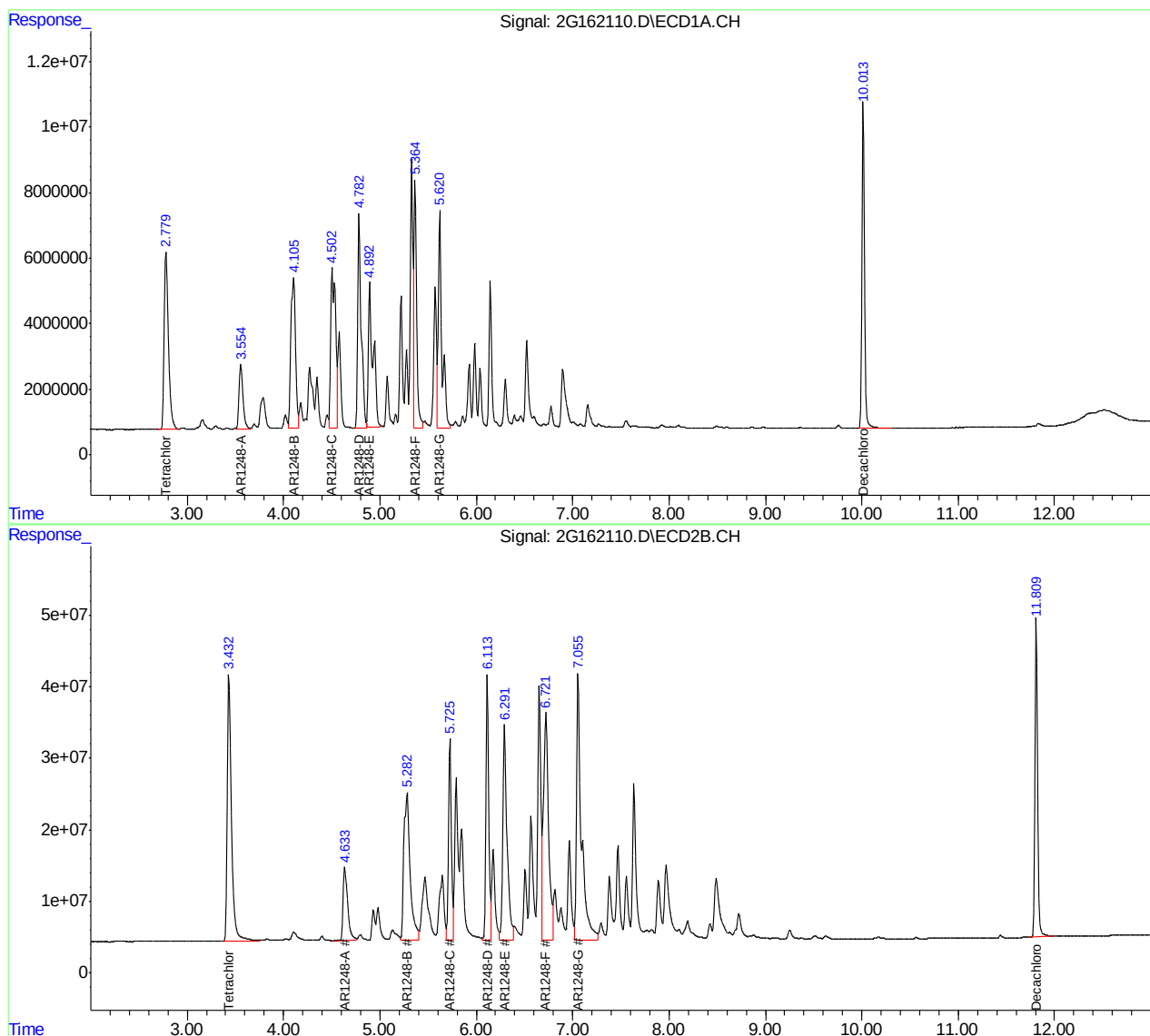
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:40:55 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4311-ICV4311

Method:

SW846 8082A

Lab FileID:

2G162110.D

Analyst approved:

04/19/18 16:41 Rebecca Krug

Injection Time:

04/19/18 16:25

Supervisor approved:

04/20/18 09:13 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1248-C           |           | 1    | 4.50           | Split peak              |
| AR1248-E           |           | 1    | 4.89           | Split peak              |
| AR1248-B           |           | 2    | 5.28           | Split peak              |
| Ar1248-G           |           | 1    | 5.62           | Split peak              |
| Ar1248-G           |           | 2    | 7.05           | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.81          | Poorly defined baseline |

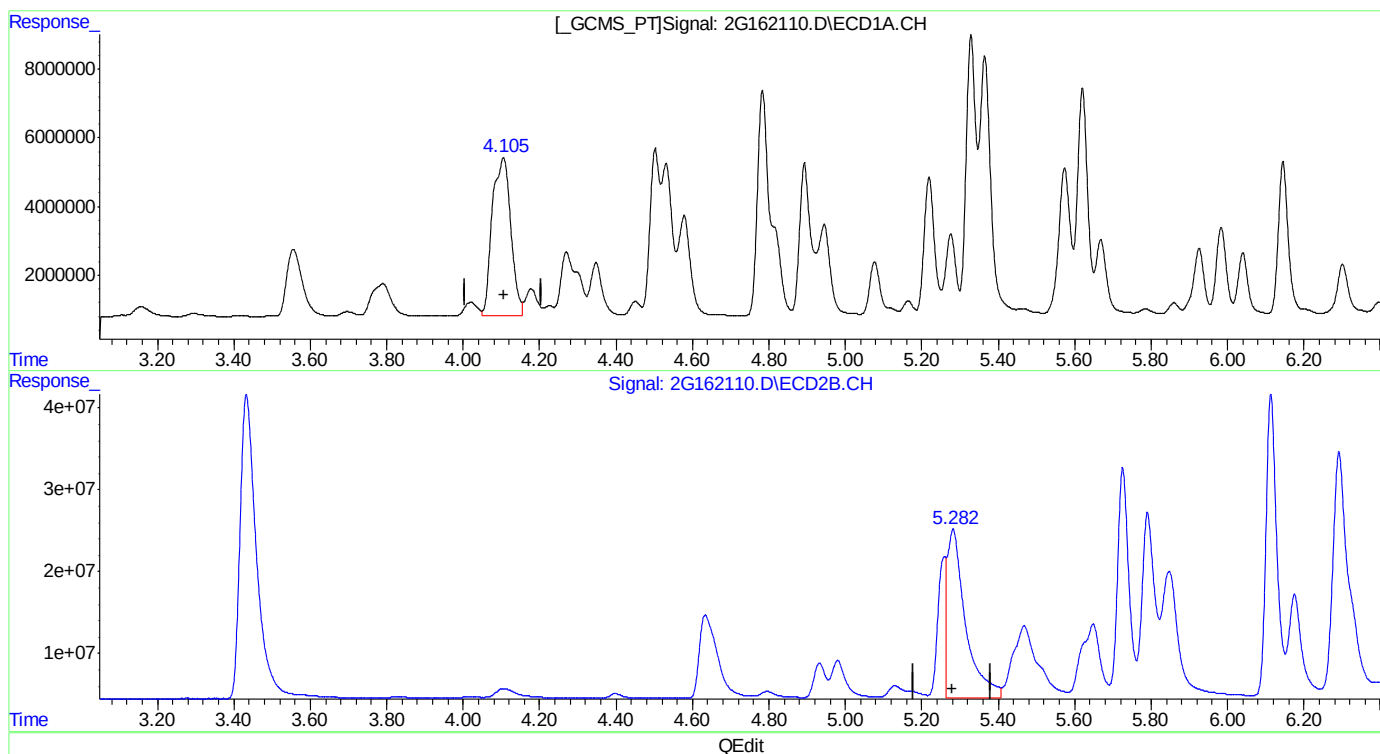
7.5.15.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(18) AR1248-B  
4.106min 1002.483PPB  
response 154780930

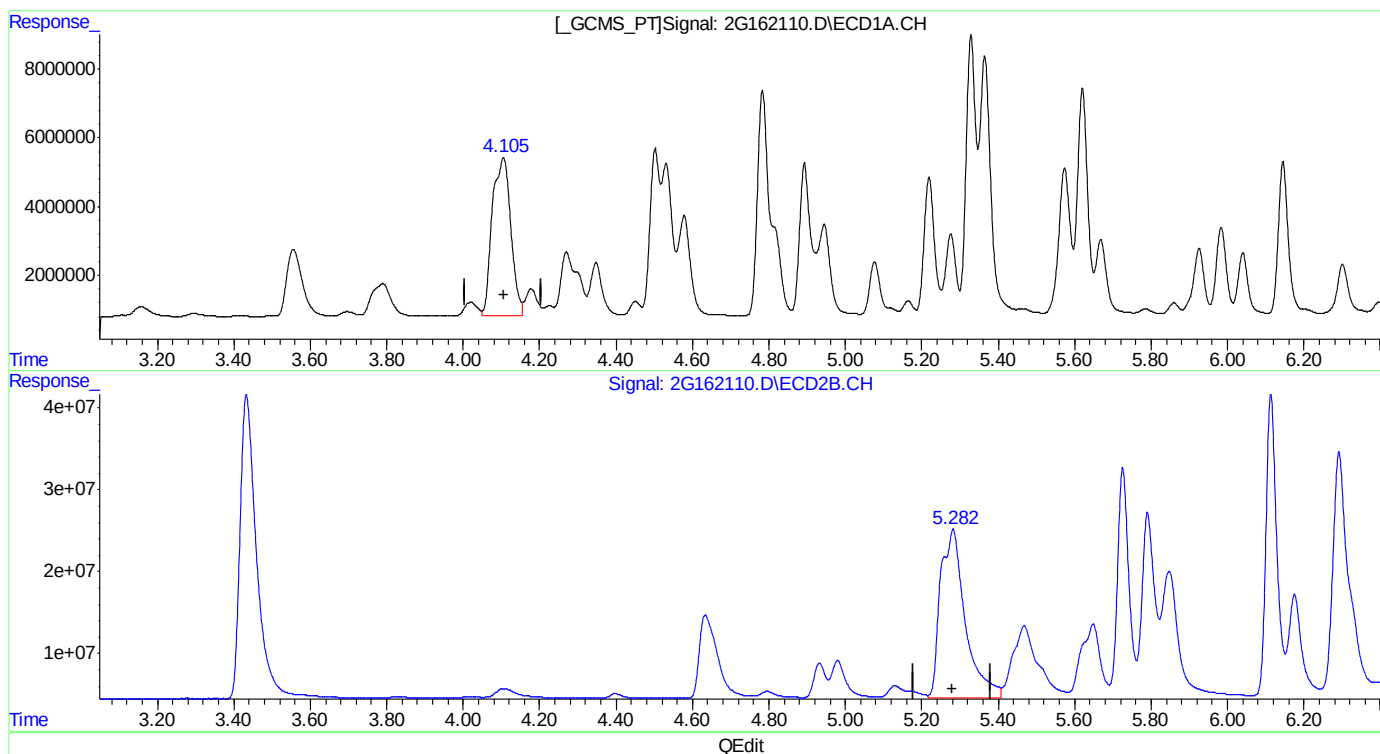
(18) AR1248-B #2  
5.282min 717.865PPB  
response 685407759

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(18) AR1248-B  
4.106min 1002.483PPB  
response 154780930

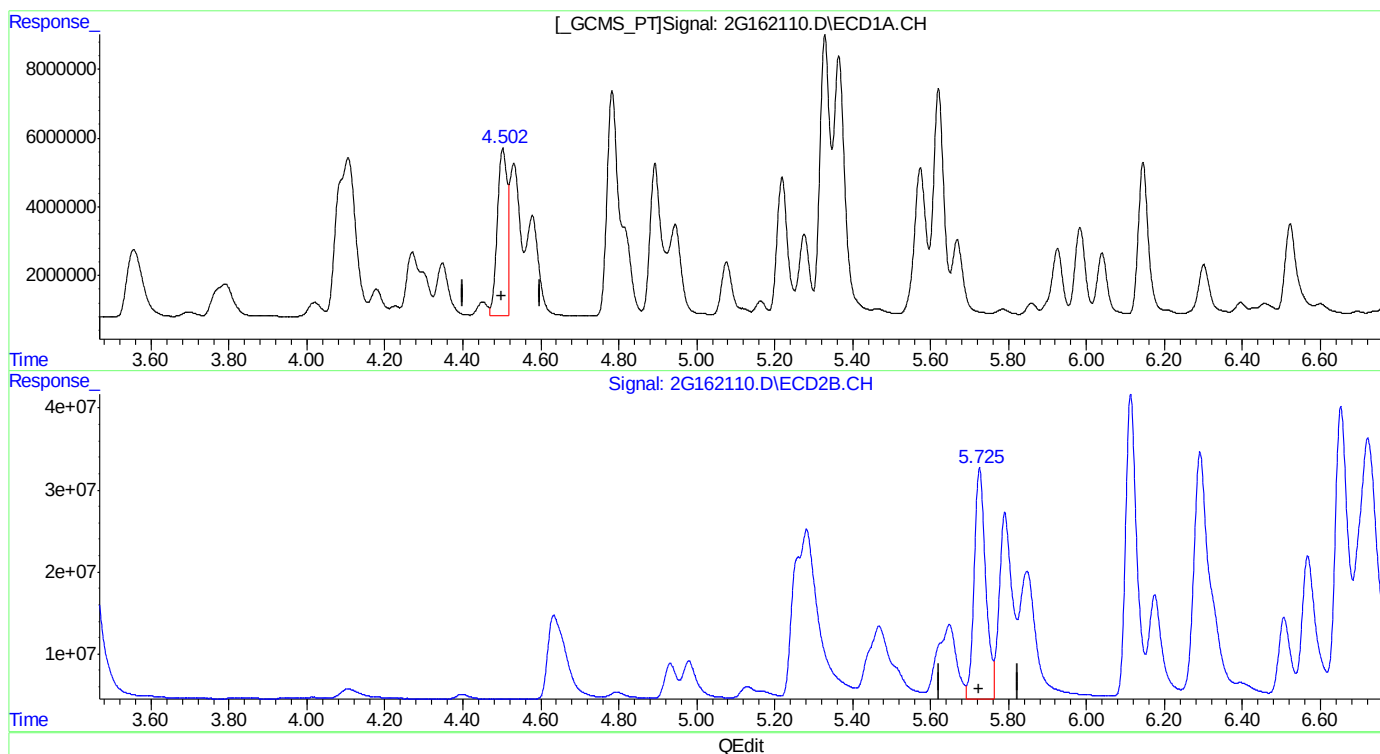
(18) AR1248-B #2  
5.282min 976.877PPB m  
response 932708612

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(19) AR1248-C  
4.502min 511.510PPB  
response 84504842

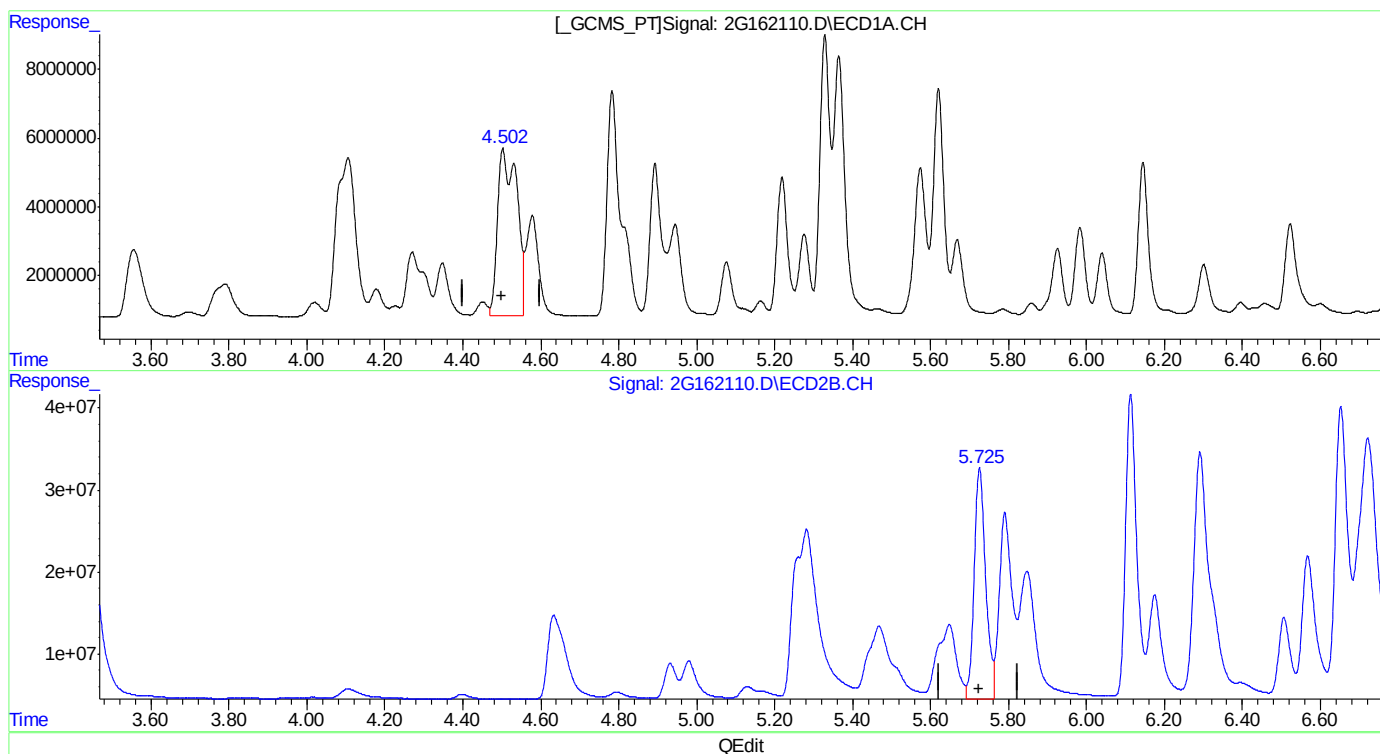
(19) AR1248-C #2  
5.726min 1005.821PPB  
response 572997262

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(19) AR1248-C  
4.502min 1001.355PPB m  
response 165430599

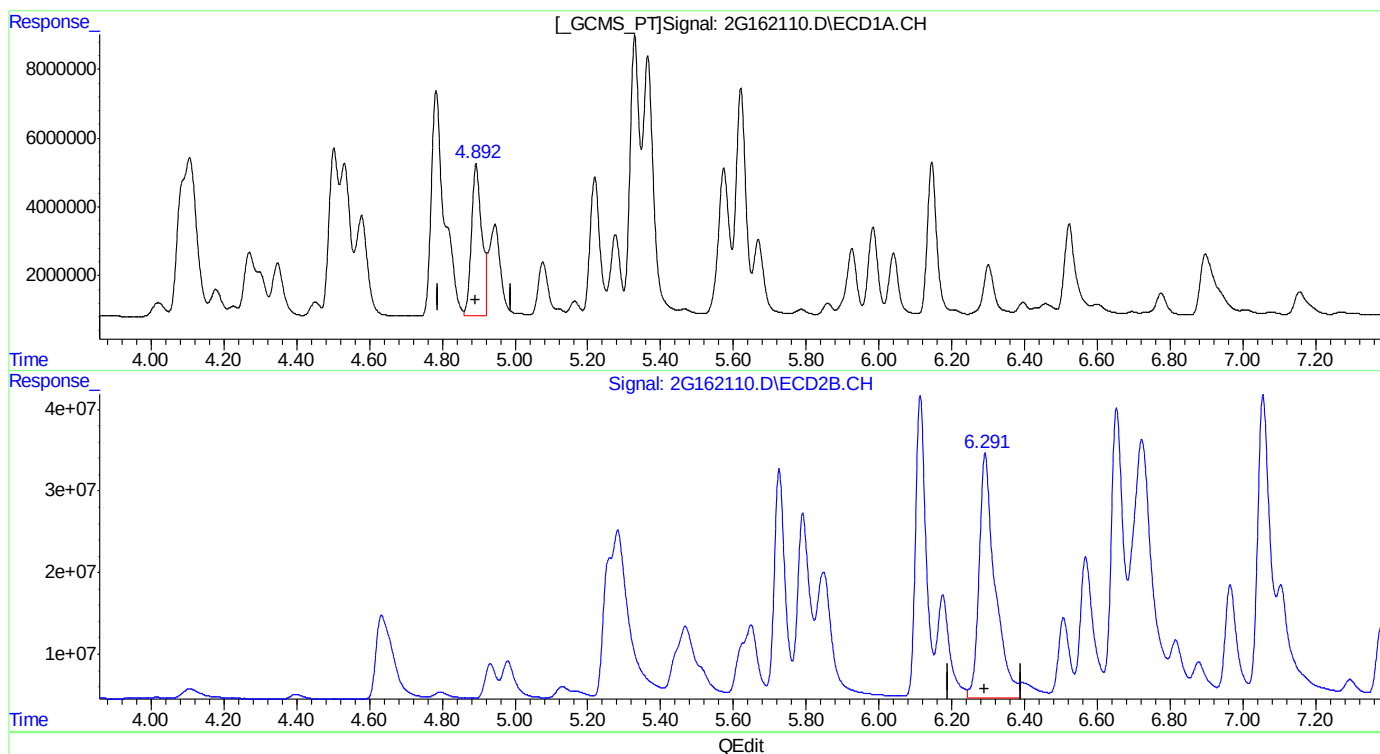
(19) AR1248-C #2  
5.726min 1005.821PPB  
response 572997262

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(21) AR1248-E  
4.893min 621.051PPB  
response 88230545

(21) AR1248-E #2  
6.291min 1038.805PPB  
response 914038075

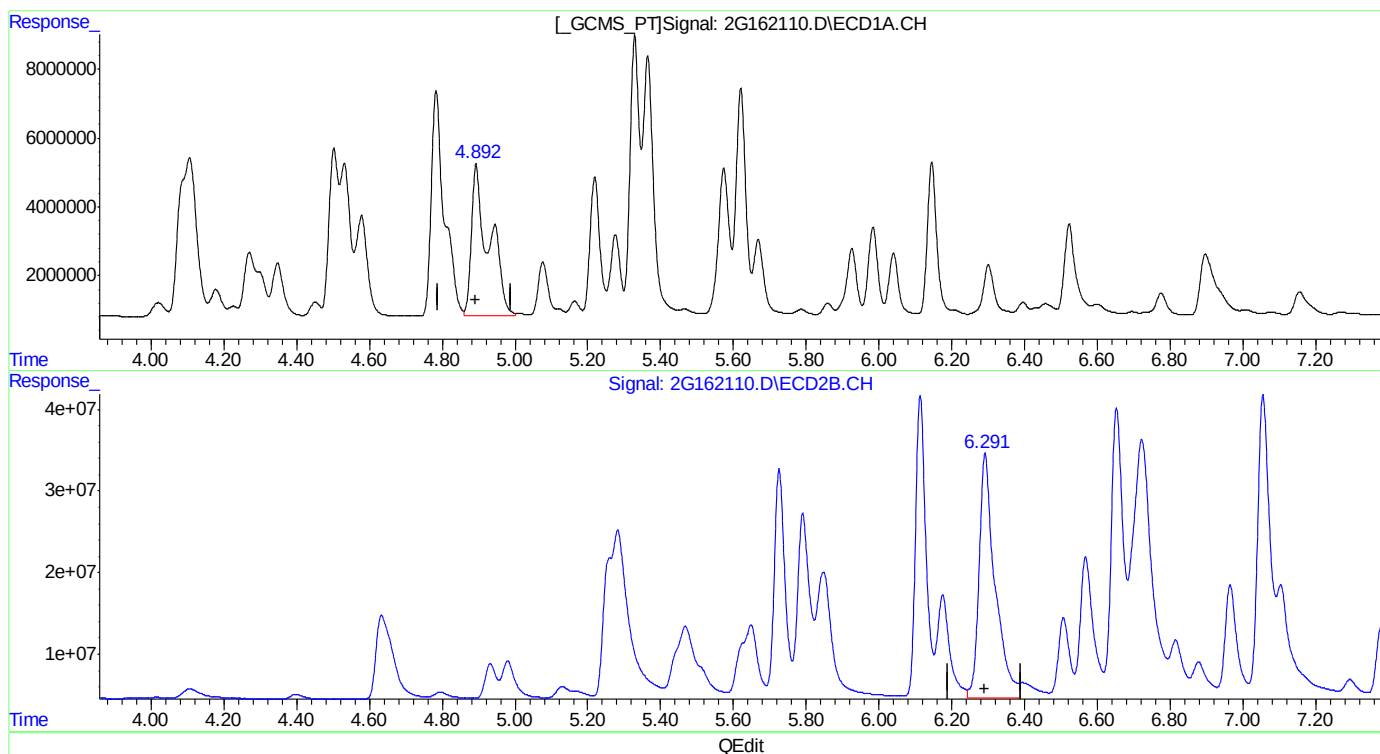


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(21) AR1248-E  
4.892min 1030.010PPB m  
response 146329784

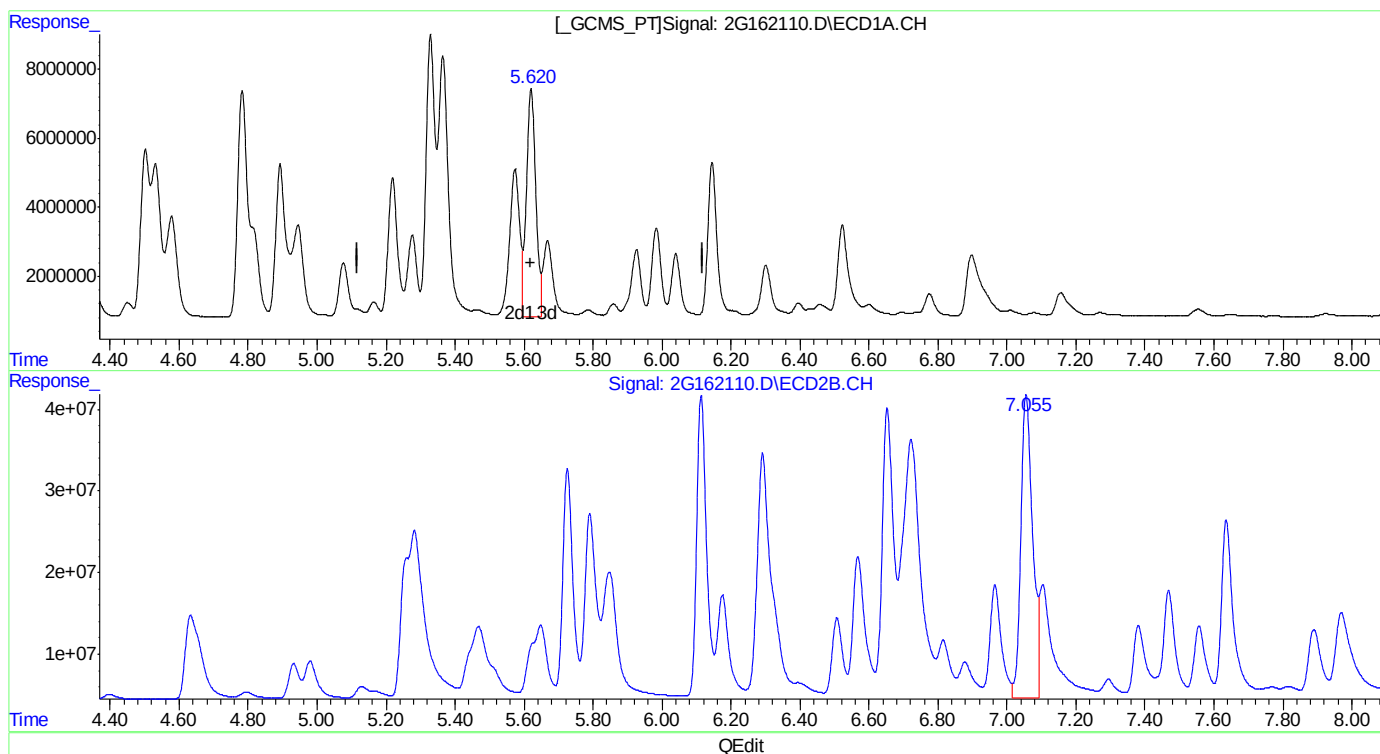
(21) AR1248-E #2  
6.291min 1038.805PPB  
response 914038075

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(23) AR1248-G  
5.621min 791.749  
response 124478866

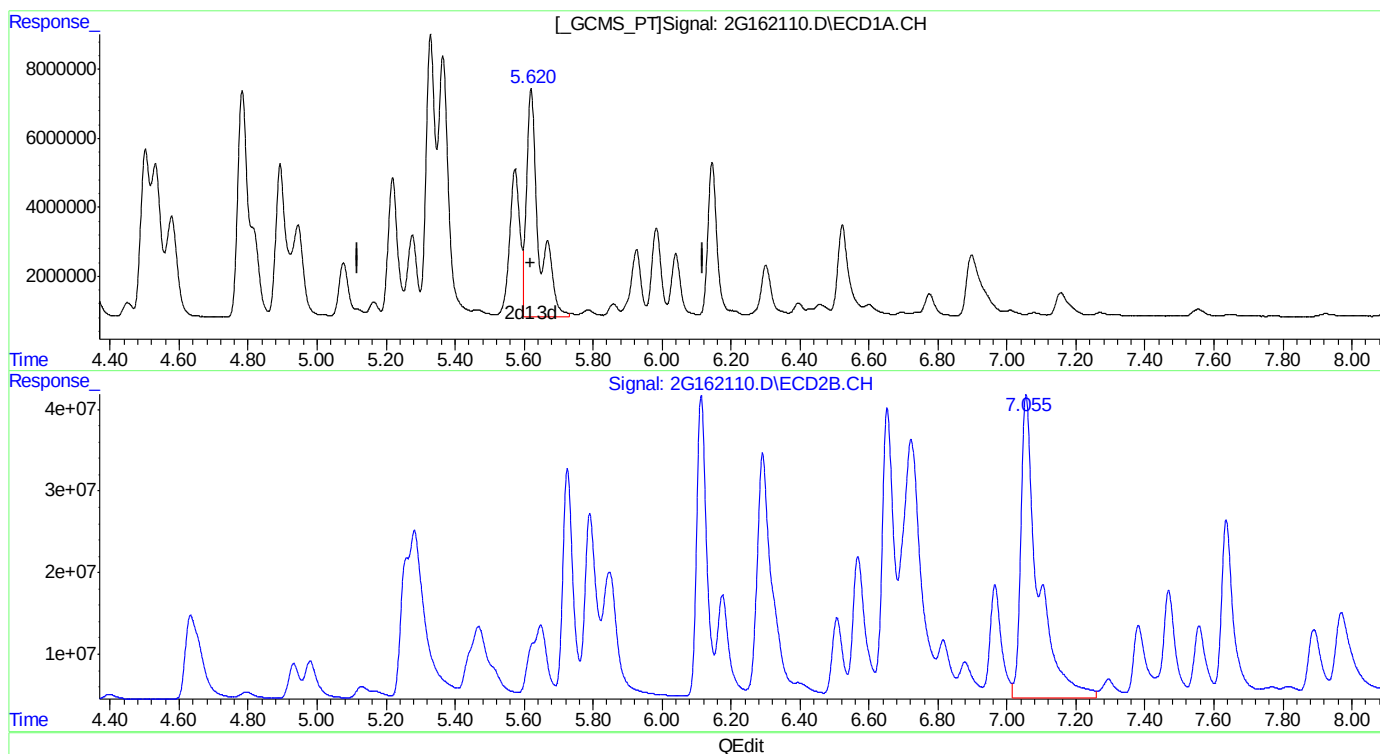
(23) AR1248-G #2  
7.055min 715.412  
response 872937026

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(23) AR1248-G  
5.620min 1074.742 m  
response 168970983

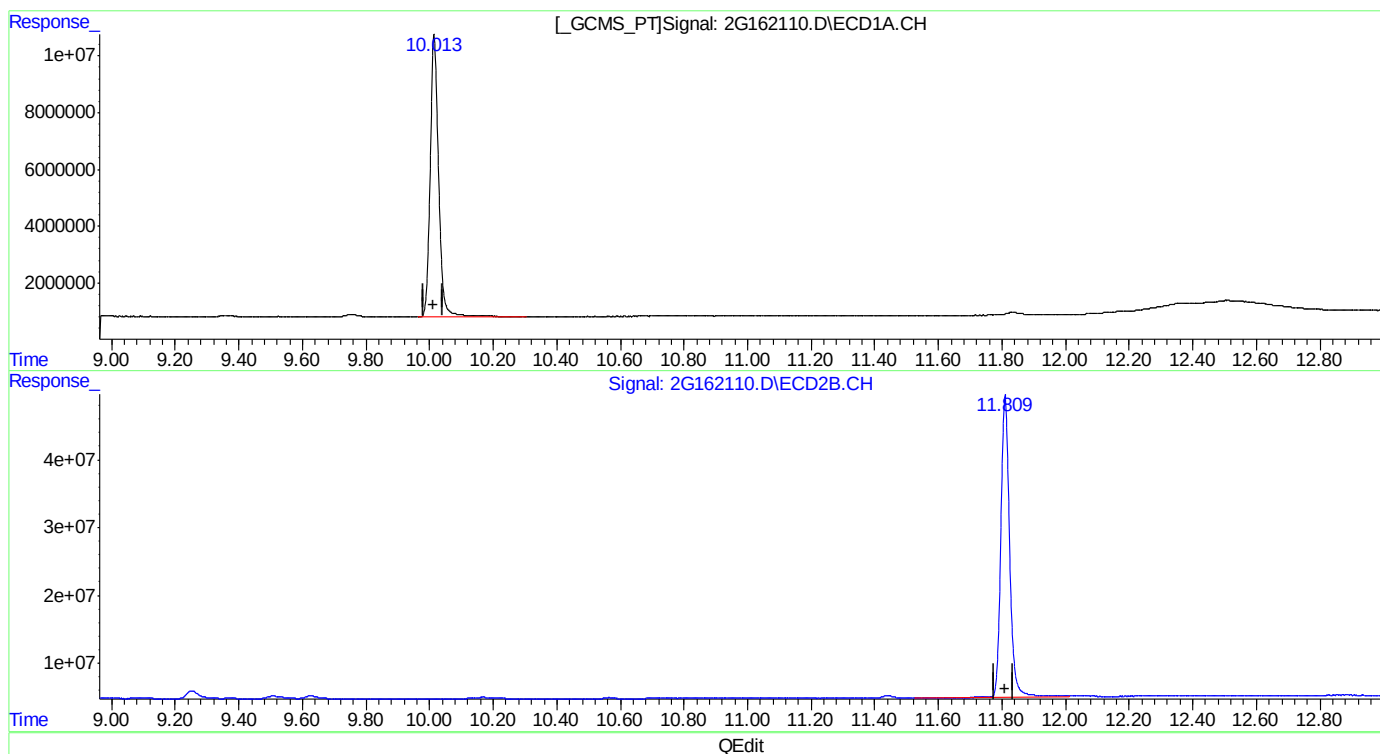
(23) AR1248-G #2  
7.055min 1070.589 m  
response 1306320019

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)  
10.014min 44.625ppb  
response 180988260

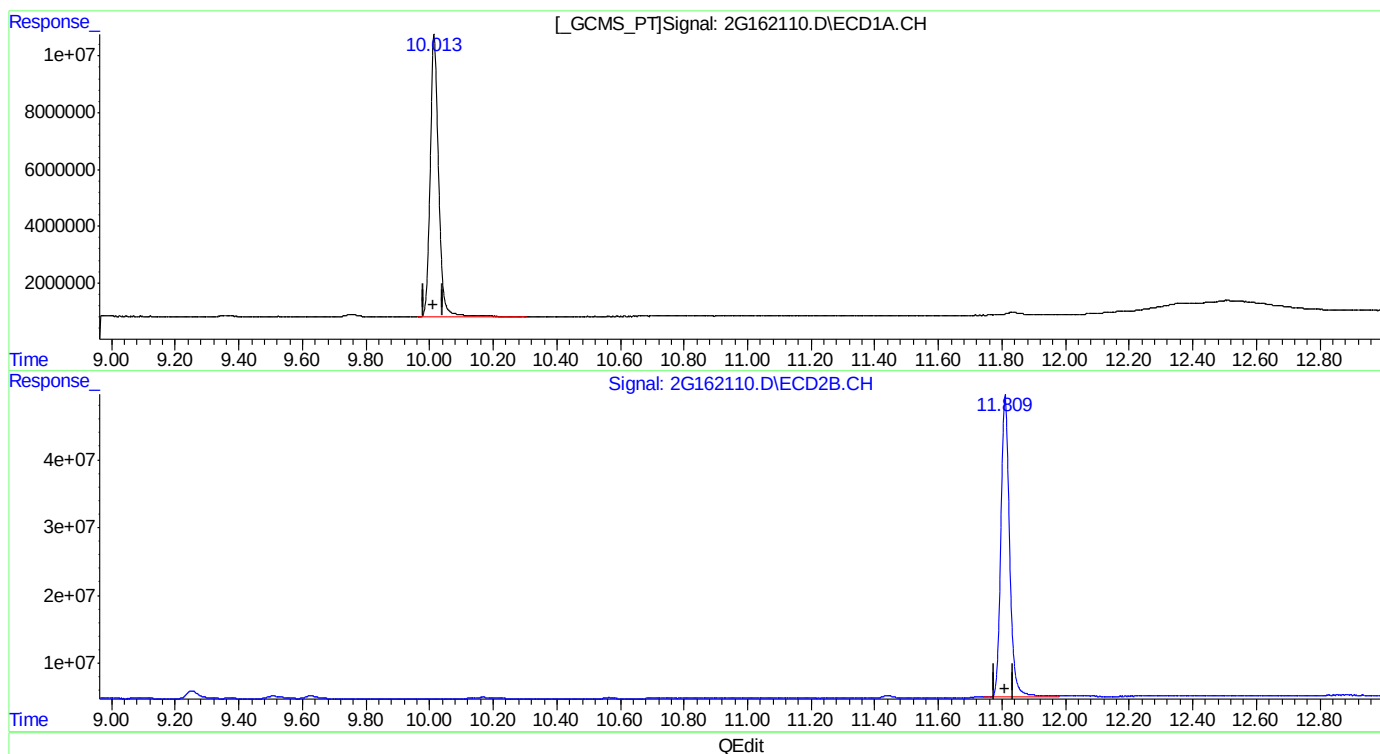
(51) Decachlorobiphenyl #2 (S)  
11.810min 45.408ppb  
response 867272515

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4311\  
Data File : 2G162110.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 19 Apr 2018 4:25 pm  
Operator : tianweir  
Sample : icv4311-1000  
Misc : OP11095,G2G4311,15.0,,,10.0,1  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Apr 19 16:39:39 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu Apr 19 15:41:07 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)  
10.014min 44.625ppb  
response 180988260

(51) Decachlorobiphenyl #2 (S)  
11.809min 44.465ppb m  
response 849257237

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
 Data File : 2G164625.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 4:18 am  
 Operator : christp  
 Sample : cc4311-1000  
 Misc : OP12371,G2G4349,300,,,2,1  
 ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 09:53:46 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 09:51:57 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

|                             | Compound       | RT#1   | RT#2    | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|----------------|--------|---------|----------|----------|-----------|-----------|
| -----                       |                |        |         |          |          |           |           |
| System Monitoring Compounds |                |        |         |          |          |           |           |
| 1)                          | S Tetrachlo... | 2.768  | 3.422   | 162.9E6  | 987.4E6  | 44.391    | 43.153    |
|                             | Spiked Amount  | 40.000 |         | Recovery | =        | 110.98%   | 107.88%   |
| 51)                         | S Decachlor... | 9.970  | 11.769  | 156.5E6  | 800.5E6  | 38.580    | 41.914    |
|                             | Spiked Amount  | 40.000 |         | Recovery | =        | 96.45%    | 104.79%   |
| Target Compounds            |                |        |         |          |          |           |           |
| 31)                         | AR1016-A       | 3.142  | 4.086   | 82496976 | 418.8E6  | 1059.107  | 1117.868  |
| 32)                         | AR1016-B       | 3.537  | 4.612   | 143.5E6  | 822.5E6  | 1054.363  | 1026.738  |
| 33)                         | AR1016-C       | 4.087  | 5.263   | 274.7E6  | 1690.4E6 | 947.219   | 975.057   |
| 34)                         | AR1016-D       | 4.246  | 5.448   | 118.2E6  | 876.3E6  | 999.926   | 1164.912  |
| 35)                         | AR1016-E       | 4.753  | 6.087   | 123.2E6  | 519.6E6  | 1010.492  | 1012.683  |
| 36)                         | AR1260-A       | 7.147  | 8.693   | 283.1E6  | 1800.4E6 | 830.523   | 900.330   |
| 37)                         | AR1260-B       | 7.274  | 8.798   | 160.4E6  | 1104.1E6 | 1110.397  | 1262.745  |
| 38)                         | AR1260-C       | 7.612  | 9.229   | 141.3E6  | 1099.9E6 | 887.340   | 1076.177  |
| 39)                         | AR1260-D       | 8.059  | 9.590   | 399.4E6  | 2188.4E6 | 1087.811  | 1019.515  |
| 40)                         | AR1260-E       | 8.483  | 10.139f | 383.1E6  | 2351.5E6 | 1011.375m | 1153.710m |
| -----                       |                |        |         |          |          |           |           |

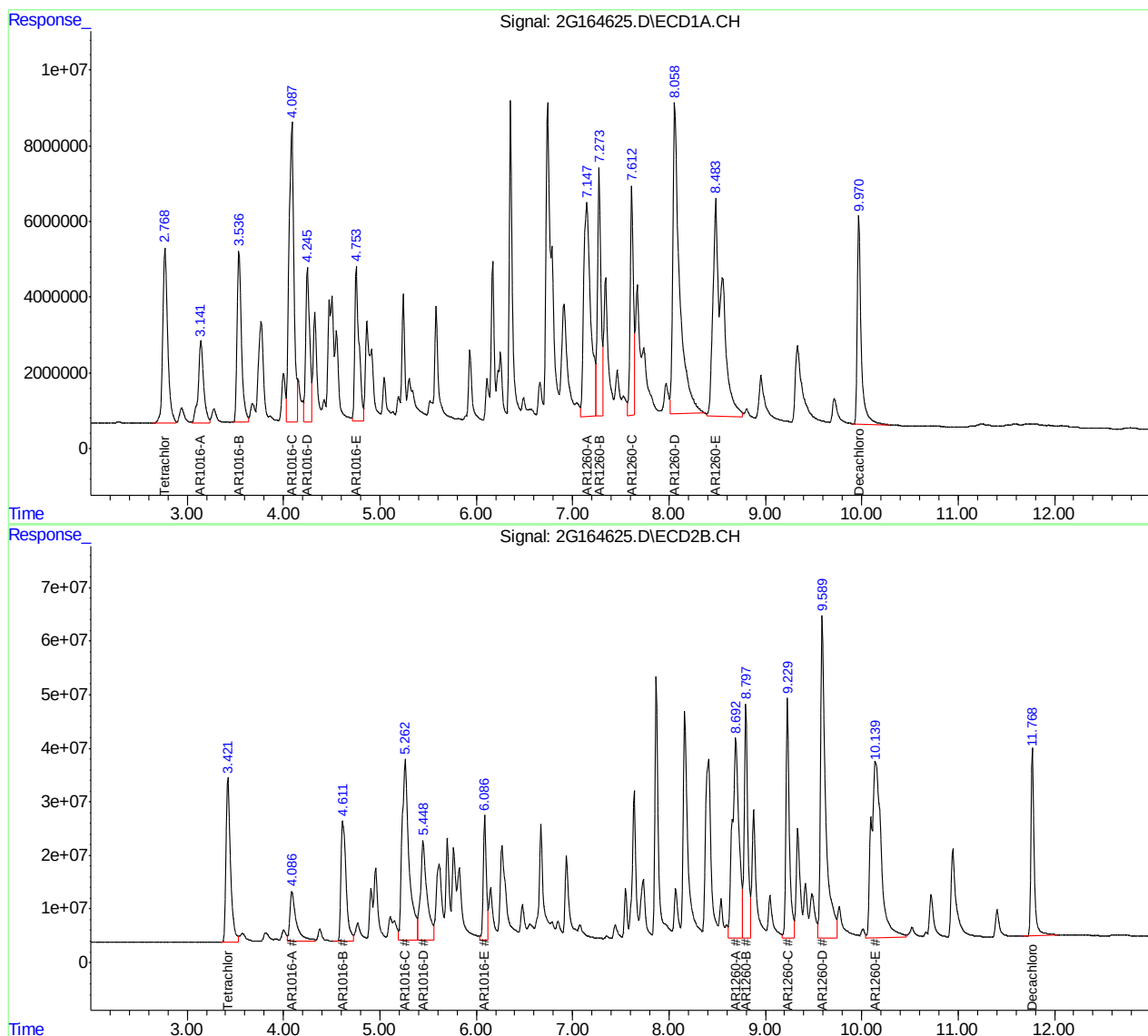
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164625.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 4:18 am  
Operator : christp  
Sample : cc4311-1000  
Misc : OP12371,G2G4349,300,,,2,1  
ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 09:53:46 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 09:51:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4349-CC4311

Method:

SW846 8082A

Lab FileID:

2G164625.D

Analyst approved:

05/31/18 10:14 Summer Kotb

Injection Time:

05/31/18 04:18

Supervisor approved:

05/31/18 12:09 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1260-E  |     | 1    | 8.48           | Split peak |
| AR1260-E  |     | 2    | 10.14          | Split peak |

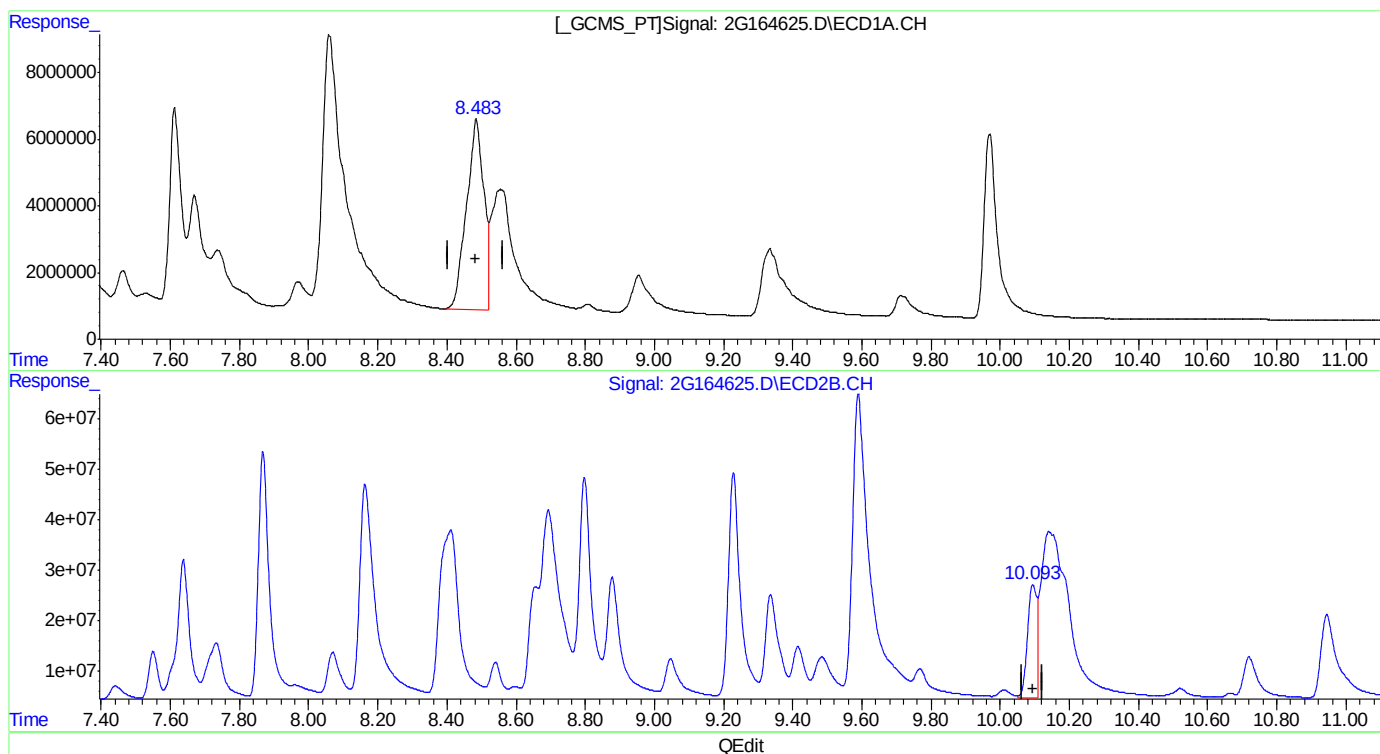


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164625.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 4:18 am  
Operator : christp  
Sample : cc4311-1000  
Misc : OP12371,G2G4349,300,,,2,1  
ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 09:52:20 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 09:51:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.484min 523.188PPB  
response 198176939

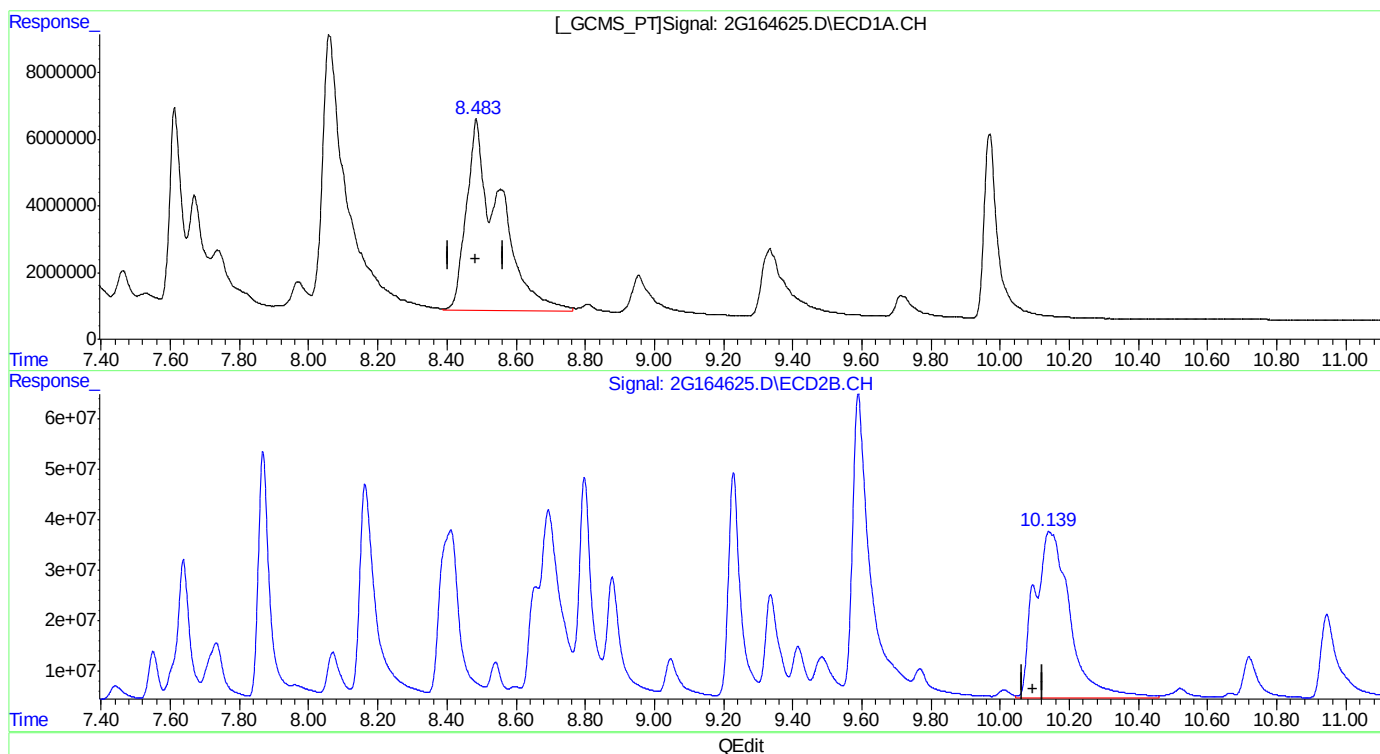
(40) AR1260-E #2  
10.095min 200.244PPB  
response 408130953

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164625.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 4:18 am  
Operator : christp  
Sample : cc4311-1000  
Misc : OP12371,G2G4349,300,,,2,1  
ALS Vial : 87 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 09:52:20 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 09:51:57 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.483min 1011.375PPB m  
response 383096406

(40) AR1260-E #2  
10.139min 1153.710PPB m  
response 2351458941

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
 Data File : 2G164636.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 7:24 am  
 Operator : christp  
 Sample : cc4311-500  
 Misc : OP12385,G2G4349,15.0,,,10,1  
 ALS Vial : 94 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 12:43:53 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 12:42:15 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb       |
|-----------------------------|--------|--------|----------|----------|----------|-----------|
| -----                       |        |        |          |          |          |           |
| System Monitoring Compounds |        |        |          |          |          |           |
| 1) S Tetrachlo...           | 2.771  | 3.423  | 80731842 | 482.4E6  | 21.995   | 21.081    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 54.99%   | 52.70%    |
| 51) S Decachlor...          | 9.970  | 11.771 | 82008424 | 388.0E6  | 20.220   | 20.314    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 50.55%   | 50.79%    |
| Target Compounds            |        |        |          |          |          |           |
| 31) AR1016-A                | 3.141  | 4.092  | 43188324 | 218.2E6  | 554.458  | 582.394   |
| 32) AR1016-B                | 3.537  | 4.614  | 73853303 | 427.2E6  | 542.808  | 533.239   |
| 33) AR1016-C                | 4.087  | 5.271  | 147.3E6  | 795.2E6  | 507.941  | 458.664   |
| 34) AR1016-D                | 4.247  | 5.454  | 58987093 | 470.0E6  | 498.899  | 624.726 # |
| 35) AR1016-E                | 4.753  | 6.089  | 59633362 | 257.4E6  | 489.062  | 501.597   |
| 36) AR1260-A                | 7.154  | 8.702  | 130.5E6  | 876.0E6  | 382.813  | 438.050   |
| 37) AR1260-B                | 7.280  | 8.799  | 85167681 | 573.6E6  | 589.626  | 656.058   |
| 38) AR1260-C                | 7.618  | 9.231  | 71131047 | 544.1E6  | 446.721  | 532.375   |
| 39) AR1260-D                | 8.071  | 9.596  | 219.8E6  | 1064.9E6 | 598.800  | 496.090   |
| 40) AR1260-E                | 8.487  | 10.156 | 204.2E6  | 1195.5E6 | 539.014m | 586.563m  |
| -----                       |        |        |          |          |          |           |

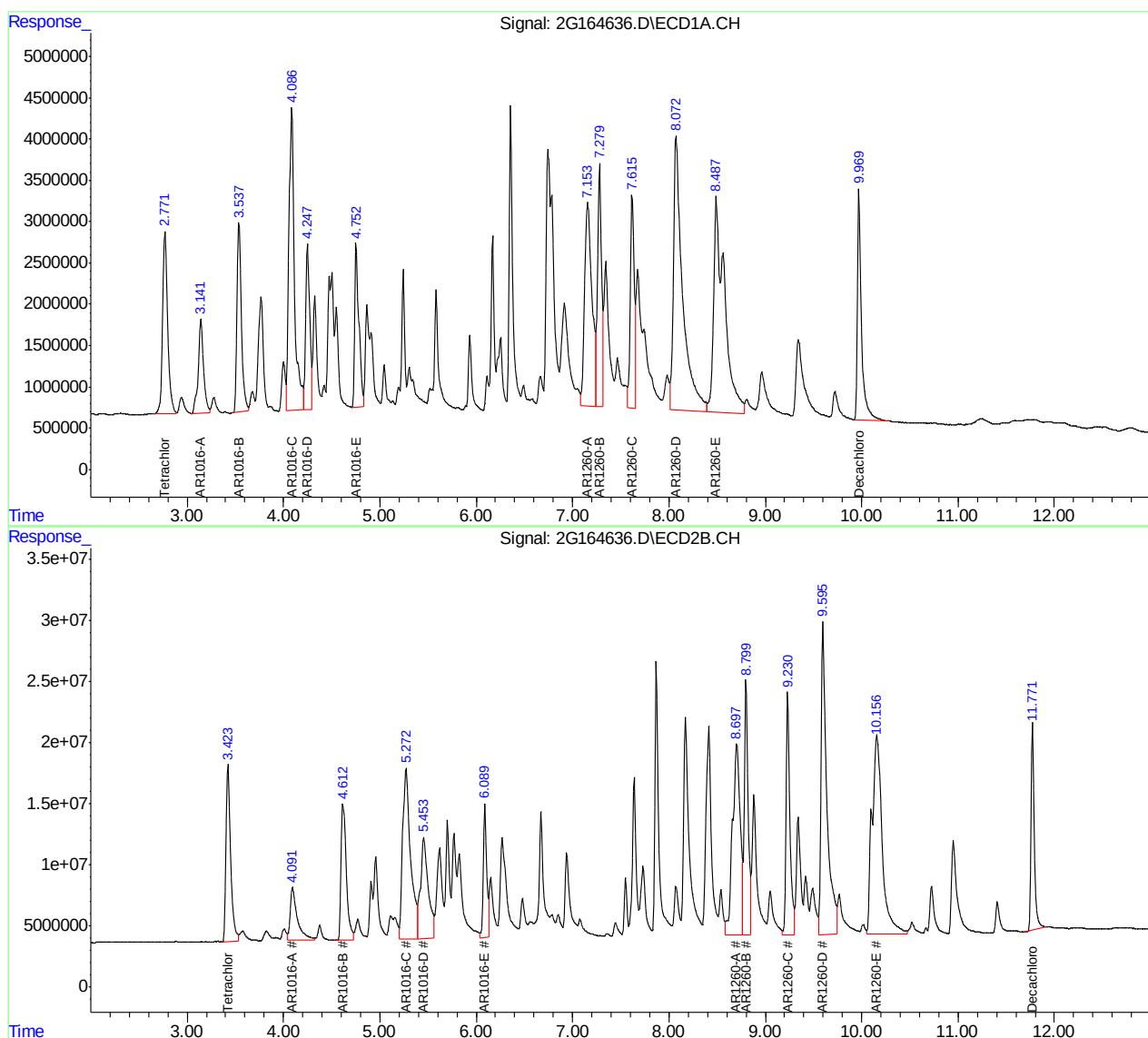
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164636.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 7:24 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4349,15.0,,,10,1  
ALS Vial : 94 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:43:53 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number: G2G4349-ECC4311

Method: SW846 8082A

Lab FileID: 2G164636.D

Analyst approved: 05/31/18 14:38 Gwendolyn Burns

Injection Time: 05/31/18 07:24

Supervisor approved: 05/31/18 14:43 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason                  |
|-----------|-----|------|----------------|-------------------------|
| AR1260-E  |     | 1    | 8.49           | Poorly defined baseline |
| AR1260-E  |     | 2    | 10.16          | Poorly defined baseline |

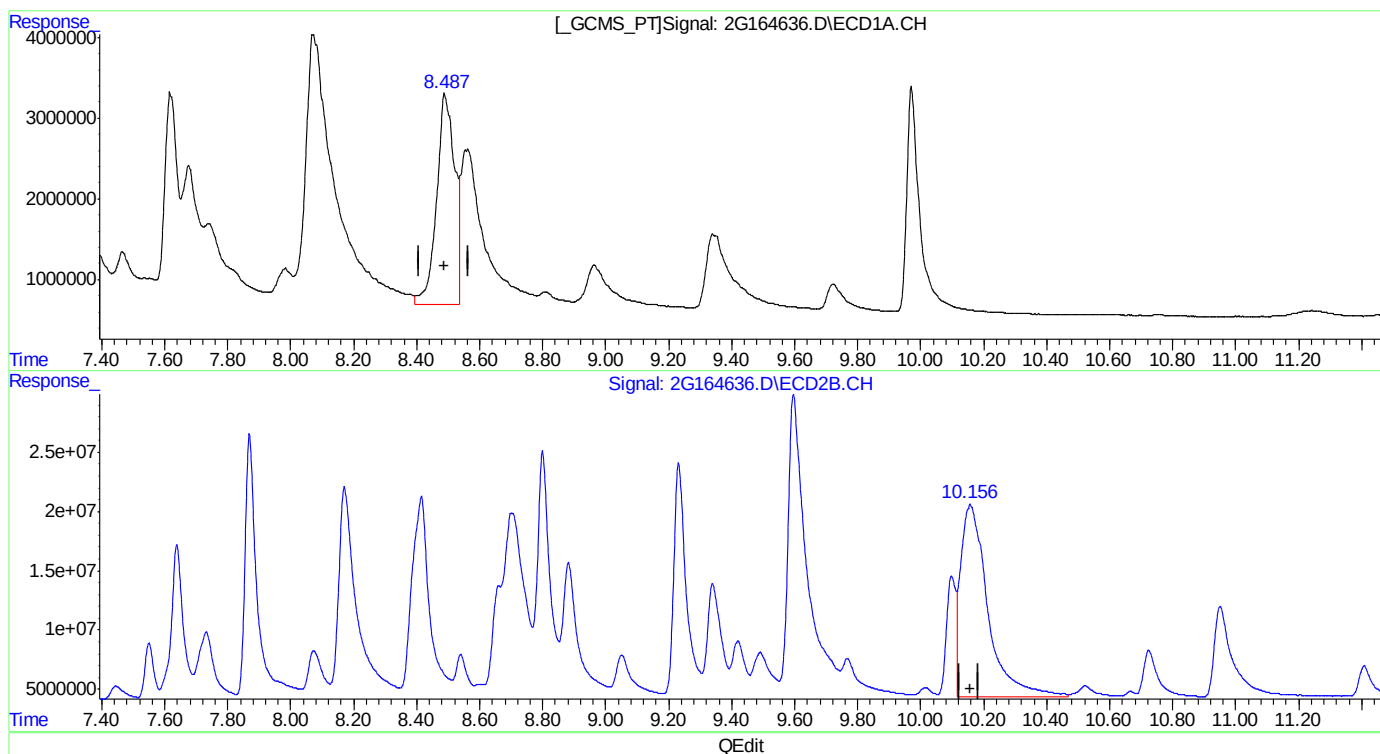
7.5.17.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164636.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 7:24 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4349,15.0,,,10,1  
ALS Vial : 94 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:43:15 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.488min 270.338PPB  
response 102400594

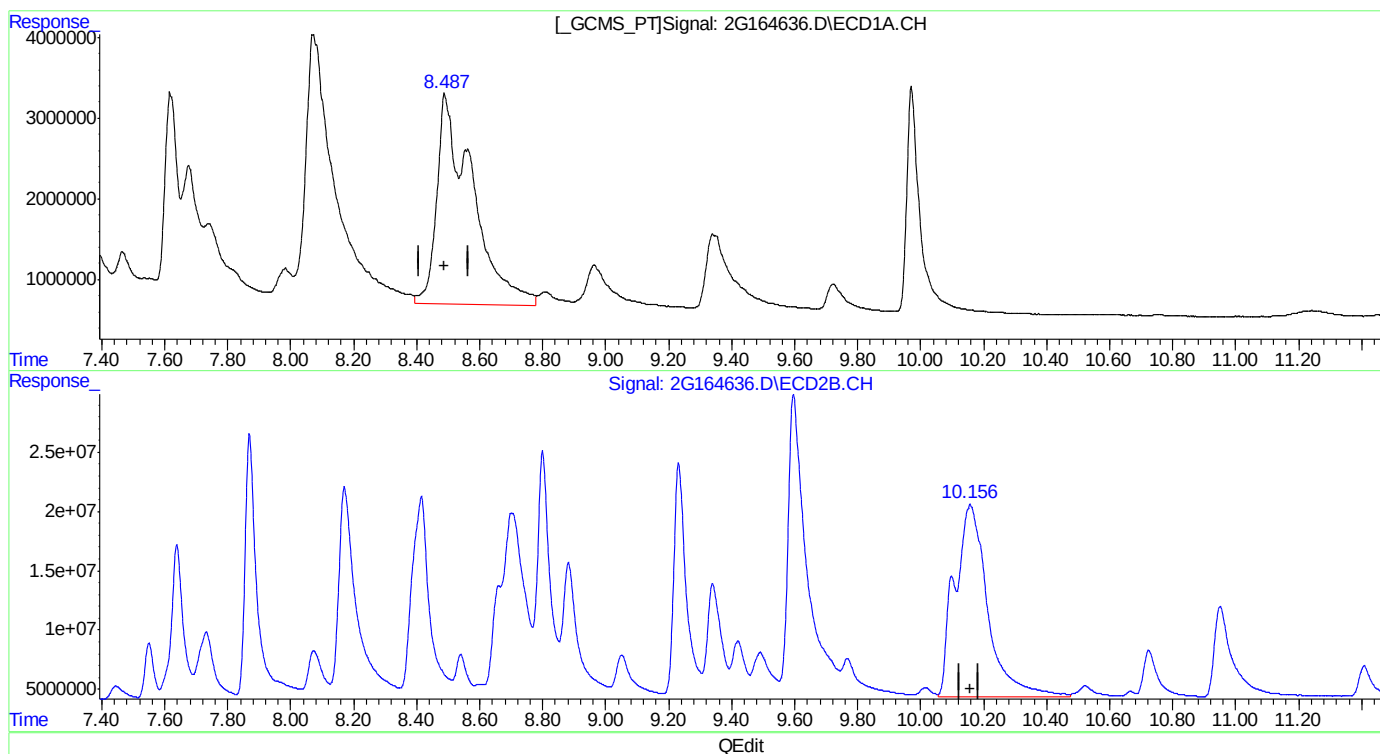
(40) AR1260-E #2  
10.157min 482.352PPB  
response 983117157

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4349\  
Data File : 2G164636.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 7:24 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4349,15.0,,,10,1  
ALS Vial : 94 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 12:43:15 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.487min 539.014PPB m  
response 204171946

(40) AR1260-E #2  
10.156min 586.563PPB m  
response 1195516874

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
 Data File : 2G164650.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 11:09 am  
 Operator : christp  
 Sample : cc4311-500  
 Misc : OP12385,G2G4350,15.6,,,10,1  
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 11:35:04 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 11:34:26 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb      |
|-----------------------------|--------|--------|----------|----------|----------|----------|
| -----                       |        |        |          |          |          |          |
| System Monitoring Compounds |        |        |          |          |          |          |
| 1) S Tetrachlo...           | 2.767f | 3.418  | 73696825 | 436.8E6  | 20.078   | 19.089   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 50.20%   | 47.72%   |
| 51) S Decachlor...          | 9.973  | 11.772 | 72380643 | 348.6E6  | 17.846   | 18.254   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 44.62%   | 45.64%   |
| Target Compounds            |        |        |          |          |          |          |
| 31) AR1016-A                | 3.141  | 4.079  | 39027007 | 177.9E6  | 501.034  | 475.002  |
| 32) AR1016-B                | 3.535  | 4.612  | 68638216 | 383.3E6  | 504.478  | 478.485  |
| 33) AR1016-C                | 4.083  | 5.259  | 141.7E6  | 785.1E6  | 488.531  | 452.866  |
| 34) AR1016-D                | 4.245  | 5.444  | 55074723 | 376.3E6  | 465.809  | 500.178  |
| 35) AR1016-E                | 4.753  | 6.086  | 56575698 | 230.1E6  | 463.985  | 448.487  |
| 36) AR1260-A                | 7.154f | 8.697  | 140.2E6  | 802.8E6  | 411.183  | 401.463  |
| 37) AR1260-B                | 7.282  | 8.799  | 77131240 | 457.4E6  | 533.989  | 523.125  |
| 38) AR1260-C                | 7.619  | 9.231  | 69111186 | 469.1E6  | 434.035  | 458.967  |
| 39) AR1260-D                | 8.069f | 9.593  | 203.1E6  | 1026.1E6 | 553.217  | 478.022  |
| 40) AR1260-E                | 8.490f | 10.137 | 189.4E6  | 1013.0E6 | 500.101m | 497.032m |
| -----                       |        |        |          |          |          |          |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

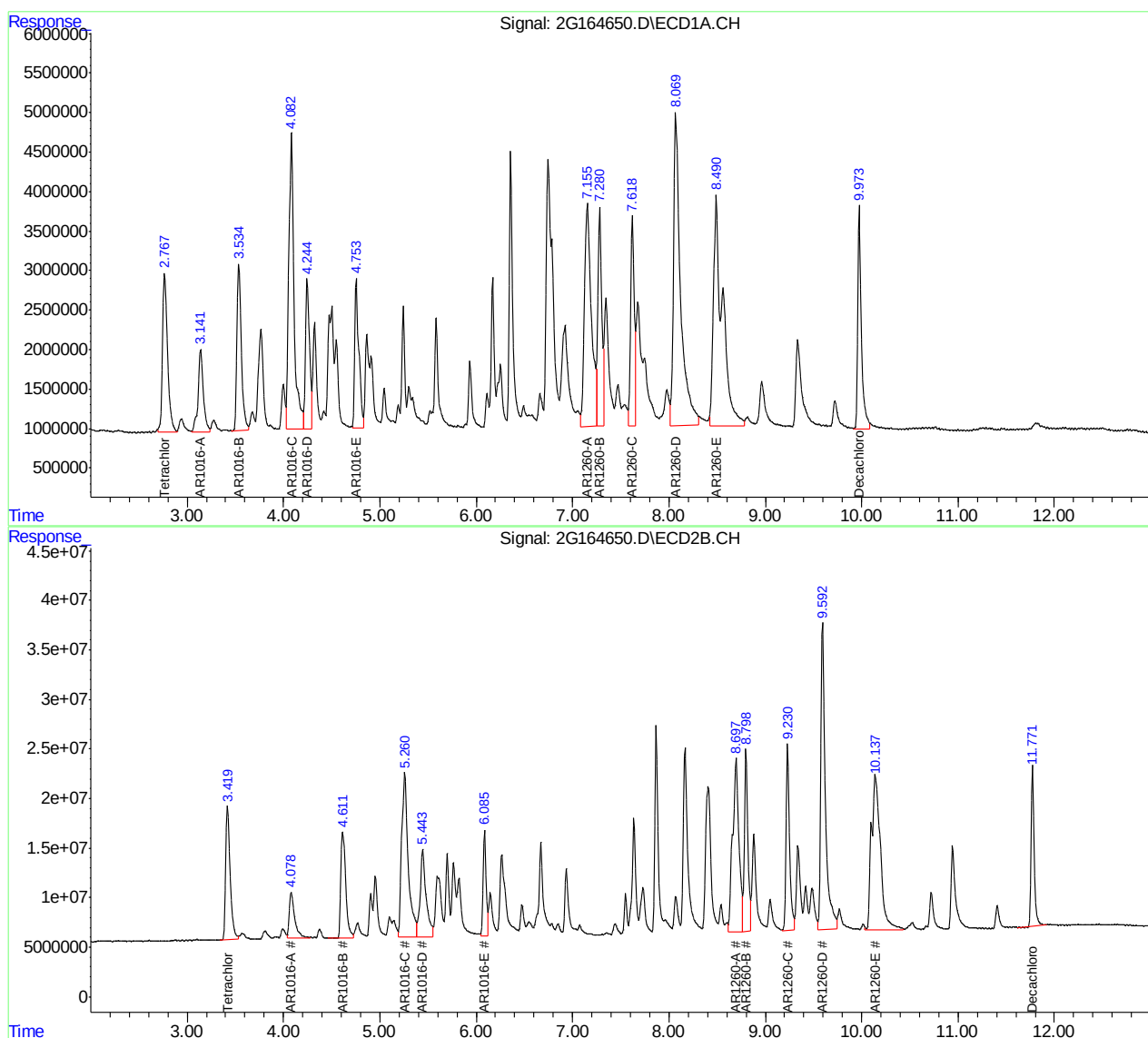


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164650.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 11:09 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 11:35:04 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4350-CC4311

Method:

SW846 8082A

Lab FileID:

2G164650.D

Analyst approved:

05/31/18 15:24 Summer Kotb

Injection Time:

05/31/18 11:09

Supervisor approved:

05/31/18 15:36 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1260-E  |     | 1    | 8.49           | Split peak |
| AR1260-E  |     | 2    | 10.14          | Split peak |

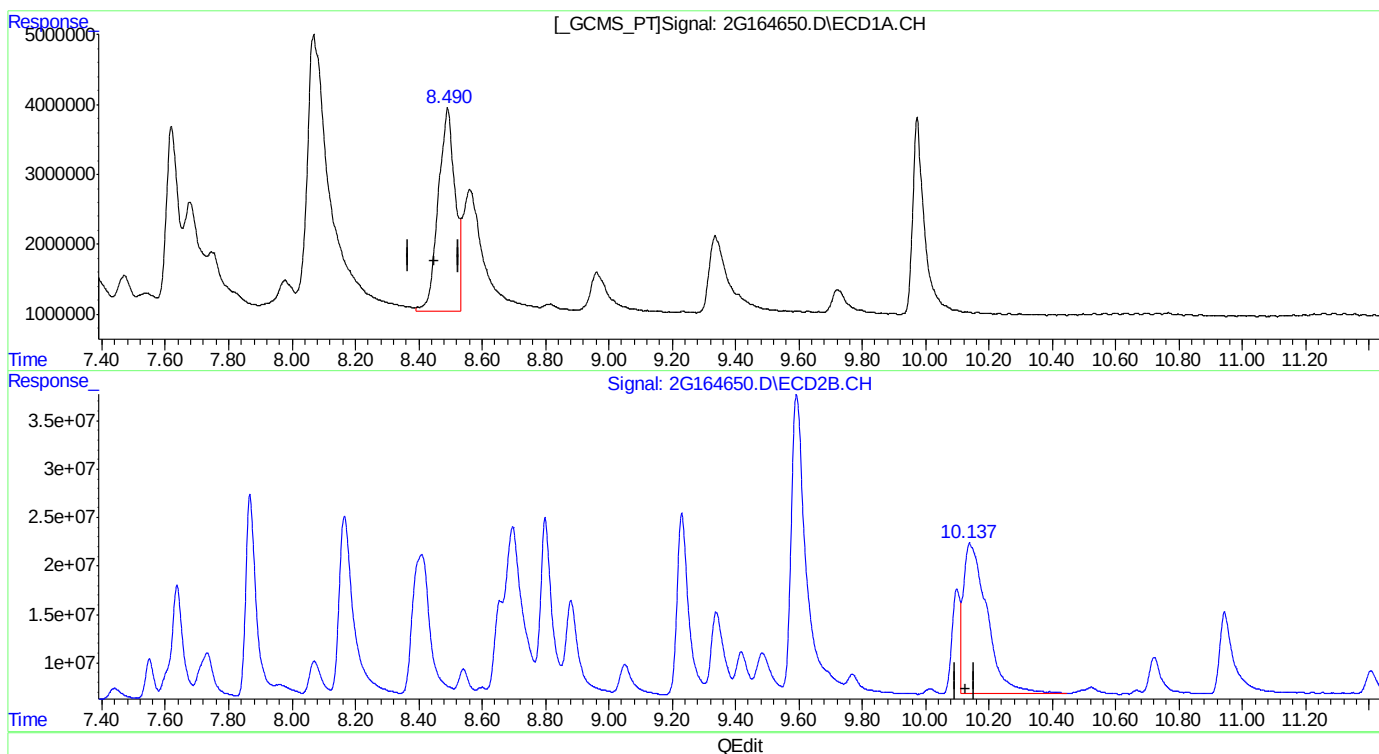
7.5.18.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164650.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 11:09 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 11:34:30 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.491min 280.138PPB  
response 106112656

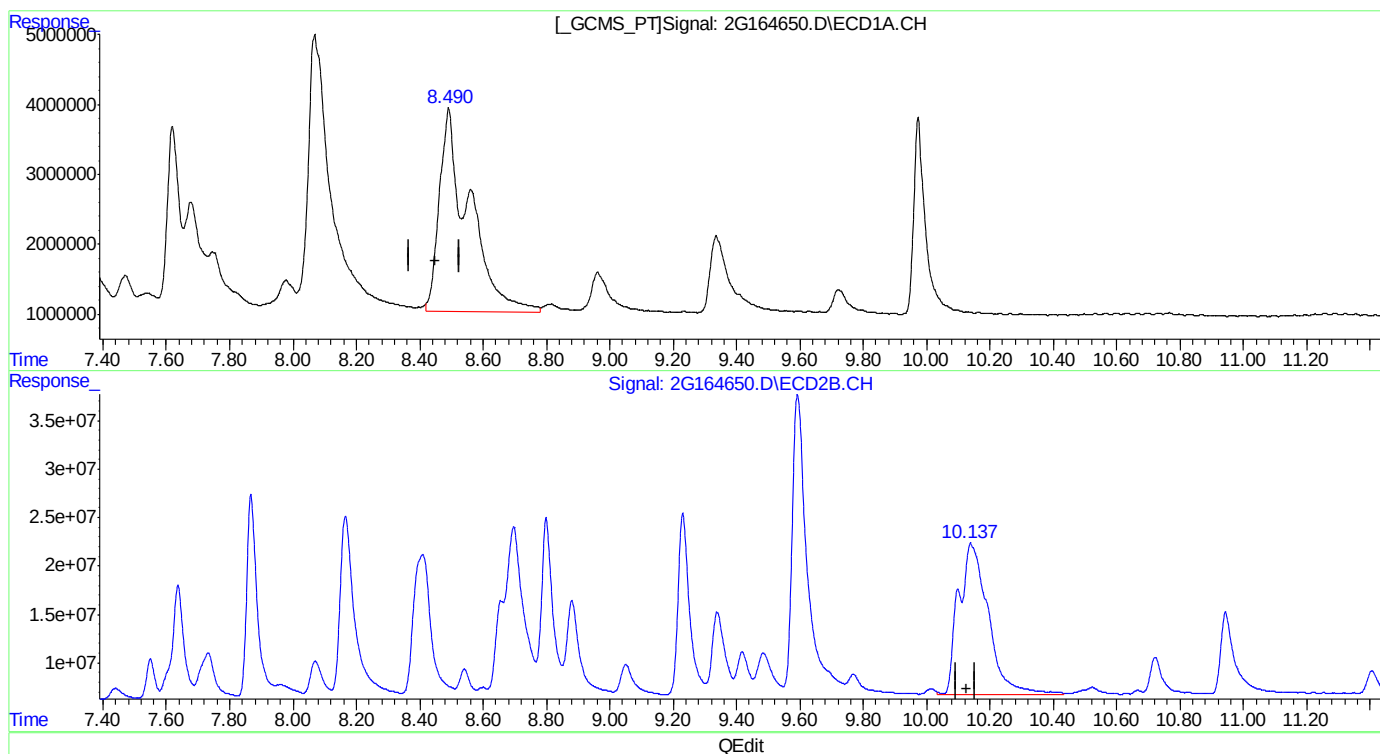
(40) AR1260-E #2  
10.139min 397.438PPB  
response 810047609

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164650.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 11:09 am  
Operator : christp  
Sample : cc4311-500  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 11:34:30 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 11:34:26 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.490min 500.101PPB m  
response 189432009

(40) AR1260-E #2  
10.137min 497.032PPB m  
response 1013035674

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
 Data File : 2G164661.D  
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
 Acq On : 31 May 2018 2:30 pm  
 Operator : tianweir  
 Sample : cc4311-1000  
 Misc : OP12385,G2G4350,15.6,,,10,1  
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: May 31 14:48:57 2018  
 Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
 Quant Title :  
 QLast Update : Thu May 31 12:42:15 2018  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
 Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
 Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2    | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|---------|----------|----------|-----------|-----------|
| -----                       |        |         |          |          |           |           |
| System Monitoring Compounds |        |         |          |          |           |           |
| 1) S Tetrachlo...           | 2.768  | 3.421   | 154.9E6  | 914.8E6  | 42.192    | 39.980    |
| Spiked Amount               | 40.000 |         | Recovery | =        | 105.48%   | 99.95%    |
| 51) S Decachlor...          | 9.967  | 11.770  | 147.3E6  | 723.5E6  | 36.316    | 37.882    |
| Spiked Amount               | 40.000 |         | Recovery | =        | 90.79%    | 94.70%    |
| Target Compounds            |        |         |          |          |           |           |
| 31) AR1016-A                | 3.139  | 4.081   | 77558953 | 391.2E6  | 995.712   | 1044.333  |
| 32) AR1016-B                | 3.535  | 4.610   | 134.7E6  | 775.6E6  | 990.057   | 968.193   |
| 33) AR1016-C                | 4.083  | 5.258   | 289.5E6  | 1608.2E6 | 998.474   | 927.603   |
| 34) AR1016-D                | 4.242  | 5.441   | 111.2E6  | 792.0E6  | 940.135   | 1052.790  |
| 35) AR1016-E                | 4.750  | 6.085   | 114.6E6  | 477.6E6  | 939.758   | 930.823   |
| 36) AR1260-A                | 7.150  | 8.692   | 280.7E6  | 1660.3E6 | 823.614   | 830.292   |
| 37) AR1260-B                | 7.273  | 8.796   | 157.5E6  | 979.1E6  | 1090.524  | 1119.745  |
| 38) AR1260-C                | 7.612  | 9.227   | 143.0E6  | 994.8E6  | 898.113   | 973.322   |
| 39) AR1260-D                | 8.059  | 9.590   | 424.1E6  | 2232.1E6 | 1155.258  | 1039.891  |
| 40) AR1260-E                | 8.482  | 10.138f | 385.9E6  | 2083.9E6 | 1018.682m | 1022.416m |
| -----                       |        |         |          |          |           |           |

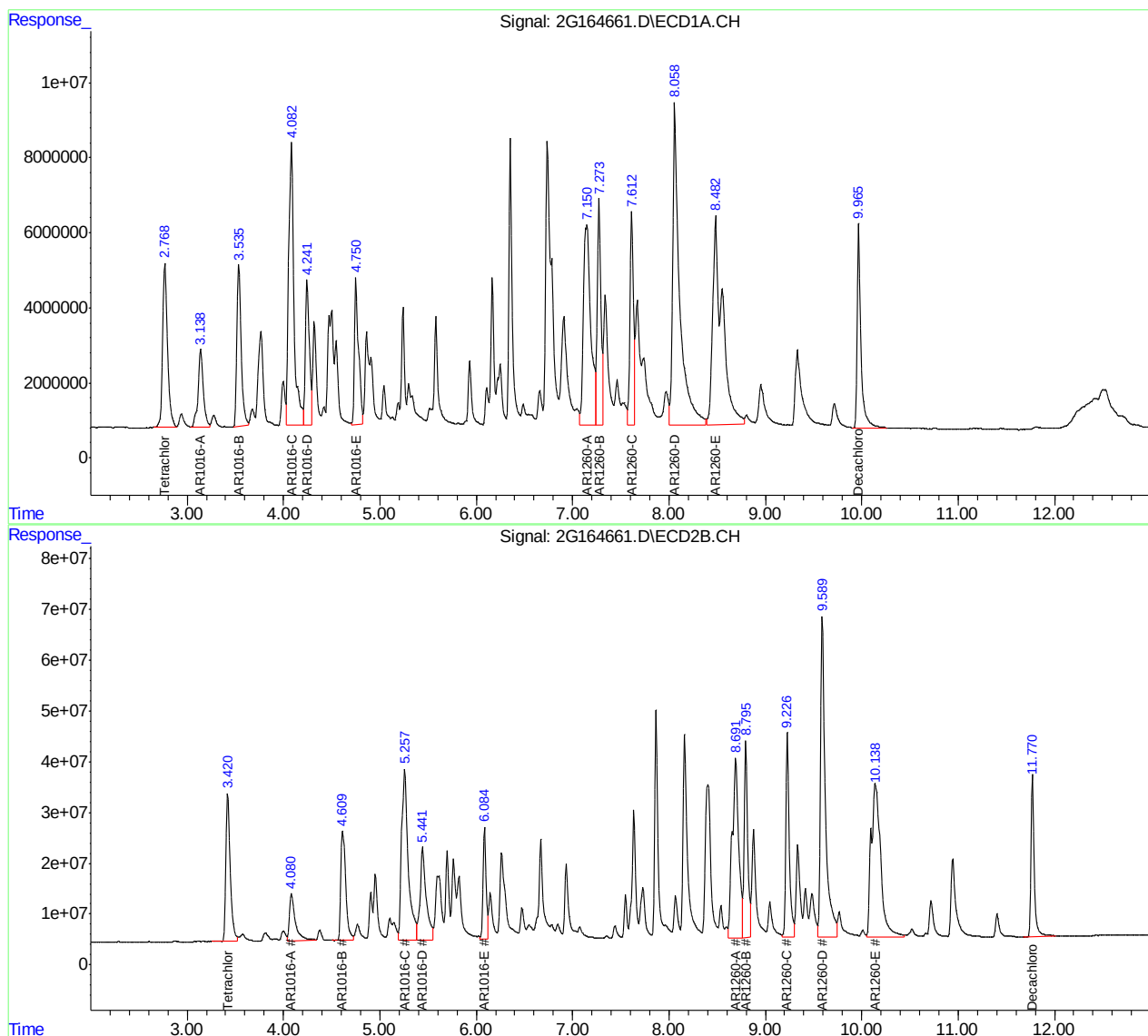
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164661.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 2:30 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 14:48:57 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4350-CC4311

Method:

SW846 8082A

Lab FileID:

2G164661.D

Analyst approved:

05/31/18 15:24 Summer Kotb

Injection Time:

05/31/18 14:30

Supervisor approved:

05/31/18 15:36 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1260-E  |     | 1    | 8.48           | Split peak |
| AR1260-E  |     | 2    | 10.14          | Split peak |

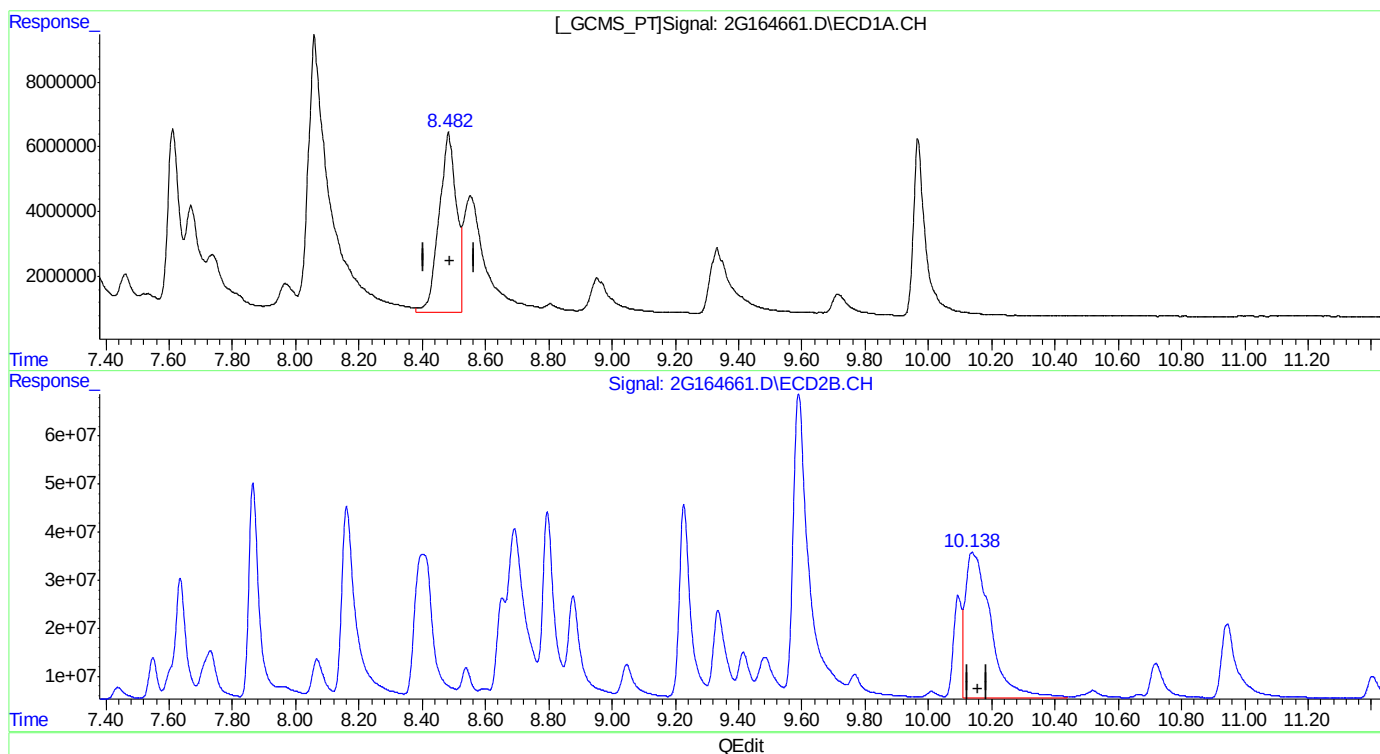
7.5.19.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164661.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 2:30 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 14:48:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.483min 553.575PPB  
response 209687166

(40) AR1260-E #2  
10.138min 834.512PPB  
response 1700879347

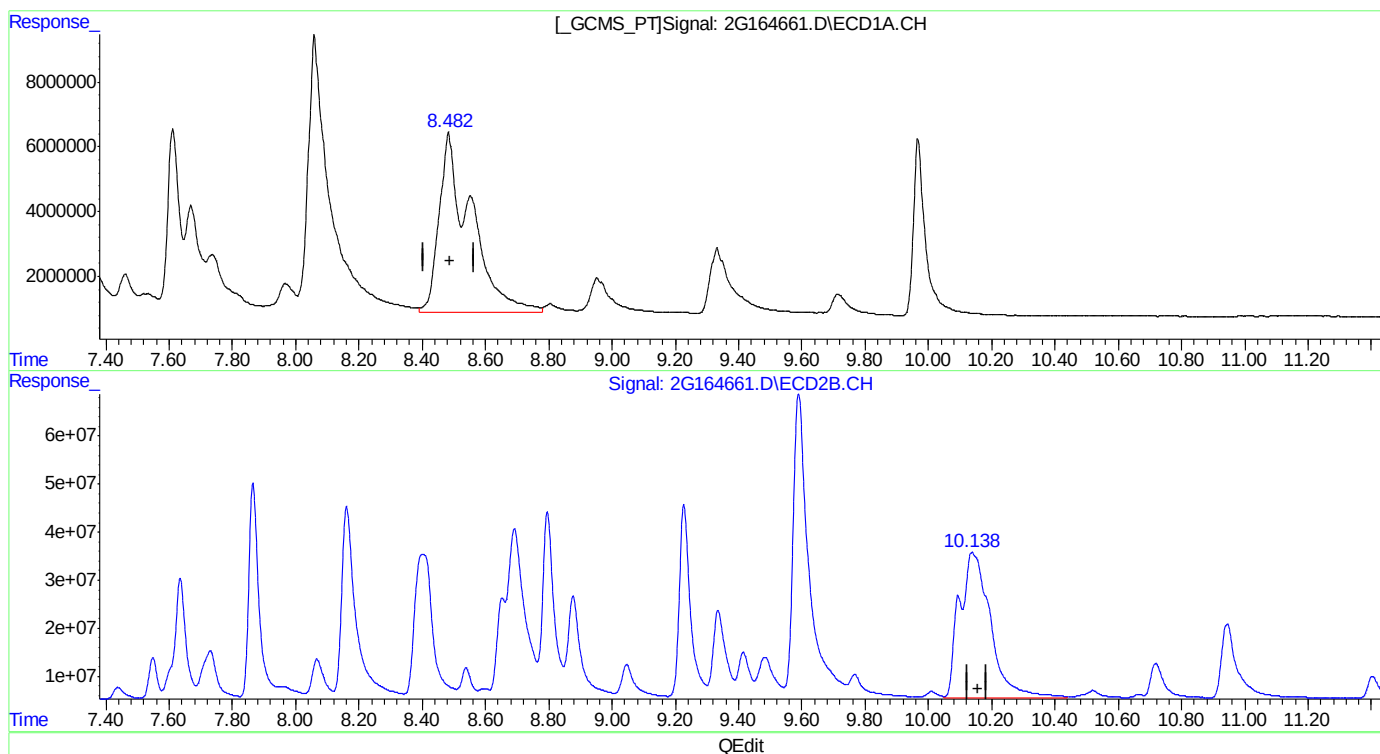


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4350\  
Data File : 2G164661.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 31 May 2018 2:30 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12385,G2G4350,15.6,,,10,1  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: May 31 14:48:12 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Thu May 31 12:42:15 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.482min 1018.682PPB m  
response 385863924

(40) AR1260-E #2  
10.138min 1022.416PPB m  
response 2083859166

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:39:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb       | ppb       |
|-----------------------------|--------|--------|----------|----------|-----------|-----------|
| -----                       |        |        |          |          |           |           |
| System Monitoring Compounds |        |        |          |          |           |           |
| 1) S Tetrachlo...           | 2.772  | 3.421  | 159.1E6  | 971.5E6  | 43.333    | 42.456    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 108.33%   | 106.14%   |
| 51) S Decachlor...          | 9.959  | 11.764 | 146.5E6  | 740.3E6  | 36.110    | 38.760    |
| Spiked Amount               | 40.000 |        | Recovery | =        | 90.27%    | 96.90%    |
| Target Compounds            |        |        |          |          |           |           |
| 31) AR1016-A                | 3.144  | 4.082  | 80207804 | 415.3E6  | 1029.719  | 1108.632  |
| 32) AR1016-B                | 3.536  | 4.611  | 140.1E6  | 812.5E6  | 1030.026  | 1014.277  |
| 33) AR1016-C                | 4.084  | 5.256  | 273.8E6  | 1699.2E6 | 944.306   | 980.099   |
| 34) AR1016-D                | 4.246  | 5.441  | 115.7E6  | 839.7E6  | 978.148   | 1116.242  |
| 35) AR1016-E                | 4.752  | 6.082  | 121.0E6  | 515.4E6  | 991.994   | 1004.516m |
| 36) AR1260-A                | 7.117  | 8.681  | 285.1E6  | 1780.3E6 | 836.386   | 890.268m  |
| 37) AR1260-B                | 7.266  | 8.791  | 158.1E6  | 990.8E6  | 1094.325  | 1133.229  |
| 38) AR1260-C                | 7.605  | 9.222  | 152.9E6  | 1033.2E6 | 960.193   | 1010.951  |
| 39) AR1260-D                | 8.043  | 9.575  | 372.5E6  | 1913.5E6 | 1014.697  | 891.437m  |
| 40) AR1260-E                | 8.477  | 10.120 | 407.3E6  | 2127.6E6 | 1075.319m | 1043.858m |
| -----                       |        |        |          |          |           |           |

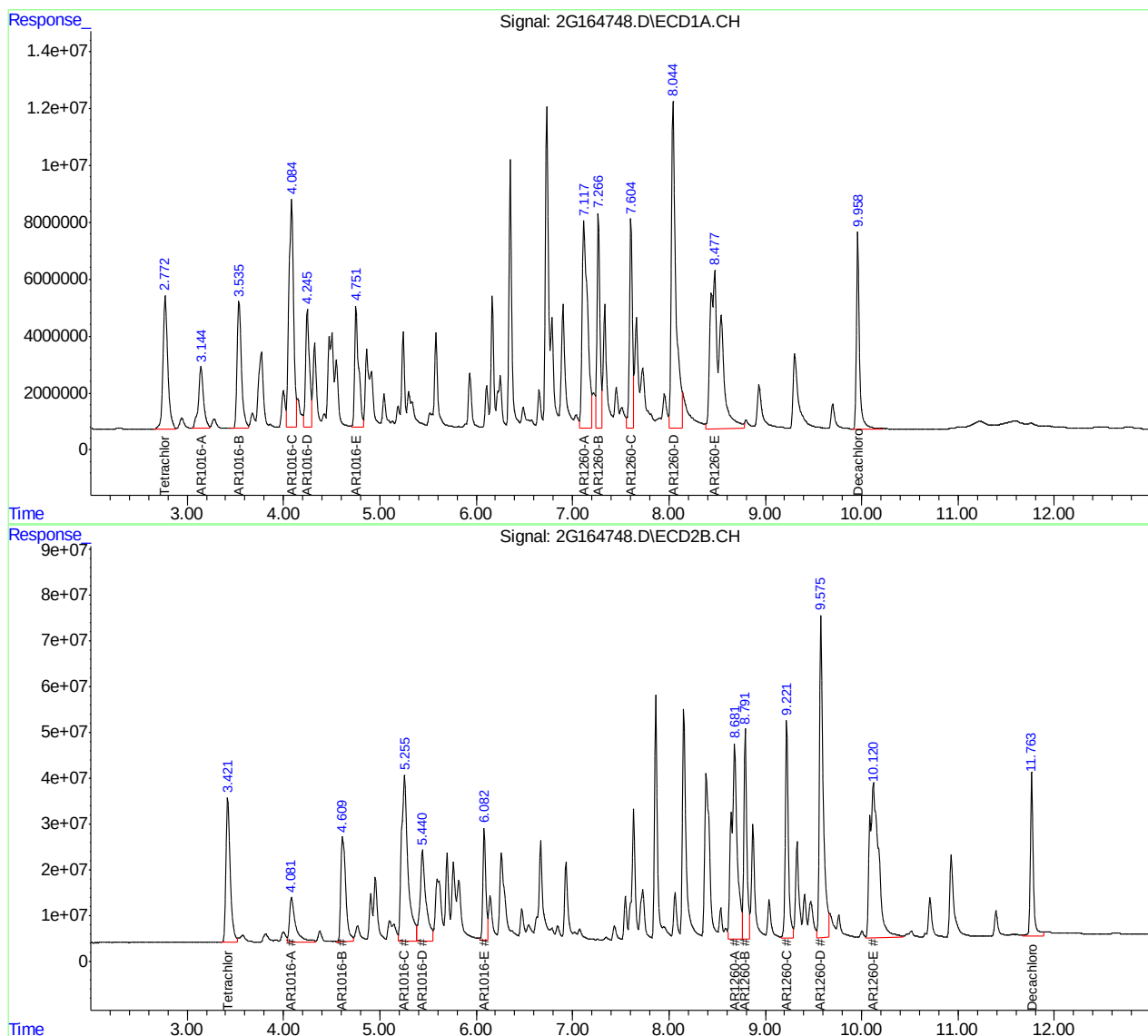
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:39:25 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u) Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4351-CC4311

Method:

SW846 8082A

Lab FileID:

2G164748.D

Analyst approved:

06/01/18 15:42 Tianwei Ruan

Injection Time:

06/01/18 15:16

Supervisor approved:

06/01/18 16:01 Gwendolyn Burns

| Parameter | CAS | Sig# | R.T.<br>(min.) | Reason     |
|-----------|-----|------|----------------|------------|
| AR1016-E  |     | 2    | 6.08           | Split peak |
| AR1260-E  |     | 1    | 8.48           | Split peak |
| AR1260-A  |     | 2    | 8.68           | Split peak |
| AR1260-D  |     | 2    | 9.57           | Split peak |
| AR1260-E  |     | 2    | 10.12          | Split peak |

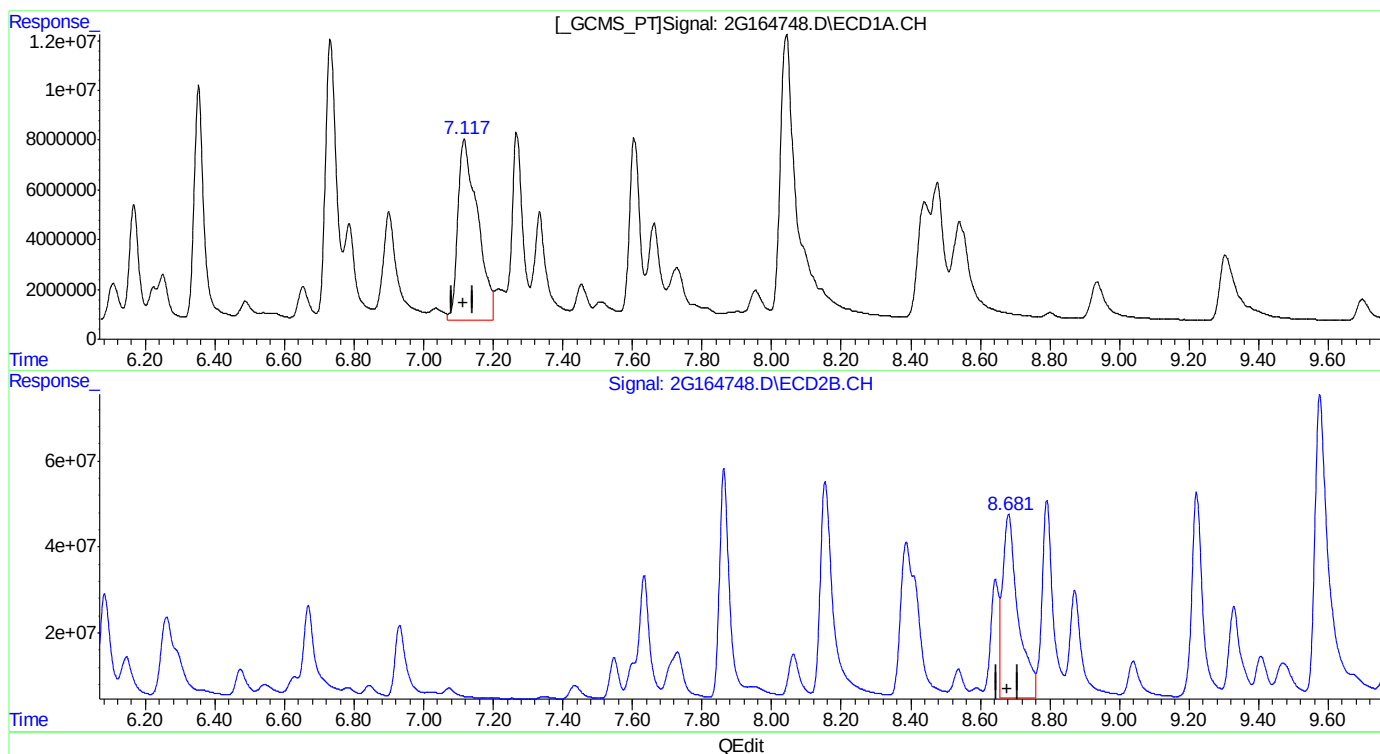
7.5.20.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.117min 836.386PPB  
response 285081628

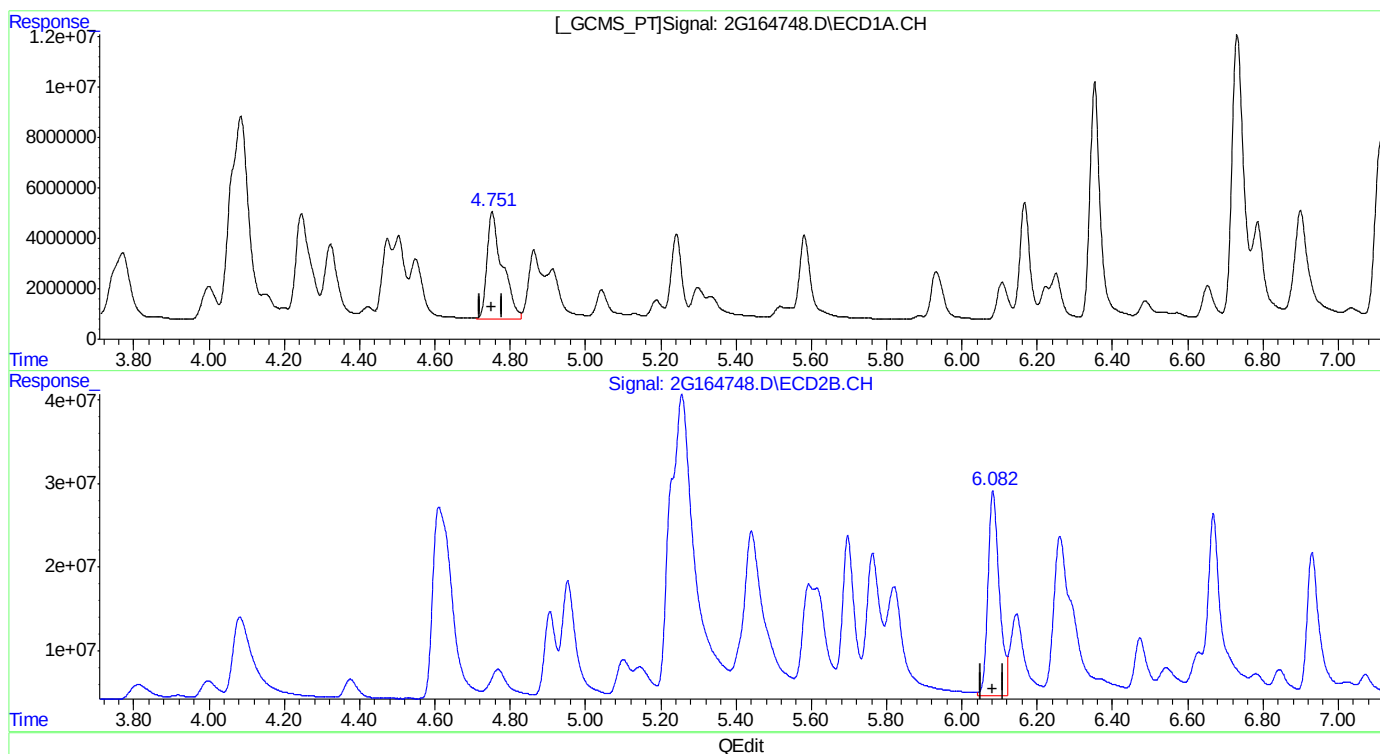
(36) AR1260-A #2  
8.681min 660.942PPB  
response 1321679973

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1016-E  
4.752min 991.994PPB  
response 120958049

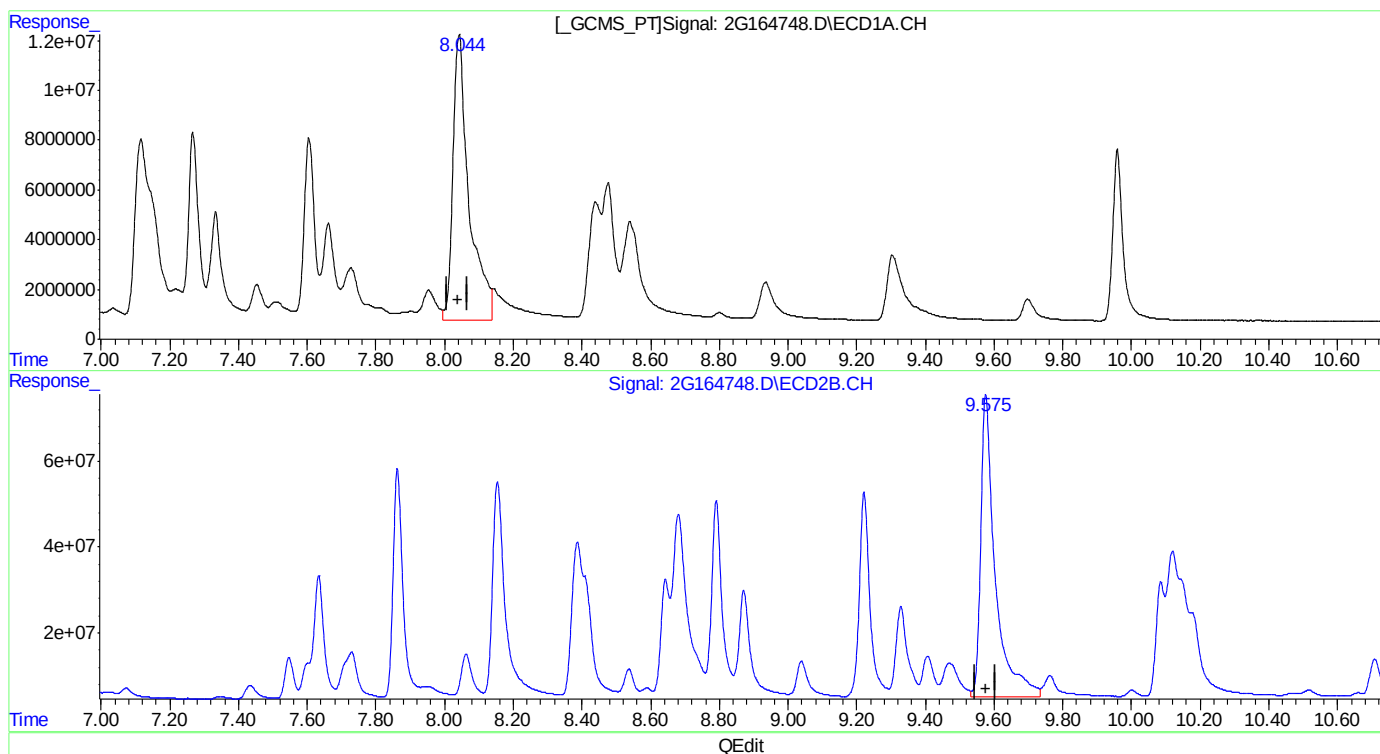
(35) AR1016-E #2  
6.082min 1004.516PPB m  
response 515396578

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(39) AR1260-D  
8.043min 1014.697PPB  
response 372541549

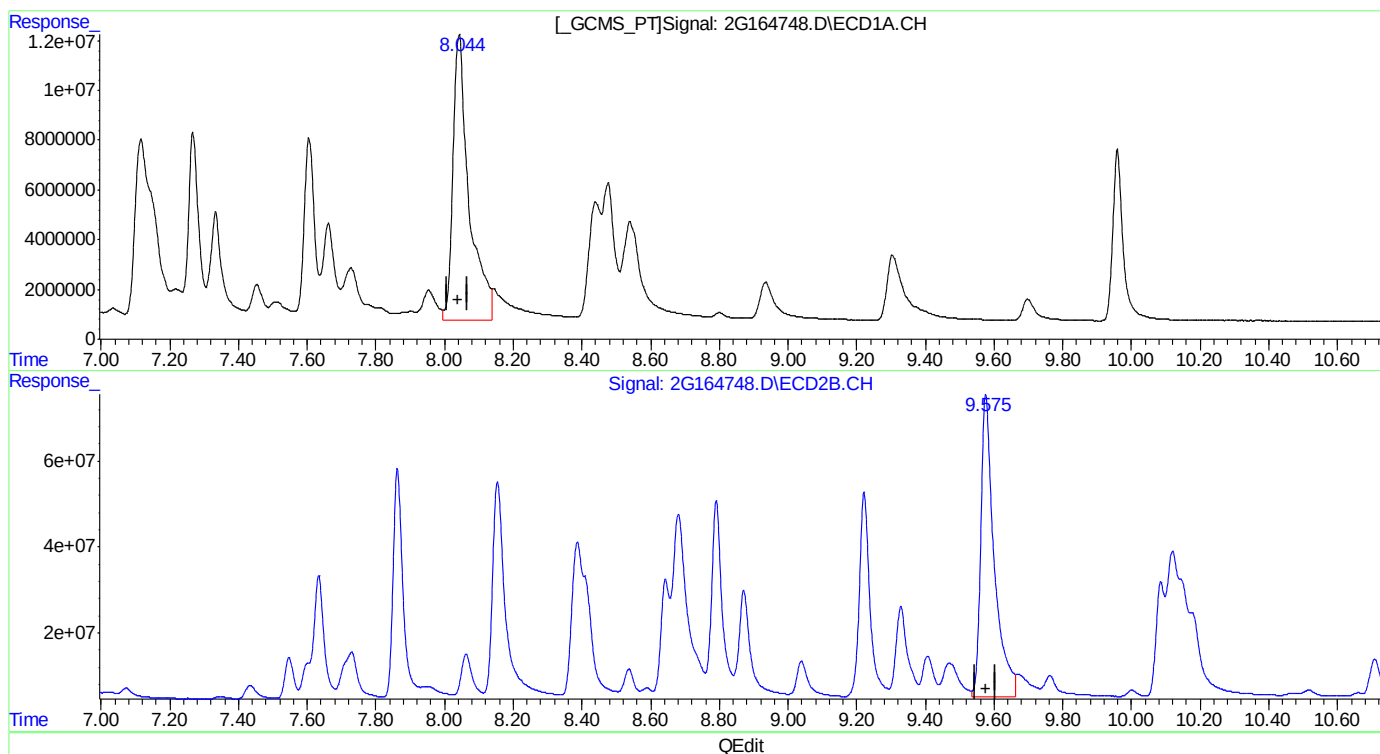
(39) AR1260-D #2  
9.576min 966.374PPB  
response 2074319091

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(39) AR1260-D  
8.043min 1014.697PPB  
response 372541549

(39) AR1260-D #2  
9.575min 891.437PPB m  
response 1913466473

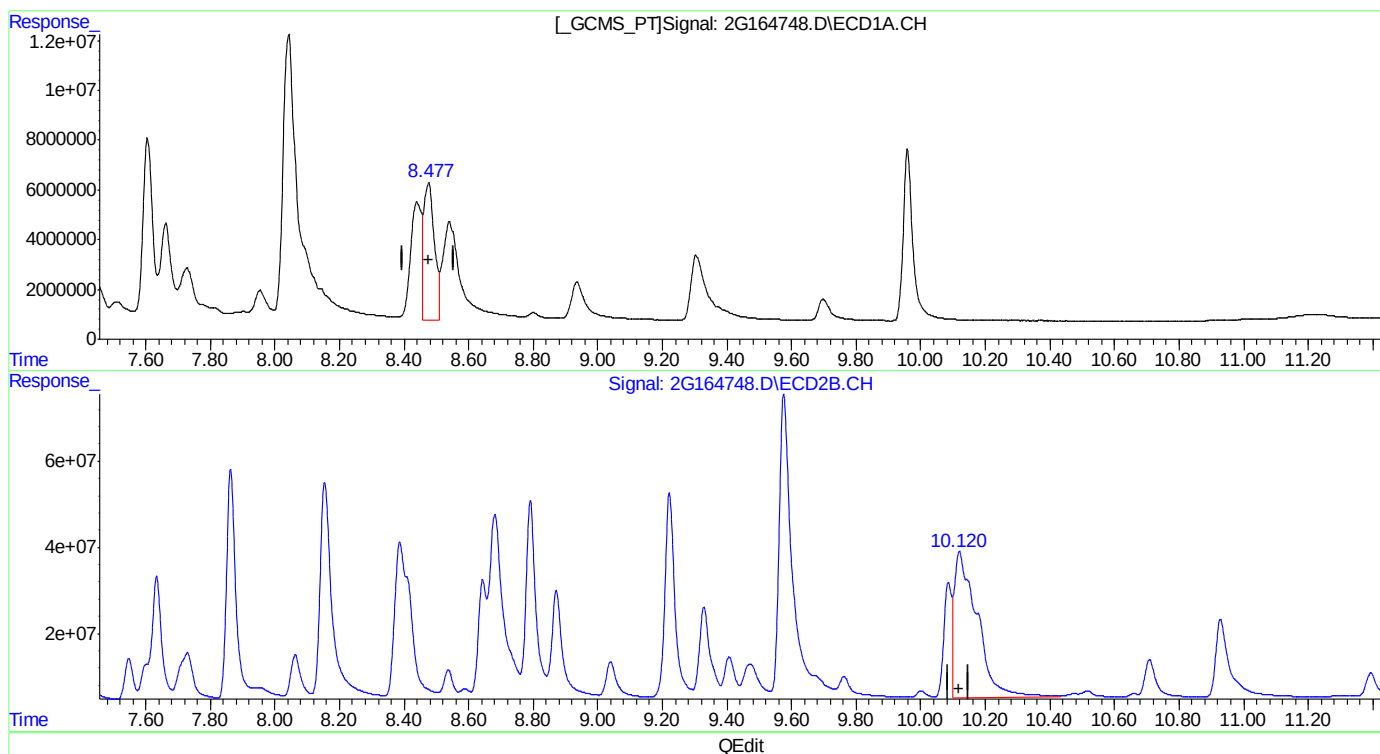


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.477min 336.218PPB  
response 127355159

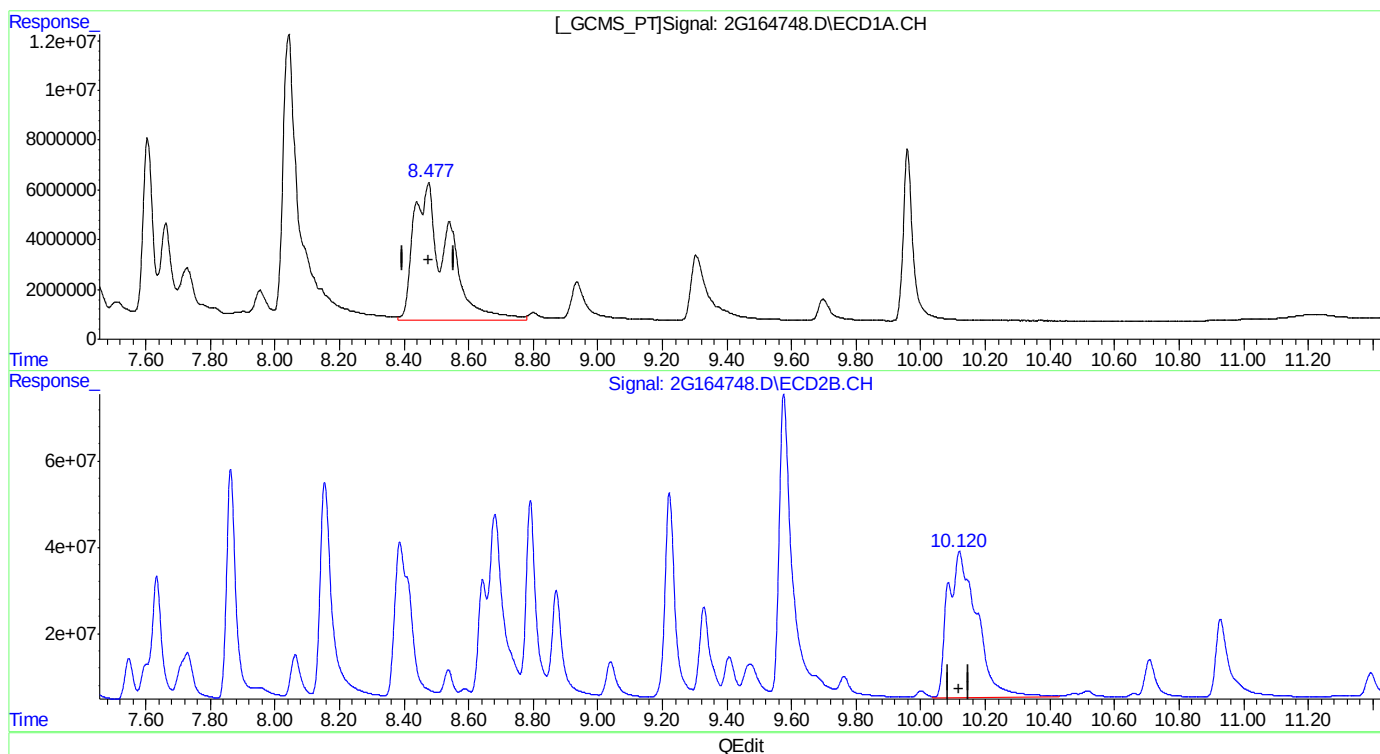
(40) AR1260-E #2  
10.120min 828.007PPB  
response 1687620361

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164748.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 01 Jun 2018 3:16 pm  
Operator : tianweir  
Sample : cc4311-1000  
Misc : OP12416,G2G4351,16.7,,,10,1  
ALS Vial : 70 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 01 15:38:32 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Fri Jun 01 12:21:49 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.477min 1075.319PPB m  
response 407317637

(40) AR1260-E #2  
10.120min 1043.858PPB m  
response 2127562000

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:05:01 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

| Compound                    | RT#1   | RT#2   | Resp#1   | Resp#2   | ppb      | ppb      |
|-----------------------------|--------|--------|----------|----------|----------|----------|
| -----                       |        |        |          |          |          |          |
| System Monitoring Compounds |        |        |          |          |          |          |
| 1) S Tetrachlo...           | 2.772  | 3.423  | 79020653 | 476.6E6  | 21.529   | 20.829   |
| Spiked Amount               | 40.000 |        | Recovery | =        | 53.82%   | 52.07%   |
| 51) S Decachlor...          | 9.958  | 11.764 | 75904204 | 348.9E6  | 18.715   | 18.267m  |
| Spiked Amount               | 40.000 |        | Recovery | =        | 46.79%   | 45.67%   |
| Target Compounds            |        |        |          |          |          |          |
| 31) AR1016-A                | 3.143  | 4.086  | 42170143 | 214.7E6  | 541.386  | 573.011  |
| 32) AR1016-B                | 3.540  | 4.613  | 72354185 | 420.4E6  | 531.790  | 524.852  |
| 33) AR1016-C                | 4.085  | 5.263  | 136.3E6  | 833.8E6  | 470.082  | 480.937  |
| 34) AR1016-D                | 4.245  | 5.446  | 59580384 | 441.1E6  | 503.917  | 586.381  |
| 35) AR1016-E                | 4.753  | 6.085  | 63181641 | 264.1E6  | 518.162  | 514.653  |
| 36) AR1260-A                | 7.115  | 8.681  | 143.6E6  | 889.0E6  | 421.190  | 444.561m |
| 37) AR1260-B                | 7.268  | 8.793  | 81272871 | 512.5E6  | 562.662  | 586.183  |
| 38) AR1260-C                | 7.605  | 9.223  | 79833960 | 523.2E6  | 501.377  | 511.970  |
| 39) AR1260-D                | 8.040  | 9.578  | 214.0E6  | 1049.9E6 | 582.925  | 489.113  |
| 40) AR1260-E                | 8.474  | 10.121 | 190.3E6  | 1071.7E6 | 502.381m | 525.829m |
| -----                       |        |        |          |          |          |          |

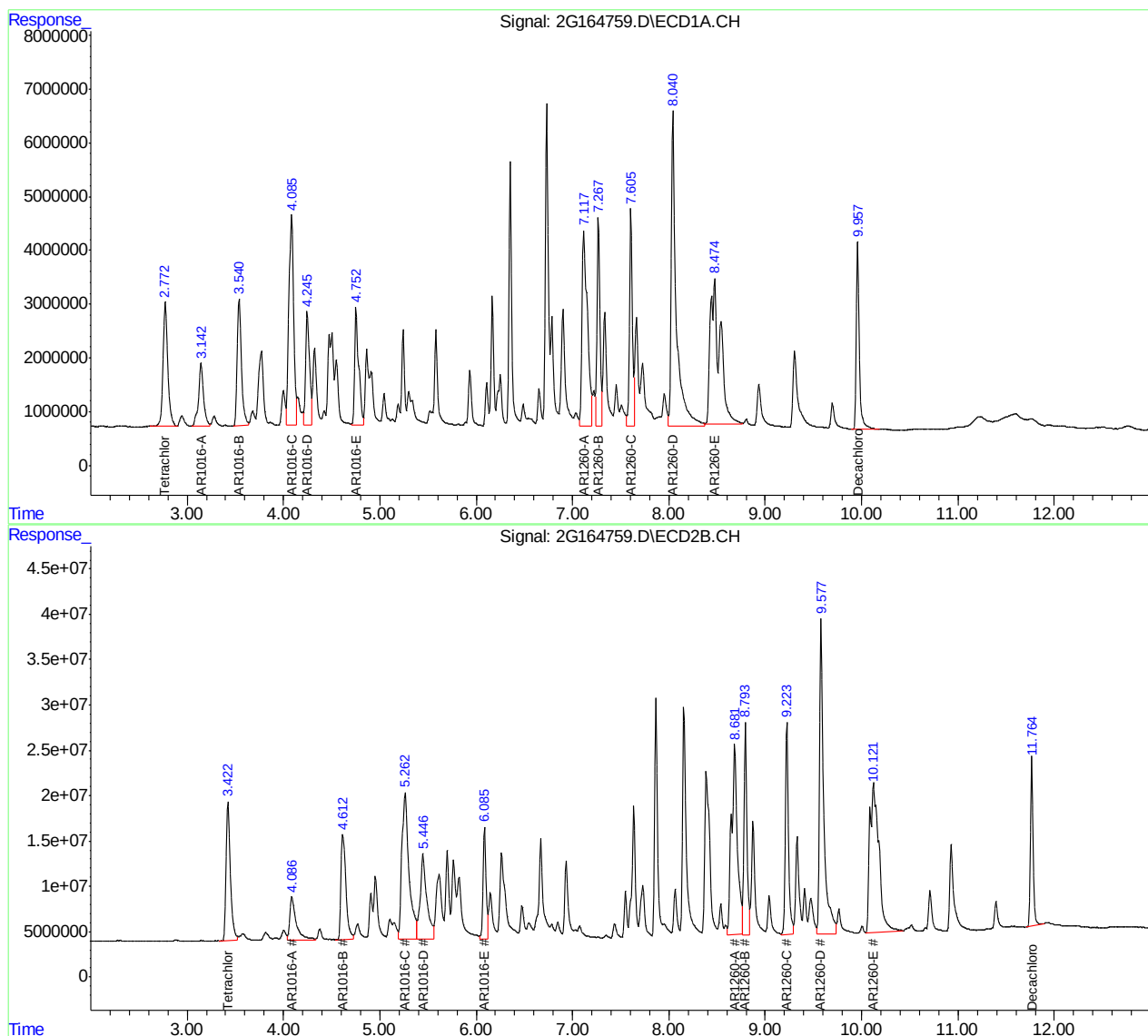
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:05:01 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



Manual Integration Approval Summary

Sample Number:

G2G4351-CC4311

Method:

SW846 8082A

Lab FileID:

2G164759.D

Analyst approved:

06/04/18 11:46 Summer Kotb

Injection Time:

06/02/18 01:08

Supervisor approved:

06/05/18 10:42 Gwendolyn Burns

| Parameter          | CAS       | Sig# | R.T.<br>(min.) | Reason                  |
|--------------------|-----------|------|----------------|-------------------------|
| AR1260-E           |           | 1    | 8.47           | Split peak              |
| AR1260-A           |           | 2    | 8.68           | Split peak              |
| AR1260-E           |           | 2    | 10.12          | Split peak              |
| Decachlorobiphenyl | 2051-24-3 | 2    | 11.76          | Poorly defined baseline |

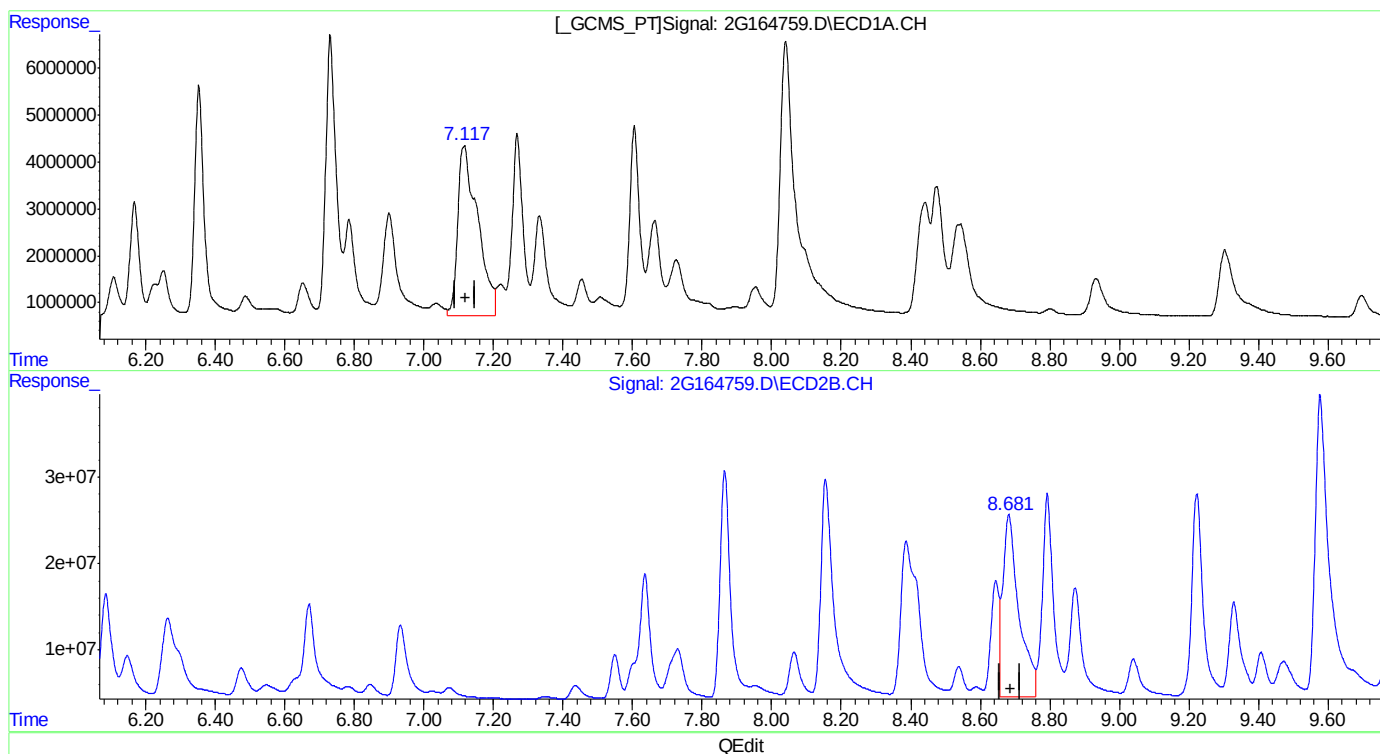
7.5.21.1  
7

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.115min 421.190PPB  
response 143562443

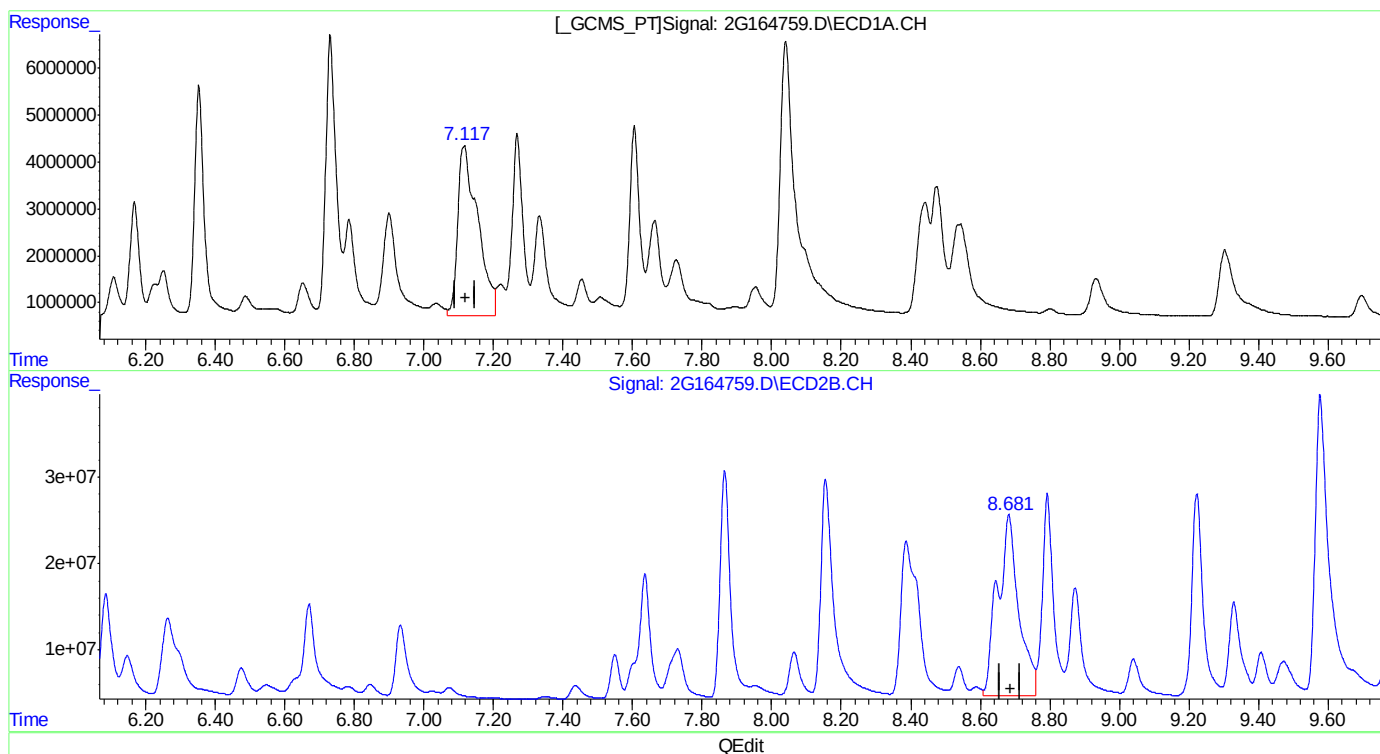
(36) AR1260-A #2  
8.682min 335.022PPB  
response 669939356

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(36) AR1260-A  
7.115min 421.190PPB  
response 143562443

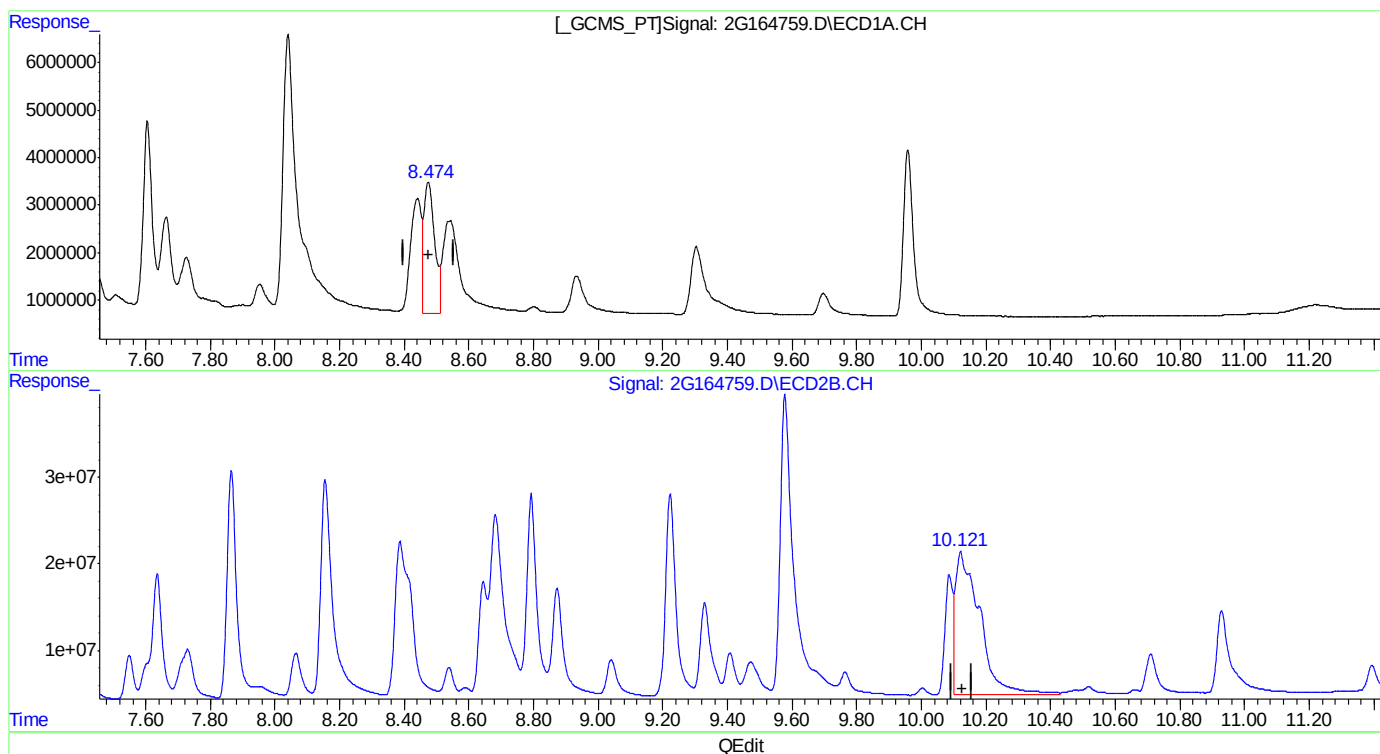
(36) AR1260-A #2  
8.681min 444.561PPB m  
response 888984684

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.474min 166.068PPB  
response 62904495

(40) AR1260-E #2  
10.121min 424.275PPB  
response 864745317

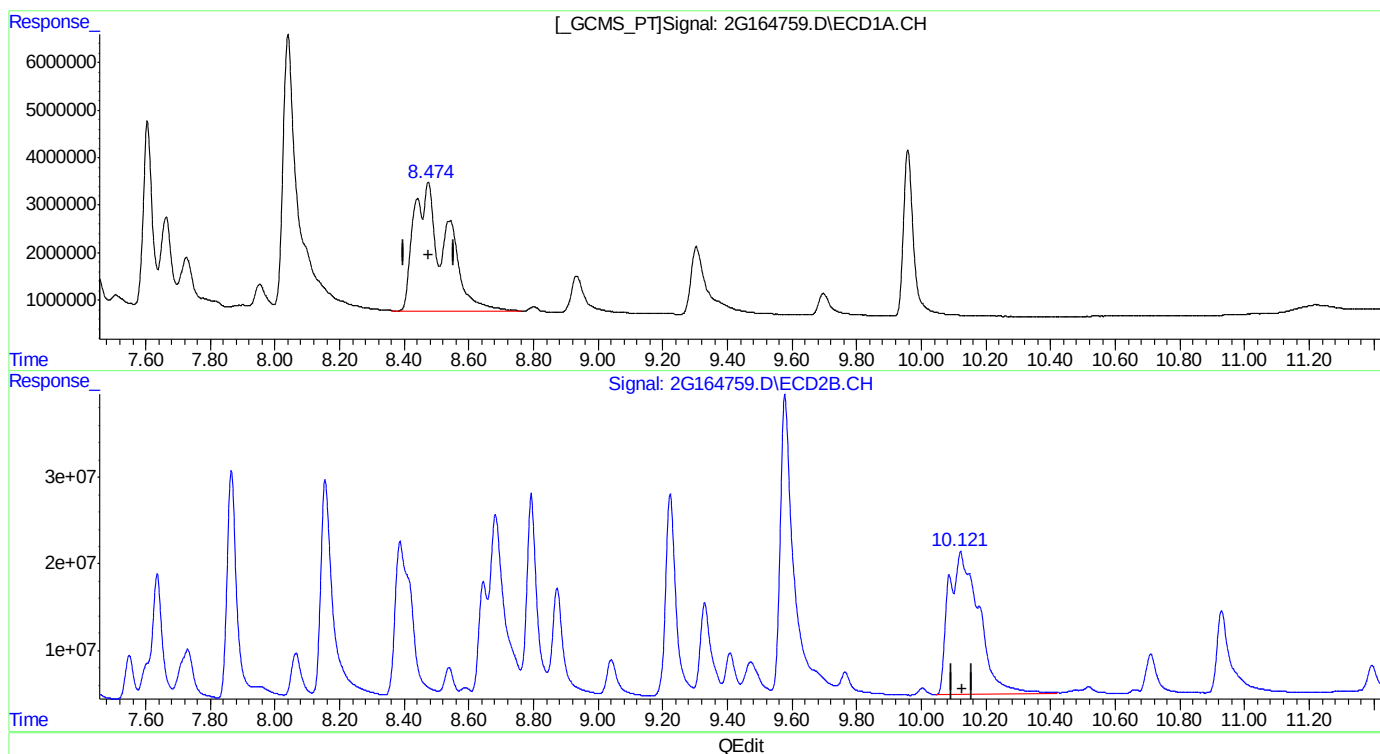


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(40) AR1260-E  
8.474min 502.381PPB m  
response 190295820

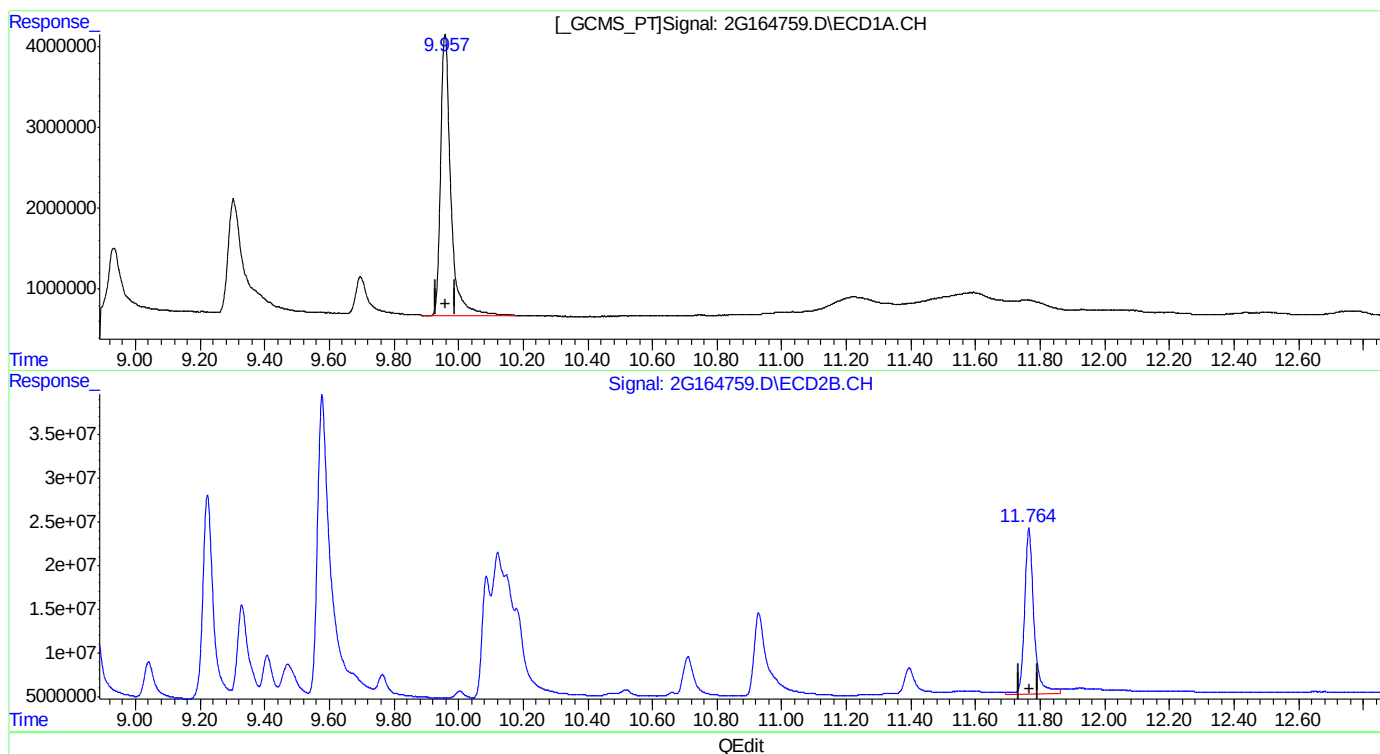
(40) AR1260-E #2  
10.121min 525.829PPB m  
response 1071730593

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.958min 18.715ppb

response 75904204

(51) Decachlorobiphenyl #2 (S)

11.765min 20.042ppb

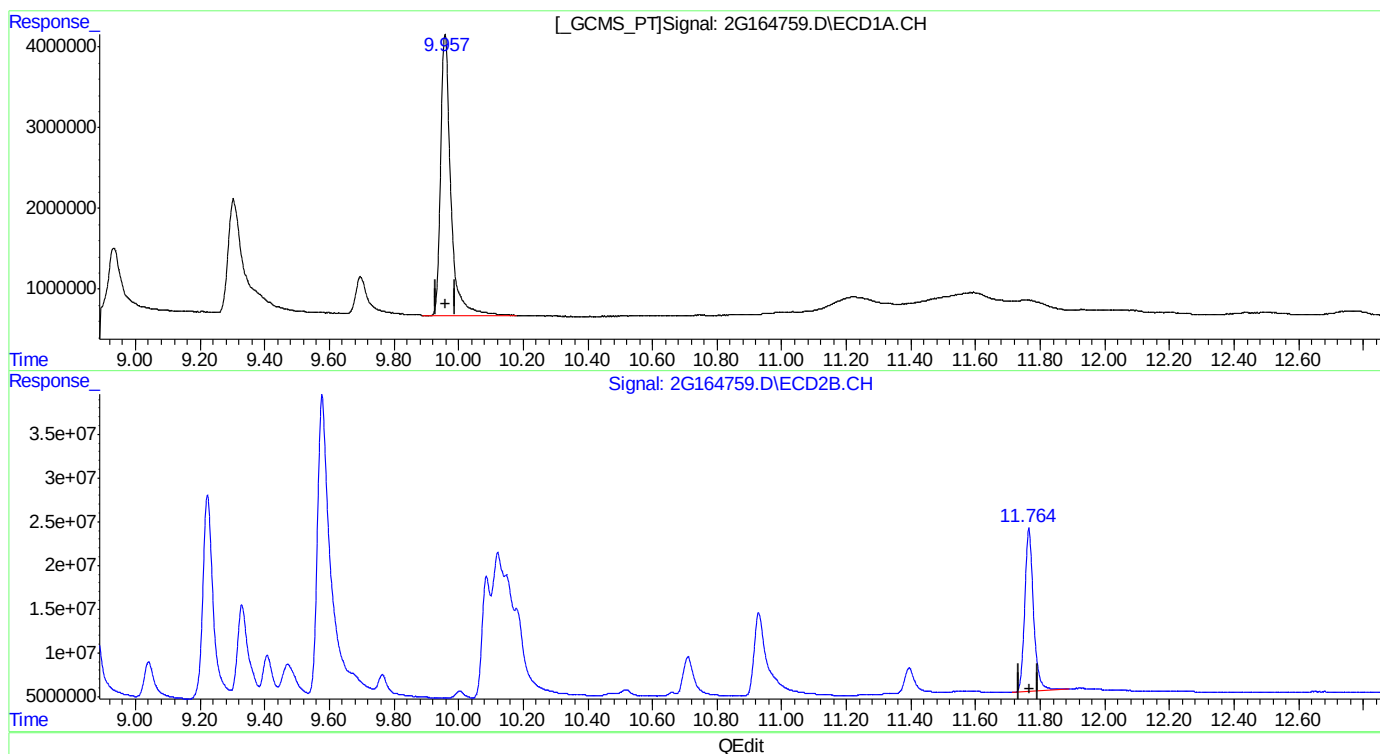
response 382789049

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2G4351\  
Data File : 2G164759.D  
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH  
Acq On : 02 Jun 2018 1:08 am  
Operator : tianweir  
Sample : cc4311-500  
Misc : OP12385,G2G4351,15.7,,,10,1  
ALS Vial : 78 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Jun 04 11:03:14 2018  
Quant Method : C:\MSDCHEM\1\METHODS\2PCB4311.M  
Quant Title :  
QLast Update : Mon Jun 04 08:46:06 2018  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul  
Signal #1 Phase : ZBCLP-1 Signal #2 Phase: ZBCLP-2  
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(51) Decachlorobiphenyl (S)

9.958min 18.715ppb

response 75904204

(51) Decachlorobiphenyl #2 (S)

11.764min 18.267ppb m

response 348894222

## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4311

Print Analyst Name: AMIR KIAN

Date: 4/19/18

**Analyst Signature:** \_\_\_\_\_

## Standard Data

| Lot # | Description    | Conc.  |
|-------|----------------|--------|
| 121   | AR 121/1244    | 100ppb |
| 21    | AR 1232/1262   | 100ppb |
| 22    | AR 1242/1268   | 100ppb |
| 23    | AR 1248        | 100ppb |
| 12418 | hexone (fiken) | —      |

## Standard Data

| Standard Data |             |         |
|---------------|-------------|---------|
| Lot #         | Description | Conc.   |
| 18-243-001    | AR1016/1200 | 50ppb   |
| 4114-250      |             | 250ppb  |
| 18-243-048    |             | 500ppb  |
| 18-243-046    |             | 1000ppb |
| 18-243-045    |             | 2000ppb |
| 85F           | ↓           | 3000ppb |
| 18-243-05     | 113         | 20 ppb  |

Columns: ZBCLPZ / ZBCLPZ

Method 2082

Initial Cal. Method 6264311

Injection Volume: 100ml

**Date Archived:**

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:**

Date: 4/20/18

| R | Data File | Sample ID    | Ext. Batch | Test | MALS TX # | Dilution | IS | SU | Status (Data) | Comments                 |
|---|-----------|--------------|------------|------|-----------|----------|----|----|---------------|--------------------------|
|   | 207162096 | IB           |            |      | 2         |          |    | /  | OK            |                          |
|   | 096       | IC4311-50    | 1016/1260  | 1st  | 3         |          |    | /  | NG            | partial injection?<br>re |
|   | 097       | -250         |            |      | 4         |          |    | /  | OK            |                          |
|   | 098       | -500         |            |      | 5         |          |    | /  | OK            |                          |
|   | 099       | Icc4311-1000 |            |      | 6         |          |    | /  | OK            |                          |
|   | 100       | IC4311-2000  |            |      | 7         |          |    | /  | OK            |                          |
|   | 101       | -3000        |            |      | 8         |          |    | /  | OK            |                          |
|   | 102       | -1000        | 1221/1254  |      | 9         |          |    | /  | OK            |                          |
|   | 102A      | -50          | 1016/1260  |      | 10        |          |    | /  | OK            |                          |
|   | 103       | -1000        | 1232/1262  |      | 10        |          |    | /  | OK            |                          |
|   | 104       | -1000        | 1242/1268  |      | 11        |          |    | /  | OK            |                          |
|   | 105       | -1000        | 1248       |      | 12        |          |    | /  | OK            |                          |
|   | 106       | IC4311-1000  | 1016/1260  | 2nd  | 13        |          |    | /  | OK            | ⓈSV.17-2362.13           |
|   | 107       | -1000        | 1221/1254  |      | 14        |          |    | /  | OK            | ⓈSV.17-2362.12           |
|   | 108       | -1000        | 1232/1262  |      | 15        |          |    | /  | OK            | ⓈSV.17-2362.14           |
|   | 109       | -1000        | 1242/1268  |      | 16        |          |    | /  | OK            | ⓈSV.17-2362.15           |
|   | 110       | -1000        | 1248       |      | 17        |          |    | /  | OK            | ⓈSV.17-2362.16           |
|   | 111       | all Mix      |            |      | 18        |          |    | /  | OK            | ⓈSV.17-2362.110          |

**ORO**

Date: 5/14

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4349

Print Analyst Name: CHRISTINE PHILIPS

Date: 5/30/18

Analyst Signature: CNP

Standard Data

Standard Data

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |

| Lot #         | Description     | Conc.   |
|---------------|-----------------|---------|
| 50 R-2492-78A | AR1016/1260     | 500ppb  |
| 78B           | AR1016/1260     | 1000ppb |
| 05            | IB              | 20ppb   |
|               |                 |         |
|               |                 |         |
|               |                 |         |
|               |                 |         |
| 180405        | HEXANE (FISHER) | —       |

Columns: ZBCUP1 / ZBCUP2

Method 8082

Initial Cal. Method 2PCB4311

Injection Volume: 1.0 µl

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/1/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX | ALS # | Dilution | IS | SU | Status (Data) | Comments                    |
|---|-----------|-------------|------------|------|-----|-------|----------|----|----|---------------|-----------------------------|
|   | 26164547  | CC4311-1000 |            |      |     | 43    |          |    |    | NOT USING     | WRONG VIAL                  |
|   | 548       | IB          |            |      |     | 2     |          |    |    | NOT USING     |                             |
|   | 549       | CC4311-1000 |            |      |     | 43    |          |    |    | OK            | 1260A ↓ 1ST<br>1260B ↑ BOTH |
|   | 550       | IB          |            |      |     | 2     |          |    |    | OK            |                             |
|   | 551       | OP12352-MB1 | 12352      | 8082 | S   | 44    |          |    |    | OK            |                             |
|   | 552       | BS1         |            |      |     | 45    |          |    |    | RR            |                             |
|   | 553       | BS0         |            |      |     | 46    |          |    |    | RR            |                             |
|   | 554       | jc 66683-1  |            |      |     | 47    |          |    |    | OK            |                             |
|   | 555       | OP12352-MS  |            |      |     | 48    |          |    |    | RR            |                             |
|   | 556       | MS0         |            |      |     | 49    |          |    |    | RR            |                             |
|   | 557       | jc 65358-7R |            |      |     | 50    |          |    |    | RR            | 48                          |
|   | 558/559   | HEXANE      |            |      |     | 100   |          |    |    | OK            |                             |
|   | 560       | CC4311-500  |            |      |     | 51    |          |    |    | OK            | 1260A/L, 1260B/R, 1260C     |
|   | 561       | IB          |            |      |     | 2     |          |    |    | OK            |                             |
|   | 562       | jc 66791-2  | 12352      | 8082 | S   | 52    |          |    |    | RR            | 54                          |
|   | 563       | jc 66781-1  |            |      |     | 53    |          |    |    | OK            |                             |
|   | 564       | jc 66782-1  |            |      |     | 54    |          |    |    | OK            |                             |
|   | 565       | jc 66835-1  |            |      |     | 55    |          |    |    | RR            | Need TMA cleanup            |
|   | 566       | jc 66683-2  |            |      |     | 56    |          |    |    | RR            |                             |

MTX = Matrix. Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |                |         |
|---------------|----------------|---------|
| Lot #         | Description    | Conc.   |
| SV 18-2432-7A | AR 1016 / 1040 | 500ppb  |
| -788          | AR 1016 / 1040 | 1000ppb |
| -35           | IB             | 200ppb  |
| -33           | TBAS           |         |
|               |                |         |
|               |                |         |
|               |                |         |
|               |                |         |
| 180405        | HEXANE (METH)  |         |

Columns: 2BCUP1 12BCUP1

Method 8082

Initial Cal. Method 2PCB4311

Injection Volume: 1.0 ul

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature] Date: 6/1/18

| R   | Data File | Sample ID   | Ext. Batch | Test | MALS<br>T X # | Dilution | IS | SU | Status<br>(Data) | Comments                       |
|-----|-----------|-------------|------------|------|---------------|----------|----|----|------------------|--------------------------------|
|     | 26164567  | JC66683-3   | 12352      | 8082 | S 57          |          |    |    | OK               |                                |
|     | 568       | .4          |            |      | 58            |          |    |    | OK               |                                |
|     | 569/570   | HEXANE      |            |      | 100           |          |    |    | OK               |                                |
|     | 571       | CC4311-1000 |            |      | 59            |          |    |    | OK               | 1260A/12nd                     |
|     | 572       | IB          |            |      | 2             |          |    |    | OK               |                                |
|     | 573       | OP12295-MB1 | 12395      | 8082 | O 60          |          |    |    | OK               | RRW/better FCC                 |
|     | 574       | -BSI        |            |      | 61            |          |    |    | NOT USING        |                                |
|     | 575       | Jc66667-1a  |            |      | 62            |          |    |    | NOT USING        | Need TBA Cleanup               |
|     | 576       | OP12295-MB  |            |      | 63            |          |    |    | NOT USING        | HAD TBA Cleanup                |
|     | 577       | -MSD        |            |      | 64            |          |    |    | NOT USING        |                                |
|     | 578       | Jc66668-1a  |            |      | 65            |          |    |    | NOT USING        |                                |
|     | 579       | Jc66667-1a  |            |      | 66            |          |    |    | NOT USING        | HAD TBA Cleanup                |
| 580 | 581       | HEXANE      |            |      | 100           |          |    |    | OK               |                                |
|     | 582       | CC4311-500  |            |      | 67            |          |    |    | NG               | 1260 A ↓ Bork<br>1260 B ↑ Bork |
|     | 583       | IB          |            |      | 2             |          |    |    | OK               |                                |
|     | 584       | CC4311-1000 |            |      | 59            |          |    |    | OK               | 1260 A ↓ 2nd                   |
|     | 585       | IB          |            |      | 2             |          |    |    | OK               |                                |
|     | 586       | Jc66683-2   | 12352      | 8082 | S 60          |          |    |    | OK Run           | Cont From Sequence             |
|     | 587       | Jc666850-1  |            |      | 61            |          |    |    | OK Run           |                                |

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Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09  
Rev. Date: 5/25/17

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4349

Print Analyst Name: Simmons Kuit

Date: 5/30/18

Analyst Signature: SK

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

Columns: ZBC1P1/ZBC1P2

Method: 2032

Initial Cal. Method: 2PCB4341

Injection Volume: 1.0 ul

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/1/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX | ALS # | Dilution | IS | SU | Status (Data) | Comments |
|---|-----------|-------------|------------|------|-----|-------|----------|----|----|---------------|----------|
|   |           |             |            |      |     |       |          |    |    |               |          |
|   | 26114588  | jc6683-2    | 12352      | 8082 | S   | 60    |          |    |    | OK            |          |
|   | 589       | jc65850-1R  |            |      |     | 61    |          |    |    | OK            |          |
|   | 590       | jc65850-2R  |            |      |     | 62    |          |    |    | OK            |          |
|   | 591       | jc66769-33  |            |      |     | 63    |          |    |    | OK            |          |
|   | 592       | jc66769-34  |            |      |     | 64    |          |    |    | OK            |          |
|   | 593       | jc66769-35  |            |      |     | 65    |          |    |    | OK            |          |
|   | 594       | jc66769-36  |            |      |     | 66    |          |    |    | OK            |          |
|   | 595/596   | hexane      |            |      |     | 100   |          |    |    | OK            |          |
|   | 597       | cc4311-500  |            |      |     | 67    |          |    |    | OK            |          |
|   | 598       | IB          |            |      |     | 2     |          |    |    | OK            |          |
|   | 599       | jc66769-37  |            |      |     | 68    |          |    |    | OK            |          |
|   | 600       | jc66769-38  |            |      |     | 69    |          |    |    | OK            |          |
|   | 601/602   | hexane      |            |      |     | 100   |          |    |    | OK            |          |
|   | 603       | cc4311-1000 |            |      |     | 70    |          |    |    | OK            |          |
|   | 604       | IB          |            |      |     | 2     |          |    |    | OK            |          |
|   | 605       | JP12371-MS1 | 12371      | 8082 | W   | 71    |          |    |    | OK            |          |
|   | 606       | BS1         |            |      |     | 72    |          |    |    | OK            |          |
|   | 607       | jc66845-6   |            |      |     | 73    |          |    |    | OK            |          |
|   | 608       | CP12371-MS  |            |      |     | 74    |          |    |    | OK            |          |

MTX = Matrix. Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016409

Rev. Date: 5/25/17

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## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4349Print Analyst Name: CHRISTINE ALLIANCEDate: 5/30/18Analyst Signature: CAP

## Standard Data

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |

## Standard Data

| Lot #       | Description     | Conc.   |
|-------------|-----------------|---------|
| 18-2431-79A | HEXANE/1000     | 500ppb  |
| 79B         | HEXANE/1000     | 1000ppb |
| 85          | IB              | 2000ppb |
|             |                 |         |
|             |                 |         |
|             |                 |         |
|             |                 |         |
| 180405      | HEXANE (FISHER) | —       |

Columns: 2BCUP I / 2BCUP IIMethod 8082Initial Cal. Method 2PCP4311Injection Volume: 1.0 µlDate Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]Date: 6/1/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX | ALS # | Dilution | IS | SU | Status (Data) | Comments                          |
|---|-----------|-------------|------------|------|-----|-------|----------|----|----|---------------|-----------------------------------|
|   | 267164609 | OP12371-MSD | 12371      | 8082 | W   | 75    |          |    |    | OK            |                                   |
|   | 610       | jc66736-1   |            |      |     | 76    |          |    |    | OK            |                                   |
|   | 611       | 2           |            |      |     | 77    |          |    |    | OK            |                                   |
|   | 612       | 3           |            |      |     | 78    |          |    |    | OK            |                                   |
|   | 613       | HEXANE      |            |      |     | 100   |          |    |    | OK            |                                   |
|   | 614       | PC4311-5000 |            |      |     | 79    |          |    |    | OK            | <del>1000ppb 79B</del><br>TR 6/31 |
|   | 615       | IB          |            |      |     | 2     |          |    |    | OK            |                                   |
|   | 616       | jc66736-4   | 12371      | 8082 | W   | 80    |          |    |    | OK            |                                   |
|   | 617       | 5           |            |      |     | 81    |          |    |    | OK            |                                   |
|   | 618       | jc66845-1   |            |      |     | 82    |          |    |    | OK            |                                   |
|   | 619       | 2           |            |      |     | 83    |          |    |    | OK            |                                   |
|   | 620       | 3           |            |      |     | 84    |          |    |    | OK            |                                   |
|   | 621       | 4           |            |      |     | 85    |          |    |    | OK            |                                   |
|   | 622       | 5           |            |      |     | 86    |          |    |    | OK            |                                   |
|   | 623/624   | HEXANE      |            |      |     | 100   |          |    |    | OK            |                                   |
|   | 625       | PC4311-1000 |            |      |     | 87    |          |    |    | OK            | <del>1000ppb 87B</del><br>TR 6/31 |
|   | 626       | IB          |            |      |     | 2     |          |    |    | OK            |                                   |
|   | 627       | jc66845-7   | 12371      | 8082 | W   | 88    |          |    |    | OK            |                                   |
|   | 628       | 8           |            |      |     | 89    |          |    |    | OK            |                                   |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09Rev. Date: 5/25/17

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## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4349Print Analyst Name: CHRISTINE PHILLIPSDate: 5/31/18Analyst Signature: cap

## Standard Data

## Standard Data

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
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|       |             |       |
|       |             |       |

| Lot #  | Description     | Conc. |
|--------|-----------------|-------|
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |
| 187405 | HEXANE (FISHER) | —     |

Columns: ZBLUP1 / ZBLUP2Method 8082Initial Cal. Method 2PCB4311Injection Volume: 1.0 µlDate Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  Date: 6/1/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX # | Dilution | IS | SU | Status (Data) | Comments           |
|---|-----------|-------------|------------|------|-------|----------|----|----|---------------|--------------------|
|   | 26164629  | jc66845.9   | 12371      | 8082 | W 90  |          |    |    | OK            |                    |
|   | 630       | jc66927.1   |            |      | 91    |          |    |    | OK            |                    |
|   | 631       | HEXANE      |            |      | 100   |          |    |    | OK            |                    |
|   | 632       | OP12385.MB1 | 12385      | 8082 | S 92  |          |    |    | OK            |                    |
|   | 633       | .BS1        |            |      | 93    |          |    |    | NOT USING     | RR w/ bucket & cc  |
|   | 634/635   | HEXANE      |            |      | 100   |          |    |    | OK            |                    |
|   | 636       | CC4311.520  |            |      | 94    |          |    |    | OK            | 1260 D 1st and 2nd |
|   | 637       | IB          |            |      | 2     |          |    |    | OK            | 1260 B 1st and 2nd |
|   | 638       | jc66907.1   | 12385      | 8082 | S 95  |          |    |    | NOT USING     |                    |
|   | 639       | jc66738.5   |            |      | 96    |          |    |    | NOT USING     | Need TBA cleanup   |
|   | 640       | jc66894.3   |            |      | 97    |          |    |    | NOT RUN       | cut from Sequence  |
|   | 641       | OP12385.MS  |            |      | 98    |          |    |    | Det Run       |                    |
|   | 642       | .MSD        |            |      | 99    |          |    |    | Det Run       |                    |
|   | 643       | jc66828.1   |            |      | 3     |          |    |    | Det Run       |                    |
|   | 644       | .2          |            |      | 4     |          |    |    | Det Run       |                    |
|   | 645/646   | HEXANE      |            |      | 100   |          |    |    | Det Run       |                    |
|   | 647       | CC4311.1000 |            |      | 5     |          |    |    | Det Run       |                    |
|   | 648       | IB          |            |      | 2     |          |    |    | Det Run       |                    |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

151

## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4350

Date: 5/31/18

Print Analyst Name: Summer Kolb

Analyst Signature: sk

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |                 |         |
|---------------|-----------------|---------|
| Lot #         | Description     | Conc.   |
| SV 32432 BA   | AR 106/126      | 500 ppb |
| 736           | AR 106/126      | 100 ppb |
| 09            | IB              | 20 ppb  |
|               |                 |         |
|               |                 |         |
|               |                 |         |
|               |                 |         |
| 13405         | hexane (Fisher) |         |

Columns: ZBCLP1/ZBCLP2

Method: 8082

Initial Cal. Method: Q12-B4311

Injection Volume: 1.0 ul

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/6/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX<br>T<br>X | ALS<br># | Dilution | IS | SU | Status<br>(Data) | Comments        |
|---|-----------|-------------|------------|------|---------------|----------|----------|----|----|------------------|-----------------|
|   | 26114649  | hexane      |            |      |               | 100      |          |    |    | OK               |                 |
|   | 650       | cc4311-500  |            |      |               | 6        |          |    |    | OK               |                 |
|   | 651       | IB          |            |      |               | 2        |          |    |    | OK               |                 |
|   | 652       | OP12385-MB1 | 12385      | 8082 |               | 7        |          |    |    | OK               | HAD TBT cleanup |
|   | 653       | -AS1        |            |      |               | 8        |          |    |    | OK               | +               |
|   | 654       | Jc66907-1   |            |      |               | 9        |          |    |    | OK               |                 |
|   | 655       | Jc66738-5   |            |      |               | 10       |          |    |    | OK               | HAD TBT cleanup |
|   | 656       | Jc66894-3   |            |      |               | 11       |          |    |    | OK               |                 |
|   | 657       | OP12385-MB  |            |      |               | 12       |          |    |    | OK               | HAD TBT cleanup |
|   | 658       | -USD        |            |      |               | 13       |          |    |    | OK               | 1               |
|   | 659/660   | hexane      |            |      |               | 100      |          |    |    | OK               |                 |
|   | 661       | cc4311-1000 |            |      |               | 14       |          |    |    | OK               |                 |
|   | 662       | IB          |            |      |               | 2        |          |    |    | OK               |                 |
|   | 663       | Jc66828-1   |            |      |               | 15       |          |    |    | OK               |                 |
|   | 664       | -2          |            |      |               | 16       |          |    |    | OK               |                 |
|   | 665/666   | hexane      |            |      |               | 100      |          |    |    | OK               |                 |
|   | 667       | cc4311-500  |            |      |               | 17       |          |    |    | OK               |                 |
|   | 668       | IB          |            |      |               | 2        |          |    |    | OK               |                 |

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Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: QR016-09

Rev. Date: 5/25/17

153

## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4350

Date: 5/31/18  
Standard Data

Print Analyst Name: Summer Kuhl

Analyst Signature: SK

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |

Columns: ZBCLPT/ZBCLPTII

Method: 8082

Initial Cal. Method: 2PCB4311

Injection Volume: 10 ul

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/6/18

| R | Data File | Sample ID   | Ext. Batch | Test | MTX<br>T X | Dilution | IS | SU | Status<br>(Data) | Comments |
|---|-----------|-------------|------------|------|------------|----------|----|----|------------------|----------|
|   | 26114669  | cp12403-MBI | 12403      | 8082 | S          | 18       |    |    | OK               |          |
|   | 670       | cp12403-B51 |            |      |            | 19       |    |    | OK               |          |
|   | 671       | Jc66918-1   |            |      |            | 20       |    |    | OK               |          |
|   | 672       | cp12403-MS  |            |      |            | 21       |    |    | OK               |          |
|   | 673       | cp12403-MS  |            |      |            | 22       |    |    | OK               |          |
|   | 674       | Jc66808-3   |            |      |            | 23       |    |    | OK               |          |
|   | 675       | Jc66918-2   |            |      |            | 24       |    |    | OK               |          |
|   | 676       | hexane      |            |      |            | 100      |    |    | OK               |          |
|   | 677       | hexane      |            |      |            | 100      |    |    | OK               |          |
|   | 678       | cc4311-1000 |            |      |            | 25       |    |    | OK               |          |
|   | 679       | IB          |            |      |            | 2        |    |    | OK               |          |
|   | 680       | Jc66918-12  |            |      |            | 26       |    |    | OK               |          |
|   | 681       | IB          |            |      |            | 27       |    |    | OK               |          |
|   | 682       | Jc66929-1   |            |      |            | 28       |    |    | OK               |          |
|   | 683       | Jc66815-1   |            |      |            | 29       |    |    | OK               |          |
|   | 684       | Jc66920-1   |            |      |            | 30       |    |    | OK               |          |
|   | 685       | Jc66921-1   |            |      |            | 31       |    |    | OK               |          |
|   | 686       | Jc66769-39  |            |      |            | 32       |    |    | OK               |          |
|   | 687/688   | hexane      |            |      |            | 100      |    |    | OK               |          |

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Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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# SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4350

Date: 5/31/18

Print Analyst Name: Tianwei Ruan

Analyst Signature: TR

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |             |        |
|---------------|-------------|--------|
| Lot #         | Description | Conc.  |
| SW182432-2A   | AP1016/1260 | 100ppb |
| -785          | ↓           | 500ppb |
| -65           | 113         | 20ppb  |
|               |             |        |
|               |             |        |
|               |             |        |
|               |             |        |

Columns: ZBCLP1/ZBCLP2

Method: 8080

Initial Cal. Method: 2PCB43.1

Injection Volume: 1.0uL

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/6/18

| R        | Data File   | Sample ID | Ext. Batch | Test | MALS<br>T X | Dilution | IS | SU | Status<br>(Data) | Comments          |
|----------|-------------|-----------|------------|------|-------------|----------|----|----|------------------|-------------------|
| 29164689 | cc4311-500  |           |            |      | 33          |          |    |    | OK               | 1240 A, DCB ↓ 2ND |
| 690      | 113         |           |            |      | 2           |          |    |    | OK               |                   |
| 691      | Jc66943-1   | 12403     | 8082       | S    | 34          |          |    |    | OK               |                   |
| 692      | Jc66626-1   |           |            |      | 35          |          |    |    | OK               |                   |
| 693      | -2          |           |            |      | 36          |          |    |    | OK               |                   |
| 696      | -3          |           |            |      | 37          |          |    |    | OK               |                   |
| 695      | Jc66626-4   |           |            |      | 38          |          |    |    | OK               |                   |
| 696      | -5          |           |            |      | 39          |          |    |    | OK               |                   |
| 697      | -6          |           |            |      | 40          |          |    |    | OK               |                   |
| 698/699  | lexale      |           |            |      | 100         |          |    |    | OK               |                   |
| 700      | cc4311-1000 |           |            |      | 41          |          |    |    | OK               | 1240 D ↑ 1ST      |
| 701      | 113         |           |            |      | 2           |          |    |    | OK               |                   |
| 702      | 9F12416-MB1 | 12416     | 8082       | S    | 42          |          |    |    | NOT USING        | RRW/holder etc    |
| 703      | BS1         |           |            |      | 43          |          |    |    | NOT USING        |                   |
| 704      | jc66627-1   |           |            |      | 44          |          |    |    | NOT USING        |                   |
| 705      | OP12416-MS  |           |            |      | 45          |          |    |    | NOT USING        |                   |
| 706      | -MSD        |           |            |      | 46          |          |    |    | NOT USING        |                   |
| 707      | jc67067-1   |           |            |      | 47          |          |    |    | NOT USING        |                   |
| 708      | -2          |           |            |      | 48          |          |    |    | NOT USING        |                   |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

157

## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4350

Date: 6/1/18

Print Analyst Name: CHRISTIE PHILLIPS

Analyst Signature: CAP

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |                 |         |
|---------------|-----------------|---------|
| Lot #         | Description     | Conc.   |
| 182452-BA     | AR1010/1100     | 500ppb  |
| 788           | AR1010/1100     | 1000ppb |
| 05            | IB              | 70ppb   |
|               |                 |         |
|               |                 |         |
|               |                 |         |
|               |                 |         |
| 182455        | HEXANE (FISHER) | —       |

Columns: 20CLPT / 20CLPT

Method 8262

Initial Cal. Method 20CLPT4311

Injection Volume: 1.0ul

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/6/18

| R | Data File    | Sample ID   | Ext. Batch | Test | MAIS T # | Dilution | IS | SU | Status (Data) | Comments             |
|---|--------------|-------------|------------|------|----------|----------|----|----|---------------|----------------------|
|   | 26114709-710 | HEXANE      |            |      | 100      |          |    |    | OK            |                      |
|   | 711          | CC4311-500  |            |      | 49       |          |    |    | OK            | 1016 A, 1016 D ↑ 2nd |
|   | 712          | IB          |            |      | 2        |          |    |    | OK            | 1260 B ↑ 2nd         |
|   | 713          | CC67067-3   | 124116     | 8082 | S 50     |          |    |    | OK            |                      |
|   | 714          | 4           |            |      | 51       |          |    |    | NOT USING     | Residue              |
|   | 715          | 5           |            |      | 52       |          |    |    | NOT USING     | ↓                    |
|   | 716          | JC66846-1A  | 123855     | 8082 | S 53     |          |    |    | OK            |                      |
|   | 717          | 2A          |            |      | 54       |          |    |    | OK            |                      |
|   | 718          | JC66709-39  |            |      | 55       |          |    |    | OK            |                      |
|   | 719          | JC66815-1   |            |      | 56       |          |    |    | OK            |                      |
|   | 720          | HEXANE      |            |      | 100      |          |    |    | OK            |                      |
|   | 722          | CC4311-1000 |            |      | 57       |          |    |    | OK            | 2607 TR611           |
|   | 723          | IB          |            |      | 2        |          |    |    | OK            |                      |
|   | 724          | JC6674-1    |            |      |          |          |    |    | NOT USING     | Cut from Sepum       |
|   | 725          | JC66722-1   |            |      |          |          |    |    |               |                      |
|   | 726          | JC66836-1   |            |      |          |          |    |    |               |                      |
|   | 727          | JC66862-1   |            |      |          |          |    |    |               |                      |
|   | 728          | JC66873-1   |            |      |          |          |    |    |               |                      |
|   | 729          | JC66873-2   |            |      |          |          |    |    |               |                      |

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Sample volume/weight refer to extraction log.  
All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09  
Rev. Date: 5/25/17

159

## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G12G4351

Date: 6/1/2018

Print Analyst Name: Shirley J. [Signature]

Analyst Signature: AK

[illegible]

| Standard Data |                |          |
|---------------|----------------|----------|
| Lot #         | Description    | Conc.    |
| 13.5432.73A   | AR 1016/1026   | 500 ppb  |
| .73A          | AR 1016/1026   | 1000 ppb |
| .05           | 1B             | 200 ppb  |
|               |                |          |
|               |                |          |
|               |                |          |
| (16000)       | (excess final) | -        |

Columns: ZBCLP I / ZBCI

Method 8082

Initial Cal. Method 2 PCB 1311

Injection Volume: 1.0 ml

Date Archived: \_\_\_\_\_

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervising Officer

Date: 6/6/18

| Supervisor Signature: _____ |           |             |            |        |               |          |          |    |    |                  | Date: 6/6/18      |
|-----------------------------|-----------|-------------|------------|--------|---------------|----------|----------|----|----|------------------|-------------------|
| R                           | Data File | Sample ID   | Ext. Batch | Test   | MTX<br>T<br>X | ALS<br># | Dilution | IS | SU | Status<br>(Data) | Comments          |
| 724                         | jc6671-1  | jc6671-1    |            |        |               |          |          |    |    |                  |                   |
| 725                         | 724       | jc6672-1    |            |        |               | 58       |          |    |    | OK               |                   |
| 726                         | 722       | jc66836-1   |            |        |               | 60       |          |    |    | OK               |                   |
| 727                         | 733       | jc66862-1   |            |        |               | 61       |          |    |    | OK               |                   |
| 728                         | 734       | jc66873-1   |            |        |               | 62       |          |    |    | NOT RUN          | Need TRA Cls - Vp |
| 729                         | 735       | jc66873-2   |            |        |               | 63       |          |    |    | OK               |                   |
| 730                         |           | jc66853-2   |            |        |               | 64       |          |    |    | OK               |                   |
| 731                         |           | hexane      |            |        |               | 100      |          |    |    | OK               | RR 1:10           |
| 732                         |           | hexane      |            |        |               | 100      |          |    |    | OK               |                   |
| 733                         |           | cc4311-500  |            |        |               | 65       |          |    |    | OK               |                   |
| 734                         |           | 1B          |            |        |               | 2        |          |    |    | OK               | 1260A 2nd         |
| 735                         |           | jc66854-2   |            |        |               | 66       |          |    |    | NOT RUN          |                   |
| 736                         |           | jc66894-1   |            |        |               | 67       |          |    |    | NOT RUN          | cut from Sequence |
| 737                         |           | jc66894-2   |            |        |               | 68       |          |    |    | NOT RUN          |                   |
| 738                         |           | jc66894-4   |            |        |               | 69       |          |    |    | NOT RUN          |                   |
| 739                         |           | cp12416-MS  | 12416      | 8032 S |               | 42       |          |    |    | OK               |                   |
| 740                         |           | cp12416-BST |            |        |               | 43       |          |    |    | OK               |                   |
| 741                         |           | jc66627-1   |            |        |               | 44       |          |    |    | OK               |                   |
| 742                         |           | cp12416-MS  |            |        |               | 45       |          |    |    | OK               |                   |

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MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.  
Sample volume/weight refer to extraction log.  
All strikes must be made in duplicate.

All strikeouts must be initialed, dated, and reason applied if not transcription error  
Form: QR016-00

Form: OR016-09

Rev. Date: 5/25/17

161



## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G12G14351

Date: 6/1/18

Print Analyst Name: Summer K.

Analyst Signature: AK

[illegible]

| Standard Data |                |          |
|---------------|----------------|----------|
| Lot #         | Description    | Conc.    |
| 5-3432-73A    | AR 1016 / 1916 | 5.0 ppb  |
| 73B           | AR 1016 / 1916 | 10.0 ppb |
| 5-3           | 103            | 2.0 ppb  |
|               |                |          |
|               |                |          |
|               |                |          |
| (1000)        | hexane (100%)  |          |

Columns: ZBCLPT / ZBCLP

Method 8080

Initial Cal. Method 2PCB4311

Injection Volume: 1 cc

Date Archived: \_\_\_\_\_

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: \_\_\_\_\_

Injection Volume: 10 µl

Date Archived: \_\_\_\_\_

**Supervisor Signature:**

Date: 6/6/18

| Supervisor Signature: _____ |           |                 |              |      |       |          |    |    |               | Date: 6/6/18 |
|-----------------------------|-----------|-----------------|--------------|------|-------|----------|----|----|---------------|--------------|
| R                           | Data File | Sample ID       | Ext. Batch   | Test | MTX # | Dilution | IS | SP | Status (Data) | Comments     |
|                             | 261647430 | pi2416 MS       | 12416        | 8082 | S     | 46       |    |    | OK            |              |
|                             | 744       | jc61061.1       |              |      |       | 47       |    |    | OK            |              |
|                             | 745       | jc61061.2       |              |      |       | 48       |    |    | Not Using     | Reschedule   |
|                             | 746       | hexane          |              |      |       | 100      |    |    | Not Using     | ↓            |
|                             | 747       | hexane          |              |      |       | 100      |    |    | OK            |              |
|                             | 748       | cc4311-1000     |              |      |       | 70       |    |    | OK            |              |
|                             | 749       | IB              |              |      |       | 2        |    |    | OK            |              |
|                             | 750       | Jc66854-2       | 12385        | 8082 | S     | 71       |    |    | OK            |              |
|                             | 751       | Jc66894-1       |              |      |       | 72       |    |    | OK            |              |
|                             | 752       | -2              |              |      |       | 73       |    |    | OK            |              |
|                             | 753       | Jc66894-4       | TR611<br>734 |      |       | 74       |    |    | OK            |              |
|                             | 754       | Jc66628-4       | 12416        | 8082 | S     | 75       |    |    | OK            |              |
|                             | 755       | -5              |              |      |       | 76       |    |    | OK            |              |
|                             | 756       | -6              |              |      |       | 77       |    |    | OK            |              |
|                             | 757       | 758 hexane      |              |      |       | 100      |    |    | OK            |              |
|                             | 759       | cc4311-500      |              |      |       | 78       |    |    | OK            |              |
|                             | 760       | IB              |              |      |       | 2        |    |    | OK            |              |
|                             | 761       | TR<br>Jc66628-2 |              |      |       | 79       |    |    | OK            |              |
|                             | 762       | -3              |              |      |       | 80       |    |    | OK            |              |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.  
Sample volume/weight refer to extraction log.  
All strikeouts must be initialed, dated.

Form: OR016-09

Rev. Date: 5/25/17

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4351

Print Analyst Name: Tianwei Ruan

Date: 6/1/18

Analyst Signature: TR

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |                 |         |
|---------------|-----------------|---------|
| Lot #         | Description     | Conc.   |
| 1820278       | Hexane 100      | 500ppb  |
| 778           | ↓               | 1000ppb |
| 05            | IB              | 20ppb   |
|               |                 |         |
|               |                 |         |
|               |                 |         |
|               |                 |         |
| 180005        | Hexane (fisher) | —       |

Columns: ZBCLP3/ZBCLP4

Method 8080

Initial Cal. Method 2PC04311

Injection Volume: 1.0 μL

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  

Date: 6/6/18

| R | Data File   | Sample ID   | Ext. Batch | Test | M T X | ALS # | Dilution | IS | SU | Status (Data) | Comments                |
|---|-------------|-------------|------------|------|-------|-------|----------|----|----|---------------|-------------------------|
|   | 2616476.3   | Jc66627-3   | 12416      | 8082 | S     | 81    |          |    |    | OK            |                         |
|   | 764         | -4          |            |      |       | 82    |          |    |    | OK            |                         |
|   | 765         | -5          |            |      |       | 83    |          |    |    | OK            |                         |
|   | 766         | -6          |            |      |       | 80    |          |    |    | OK            |                         |
|   | 767         | -7          |            |      |       | 85    |          |    |    | OK            |                         |
|   | 768         | Hexane      |            |      |       | 100   |          |    |    | OK            |                         |
|   | 770         | cc4311-1000 |            |      |       | 86    |          |    |    | OK            | 1260B + 2nd test 6/6/18 |
|   | 771         | IB          |            |      |       | 2     |          |    |    | OK            |                         |
|   | 772         | Jc66627-2   |            |      |       | 87    |          |    |    | OK            |                         |
|   | 773         | Jc66628-1   |            |      |       | 88    |          |    |    | OK            |                         |
|   | 774/775/776 | Hexane      |            |      |       | 100   |          |    |    | OK            |                         |
|   | 777         | cc4311-500  |            |      |       | 89    |          |    |    | OK            |                         |
|   | 778         | IB          |            |      |       | 2     |          |    |    | OK            |                         |
|   | 779         | CP12433-NB/ | 12433      | 8082 | S     | 90    |          |    |    | OK            |                         |
|   | 780         | -BS1        |            |      |       | 91    |          |    |    | OK            |                         |
|   | 781         | Jc66660-1   |            |      |       | 92    |          |    |    | OK            |                         |
|   | 782         | CP12433-MIS |            |      |       | 93    |          |    |    | OK            |                         |
|   | 783         | -MIS        |            |      |       | 94    |          |    |    | OK            |                         |
|   | 784         | Jc66660-2   |            |      |       | 95    |          |    |    | OK            |                         |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4351

Print Analyst Name: Tianwei Ruan

Date: 6/1/18

Analyst Signature: TR

| Standard Data |             |       |
|---------------|-------------|-------|
| Lot #         | Description | Conc. |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |
|               |             |       |

| Standard Data |                 |        |
|---------------|-----------------|--------|
| Lot #         | Description     | Conc.  |
| 182432-78A    | AR1016/1000     | 500ppb |
| 78B           | L               | 100ppb |
| 05            | IB              | 20ppb  |
|               |                 |        |
|               |                 |        |
|               |                 |        |
| 180605        | hexane (fisher) |        |

Columns: ZBCUP1/800R1

Method 8082

Initial Cal. Method 2PC04311

Injection Volume: 1.0 uL

Date Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:   Date: 6/6/18

| Data File | Sample ID    | Ext. Batch | Test | MTX | ALS # | Dilution | IS | SU | Status (Data) | Comments         |
|-----------|--------------|------------|------|-----|-------|----------|----|----|---------------|------------------|
| 26164785  | hexane       |            |      |     | 100   |          |    |    | OK            |                  |
| 786       | hexane       |            |      |     | 100   |          |    |    | OK            |                  |
| 787       | cc 4311-1000 |            |      |     | 96    |          |    |    | OK            | D60 B ↑ 2nd      |
| 788       | IB           |            |      |     | 2     |          |    |    | OK            |                  |
| 789       | OP12432-MB1  | 12432      | 8082 | 8   | 3     |          |    |    | OK            |                  |
| 790       | -BS1         |            |      |     | 4     |          |    |    | OK            |                  |
| 791       | Jc66892-1    |            |      |     | 5     |          |    |    | OK            |                  |
| 792       | OP12432-M15  |            |      |     | 6     |          |    |    | OK            |                  |
| 793       | -M150        |            |      |     | 7     |          |    |    | OK            |                  |
| 794       | Jc66892-2    |            |      |     | 8     |          |    |    | OK            |                  |
| 795       | -3           |            |      |     | 9     |          |    |    | OK            |                  |
| 796       | hexane       |            |      |     | 100   |          |    |    | OK            |                  |
| 797       | cc 4311-1000 |            |      |     | 10    |          |    |    | OK            |                  |
| 799       | IB           |            |      |     | 2     |          |    |    | OK            |                  |
| 800       | Jc66892-4    |            |      |     | 11    |          |    |    | OK            | Rx low Surrogate |
| 801       | -5           |            |      |     | 12    |          |    |    | OK            |                  |
| 802       | -6           |            |      |     | 13    |          |    |    | OK            |                  |
| 803       | -7           |            |      |     | 14    |          |    |    | OK            |                  |
| 804       | -8           |            |      |     | 15    |          |    |    | OK            |                  |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.

sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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## SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G2G4351Date: 6/1/18Print Analyst Name: Tianwei RuanAnalyst Signature: TR

## Standard Data

| Lot # | Description | Conc. |
|-------|-------------|-------|
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |
|       |             |       |

## Standard Data

| Lot #      | Description     | Conc.    |
|------------|-----------------|----------|
| SV18-2078A | AR1016/1260     | 500 ppb  |
| 78F        | ✓               | 1000 ppb |
| 09         | 13              | 20 ppb   |
|            |                 |          |
|            |                 |          |
|            |                 |          |
| 180809     | hexene (fisher) | —        |

Columns: ZBCLP1/ZBCLP2Method 8082Initial Cal. Method 2PCB4311Injection Volume: 1.0 µLDate Archived:  

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:  Date: 6/6/18

| R   | Data File  | Sample ID   | Ext. Batch | Test | MAIS T X # | Dilution | IS | SU | Status (Data) | Comments                |
|-----|------------|-------------|------------|------|------------|----------|----|----|---------------|-------------------------|
| 29  | 104805     | Jc66892-9   | 12432      | 8082 | 5          | 16       |    |    | OK            |                         |
| 806 |            | -10         |            |      |            | 17       |    |    | OK            |                         |
| 807 | 808        | hexene      |            |      |            | 100      |    |    | OK            |                         |
| 809 |            | cc4311-1000 |            |      |            | 18       |    |    | OK            |                         |
| 810 |            | 13          |            |      |            | 2        |    |    | OK            | 1260 B ↑ 2nd            |
| 811 | Jc66892-11 | 12432       | 8082       | 5    | 19         |          |    |    | OK            |                         |
| 812 |            | -12         |            |      |            | 20       |    |    | not using     | 1254 RE w/ interference |
| 813 | Jc66951-1  |             |            |      |            | 21       |    |    | not using     | 1254 RE w/ interference |
| 814 |            | -2          |            |      |            | 22       |    |    | OK            | Non-Detect              |
| 815 |            | -3          |            |      |            | 23       |    |    | OK            | Non-Detect              |
| 816 |            | -4          |            |      |            | 24       |    |    | OK            | Non-Detect              |
| 817 |            | -5          |            |      |            | 25       |    |    | OK            | Non-Detect              |
| 818 | 814        | hexene      |            |      |            | 100      |    |    | OK            |                         |
| 820 |            | cc4311-500  |            |      |            | 26       |    |    | OK            | 1260 B 1st, 1260 ↑ 2nd  |
| 821 |            | 13          |            |      |            | 2        |    |    | OK            | 1260 B ↑ 2nd            |
| 822 | Jc66951-6  | 12432       | 8082       | 5    | 27         |          |    |    | OK            |                         |
| 823 |            | -7          |            |      |            | 28       |    |    | OK            | Non-Detect              |
| 824 |            | -8          |            |      |            | 29       |    |    | OK            | Non-Detect              |
| 825 | Jc66892-1  | 12385       | 8082       | 5    | 30         |          |    |    | OK            | Non-Detect              |
|     |            |             |            |      |            |          |    |    | OK            | Non-Detect              |
|     |            |             |            |      |            |          |    |    | OK            | HAD TBA cleanup         |

MTX = Matrix. Designate W for water, S for soil, O for oil. IS = Internal Standard Area. (if used) SU = Surrogate.  
 Sample volume/weight refer to extraction log.  
 All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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LOGBOOK ID: 0-2190

Date Started: 05/20/18 Time Started: 10:30 AM  
Date Finished: 05/21/18 Time Finished: 5:00 PM

# Pest / PCB Extraction Log - Soils

Extract Method (CHECK OFF <sup>✓</sup> / DO NOT CIRCLE):

Microwave SW3546 ☒ Sonication SW350C

Waste Dilution SW350A ☒ Soxhlet SW3540

|                         |            |                    |                     |
|-------------------------|------------|--------------------|---------------------|
| BATCH #                 | GC12385    | RACK#              | PCB-21              |
| Weighted by:            | FN 1/1/13  |                    |                     |
| Concentrated by:        | MPS        |                    |                     |
| Final Vol. Top-up:      | 500 mL     |                    |                     |
| Valid by:               | MPS 1/1/13 |                    |                     |
| Supervisor Review:      | Defy 5/130 |                    |                     |
| Equipment/Range         | ID         | Observed Temp (°C) | Corrected Temp (°C) |
| Bath (65-70°C)          | 3          | 65                 | 65                  |
| Bath Chiller            | 3          | 11                 | 11                  |
| Washbath (70-80°C)      |            |                    |                     |
| Washbath Chiller (GPM)  |            |                    |                     |
| NEVAP (23-24°C, LPM)    |            |                    |                     |
| Balance                 |            | N/A                | N/A                 |
| SUBROGATE               | LOT #      | CONC (ppb)         | AMT (mL)            |
| PCB                     | 182158126  | 4.00               | 1.00                |
| PCB LL                  |            |                    |                     |
| WITNESS SIGN: <i>FN</i> |            |                    |                     |
| MATRIX SPIKE            | LOT #      | CONC               | AMT (mL)            |
| PEST                    | 182158126  | 2.800              | 1.00                |
| PEST LL                 |            |                    |                     |
| PCB                     |            |                    |                     |
| PCB LL                  |            |                    |                     |
| WITNESS SIGN: <i>FN</i> |            |                    |                     |
| SOLVENT                 | LOT #      | BRAND              | AMT (mL)            |
| 2:1 HEXANE/ACETONE      | 182158126  | ANALYST            | 30                  |
| 1:1 METH CHLOR/ACETONE  |            |                    |                     |
| HEXANE                  |            |                    |                     |
| REAGENT                 | LOT #      | BAKE BATCH #       | BRAND               |
| HYDROMATRIX             | 6400001    | 5111512            | ANALYST             |
| SODIUM SULFATE          | 181492     | 5-23-162           | ANALYST             |
| FILTER PAPER            | 11145061   |                    | ANALYST             |
| FLORISIL                | 2707932    |                    | ANALYST             |
| 1:1 SULFURIC ACID       | 0818215811 |                    | ANALYST             |
| COPPER                  |            |                    |                     |
| PERMAKROM (4)           |            |                    |                     |
| HYDROMATRIX             |            |                    |                     |
| MATRIX                  | LOT #      | BAKE BATCH #       | BRAND               |
| SAND                    | 18072021   | 2-5-18             | ANALYST             |

| Sample # | Analysis Type | Sample Description | Sample Bottle # | Wet Wt. (g) | Oil (g) | Vol. (mL) | Color | Microwave ID | Decant | Y | N | Extract Cleanup | Comment |
|----------|---------------|--------------------|-----------------|-------------|---------|-----------|-------|--------------|--------|---|---|-----------------|---------|
| 1        | MS            | 5-4-1              | 1               | 15.5        | 15.5    | 100       | 0.000 | 15           |        |   |   | GPC             |         |
| 2        | MS            | 5-4-1              | 2               | 15.4        | 15.4    | 100       | 0.000 | 15           |        |   |   | KMnO4           |         |
| 3        | MS            | 5-4-1              | 3               | 15.6        | 15.6    | 100       | 0.000 | 15           |        |   |   | Cu              |         |
| 4        | MS            | 5-4-1              | 4               | 15.7        | 15.7    | 100       | 0.000 | 15           |        |   |   | Florisil        |         |
| 5        | MS            | 5-4-1              | 5               | 15.8        | 15.8    | 100       | 0.000 | 15           |        |   |   | H2SO4           |         |
| 6        | MS            | 5-4-1              | 6               | 15.9        | 15.9    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 7        | MS            | 5-4-1              | 7               | 16.0        | 16.0    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 8        | MS            | 5-4-1              | 8               | 16.1        | 16.1    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 9        | MS            | 5-4-1              | 9               | 16.2        | 16.2    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 10       | MS            | 5-4-1              | 10              | 16.3        | 16.3    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 11       | MS            | 5-4-1              | 11              | 16.4        | 16.4    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 12       | MS            | 5-4-1              | 12              | 16.5        | 16.5    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 13       | MS            | 5-4-1              | 13              | 16.6        | 16.6    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 14       | MS            | 5-4-1              | 14              | 16.7        | 16.7    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 15       | MS            | 5-4-1              | 15              | 16.8        | 16.8    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 16       | MS            | 5-4-1              | 16              | 16.9        | 16.9    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 17       | MS            | 5-4-1              | 17              | 17.0        | 17.0    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 18       | MS            | 5-4-1              | 18              | 17.1        | 17.1    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 19       | MS            | 5-4-1              | 19              | 17.2        | 17.2    | 100       | 0.000 | 15           |        |   |   |                 |         |
| 20       | MS            | 5-4-1              | 20              | 17.3        | 17.3    | 100       | 0.000 | 15           |        |   |   |                 |         |

QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

Comments: *Link 18072021-51*  
*Link 18072021-51*

## SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD:

Final Volume:

Other:

*JC66894-3*

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SGS  
Form: OP018A-09  
Rev Date: 8/2/17





## General Chemistry

### QC Data Summaries



---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC66894  
Account: ELPASOX - EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Analyte              | Batch ID        | RL  | MB<br>Result | Units | Spike<br>Amount | BSP<br>Result | BSP<br>%Recov | QC<br>Limits |
|----------------------|-----------------|-----|--------------|-------|-----------------|---------------|---------------|--------------|
| Total Organic Carbon | GP13384/GN80706 | 100 | 0.00         | mg/kg | 2000            | 2100          | 105.0         | 80-120%      |

Associated Samples:  
Batch GP13384: JC66894-1, JC66894-2, JC66894-3, JC66894-4  
(\*) Outside of QC limits

8.1  
8

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC66894  
Account: ELPASOX - EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Analyte              | Batch ID        | QC Sample | Units | Original Result | DUP Result | RPD  | QC Limits |
|----------------------|-----------------|-----------|-------|-----------------|------------|------|-----------|
| Total Organic Carbon | GP13384/GN80706 | JC66894-3 | mg/kg | 14400           | 11900      | 19.0 | 0-49%     |

Associated Samples:

Batch GP13384: JC66894-1, JC66894-2, JC66894-3, JC66894-4  
(\*) Outside of QC limits

8.2  
8

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC66894  
Account: ELPASOX - EL PASO CORPORATION  
Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

| Analyte              | Batch ID        | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|----------------------|-----------------|-----------|-------|-----------------|--------------|-----------|------|-----------|
| Total Organic Carbon | GP13384/GN80706 | JC66894-3 | mg/kg | 14400           | 27400        | 40900     | 96.7 | 14-161%   |

Associated Samples:

Batch GP13384: JC66894-1, JC66894-2, JC66894-3, JC66894-4

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC66894

Account: ELPASOX - EL PASO CORPORATION

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

File ID: E80531S1.TXT

Date Analyzed: 05/31/18

Methods: LLOYD KAHN 1988 MOD

Analyst: JO

Run ID: GN80706

Parameters: Total Organic Carbon

| Time  | Sample Description | Dilution Factor | PS Recov | Comments                  |
|-------|--------------------|-----------------|----------|---------------------------|
| 09:08 | GN80706-STD1       | 1               |          | STDA                      |
| 09:33 | GN80706-STD2       | 1               |          | STDB                      |
| 10:34 | GN80706-STD3       | 1               |          | STDC                      |
| 11:11 | GN80706-STD4       | 1               |          | STDD                      |
| 12:11 | GN80706-STD5       | 1               |          | STDE                      |
| 12:52 | GN80706-STD6       | 1               |          | STDF                      |
| 13:44 | GN80706-STD7       | 1               |          | STDG                      |
| 08:12 | GN80706-CRI1       | 1               |          |                           |
| 08:36 | GN80706-HSTD1      | 1               |          |                           |
| 08:50 | GN80706-ICV1       | 1               |          |                           |
| 09:11 | GN80706-CCV1       | 1               |          |                           |
| 09:27 | GP13384-MB3        | 1               |          |                           |
| 09:39 | GP13384-B3         | 1               |          |                           |
| 09:52 | JC66894-1          | 1               |          | under range reran at 0.5g |
| 09:59 | JC66894-2          | 1               |          |                           |
| 10:11 | JC66894-3          | 1               |          |                           |
| 10:25 | JC66894-4          | 1               |          |                           |
| 11:11 | GP13384-D1         | 1               |          |                           |
| 11:38 | GP13384-S1         | 1               |          |                           |
| 12:01 | JC66894-1          | 1               |          | over range reran at 0.1g  |
| 12:26 | JC66894-1          | 1               |          | under range reran at 0.3g |
| 12:36 | GN80706-CCV2       | 1               |          |                           |
| 13:53 | JC66894-1          | 1               |          |                           |
| 14:11 | GN80706-CCV3       | 1               |          |                           |

Refer to raw data for calibration curve and standards.

Instrument QC Summary  
Inorganics Analyses

Login Number: JC66894

Account: ELPASOX - EL PASO CORPORATION

Project: BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

File ID: E80531S1.TXT

Date Analyzed: 05/31/18

Methods: LLOYD KAHN 1988 MOD

Run ID: GN80706

Units: mg/l

| Sample Number | Parameter            | Result | RL  | IDL/MDL | True Value | % Recov. | QC Limits |
|---------------|----------------------|--------|-----|---------|------------|----------|-----------|
| GN80706-CRI1  | Total Organic Carbon | 97.1   | 100 | 52      | 100        | 97.1     | 70-130    |
| GN80706-HSTD1 | Total Organic Carbon | 5430   | 100 | 52      | 5000       | 108.6    | 90-110    |
| GN80706-ICV1  | Total Organic Carbon | 2150   | 100 | 52      | 2000       | 107.5    | 90-110    |
| GN80706-CCV1  | Total Organic Carbon | 2700   | 100 | 52      | 2500       | 108.0    | 90-110    |
| GN80706-CCV2  | Total Organic Carbon | 2730   | 100 | 52      | 2500       | 109.2    | 90-110    |
| GN80706-CCV3  | Total Organic Carbon | 2640   | 100 | 52      | 2500       | 105.6    | 90-110    |

(!) Outside of QC limits

8.4

8

## Percent Solids Raw Data Summary

Page 1 of 1

**Job Number:** JC66894

**Account:** ELPASOX EL PASO CORPORATION

**Project:** BBLNYS: TGP #229, 7586 East Eden Road, Eden, NY

---

**Sample:** JC66894-1      **Analyzed:** 29-MAY-18 by DJ

**Method:** SM2540 G-97

**ClientID:** 229-OC-DD10-001-11

|                    |       |   |
|--------------------|-------|---|
| Wet Weight (Total) | 31.59 | g |
| Tare Weight        | 21.79 | g |
| Dry Weight (Total) | 28.11 | g |
| Solids, Percent    | 64.5  | % |

---

**Sample:** JC66894-2      **Analyzed:** 29-MAY-18 by DJ

**Method:** SM2540 G-97

**ClientID:** 229-OC-DD10-002-11

|                    |       |   |
|--------------------|-------|---|
| Wet Weight (Total) | 30.11 | g |
| Tare Weight        | 22.28 | g |
| Dry Weight (Total) | 24.15 | g |
| Solids, Percent    | 23.9  | % |

---

**Sample:** JC66894-3      **Analyzed:** 29-MAY-18 by DJ

**Method:** SM2540 G-97

**ClientID:** 229-OC-DD10-003-11

|                    |       |   |
|--------------------|-------|---|
| Wet Weight (Total) | 35.71 | g |
| Tare Weight        | 26.4  | g |
| Dry Weight (Total) | 32.68 | g |
| Solids, Percent    | 67.5  | % |

---

**Sample:** JC66894-4      **Analyzed:** 29-MAY-18 by DJ

**Method:** SM2540 G-97

**ClientID:** 229-OC-DD10-FD052418

|                    |       |   |
|--------------------|-------|---|
| Wet Weight (Total) | 27.34 | g |
| Tare Weight        | 18.17 | g |
| Dry Weight (Total) | 25.49 | g |
| Solids, Percent    | 79.8  | % |

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Dayton, NJ

## Section 9

General Chemistry

Raw Data

6

LABORATORY REVIEW SIGNATURE FORM  
(To be stored with the raw data)

File ID: E80531S1.TXT  
Analyst: JO

Date Analyzed: 05/31/18  
Run ID: GN80706

Methods: LLOYD KAHN 1988 MOD

The following analyst(s) have reviewed this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: JO Date 5/31/18

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee):  Date 5/31/18

|    | Type    | Sample Nam | Sample ID | Origin     | Manual Diluti | Result     | Notes          | Comment | Status    |
|----|---------|------------|-----------|------------|---------------|------------|----------------|---------|-----------|
| 1  | Unknown | CRI        |           | TOCSSMCAL. | 1.000         | SSM-TC:0.0 |                |         | Completed |
| 2  | Unknown | HSTD       |           | TOCSSMCAL. | 1.000         | SSM-TC:5.4 |                |         | Completed |
| 3  | Unknown | ICV        |           | TOCSSMCAL. | 1.000         | SSM-TC:2.1 |                |         | Completed |
| 4  | Unknown | CCV        |           | TOCSSMCAL. | 1.000         | SSM-TC:2.7 |                |         | Completed |
| 5  | Unknown | GP13384-M  | LK        | TOCSSM.met | 1.000         | SSM-TC:0.0 |                |         | Completed |
| 6  | Unknown | GP13384-B3 |           | TOCSSM.met | 1.000         | SSM-TC:0.2 |                |         | Completed |
| 7  | Unknown | JC66894-1  | ②         | TOCSSM.met | 1.000         | SSM-TC:0.3 | under ref 0.5g |         | Completed |
| 8  | Unknown | JC66894-2  | ②         | TOCSSM.met | 1.000         | SSM-TC:1.0 |                |         | Completed |
| 9  | Unknown | JC66894-3  | ②         | TOCSSM.met | 1.000         | SSM-TC:0.9 |                |         | Completed |
| 10 | Unknown | JC66894-4  | ②         | TOCSSM.met | 1.000         | SSM-TC:1.6 |                |         | Completed |
| 11 | Unknown | GP13384-D1 | JC66894-3 | TOCSSM.met | 1.000         | SSM-TC:0.8 |                |         | Completed |
| 12 | Unknown | GP13384-S1 | JC66894-3 | TOCSSM.met | 1.000         | SSM-TC:2.7 |                |         | Completed |
| 13 | Unknown | JC66894-1  | ②         | TOCSSM.met | 1.000         | SSM-TC:1.8 | over ref 0.1g  |         | Completed |
| 14 | Unknown | JC66894-1  | ②         | TOCSSM.met | 1.000         | SSM-TC:0.2 | under ref 0.3g |         | Completed |
| 15 | Unknown | CCV        |           | TOCSSMCAL. | 1.000         | SSM-TC:2.7 |                |         | Completed |
| 16 | Unknown | JC66894-1  | ②         | TOCSSM.met | 1.000         | SSM-TC:0.5 |                |         | Completed |
| 17 | Unknown | CCV        |           | TOCSSMCAL. | 1.000         | SSM-TC:2.6 |                |         | Completed |

GN80706  
e80531s1.toc  
JO  
5/31/18

File Name: 6805351.taGN Batch ID GN80706Date 5/3/18Analyst DTest: Total Organic Carbon Product: IOC Units: mg/kg

RL (cirice one) = 1000 mg/kg or 100 mg/kg

Method (circle one): SW846 9060A (EPA Region 2 Lloyd KahnOven ID: 20C-14 (Range 73-77°C)Balance ID B39Thermometer ID 73133Correction Factor -1

| Sample ID   | Bottle # | Weight | Sample Description & Comments | Date/Time In | Temp uncorr | Temp corr | Date/Time Out | Temp uncorr | Temp Corr |
|-------------|----------|--------|-------------------------------|--------------|-------------|-----------|---------------|-------------|-----------|
| CRI         |          |        |                               |              |             |           |               |             |           |
| HSTD        |          |        |                               |              |             |           |               |             |           |
| ICV         |          |        |                               |              |             |           |               |             |           |
| CCV         |          |        |                               |              |             |           |               |             |           |
| GP13384-MB3 |          | 1.0860 |                               | 5/3/18 14:45 | 77          | 76        | 5/3/18 8:54   | 76          | 75        |
| GP13384-B3  |          | 1.0000 |                               |              |             |           |               |             |           |
|             |          | 1.0000 |                               |              |             |           |               |             |           |
| JC66894-1   | 2        | 1.0125 | under range rem @ 0.52        |              |             |           |               |             |           |
|             |          | 1.0625 |                               |              |             |           |               |             |           |
|             |          | 0.1080 |                               |              |             |           |               |             |           |
|             |          | 0.1018 |                               |              |             |           |               |             |           |
| JC66894-2   | 2        | 0.1049 |                               |              |             |           |               |             |           |
|             |          | 0.1061 |                               |              |             |           |               |             |           |
|             |          | 0.1003 |                               |              |             |           |               |             |           |
|             |          | 0.1037 |                               |              |             |           |               |             |           |
| JC66894-3   | 4        | 0.1026 |                               |              |             |           |               |             |           |
|             |          | 0.1009 |                               |              |             |           |               |             |           |
|             |          | 0.1028 |                               |              |             |           |               |             |           |
|             |          | 0.1065 |                               |              |             |           |               |             |           |
| JC66894-4   | 1        | 0.1031 |                               |              |             |           |               |             |           |
|             |          | 0.1049 |                               |              |             |           |               |             |           |
|             |          | 0.1089 |                               |              |             |           |               |             |           |
|             |          | 0.1075 |                               |              |             |           |               |             |           |

Analyst: DDate: 5/3/18

Data Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: BSP: 100ml of 2000 mg c/L  $\Rightarrow$  1.0g silica sand TV=20.00 mg/kgForm: GN058-03  
Date: 12/12/17







# GENERAL CHEMISTRY STANDARD PREPARATION LOG

Balance: B-39

glass pipet: class A

Product: TOC LK

GN or GP Number: GN 80706

| Intermediate Standard Description | Stock used to prepare standard                 | Stock concentration                 | Stock volume or weight used with units  | Balance or Autopipet ID (*) | Diluent             | Final Volume | Final Conc. of Intermediate (mg/l) | Expiration Date | Analyst | Date    |
|-----------------------------------|------------------------------------------------|-------------------------------------|-----------------------------------------|-----------------------------|---------------------|--------------|------------------------------------|-----------------|---------|---------|
| 6NE5-54774-TOC                    | Fisher 173322 exp: 9/26/22                     | sucrose                             | 47.5g                                   | B-39                        | DI H <sub>2</sub> O | 100mL        | 200,000                            | 6/22/18         | CZO     | 5/25/18 |
| 6NE5-54781-TOC                    | Fisher 156130 exp: 11/11/21                    | glucose                             | 12.5g                                   | B-39                        | DI H <sub>2</sub> O | 100mL        | 50,000                             |                 |         |         |
|                                   |                                                |                                     |                                         |                             |                     |              |                                    |                 |         |         |
| Standard Description              | Intermediate or Stock used to prepare standard | Intermediate or Stock concentration | Intermediate or Stock volume used in ml | Balance or Autopipet ID (*) | Diluent             | Final Volume | Final Conc. of Standard (mg/l)     | Expiration Date | Analyst | Date    |
| SUCROSE STDs                      |                                                |                                     |                                         |                             |                     |              |                                    |                 |         |         |
| 6NE5-54775-TOC                    | 6NE5-54774-TOC                                 | 200,000                             | 0.5                                     | class A pipet               | DI H <sub>2</sub> O | 100mL        | 1000                               | 6/22/18         | CZO     | 5/25/18 |
| 6NE5-54776-TOC                    |                                                |                                     | 2.5                                     |                             |                     |              | 5000                               |                 |         |         |
| 6NE5-54777-TOC                    |                                                |                                     | 5.0                                     |                             |                     |              | 10000                              |                 |         |         |
| 6NE5-54778-TOC                    |                                                |                                     | 12.5                                    |                             |                     |              | 25000                              |                 |         |         |
| 6NE5-54779-TOC                    |                                                |                                     | 20.0                                    |                             |                     |              | 40000                              |                 |         |         |
| 6NE5-54780-TOC                    |                                                |                                     | 25.0                                    |                             |                     |              | 50000                              |                 |         |         |
|                                   |                                                |                                     |                                         |                             |                     |              |                                    |                 |         |         |
|                                   |                                                |                                     |                                         |                             |                     |              |                                    |                 |         |         |
| GLUCOSE STDs                      |                                                |                                     |                                         |                             |                     |              |                                    |                 |         |         |
| 6NE5-54783-TOC                    | 6NE5-54781-TOC                                 | 50,000                              | 40.0                                    | class A pipet               | DI H <sub>2</sub> O | 100mL        | 20000                              | 6/22/18         | CZO     | 5/25/18 |
| 6NE5-54782-TOC                    |                                                |                                     | 50.0                                    |                             |                     |              | 25000                              |                 |         |         |

\* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01  
Rev. Date: 1/13/09

**SGS**

TOCLK  
GN80706

## Reagent Information Log - TOC - Soil

| <u>Reagent</u>                             | <u>Reagent # or Manufacturer/Lot</u> | <u>Exp. Date</u> |
|--------------------------------------------|--------------------------------------|------------------|
| <u>Sucrose Stock Solution, 200000 mg/L</u> | <u>GNE5-54774-TOC</u>                | <u>6/22/18</u>   |
| <u>Glucose Stock Solution, 50000 ug/L</u>  | <u>GNE5-54781-TOC</u>                | <u>6/22/18</u>   |
| <u>Glucose Check Solution, 25000 ug/L</u>  | <u>GNE5-54782-TOC</u>                | <u>6/22/18</u>   |
| <u>Glucose Check Solution, 20000 ug/L</u>  | <u>GNE5-54783-TOC</u>                | <u>6/22/18</u>   |
| <u>Nitric Acid, Reagent Grade</u>          | <u>JT Baker 0000183840</u>           | <u>10/31/22</u>  |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |
| <u> </u>                                   | <u> </u>                             | <u> </u>         |

All standards and stocks were made as described in the SOP for this method (circle one): Y or N  
If no (N), see attached page for standards prep.

Form: GN087A66-04  
Rev. Date: 4/6/18

## TOC-Control L Report

e80514s1.toc.tlx

Instr. InformationInstrument Options  
CatalystTOC/SSM/Spurge Kit/  
Regular SensitivityCal. Curve

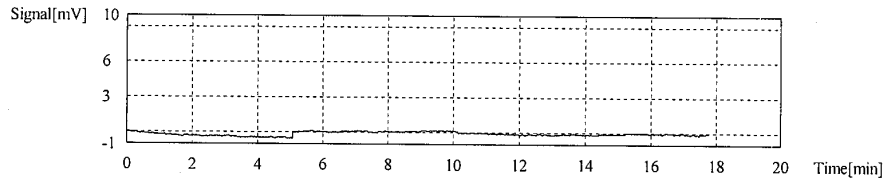
Sample Name: Untitled  
Sample ID: Untitled  
Cal. Curve: e80514s1.2018\_05\_14\_09\_00\_56.cal  
Status: Completed



AbsC: 0.000ug

| No. | Area    | CNV     | Abs C   | Weight  | Rem   | Ex | Date / Time          |
|-----|---------|---------|---------|---------|-------|----|----------------------|
| 1   | 0.000   | 0.000   | 0.000ug | 100.0mg | ***** |    | 5/14/2018 9:08:16 AM |
| 2   | 0.000   | 0.000   | 0.000ug | 100.0mg | ***** |    | 5/14/2018 9:14:41 AM |
| 3   | 0.000   | 0.000   | 0.000ug | 100.0mg | ***** |    | 5/14/2018 9:20:56 AM |
| 4   | 0.00300 | 0.00300 | 0.000ug | 100.0mg | ***** |    | 5/14/2018 9:27:53 AM |

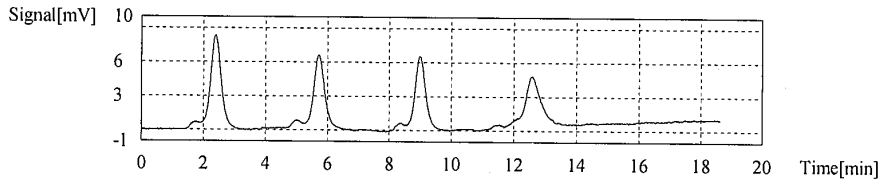
Mean Area 0.00075  
Mean CNV 0.00075



AbsC: 0.01000ug

| No. | Area  | CNV   | Abs C     | Weight  | Rem   | Ex | Date / Time           |
|-----|-------|-------|-----------|---------|-------|----|-----------------------|
| 1   | 21.87 | 21.87 | 0.01000ug | 100.0mg | ***** |    | 5/14/2018 9:33:11 AM  |
| 2   | 19.70 | 19.70 | 0.01000ug | 100.0mg | ***** |    | 5/14/2018 9:38:48 AM  |
| 3   | 17.51 | 17.51 | 0.01000ug | 100.0mg | ***** |    | 5/14/2018 10:10:13 AM |
| 4   | 20.59 | 20.59 | 0.01000ug | 100.0mg | ***** |    | 5/14/2018 10:28:05 AM |

Mean Area 19.92  
Mean CNV 19.92



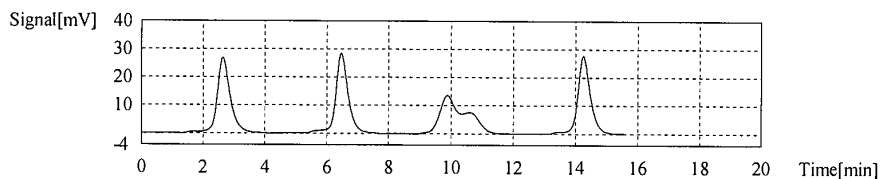
AbsC: 0.05000ug

| No. | Area  | CNV   | Abs C     | Weight  | Rem   | Ex | Date / Time           |
|-----|-------|-------|-----------|---------|-------|----|-----------------------|
| 1   | 78.63 | 78.63 | 0.05000ug | 100.0mg | ***** |    | 5/14/2018 10:34:34 AM |
| 2   | 79.24 | 79.24 | 0.05000ug | 100.0mg | ***** |    | 5/14/2018 10:49:32 AM |
| 3   | 78.89 | 78.89 | 0.05000ug | 100.0mg | ***** |    | 5/14/2018 10:58:04 AM |
| 4   | 77.85 | 77.85 | 0.05000ug | 100.0mg | ***** |    | 5/14/2018 11:04:25 AM |

## TOC-Control L Report

e80514s1.toc.tlx

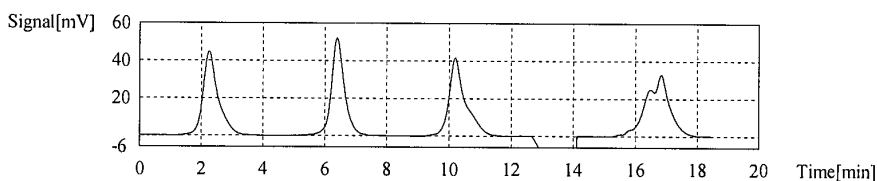
Mean Area 78.65  
Mean CNV 78.65



AbsC: 0.1000ug

| No | Area   | CNV    | Abs C    | Weight  | Rem   | Ex | Date / Time           |
|----|--------|--------|----------|---------|-------|----|-----------------------|
| 1  | 152.4  | 152.4  | 0.1000ug | 100.0mg | ***** |    | 5/14/2018 11:11:19 AM |
| 2  | 153.1  | 153.1  | 0.1000ug | 100.0mg | ***** |    | 5/14/2018 11:20:24 AM |
| 3  | 153.0  | 153.0  | 0.1000ug | 100.0mg | ***** |    | 5/14/2018 11:38:11 AM |
| 4  | 0.1395 | 0.1395 | 0.1000ug | 100.0mg | ***** | E  | 5/14/2018 11:42:56 AM |
| 5  | 0.000  | 0.000  | 0.1000ug | 100.0mg | ***** | E  | 5/14/2018 11:49:41 AM |
| 6  | 172.9  | 172.9  | 0.1000ug | 100.0mg | ***** |    | 5/14/2018 12:01:15 PM |

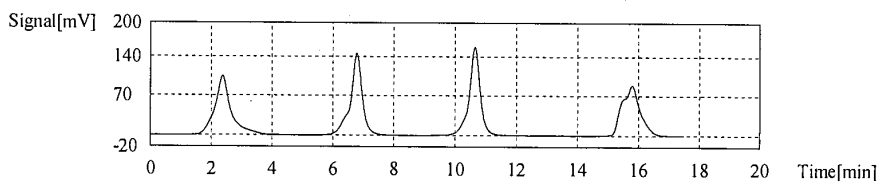
Mean Area 157.8  
Mean CNV 157.8



AbsC: 0.2500ug

| No | Area   | CNV    | Abs C    | Weight  | Rem   | Ex | Date / Time           |
|----|--------|--------|----------|---------|-------|----|-----------------------|
| 1  | 385.8  | 385.8  | 0.2500ug | 100.0mg | ***** |    | 5/14/2018 12:11:30 PM |
| 2  | 391.4  | 391.4  | 0.2500ug | 100.0mg | ***** |    | 5/14/2018 12:18:56 PM |
| 3  | 397.5  | 397.5  | 0.2500ug | 100.0mg | ***** |    | 5/14/2018 12:30:53 PM |
| 4  | 0.4406 | 0.4406 | 0.2500ug | 100.0mg | ***** | E  | 5/14/2018 12:35:15 PM |
| 5  | 371.2  | 371.2  | 0.2500ug | 100.0mg | ***** |    | 5/14/2018 12:42:29 PM |

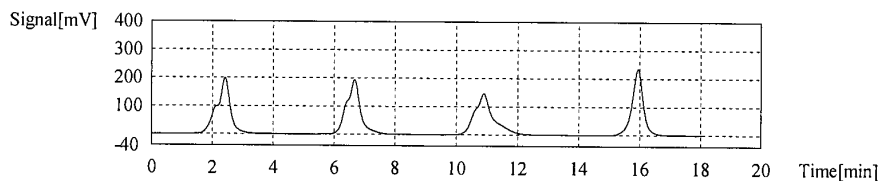
Mean Area 386.5  
Mean CNV 386.5



AbsC: 0.4000ug

| No | Area  | CNV   | Abs C    | Weight  | Rem   | Ex | Date / Time           |
|----|-------|-------|----------|---------|-------|----|-----------------------|
| 1  | 608.6 | 608.6 | 0.4000ug | 100.0mg | ***** |    | 5/14/2018 12:52:07 PM |
| 2  | 615.2 | 615.2 | 0.4000ug | 100.0mg | ***** |    | 5/14/2018 1:18:06 PM  |
| 3  | 618.7 | 618.7 | 0.4000ug | 100.0mg | ***** |    | 5/14/2018 1:26:50 PM  |
| 4  | 605.2 | 605.2 | 0.4000ug | 100.0mg | ***** |    | 5/14/2018 1:35:21 PM  |

Mean Area 611.9  
Mean CNV 611.9



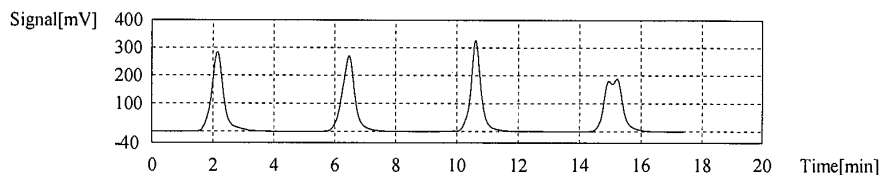
## TOC-Control L Report

e80514s1.toc.tlx

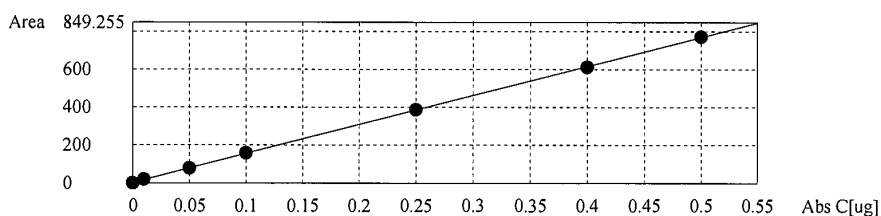
AbsC: 0.5000ug

| No | Area  | CNV   | AbsC     | Weight  | Rem   | Ev | Date/Time            |
|----|-------|-------|----------|---------|-------|----|----------------------|
| 1  | 781.2 | 781.2 | 0.5000ug | 100.0mg | ***** |    | 5/14/2018 1:44:34 PM |
| 2  | 776.9 | 776.9 | 0.5000ug | 100.0mg | ***** |    | 5/14/2018 1:50:38 PM |
| 3  | 754.8 | 754.8 | 0.5000ug | 100.0mg | ***** |    | 5/14/2018 1:58:29 PM |
| 4  | 775.3 | 775.3 | 0.5000ug | 100.0mg | ***** |    | 5/14/2018 2:06:19 PM |

Mean Area 772.1  
Mean CNV 772.0



Slope: 1534  
Intercept 2.520  
 $r^2$  0.9999  
 $r$  1.0000  
Zero Shift No

9.1  
9

## TOC-Control L Report

e80514s1.toc.tlx

## Instr. Information

Instrument Options  
CatalystTOC/SSM/Spurge Kit/  
Regular Sensitivity

## Sample

Sample Name: CRI  
Sample ID:  
Origin: TOCSSM.CAL.met  
Status: Completed  
Chk. Result

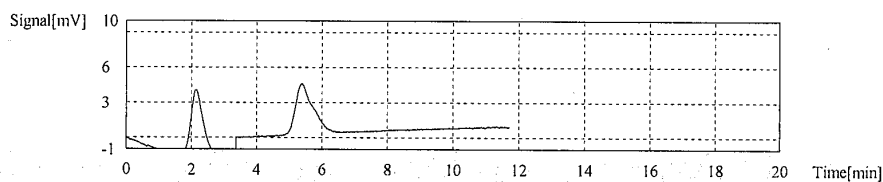
| Type    | Anal   | Manual Dilution | Density    | Result             |
|---------|--------|-----------------|------------|--------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:0.09705mg/L |

1. Det

Anal.: SSM-TC

| No. | Area  | CONV  | Conc.       | Weight  | Volume | EX | Cal. Curve                       | Date / Time          |
|-----|-------|-------|-------------|---------|--------|----|----------------------------------|----------------------|
| 1   | 15.45 | 15.45 | 0.08430mg/L | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 8:12:15 AM |
| 2   | 19.36 | 19.36 | 0.1098mg/L  | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 8:23:48 AM |

Mean Conc. 0.09705mg/L  
CV Conc 18.57%



## Sample

Sample Name: HSTD  
Sample ID:  
Origin: TOCSSM.CAL.met  
Status: Completed  
Chk. Result

| Type    | Anal   | Manual Dilution | Density    | Result           |
|---------|--------|-----------------|------------|------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:5.425mg/L |

1. Det

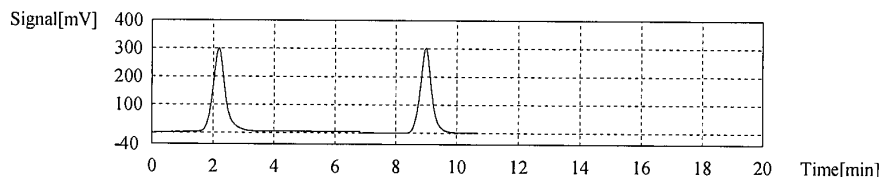
Anal.: SSM-TC

| No. | Area  | CONV  | Conc.     | Weight  | Volume | EX | Cal. Curve                       | Date / Time          |
|-----|-------|-------|-----------|---------|--------|----|----------------------------------|----------------------|
| 1   | 885.0 | 885.0 | 5.754mg/L | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 8:36:04 AM |
| 2   | 784.2 | 784.2 | 5.096mg/L | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 8:42:15 AM |

## TOC-Control L Report

e80531s1.toc.tlx

Mean Conc. 5.425mg/L  
CV Conc 8.57%

**Sample**

Sample Name: ICV  
Sample ID:  
Origin: TOCSSMCAL.met  
Status: Completed  
Chk. Result

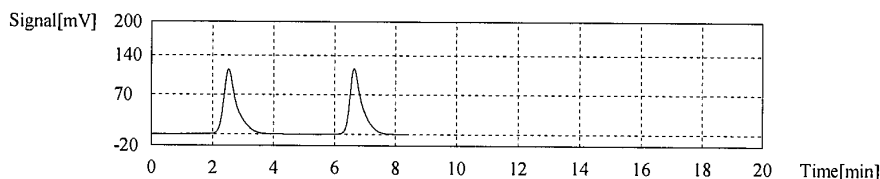
| Type    | Anal.  | Manual Dilution | Density    | Result           |
|---------|--------|-----------------|------------|------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:2.145mg/L |

1. Det

Anal.: SSM-TC

| No. | Area  | CONV  | Conc.     | Weight  | Volume | Ex.                              | Cal. Curve | Date/Time            |
|-----|-------|-------|-----------|---------|--------|----------------------------------|------------|----------------------|
| 1   | 340.8 | 340.8 | 2.206mg/L | 100.0mg | 100uL  | e80514s1.2018_05_14_09_00_56.cal |            | 5/31/2018 8:50:16 AM |
| 2   | 322.3 | 322.3 | 2.085mg/L | 100.0mg | 100uL  | e80514s1.2018_05_14_09_00_56.cal |            | 5/31/2018 9:01:06 AM |

Mean Conc. 2.145mg/L  
CV Conc 3.98%

**Sample**

Sample Name: CCV  
Sample ID:  
Origin: TOCSSMCAL.met  
Status: Completed  
Chk. Result

| Type    | Anal.  | Manual Dilution | Density    | Result           |
|---------|--------|-----------------|------------|------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:2.702mg/L |

1. Det

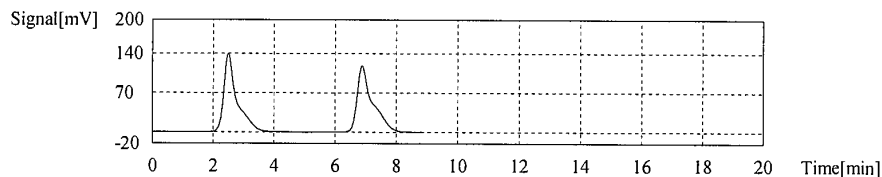
Anal.: SSM-TC

| No. | Area  | CONV  | Conc.     | Weight  | Volume | Ex.                              | Cal. Curve | Date/Time            |
|-----|-------|-------|-----------|---------|--------|----------------------------------|------------|----------------------|
| 1   | 419.3 | 419.3 | 2.717mg/L | 100.0mg | 100uL  | e80514s1.2018_05_14_09_00_56.cal |            | 5/31/2018 9:11:25 AM |
| 2   | 414.6 | 414.6 | 2.687mg/L | 100.0mg | 100uL  | e80514s1.2018_05_14_09_00_56.cal |            | 5/31/2018 9:17:53 AM |

## TOC-Control L Report

e80514sl.toc.tlx

Mean Conc. 2.702mg/L  
CV Conc 0.80%

**Sample**

Sample Name: GP13384-MB3  
Sample ID: LK  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

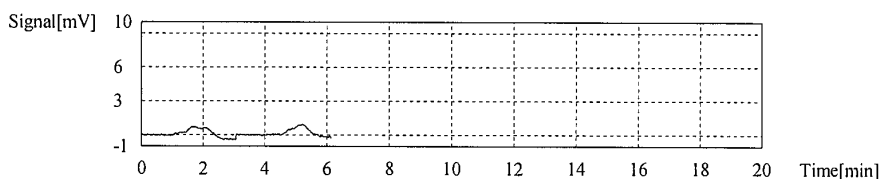
|         |        |      |           |                        |
|---------|--------|------|-----------|------------------------|
| Unknown | SSM-TC | 5000 | 1.000mg/L | SSM-TC 0.1 (2) 0.5mg/L |
|---------|--------|------|-----------|------------------------|

1. Det

Anal.: SSM-TC

| No | Area  | Conv  | Conc        | Weight | Volume | Ex                               | Cal Curve | Date/Time            |
|----|-------|-------|-------------|--------|--------|----------------------------------|-----------|----------------------|
| 1  | 4.501 | 4.501 | 0.00129mg/L | 1000mg | 1000uL | e80514sl.2018_05_14_09_00_56.cal |           | 5/31/2018 9:27:16 AM |
| 2  | 3.844 | 3.844 | 0.00086mg/L | 1000mg | 1000uL | e80514sl.2018_05_14_09_00_56.cal |           | 5/31/2018 9:33:27 AM |

Mean Conc. 0.00108mg/L  
CV Conc 28.11%

**Sample**

Sample Name: GP13384-B3  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

|         |        |      |           |                        |
|---------|--------|------|-----------|------------------------|
| Unknown | SSM-TC | 5000 | 1.000mg/L | SSM-TC 0.2 (0) 0.5mg/L |
|---------|--------|------|-----------|------------------------|

1. Det

Anal.: SSM-TC

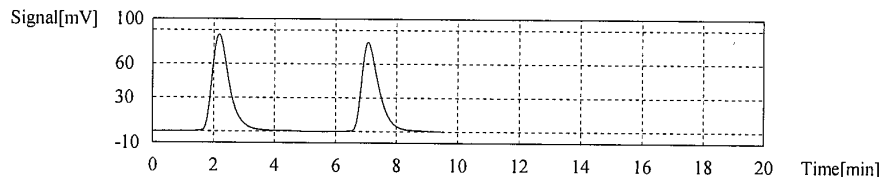
| No | Area  | Conv  | Conc       | Weight | Volume | Ex                               | Cal Curve | Date/Time            |
|----|-------|-------|------------|--------|--------|----------------------------------|-----------|----------------------|
| 1  | 338.9 | 338.9 | 0.2193mg/L | 1000mg | 1000uL | e80514sl.2018_05_14_09_00_56.cal |           | 5/31/2018 9:39:33 AM |
| 2  | 311.2 | 311.2 | 0.2013mg/L | 1000mg | 1000uL | e80514sl.2018_05_14_09_00_56.cal |           | 5/31/2018 9:45:20 AM |



## TOC-Control L Report

e80531s1.toc.tlx

Mean Conc. 0.2103mg/L  
CV Conc 6.07%

**Sample**

Sample Name: JC66894-1  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

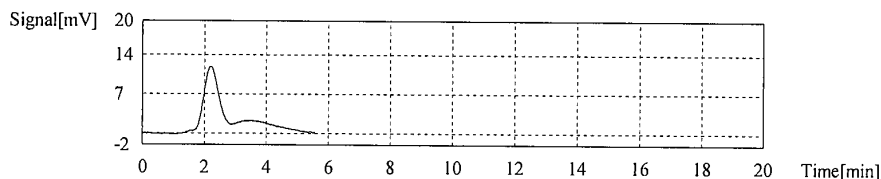
| Type    | Anal   | Manual Dilution | Density    | Result            |
|---------|--------|-----------------|------------|-------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:0.3582mg/L |

1. Det

Anal.: SSM-TC

| No. | Area  | Conc      | Weight  | Volume | EX | Cal. Curve                       | Date/Time             |
|-----|-------|-----------|---------|--------|----|----------------------------------|-----------------------|
| 1   | 185.8 | 1.139mg/L | 104.9mg | 104uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 9:59:29 AM  |
| 2   | 169.7 | 1.027mg/L | 106.1mg | 106uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:05:04 AM |

Mean Conc. 0.3582mg/L  
CV Conc 0.00%

**Sample**

Sample Name: JC66894-2  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

| Type    | Anal   | Manual Dilution | Density    | Result           |
|---------|--------|-----------------|------------|------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:1.083mg/L |

1. Det

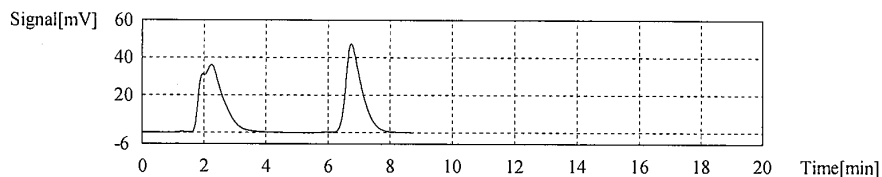
Anal.: SSM-TC

| No. | Area  | Conc      | Weight  | Volume | EX | Cal. Curve                       | Date/Time             |
|-----|-------|-----------|---------|--------|----|----------------------------------|-----------------------|
| 1   | 185.8 | 1.139mg/L | 104.9mg | 104uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 9:59:29 AM  |
| 2   | 169.7 | 1.027mg/L | 106.1mg | 106uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:05:04 AM |

## TOC-Control L Report

e80531s1.toc.tlx

Mean Conc. 1.083mg/L  
CV Conc 7.30%

**Sample**

Sample Name: JC66894-3  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

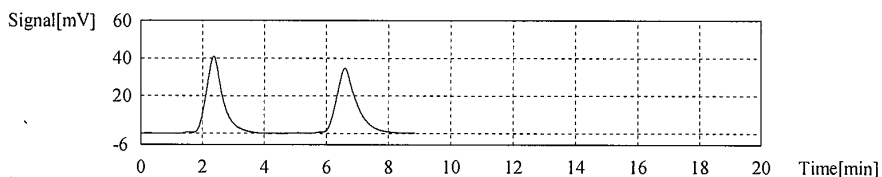
|         |        |       |            |                   |
|---------|--------|-------|------------|-------------------|
| Unknown | SSM-TC | 1.000 | 1.000mg/ul | SSM-TC 0.9694mg/L |
|---------|--------|-------|------------|-------------------|

1. Det

Anal.: SSM-TC

| No. | Area  | CONC  | Conc       | Weight  | Volume | Ex | Cal Curve                        | Date/Time             |
|-----|-------|-------|------------|---------|--------|----|----------------------------------|-----------------------|
| 1   | 153.7 | 153.7 | 0.9607mg/L | 102.6mg | 102uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:11:09 AM |
| 2   | 153.9 | 156.5 | 0.9782mg/L | 100.9mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:17:22 AM |

Mean Conc. 0.9694mg/L  
CV Conc 1.27%

**Sample**

Sample Name: JC66894-4  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

|         |        |       |            |                  |
|---------|--------|-------|------------|------------------|
| Unknown | SSM-TC | 1.000 | 1.000mg/ul | SSM-TC 1.669mg/L |
|---------|--------|-------|------------|------------------|

1. Det

Anal.: SSM-TC

| No. | Area  | CONC  | Conc      | Weight  | Volume | Ex | Cal Curve                        | Date/Time             |
|-----|-------|-------|-----------|---------|--------|----|----------------------------------|-----------------------|
| 1   | 266.5 | 266.5 | 1.669mg/L | 103.1mg | 103uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:25:02 AM |
| 2   | 279.4 | 274.6 | 1.721mg/L | 104.9mg | 104uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 10:32:28 AM |

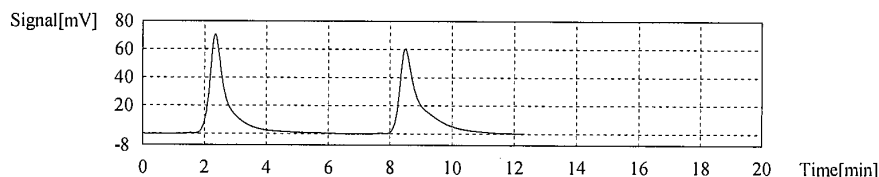
5/9

5/31/2018 2:24:53 PM

## TOC-Control L Report

e80531s1.toc.tif

Mean Conc. 1.695mg/L  
CV Conc 2.15%

**Sample**

Sample Name: GP13384-D1  
Sample ID: JC66894-3  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

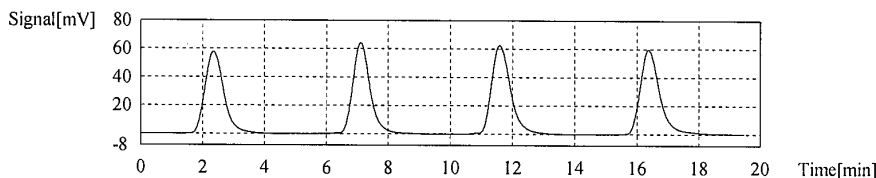
| Type    | Anal   | Manual Dilution | Density    | Result            |
|---------|--------|-----------------|------------|-------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:0.8027mg/L |

1. Det

Anal.: SSM-TC

| No | Area  | CONV  | Conc       | Weight  | Volume | Ex | Cal. Curve                       | Date/Time             |
|----|-------|-------|------------|---------|--------|----|----------------------------------|-----------------------|
| 1  | 244.9 | 244.9 | 0.7747mg/L | 204.0mg | 204uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 11:11:06 AM |
| 2  | 250.3 | 244.3 | 0.7730mg/L | 209.0mg | 209uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 11:16:46 AM |
| 3  | 266.0 | 263.4 | 0.8339mg/L | 206.0mg | 206uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 11:22:52 AM |
| 4  | 264.8 | 262.0 | 0.8293mg/L | 206.2mg | 206uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 11:31:02 AM |

Mean Conc. 0.8027mg/L  
CV Conc 4.16%

**Sample**

Sample Name: GP13384-S1  
Sample ID: JC66894-3  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

| Type    | Anal   | Manual Dilution | Density    | Result           |
|---------|--------|-----------------|------------|------------------|
| Unknown | SSM-TC | 1.000           | 1.000mg/uL | SSM-TC:2.764mg/L |

1. Det

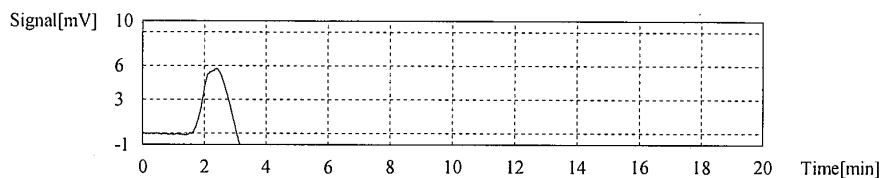
Anal.: SSM-TC

## TOC-Control L Report

e80531s1.toc.tlx

|       |            |         |       |                                  |                       |
|-------|------------|---------|-------|----------------------------------|-----------------------|
| 35.4% | 0.2112mg/L | 101.8mg | 100uL | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 12:36:00 PM |
|-------|------------|---------|-------|----------------------------------|-----------------------|

Mean Conc. 0.2112mg/L  
CV Conc 0.00%



## Sample

Sample Name: CCV  
Sample ID:  
Origin: TOCSSM.CAL.met  
Status: Completed  
Chk. Result

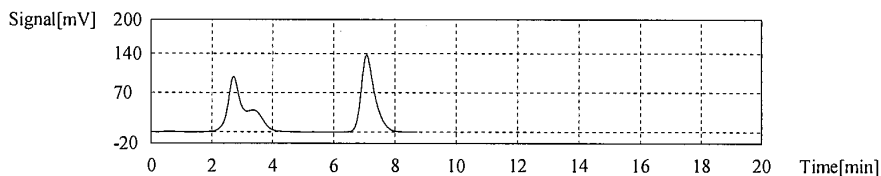
|         |        |       |           |                  |
|---------|--------|-------|-----------|------------------|
| Unknown | SSM-TC | 1.00% | 1.000mg/L | SSM-TC 2.731mg/L |
|---------|--------|-------|-----------|------------------|

1. Det

Anal.: SSM-TC

| No. | Area  | IGV   | Conc.     | Weight  | Volume | Ex. | Cal. Curve                       | Date/Time             |
|-----|-------|-------|-----------|---------|--------|-----|----------------------------------|-----------------------|
| 1   | 421.4 | 421.4 | 2.731mg/L | 100.0mg | 100uL  |     | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 12:36:47 PM |
| 2   | 421.3 | 421.3 | 2.730mg/L | 100.0mg | 100uL  |     | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 12:43:19 PM |

Mean Conc. 2.731mg/L  
CV Conc 0.02%



## Sample

Sample Name: JC66894-1  
Sample ID:  
Origin: TOCSSM.met  
Status: Completed  
Chk. Result

|         |        |       |           |                  |
|---------|--------|-------|-----------|------------------|
| Unknown | SSM-TC | 1.00% | 1.000mg/L | SSM-TC 0.544mg/L |
|---------|--------|-------|-----------|------------------|

1. Det

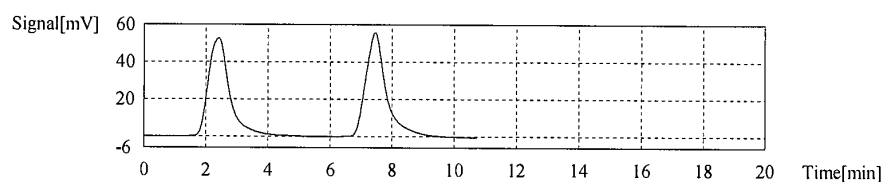
Anal.: SSM-TC

## TOC-Control L Report

e80514s1.toc.tlx

| No | Area  | CONC  | Conc       | Weight  | Volume | Ex | Cal Curve                        | Date / Time          |
|----|-------|-------|------------|---------|--------|----|----------------------------------|----------------------|
| 1  | 247.4 | 247.4 | 0.5255mg/L | 303.8mg | 303uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 1:53:50 PM |
| 2  | 262.6 | 265.2 | 0.5637mg/L | 300.8mg | 300uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 2:03:53 PM |

Mean Conc. 0.5446mg/L  
CV Conc 4.96%



## Sample

Sample Name: CCV  
Sample ID: TOCSSMICAL.met  
Origin: Completed  
Status: Completed  
Chk. Result:

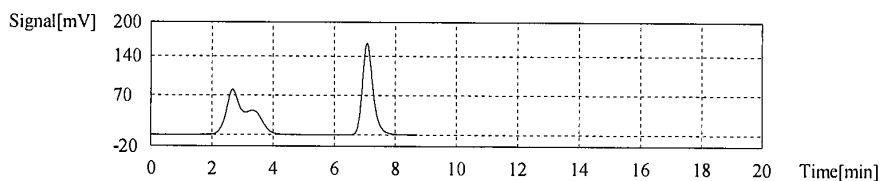
|        |        |       |           |                  |
|--------|--------|-------|-----------|------------------|
| 1. Det | SSM-TC | 1.000 | 0.000mg/L | SSM-TC 2.640mg/L |
|--------|--------|-------|-----------|------------------|

1. Det

Anal.: SSM-TC

| No | Area  | CONC  | Conc      | Weight  | Volume | Ex | Cal Curve                        | Date / Time          |
|----|-------|-------|-----------|---------|--------|----|----------------------------------|----------------------|
| 1  | 418.1 | 418.1 | 2.710mg/L | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 2:11:07 PM |
| 2  | 396.7 | 396.7 | 2.570mg/L | 100.0mg | 100uL  |    | e80514s1.2018_05_14_09_00_56.cal | 5/31/2018 2:16:00 PM |

Mean Conc. 2.640mg/L  
CV Conc 3.74%



# ATTACHMENT C

NYSDEC Fish and Wildlife Permit to Collect or Possess





## LICENSE

### Under the Environmental Conservation Law (ECL)

#### Licensee Information

**License Issued To:**

DAVID J BUYS  
ARCADIS OF NEW YORK INC  
110 W Fayette St Ste 300  
SYRACUSE, NY 13202

(315) 671-9400  
COUNTY: ONONDAGA  
REGION: 7

#### DEC Contact Information

DIVISION OF FISH, WILDLIFE AND MARINE RESOURCES  
SPECIAL LICENSES UNIT  
625 BROADWAY, ALBANY, NEW YORK 12233-4752  
PHONE: (518) 402-8985 FAX: (518) 402-8925  
WEBSITE: [www.dec.state.ny.us](http://www.dec.state.ny.us)

#### License Authorizations

**License to Collect or Possess: Scientific**  
License # 1916

New License

Effective Date: 2/7/2018

Expiration Date: 2/6/2019

#### NYSDEC Approval

**By acceptance of this license, the licensee agrees that the license is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this license.**

#### License Regulations

6 NYCRR Part 175  
ECL 11-0515 (1)



6 NYCRR Part 189

**LICENSE TO COLLECT OR POSSESS: SCIENTIFIC - LICENSE  
CONDITIONS**

**1. Transportation of Listed Salamander Species Across State Lines Prohibited** The licensee shall not import, export or transport across state lines any live or dead specimen, including parts and tissues, of any of the salamander genera listed by the USFWS as Injurious Wildlife ([http://www.fws.gov/injuriouswildlife/pdf\\_files/List-of-Salamander-Species.pdf](http://www.fws.gov/injuriouswildlife/pdf_files/List-of-Salamander-Species.pdf)) without first obtaining a permit from the U. S. Fish and Wildlife Service (<http://www.fws.gov/forms/3-200-42.pdf>) authorizing such import, export or transport.

**2. Scientific Collection - Authorized Species** The licensee is authorized to collect and possess the species and quantities listed in the table below:

| Common Name             | Scientific Name         | Total |
|-------------------------|-------------------------|-------|
| Freshwater Fish Species | Super-order Pisces      | 48    |
| Blacknose dace          | Rhinichthys atratulus   | 480   |
| Creek chub              | Semotilus atromaculatus | 480   |

**3. Scientific Collection - Authorized Activities** The licensee is authorized to possess the collected species for the following activity(ies): Collection of aquatic biota for PCB concentration measurements.

**4. Scientific Collection - Location** The licensee is authorized to collect species from the following locations only:

Three locations in Station Lake Tributary adjacent to the Tennessee Gas Pipeline Compressor Station 229, Town of Eden, Erie County.

**5. Scientific Collection - Authorized Fish Collection Equipment** The licensee shall only collect fish using

Backpack and boat mounted electrofishing, seining and minnow traps.

**6. Scientific Collection – Gear Marking and Monitoring** The licensee shall mark all gear deployed with the licensee's name, resident address and license type and number. All traps and nets shall be checked no less than once every twenty-four (24) hours.

**7. Scientific Collection - Freshwater Fisheries - Bio-safety Protocol** The licensee shall conform with all guidelines contained in the NYS DEC Bureau of Fisheries Sampling, Survey, Boat and Equipment Protocol, attached to this license as Appendix I. Any questions regarding the protocols may be directed to the Regional Fisheries Manager at:

Regional Fisheries Manager  
NYSDEC Region 9 Headquarters  
270 Michigan Ave





Buffalo, NY 14203 -2915

**8. Scientific - LCP - Collection or Possession of Endangered or Threatened Species Prohibited** The licensee shall not collect or possess any endangered/threatened species pursuant to this license.

**9. Scientific Collection - Law Enforcement Notification** The licensee shall notify the appropriate Regional Environmental Conservation Officer at least 48 hours prior to conducting activities pursuant to this license and within 24 hours upon the loss or theft of any collecting gear. Please use the following link for a listing of regional law enforcement phone numbers: <http://www.dec.ny.gov/about/558.html>

**10. Collection from the Wild - Authority to Designate Agents** The licensee is authorized to designate agents to assist the licensee with the activities authorized pursuant to this license provided that:

a. the licensee submits a written request to the NYSDEC Special Licenses Unit at the address listed on the front of this license containing the:

i) name

ii) address

iii) age

iv) phone number of the person he or she is nominating as a designated agent, and;

b. the licensee receives an amended license from the Special Licenses Unit listing the designated agent(s) he or she has nominated before that person can conduct activities authorized by this license.

**11. Authorized Designated Agents** The following Designated Agents are authorized: Matthew H. Frackelton, Nicholas J. Firman, Jason C. Vogel and Gretchen R. Miles.

**12. Scientific Collection - Reporting Requirement - Prior to Expiration** The licensee shall file a written annual report prior to the expiration date of this license. Such annual report shall contain: a) name of the licensee, b) license number, c) common name of the listed animals collected, d) location(s) of collection, e) date(s) of collection, f) biological data collected and g) final disposition of collected animals. The licensee shall send this report to the NYSDEC Special Licenses Unit 625 Broadway, Albany, NY 12233-4752.

### GENERAL CONDITIONS - Apply to ALL Authorized Licenses

**1. GC – Licensee Shall Read All Conditions** The licensee shall read all license conditions prior to conducting any activities authorized pursuant to this license.

**2. GC – License is Not Transferrable** This license is not transferrable and is valid only for the person identified as the licensee.

**3. GC – Licensee Responsible for Federal, State or Local Permits/Licenses** The licensee is responsible for obtaining any and all necessary, corresponding Federal, State or local permits or licenses prior to conducting any activity authorized pursuant to this license.

**4. GC – Reasons for Revocation** This license may be revoked for any of the following reasons:

i. licensee provided materially false or inaccurate statements in his or her application, supporting documentation or on required reports;

ii. failure by the licensee to comply with any terms or conditions of this license;

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**License to Collect or Possess: Scientific # 1916**

- iii. licensee exceeds the scope of the purpose or activities described in his or her application for this license;
- iv. licensee fails to comply with any provisions of the NYS Environmental Conservation Law, any other State or Federal laws or regulations of the department directly related to the licensed activity;
- v. licensee submits a check, money order or voucher for this license or application for this license that is subsequently returned to the department for insufficient funds or nonpayment after the license has been issued.

**5. GC – Licensee Shall Carry Copy of License** The licensee shall carry a copy of this license or a document provided by the department, if relevant, when conducting activities pursuant to this license.

**6. GC – Licensee Shall Notify of Change of Address** The licensee shall notify the Special Licenses Unit in writing, by mail or email, within five (5) days of the official change of residence.

**7. GC – Licensee is Liable for Designated Agents** If designated agents are authorized pursuant to this license, the licensee shall be liable and responsible for any activities conducted by designated agents pursuant to this license or any actions by designated agents resulting from activities authorized by this license.

**8. GC – Licensee Renewal** The licensee shall submit a written request for the renewal of this license prior to the expiration date listed on the license. The licensee shall include accurate and complete copies of any required reports with their renewal request. This renewal paperwork shall be sent to:

NYSDEC  
Special Licenses Unit  
625 Broadway  
Albany, NY 12233-4752.

This license is deemed expired on the date of expiration listed on the license.

**NOTIFICATION OF OTHER LICENSEE OBLIGATIONS**

**MN– Licensee is Liable**

The licensee shall be liable and responsible for any activities conducted under the authority of this license or any actions resulting from activities authorized by the license.

**MN – Access by Law Enforcement**

The licensee shall allow representatives of the NYS DEC Division of Law Enforcement to enter the licensed premises to inspect his or her operations and records for compliance with license conditions.

**Trespassing Prohibited**

This license is not a license to trespass. The licensee shall obtain permission from the appropriate landowner/land manager prior to conducting activities authorized pursuant to this license

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife

625 Broadway, 5th Floor, Albany, NY 12233-4750

P: (518) 402-8924 | F: (518) 402-8925

www.dec.ny.gov

## NYS DEC Division of Fish, Wildlife and Marine Resources, Special Licenses Unit

This document is an official addendum to the attached license, and shall be kept with the license at all times.

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### Appendix I. NYS DEC Bureau of Fisheries Sampling, Survey, Boat and Equipment Protocol

Sampling and Survey work should be conducted with clean, dry and/or completely disinfected equipment.

For all survey work in streams and rivers where the status of ANS is unknown, sampling should start at the upper most reach, and then work downstream. This will help ensure that non motile ANS will not be transported on boots and gear to uninfected upstream reaches. In streams where the infestation is systemwide, survey order is less important. If the stream or river is already known to be infested with ANS but the extent of infestation is not clear, particular care should be taken to replace or completely disinfect boots and gear before consecutive surveys are conducted.

In general, lakes and ponds which are connected by channels or streams with or without barriers, should be surveyed starting at the uppermost location in the system. Dry or disinfected gear should always be used for lake or pond surveys.

When traveling from a lake or pond to another water body, or from a stream/river site to one that is not downstream in the same system, the following procedures must be followed for boats, trailers and all other gear that comes in contact with the water. *(Note: additional REQUIRED procedures are listed in this protocol for use when moving from whirling disease or zebra mussel positive waters to waters not known to have these organisms.)*

#### ○ Upon launching boat:

- Trailers with carpeted bunks should be disinfected after the boat is launched and the trailer removed from the water - use a spray bottle with Lysol solution or full-strength vinegar for carpeted trailer bunks.
- Keep the disinfectant bottle in the truck so the driver can treat the trailer bunks after deploying the boat.



Department of  
Environmental  
Conservation

○ **Prior to leaving launch site:**

- Inspect and remove visible aquatic plants, animals and mud from the boat, trailer and equipment at the sampling location.
- Drain all water from the live well, bilge, etc.
- Do not transfer any aquatic animals, plants or water from one water body to another.
- Do not store dissolved oxygen probes or other water chemistry gear in lake water - bring distilled or chlorinated tap water for this purpose (follow manufacturers directions).

○ **Upon returning to equipment storage area OR before launching in any other water body that is not immediately downstream of prior location (whichever comes first):**

- Nets, anchors, lines, boots and waders can be dried for 5 days . *When felt soled waders are used special care needs to be taken to ensure that they are totally dry or they must be disinfected as outlined below* OR
- All equipment can be disinfected using one of the following techniques (*Note: for boats this includes surface, motor, bilge, pumps and live wells. All equipment must subsequently be rinsed with clean water. Disinfection must take place away from water bodies*):

- **In zebra mussel/whirling disease waters - use 10% bleach solution\***
- **In all other waters - 1% Virkon Aquatic\*\* is acceptable OR**
- **Boats, trailers and all other equipment can be disinfected using a high temperature pressure washer (steam power washer)- (*Note: this technique is approved for zebra mussel/whirling disease waters; see Appendix 1 for boat disinfection guidelines*).**

- \* **Chlorine bleach:** When handling 10% chlorine bleach solution, be sure to wear protective gear (masks, gloves, goggles, etc.) and use in a well ventilated area (follow precautions on Material Safety Data Sheets (MSDS)). Remove all visible debris from equipment and gear. Spray equipment and gear with the solution so that it is saturated or immerse gear in solution.

If equipment or gear is porous (i.e., felt bottomed or neoprene waders) let soak in solution for

10 minutes. Rinse equipment and gear with tap water or with water from the next water body you will be sampling. Dispose of waste chlorine bleach solution away from bodies of water and drinking water sources (follow protocol in MSDS).

- \*\* **Virkon Aquatic:** Wear a dust mask and rubber gloves when handling the powder. Mix a 1% (1:100) solution. Remove all visible debris from equipment and gear. Spray equipment and gear with the solution so that it is saturated or immerse gear in solution. If equipment or gear is porous (i.e., felt bottomed or neoprene waders) let soak in solution for 10 minutes. Rinse equipment and gear with tap water or with water from the next water body you will be sampling. Dispose of waste Virkon solution away from bodies of water and drinking water sources (follow protocol in MSDS).

## **NYSDEC Bureau of Fisheries Biosecurity Protocol**

### **Boat hulls, anchors, and trailers:**

- Always drain the bilges of the boat by removing the drain plug. Bilge pumps are not capable of removing all water from those areas. Wet wells, live wells, and any other compartments that could hold water from an infested field collection site should be drained of water at the field site, and if possible, flushed with hot water, steam or disinfectant solution and allowed to dry before the next use. If appropriate, the field site water may be drained back into the original body of water, as long as conditions and the decontaminant used are such that this would not cause chemical or biological contamination. Otherwise, such water containing disinfectant solutions must be drained into a suitable container for treatment prior to final disposal. Field crews may elect to not drain the bilge area until they return to the storage lot if they are not going to any other bodies of water until decontamination is completed.
- If the bilge water is drained and collected, it must be disinfected and then disposed of by suitable means to avoid causing environmental damage or contamination.
- After draining contained water, all compartments that held water should be washed with a high temperature pressure washer or disinfectant solution and left open to completely dry prior to use in the next site.
- All boats, anchors, trailers used in field sampling will be cleaned using a high temperature pressure washer working from fore to aft and gunnels to keel in a thorough manner.
- While using the high temperature pressure washer, particular attention should be paid to the cooling water intakes on the lower unit of the motor.
- Particular attention should be paid to the carpeted trailer bunks since they can hold water for extended periods of time. These areas should have already been treated with a disinfectant solution when the boat was unloaded into the lake but should be washed with a high temperature pressure washer anyway.
- Lower the motor to drain all water from the lower unit. Replace the motor into the "transom saver" when this is accomplished.

\*OWRB, Oklahoma Water Resources Board. 2005. Decontamination Protocol for Aquatic Nuisance Species. Technical Report 05-157.

Arcadis of New York, Inc.

6723 Towpath Road

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A decorative graphic consisting of three thin orange lines. One line is horizontal, extending from the left edge of the page towards the right. Two other lines are diagonal, starting from the bottom left and extending towards the top right, intersecting the horizontal line.