PERIODIC REVIEW REPORT

(March 1, 2017 to March 1, 2018)

Elks Plaza
189 West Merrick Road
Freeport, New York
Site #130193

Prepared for:

Elks Plaza, LLC
28 Campbell Drive
Dix Hills, New York 11746

Prepared by:

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May 2018

TYLL ENGINEERING & CONSULTING PC

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EXECUTIVE SUMMARY

The following Periodic Review Report (PRR) has been prepared by Tyll Engineering and Consulting PC., on behalf of Elks Plaza, LLC. The property is located at 189 West Merrick Road, in Freeport, New York (hereinafter referred to as "Site"). This document was prepared in accordance with the Site Management Plan (SMP) dated June 2014 for NYSDEC Site Number: 1-30-193.

Due to the Site's history of containing a dry cleaner, a pre-purchase site investigation was completed, which included a Phase II Subsurface Investigation which was performed in December of 2006. The Investigation included seven borings to collect both soil and groundwater samples. The soil samples had no detections of Perchlorethylene (PCE) but two of the groundwater samples in the southwest portion of the property (downgradient of former dry cleaner) had detections of PCE at 27 and 37 ug/L.

A Subsequent Site Characterization was completed in March 2010 which included a geophysical survey and the collection of soil samples. None of the soil samples had detections of PCE above Site Cleanup Objectives (SCOs). In addition, the two on-site supply wells used by the current laundromat were sampled along with an additional nine (9) groundwater samples that were collected using geoprobe technology. The results ranged between non-detected to the highest, 180 ug/L, found adjacent to a geophysical anomaly found in the parking lot.

Results from the soil vapor and indoor air vapor investigations yielded sub-slab detections that ranged from no detections to 54,000 ug/m^3 and indoor air results of no detections to 3.3 ug/m^3.

A Pilot Test Report and Interim Remedial Measured Work Plan was completed in September 2011.

The remedy (engineering control) chosen for the Site was the installation of a SVE system (Figure 3) that was operated from June 2012 to January 2013 and then converted to a more efficient SSD system in January 2013 (Figure 4). The SSDS has been in operation since January 2013. In addition, an environmental easement (institutional control) was executed and recorded to restrict land use and prevent future exposure to any contamination remaining at the site.

The Engineering Controls have been and are continuing to be effective at reducing the contamination at the Site and meeting the Remedial Action Objectives for both groundwater and soil vapor.

We believe that this downward trend illustrates that the PCE is no longer an issue at this Site. We would like to discontinue the Site Management activities/sampling at the Site. However, the SSDS will continue to be operated.

1.0 INTRODUCTION

The following Periodic Review Report (PRR) has been prepared by Tyll Engineering and Consulting, PC (TEC) on behalf of Elks Plaza, LLC for the property located at 189 West Merrick Road in Freeport, New York (Site) (Figure 1). This PRR document was prepared in accordance with the Site Management requirement of the Site as detailed in DER-10 and the site specific SMP.

1.1 Site Overview

The Site is located within the Village of Freeport, County of Nassau, New York and is identified as Section 62; Block114; and Lot 131 on the Nassau County Tax Map. The subject property (Site) is an approximate 3.41-acre area bounded by Merrick Road to the north, a vacant lot and Smith Street to the south, office buildings and Ocean Avenue to the east, and a private school, a bank and South Long Beach Avenue to the west (see Figures 1 and 2).

This Site consists of a tenant unit located in the southwest corner of a L-shaped, one-story concrete strip mall and includes the parking area to the south and west of the structure. The current use of the Site is an active, commercially zoned laundromat that does not perform dry cleaning. The surrounding properties are zoned commercial and residential.

1.2 Site History

As part of a pre-purchase site investigation, a Phase II Subsurface Investigation was performed in December of 2006 which included seven borings to collect both soil and groundwater samples. The soil samples had no detections of Perchlorethylene (PCE) but two of the groundwater samples in the southwest portion of the property (downgradient of former dry cleaner shown on Figure 2) had detections of PCE at 27 and 37 ug/L.

In March 2010, a Site Characterization was completed which included a geophysical survey and the collection of four (4) soil samples. The samples were collected one adjacent to a geophysical anomaly in the parking lot, one next to drywell, one below dumpster used by former dry cleaner and one below the location of the former dry cleaning machine. None of the four samples had detections of PCE above Site Cleanup Objectives (SCOs).

In addition, the two on-site supply wells used by the current laundromat were sampled along with an additional nine (9) groundwater samples that were collected using geoprobe technology. The results ranged between non-detected to the highest, 180 ug/L, found adjacent to the geophysical anomaly in the parking lot.

Also in March 2010, one sub-slab and one indoor air sample were collected within the laundromat and four other soil vapor and one outdoor air samples were also collected. The sub-slab results ranged from no detections to 14,900 ug/m^3 within the laundromat with indoor air results at 3.3 ug/m^3.

In June 2010, a supplemental soil vapor investigation was completed that included two additional sub-slab vapor samples and three additional indoor air samples. The PCE was detected in sub-slab soil vapors ranging from 2.17 to 54,000 ug/m^3 and from 2.17 to 3.25 ug/m^3 in the indoor air samples.

A Pilot Test Report and Interim Remedial Measured Work Plan was completed in September 2011. The pilot test included a boring completed within the footprint of the former dry cleaning machine and four (4) vapor extraction vents were installed and pilot tested. The samples at the beginning of the pilot test were 94,990 ug/m^3 of PCE and at the end of the test were 210,335 ug/m^3 PCE. In November 2012, three groundwater monitoring wells were installed along with the sub-slab vapor vent in the basement of the Woodward Children's Center.

1.3 Summary of Site Remedy

1.3.1 IRM Remedy

The site was remediated in accordance with the NYSDEC-approved Pilot Test Report and Interim Remedial Measure Work Plan dated January 2012 and Addendum #1 dated March 2012.

The following is a summary of the Remedial Actions performed at the site in January 2013

- No removal of contaminated soil was required.
- Installation of a sub-slab venting system consisting of four, 4-inch diameter vents. Installation of duct work to extend the four vents to the roof.
- Installation and operation of a soil vapor extraction (SVE) system (Figure 3) with a moisture knockout drum, 1 HP blower, and carbon treatment unit to remove PCE vapors from beneath the slab of the building.
- Conversion of the SVE system to a more energy efficient sub-slab depressurization system (SSDS) and continued operation of the system (Figure 4).
- Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
- Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
- Periodic certification of the institutional and engineering controls.

1.3.2 ROD Selected Remedy

Based on the results of the investigations at the site, the IRM that was completed, and the evaluation within the ROD, the Department proposed a No Further Action as the remedy for the

site. This No Further Action remedy includes the continued operation of the SSDS and the implementation of the ICs/ECs. The NYSDEC stated that they believe that this remedy is protective of human health and the environment and satisfies the RAOs described in Section 1.4.1 of this report which were taken from Section 6.5 of the ROD, Summary of the Remediation Objectives.

1.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) are detailed in the Record of Decision (ROD) dated March 2014. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

1.4.1 Groundwater RAOs

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

1.4.2 Soil Vapor RAOs

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for soil vapor intrusion into buildings at a site.

1.5 Site Closure Criteria

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10 and discussed in Section 1.5.1 below.

1.5.1 Sub-Slab Depressurization System (SSDS)]

As stated in Section 4.3.4 of the SMP, the active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSD

system is no longer required, a request to discontinue the SSD system will be submitted by the property owner to the NYSDEC and NYSDOH in a workplan that and will describe the shutdown procedures as laid out in the SMP.

Operation of the SSD system will be terminated when the following are demonstrated in accordance with Indoor Air Matrix 2 of the NYSDOH's 2006 Guidance document:

- Indoor air concentrations of PCE in the Laundromat is less than 3 ug/m3; and,
- Sub-slab vapor concentration of PCE below the Laundromat is less than 100 ug/m3.
- This shall be demonstrated during the winter heating season, to represent the worst-case scenario, and after the SSD system has been turned off for a period of 30 days.

1.6 Deviations from the Remedial Action Work Plan

No changes to the remedial design were reported.

2.0 EVALUATE REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

Presently, an annual evaluation is completed at the site to document the operation and effectiveness of the SSDS. At a minimum, a site-wide inspection will be conducted annually.

The SSDS System is in operation at the Subject property. The objective of the SSDS is to remove any vapors from under the slab which assists in safeguarding the occupants from potentially harmful vapors.

Groundwater samples at the site have yielded detections but no exceedances over NYS groundwater standards within the reporting period.

Indoor air and sub-slab vapor sampling was completed at the off-site location, Woodward Center prior to the reporting period in February 2015 and February 19, 2016. During discussions with the NYSDOH and NYSDEC, it was determined that further sub-slab and indoor air sampling is no longer required

The Site-wide inspection was conducted on April 24, 2018 by Karen Tyll, P.E. Viktor Padilla, from Galaxy Management, provided access to the laundromat and roof for the Site-wide inspection. The surrounding interior areas and surrounding parking lots were also inspected.

No additional inspections were conducted during this reporting period as there were no events that warranted inspections or emergency inspections. The Site-wide Inspection form is enclosed as Appendix A. Select photographs of the Site during the inspection are also enclosed within Appendix A.

The Engineering Controls have been and are continuing to be effective at reducing the contamination at the Site and meeting the Remedial Action Objectives for both groundwater and soil vapor.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN COMPLIANCE REPORT

3.1 Engineering Controls

Engineering controls (ECs) at the Site consist of a sub-slab depressurization system. Assurance of the ECs developed for the Site will be achieved using a combination of site inspections, monitoring, and annual certifications. The engineering controls were inspected and evaluated on April 24, 2018 by Karen Tyll.

Initially, a Soil Vapor Extraction (SVE) was installed comprised of four vents connected to four vertical ducts connected to a regenerative blower, moisture knock-out drum and carbon units on the roof. In January 2013, the former SVE system was converted, with the NYSDEC's approval, to an active SSD system due to the reduction of the PCE concentrations detected in extracted soil vapor. The SSDS consists of a 6- inch diameter Fantech Model HP 220 vapor abatement fan that was mounted on top of the existing riser on the roof and the SVE system equipment was removed. The new SSDS system also included a vacuum gauge that has a visual alarm that illuminates a red light if the fan fails to operate located in the office of the Laundromat next to a sign that includes the phone number to call if the light turns on.

Procedures for monitoring, operating and maintaining the SSDS were provided in the Operation and Maintenance Plan in Section 4 of the Site Management Plan (SMP). The Monitoring Plan also addressed inspection procedures that must occur after any severe weather conditions that may affect the ECs.

3.2 Institutional Controls

Institutional Controls include an environmental easement on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to commercial uses only.

The environmental easement for the site was executed by the Department on April 10, 2015, and filed with the Nassau County Nassau Clerk on May 6, 2015. The County Recording Identifier number for this filing is RE 017516 with a Control Number of 420. A copy of the easement and proof of filing was provided in Appendix B of the Site Management Plan (not attached).

3.3 Status of Controls

At the time of this PRR, the Engineering controls in the form of the SSDS is operating as designed and the Institutional Control in the form of the environmental easement was obtained on May 6, 2015.

3.3.1 Corrective Measures

There are no known deficiencies of the Engineering Controls or Institutional Controls at this time and as a result, no corrective measures are warranted.

3.6 IC/EC Certification

The annual certification for the Site consists of a completed NYSDEC IC/EC Certification Form. The completed IC/EC Certification Forms were signed on April 23, 2018 and May 16, 2018 and are enclosed as Appendix B. The annual certification was prepared in accordance with the SMP and has been signed by the Owner, Elks Plaza, LLC and Karen Tyll, P.E., a professional engineer licensed to practice in New York State, as the Qualified Environmental Professional.

4.0 MONITORING PLAN COMPLIANCE REPORT

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site and all affected site media identified below. The Monitoring Plan may only be revised with the approval of NYSDEC.

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria.
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site and off-site will be conducted for the first five years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected

areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in tabulation below:

Matrix	Frequency	Analysis	Compliance Date
Groundwater (MW-1, 2, & 3)	Annual	VOCs	February 15, 2018
Soil Vapor and Indoor Air (3 sub-slab and 3 indoor air)	Annual	VOC (TO-15 over 8 hours)	N/A
Soil	Once	TCL VOCs, SVOCs, PCBs, Pesticides, and TAL Metals	June 4, 2015
SSDS Operation Conditions	Annual during Site Wide Inspection	none	April 24, 2018

4.1 Summary of Monitoring Completed During Reporting Period

In a letter dated May 24, 2016, Renata E. Ockerby of the New York State Department of Health stated that annual soil vapor intrusion monitoring of the off-site Woodward School can be discontinued. Therefore, soil vapor intrusion sampling was not completed during this reporting period.

On February 15, 2018, Seacliff Environmental collected groundwater samples from the 3 on-site groundwater monitoring wells. Results of the groundwater sampling event indicated detections in MW-2 of cis-1,2 dichloroethene. TCE, and PCE that were significantly below their respective NYS Groundwater Standards. There were no detections of other VOCs in MW-1 and MW-3 (other than the assumed lab artifact methylene chloride). MW-1 and MW-3 results are consistent with 2016 groundwater data. The Data Usability Summary Report (DUSR) is included in Appendix D and the Well Sampling Logs are included in Appendix E. There were no groundwater exceedances so according to Melissa Sweet of the NYSDEC, a summary report would not be needed.

Comparisons of Groundwater Data

In November 2012, there were detections of cis-1,2 dichloroethene, trichloroethene, and PCE in MW-2 that were just above their respective NYS Groundwater Standards. Sampling events in September 2016 and February 2018, yielded detections in MW-2 of both cis-1,2 dichloroethene and

PCE that were significantly below their respective Groundwater standards. This indicates a downward trend.

Comparisons of Sub-Slab Soil Vapor Data

No soil vapor sampling was required during this monitoring period.

5.0 OPERATION & MAINTENANCE (O&M) PLAN COMPLIANCE REPORT

5.1 Sub-Slab Depressurization System

The Fantec fan installed on the SSDS does not require any maintenance. It has no filters and does not require lubrication. If the fan should fail to work in the future, it should be replaced by an electrician with a similar make and model fan.

5.2 SSD System Monitoring Schedule

Based on the manufactures literature, there are no maintenance requirements for the SSD fan. The system includes a vacuum gauge with a visual low vacuum alarm. If the fan fails to operate, a red light in the office of the Laundromat will illuminate. A sign with the phone number to call for service is posted next to the vacuum gauge and alarm.

The vacuum gauge, fan and duct work will be inspected on an annual basis to coincide with the soil vapor and groundwater monitoring.

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSD system has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

5.3 SSD System General Equipment Monitoring

A visual inspection of the complete system will be conducted during each monitoring event. SSD system components to be monitored include, but are not limited to, the vacuum gauge/alarm, fan and duct work If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair are required immediately, and the SSD system restarted.

5.4 SSD System Operation and Maintenance Deficiencies

Due to the nature of the SSDS fan as discussed above, there are no deficiencies in the O&M of the system.

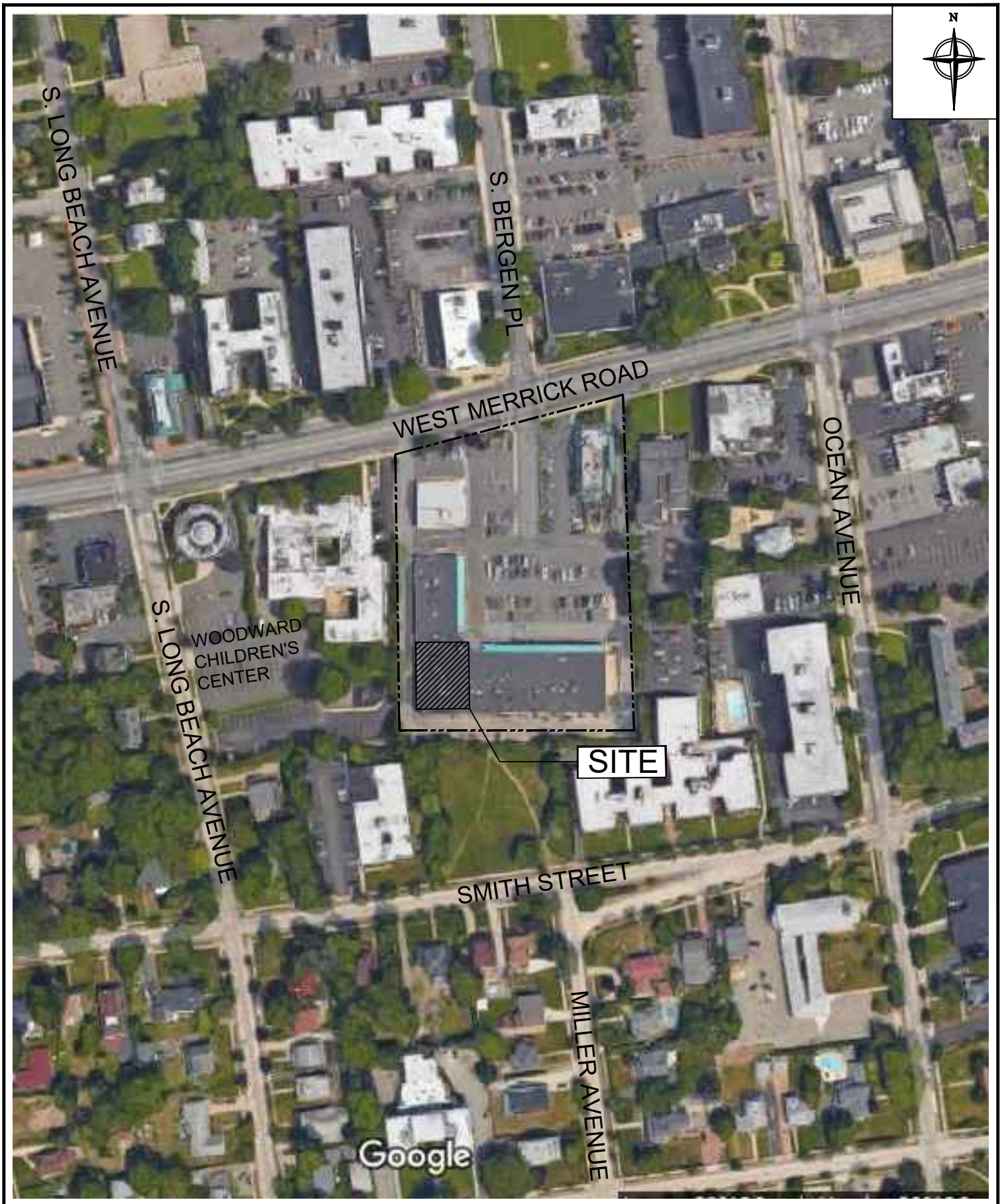
5.4 SSD System Conclusions and Recommended Improvements

We believe that O&M is being conducted correctly and no improvements need to be made to the current SSD System.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the requirements of the SMP, the monitoring, and O&M events, we believe that the operation of the SSD system shall continue; and the indoor air, sub-slab vapor, and groundwater samples should be discontinued.

Figures



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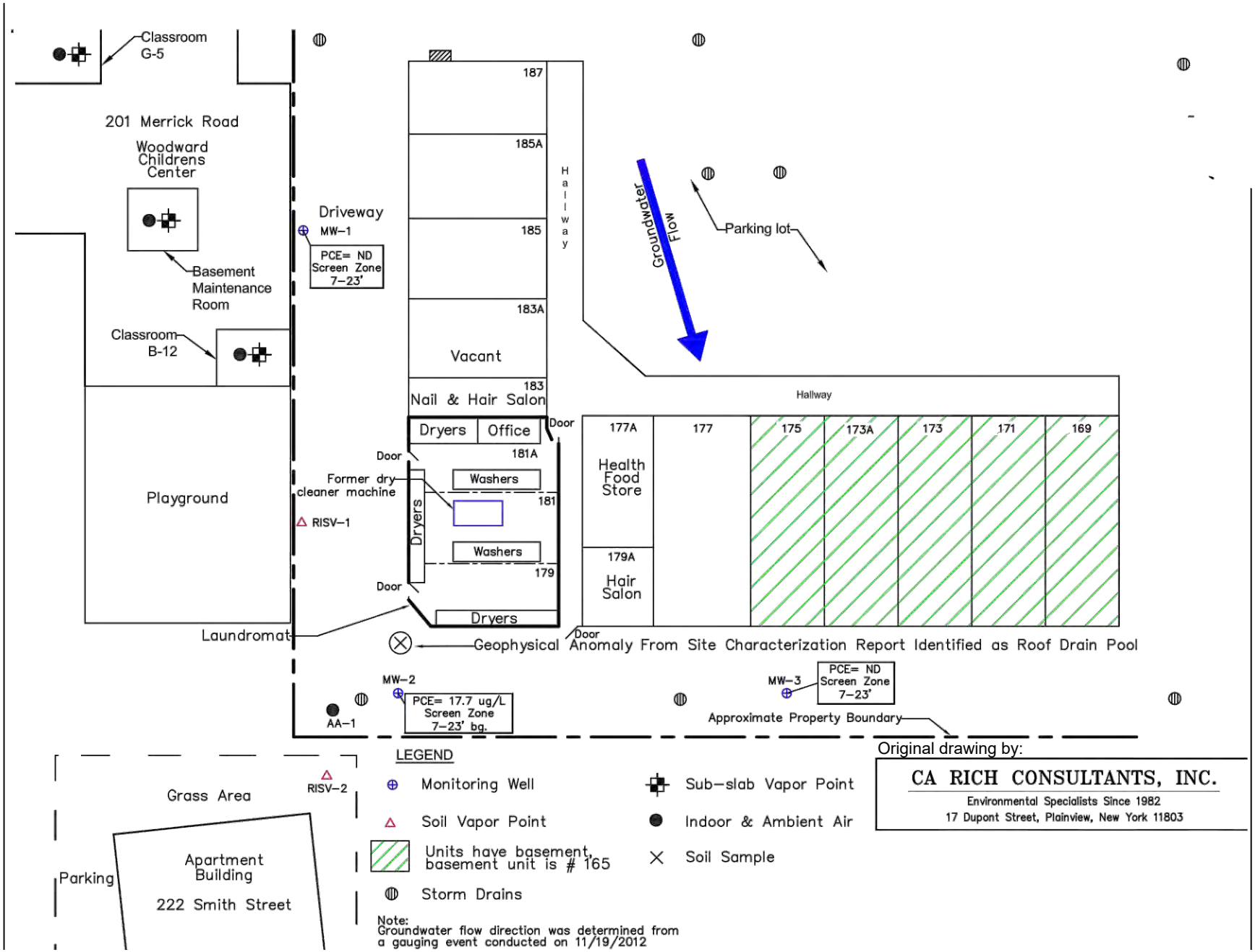
TITLE:

SITE LOCATION MAP

ELKS PLAZA, LLC
157-189 W. MERRICK ROAD
FREEPORT, NY

DWN:	SCALE:	DATE:	PROJECT NO.:
-	NTS	5-10-18	ELK1801
CHKD:	APPD:	REV.:	NOTES:
KT	KT	-	-

FIGURE NO.: 1



Original drawing by:

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Environmental Specialists Since 1982
17 Dupont Street, Plainview, New York 11803

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PHONE: (631) 629-5373 info@tyllengineering.com

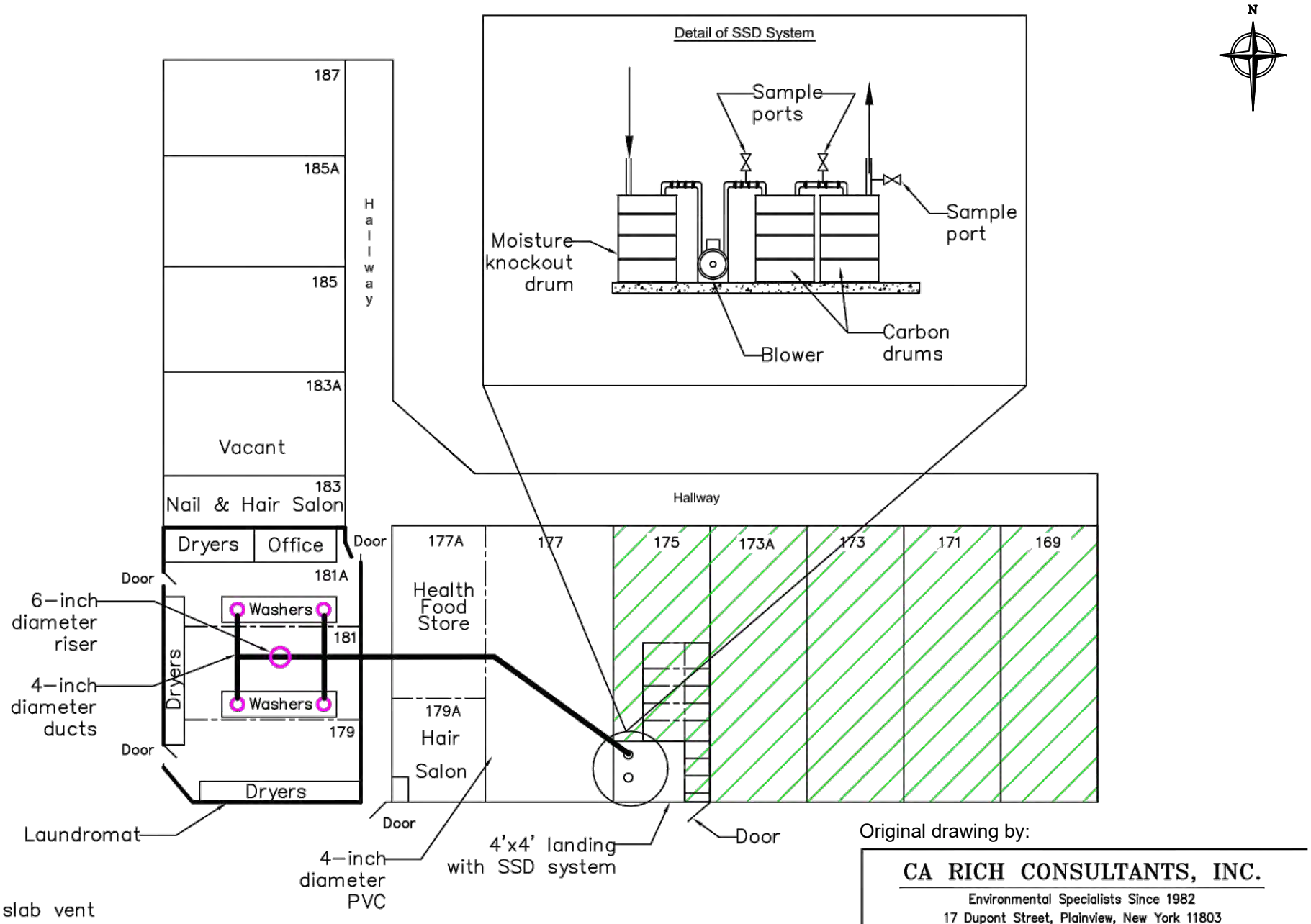
TITLE:

SITE PLAN

ELKS PLAZA, LLC
157-189 W. MERRICK ROAD
FREEPORT, NY

DRAWN:	SCALE:	DATE:	PROJECT NO.:
-	NTS	5-10-18	ELK1801
CHECKED:	APPROVED:	REVISION:	NOTES:
KT	KT	-	-

FIGURE NO.: 2



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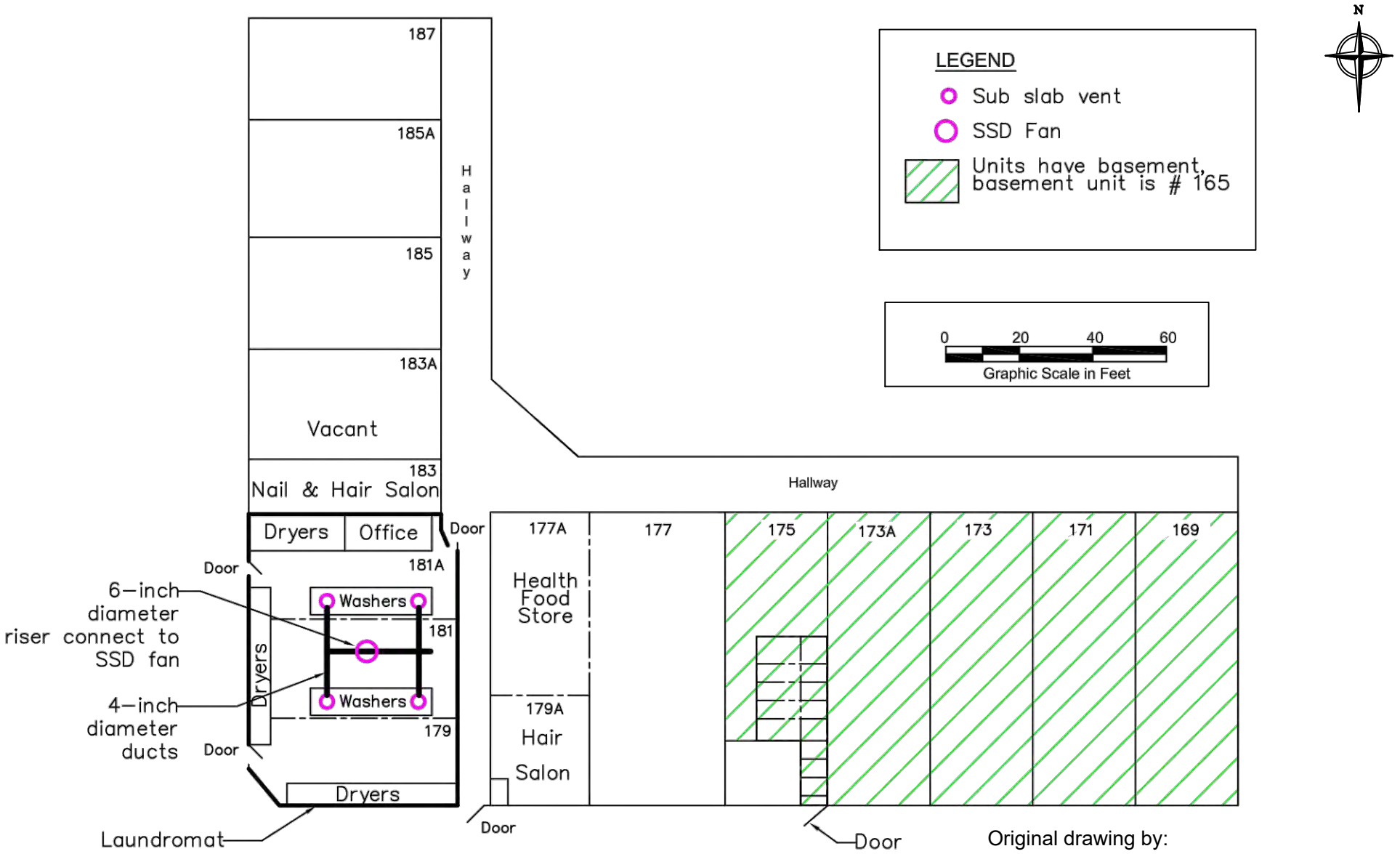
TITLE:

SVE LOCATION MAP

ELKS PLAZA, LLC
157-189 W. MERRICK ROAD
FREEPORT, NY

DRAWN:	SCALE:	DATE:	PROJECT NO.:
-	NTS	5-10-18	ELK1801
CHECKED:	APPROVED:	REVISION:	NOTES:
KT	KT	-	-

FIGURE NO.: 3



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TITLE:

SSDS LOCATION MAP

ELKS PLAZA, LLC
157-189 W. MERRICK ROAD
FREEPORT, NY

DRAWN:	SCALE:	DATE:	PROJECT NO.:
-	NTS	5-10-18	ELK1801
CHECKED:	APPROVED:	REVISION:	NOTES:
KT	KT	-	-

FIGURE NO.: 4

Tables

Elks Plaza, Freeport;
157-189 W. Merrick Road, Freeport, NY
New York State Technical and Operational Guidance Series (TOGS)
Ambient Water Quality Standards and Guidance Values - Class GA
Table 1
Volatile Organic Compounds Ground Water
SW 846 8260C

	Client SampleID:		MW-1		MW-2		MW-3	
	Sampling Date:		2/15/2018		2/15/2018		2/15/2018	
Analyte	Units	Limits		Q		Q		Q
1,1,1,2-Tetrachloroethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1,1-Trichloroethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1,2,2-Tetrachloroethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1,2-Trichloro-1,2,2-trifluoroeth	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1,2-Trichloroethane	ug/L	1	< 0.25	U	< 0.25	U	< 0.25	U
1,1-Dichloroethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1-Dichloroethene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,1-Dichloropropene	ug/L	1	< 0.25	U	< 0.25	U	< 0.25	U
1,2,3-Trichlorobenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,2,3-Trichloropropane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,2,4,5-Tetramethylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,2,4-Trichlorobenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,2,4-Trimethylbenzene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
1,2-Dibromo-3-chloropropane	ug/L	5	< 0.03	U	< 0.03	U	< 0.03	U
1,2-Dibromoethane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
1,2-Dichlorobenzene	ug/L	3	< 0.25	U	< 0.25	U	< 0.25	U
1,2-Dichloroethane	ug/L	0.6	< 0.25	U	< 0.25	U	< 0.25	U
1,2-Dichloropropane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,3,5-Trimethylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,3-Dichlorobenzene	ug/L	3	< 0.25	U	< 0.25	U	< 0.25	U
1,3-dichloropropane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
1,4-Dichlorobenzene	ug/L	3	< 0.25	U	< 0.25	U	< 0.25	U
1,4-Dioxane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
2,2-Dichloropropane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
2-Butanone	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
2-Chloroethyl vinyl ether	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
2-Chlorotoluene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
2-Hexanone	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
2-Propanol	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
4-Chlorotoluene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
4-Isopropyltoluene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
4-Methyl-2-pentanone	ug/L	NA	< 0.5	U	< 0.5	U	< 0.5	U
Acetone	ug/L	50	< 5.0	U	< 5.0	U	< 5.0	U
Acrolein	ug/L	NA	< 1.0	U	< 1.0	U	< 1.0	U
Acrylonitrile	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Benzene	ug/L	1	< 0.25	U	< 0.25	U	< 0.25	U
Bromobenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U

Notes:
B - Analyte detected in Method Blank
J - Laboratory estimated concentration
NA - Not available, no value specified in NYS TOGS Limits
ND - Not detected

Elks Plaza, Freeport;
157-189 W. Merrick Road, Freeport, NY
New York State Technical and Operational Guidance Series (TOGS)
Ambient Water Quality Standards and Guidance Values - Class GA
Table 1
Volatile Organic Compounds Ground Water
SW 846 8260C

	Client SampleID:		MW-1		MW-2		MW-3	
	Sampling Date:		2/15/2018		2/15/2018		2/15/2018	
Analyte	Units	Limits		Q		Q		Q
Bromochloromethane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Bromodichloromethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Bromoform	ug/L	50	< 0.25	U	< 0.25	U	< 0.25	U
Bromomethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Carbon disulfide	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Carbon tetrachloride	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Chlorobenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Chlorodifluoromethane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Chloroethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Chloroform	ug/L	7	< 0.25	U	< 0.25	U	< 0.25	U
Chloromethane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
cis-1,2-Dichloroethene	ug/L	5	< 0.25	U	**1.6**	J	< 0.25	U
cis-1,3-Dichloropropene	ug/L	0.4	< 0.25	U	< 0.25	U	< 0.25	U
Cyclohexane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Dibromochloromethane	ug/L	50	< 0.25	U	< 0.25	U	< 0.25	U
Dibromomethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Dichlorodifluoromethane	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Diisopropyl ether	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Ethanol	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Ethylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Freon-114	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Hexachlorobutadiene	ug/L	0.5	< 0.25	U	< 0.25	U	< 0.25	U
Isopropylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
m,p-Xylene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Methyl Acetate	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Methyl tert-butyl ether	ug/L	10	< 0.25	U	< 0.25	U	< 0.25	U
Methylene chloride	ug/L	5	< 5.0	U	< 5.0	U	< 5.0	U
Naphthalene	ug/L	10	< 0.25	U	< 0.25	U	< 0.25	U
n-Butylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
n-Propylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
o-Xylene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
p-Diethylbenzene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
p-Ethyltoluene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
sec-Butylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Styrene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
t-Butyl alcohol	ug/L	NA	< 2.5	U	< 2.5	U	< 2.5	U
tert-Butylbenzene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U

Notes:
B - Analyte detected in Method Blank
J - Laboratory estimated concentration
NA - Not available, no value specified in NYS TOGS Limits
ND - Not detected

Elks Plaza, Freeport;
157-189 W. Merrick Road, Freeport, NY
New York State Technical and Operational Guidance Series (TOGS)
Ambient Water Quality Standards and Guidance Values - Class GA
Table 1
Volatile Organic Compounds Ground Water
SW 846 8260C

	Client SampleID:		MW-1		MW-2		MW-3	
	Sampling Date:		2/15/2018		2/15/2018		2/15/2018	
Analyte	Units	Limits		Q		Q		Q
Tetrachloroethene	ug/L	5	< 0.25	U	**0.47**	J	< 0.25	U
Toluene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
trans-1,2-Dichloroethene	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
trans-1,3-Dichloropropene	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Trichloroethene	ug/L	5	< 0.25	U	< **0.35**	J	< 0.25	U
Trichlorofluoromethane	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Vinyl acetate	ug/L	NA	< 0.25	U	< 0.25	U	< 0.25	U
Vinyl chloride	ug/L	5	< 0.25	U	< 0.25	U	< 0.25	U
Xylenes, Total	ug/L	NA	< 0.75	U	< 0.75	U	< 0.75	U
Total Volatile Organics	ug/L	NA	**ND**		**2.42**		**ND**	

Notes:
B - Analyte detected in Method Blank
J - Laboratory estimated concentration
NA - Not available, no value specified in NYS TOGS Limits
ND - Not detected

Elks Plaza, Freeport;
157-189 W. Merrick Road, Freeport, NY
New York State Technical and Operational Guidance Series (TOGS)
Ambient Water Quality Standards and Guidance Values - Class GA
Table 2
Semi Volatile Organic Compounds Ground Water
SW 846 8270D SIM

	Client SampleID:		MW-1		MW-2		MW-3	
	Sampling Date:		2/15/2018		2/15/2018		2/15/2018	
Analyte	Units	Limits		Q		Q		Q
1,4-Dioxane	ug/L	NA	< 0.04	U	**0.048**		**0.046**	

Notes:
B - Analyte detected in Method Blank
J - Laboratory estimated concentration
NA - Not available, no value specified in NYS TOGS Limits
ND - Not detected

Appendix A

Site-wide Inspection Form

Annual Site-wide Inspection Form

Elks Plaza, Freeport, New York

Date: 04/24/18 Time: 10:50 AM

Weather: Sunny 58ºF

Reason for Inspection: ☐ Routine ☑ other Annual Site-wide Inspection and Certification

---

Inspection Observations

Check one of the following: **Y:** Yes **N:** No **NA:** Not Applicable

		y	N	NA	Remarks
	Records				
1	Based on site records, when was the last inspection, maintenance, or repair event?				
2	Based on site records, was the system not operating for any amount of time since the last inspection, maintenance, or repair event? For how long? Provide details.		X		
3	Has the site use changed to a type of use higher than the current commercial use (as allowed in environmental easement)?		X		
	General System				
5	Is there any construction activity, or indication of any construction activity within the past certification year (including any tenant improvements), that included the breaching of the concrete floor slab?		X		
6	Are there any cracks in the concrete slab or concrete basement walls?		X		
7	If YES to number 6, is there documentation that the Soil Management Plan (SMP), HASP, and CAMP for the site was/is being followed?			N/A	
8	If YES to number 6, is there documentation that all breaches in the floor slab have been sealed?			N/A	
9	Does all visible SSDS piping appear intact and undamaged?	X			
10	Have any intake points been constructed at the roof near (less than 10 feet) the SSDS blower discharge point?		X		

11	Were the one SSDS blower operational at the time of the inspection?	X			
12	Is the SSDS System expelling Air from the exhaust on the roof of the building?	X			
13	Is there dust and debris from the area surrounding the blowers on the roof.		X		Roof was very clean.

Performed by: Karen G. Tyll, PE _____
Printed Name Signature

Professional Engineer Tyll Engineering and Consulting, PC
Title Company


Elks Plaza
LAUNDRY PLACE
mobile


Elks Plaza
RESTAURANT
HEALTH STORE
LAUNDRY PLACE


ATM


FREE SOAP

INCHES OF WATER
MAGNEHELIC®
SETPOINT INDICATOR
MAX. PRESSURE 25 PSIG
Dwyer
ZERO

Appendix B

Certification Forms

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

Site Details **Box 1**

Site No. 130193

Site Name Elks Plaza

Site Address: 189 W. Merrick Road Zip Code: 11520
City/Town: Freeport
County: Nassau
Site Acreage: 0.2

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

	YES	NO
1. Is the information above correct?	X	
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?		X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		X
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?		X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Residential, Restricted-Residential, Commercial, and Industrial	X	
7. Are all ICs/ECs in place and functioning as designed?	X	

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

SITE NO. 130193 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
62-114-131	George Tsillogianis	Ground Water Use Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Nassau County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

Monitoring of the groundwater and Soil vapor intrusion at the property next door shall be in accordance with the SMP.

Operation, Maintenance, and Monitoring of the SSDS shall be in accordance with the SMP.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
62-114-131	Vapor Mitigation

There is a sub-slab depressurization system in place at the site.

Box 5

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 compete.

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. 130193

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 GEORGE TSILOGIANNIS (print name) at C/O GALAXY MANAGEMENT INC 28 CAMPBELL DRIVE DIX HILLS N.Y. 11746 (print business address)

am certifying as MEMBER OF ELKS PLAZA, LLC (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

4/23/18
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer 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 Karen G. Tyll, PE (print name) at Tyll Engineering and Consulting, PC, 169 Commack Rd, Suite H173, Commack, NY 11725 (print business address),

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

STATE OF NEW YORK
KAREN GAIL TYLL
079520
LICENSED PROFESSIONAL ENGINEER

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

5/16/18
Date

Appendix C

American Analytical - Laboratory Data Summary Package, April 20, 2018

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

February 20, 2018

Jim DeMartinis
Seacliff Environmental
PO Box 2085
Miller Place, NY 11764
TEL:
FAX

RE: Elks Plaza Freeport, 157-189 W. Merrick R Order No.: 1802093

Dear Jim DeMartinis:

American Analytical Laboratories, LLC. received 3 sample(s) on 2/15/2018 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report. The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer

Lori Beyer
Lab Director
American Analytical Laboratories, LLC.

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Workorder Sample Summary

WO#: **1802093**

20-Feb-18

CLIENT: Seacliff Environmental
Project: Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1802093-001A	MW-3		2/15/2018 10:39:00 AM	2/15/2018 1:08:00 PM	Liquid
1802093-002A	MW-1		2/15/2018 11:04:00 AM	2/15/2018 1:08:00 PM	Liquid
1802093-003A	MW-2		2/15/2018 11:54:00 AM	2/15/2018 1:08:00 PM	Liquid

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES

56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: Seacliff Environmental
Address: PO Box 2085
City: Miller Place State: NY Zip: 11764
Project Contact: Jim Demartinis
Phone #: 631-828-5994
E-mail:

Project Information

Project Name: Elks Plaza Freeport
Street: 157-189 N Merrick Road
City: Freeport State: NY Zip:
Project # / Purchase Order #:
Sampler's Name / Company: Chris Nickel RTC Formation
Sampler's Signature:

Analytical Test / Information

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	NONE	HCl	NaOH	HNO_3	H_2SO_4	DI Water (5035A)	MeOH	OTHER	FULL 8260 VOC's	1,4-DIOXANE BY 8270 SIM
1802083-001	MW-3	G	L	2/15/18	1039	G	4	2	2							X	X
002	MW-1				1104											X	X
003	MW-2				1154											X	X

Turnaround Time (Business Days)

Standard
[X] 7-10 Business Days
[ ] 3 Day *RUSH*
[ ] 5 Day *RUSH*
[ ] 2 Day *RUSH*
[ ] 4 Day *RUSH*
[ ] 1 Day *RUSH*

Please contact laboratory for rush service availability

SAMPLE TYPE

G = Grab
C = Composite
B = Blank

MATRIX CODE

L = Liquid PC = Paint Chip
S = Soil SL = Sludge
O = Oil SD = Solid
W = Wipe M = Misc

ELECTRONIC DELIVERABLES

NYCRR Part 375 - please circle
Unres/ Comm/ Industrial/ Residential/ Res Residential/ PGW
NJ Soil Clean Up Criteria SCDOH Action Levels
CP 51 - Gas / Fuel TCLP Hazardous Waste
TOGS NYSDEC EQUIS

Comments / Remarks

CAT B DELIVERABLE

Cooler Temp: 1.3 °C

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
	12/15/18 1:08		P Masi	2/15/18 1308	P Masi
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Sample Log-In Check List

Client Name: **SEACLIFF ENV** Work Order Number: **1802093** RcptNo: **1**

Logged by:	**Lori Beyer**	**2/15/2018 1:08:00 PM**	Lori Beyer
Completed By:	**Lori Beyer**	**2/15/2018 1:59:00 PM**	Lori Beyer
Reviewed By:	**Karen Kelly**	**2/15/2018**	Karen Kelly

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date:	Signed By:		
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☑	No ☐	No VOA Vials ☐
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

18. Additional remarks:

1,4-Dioxane 8270-SIM analysis subcontracted to ALS-Rochester

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Case Narrative

WO#: **1802093**
Date: **2/20/2018**

CLIENT: Seacliff Environmental
Project: Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846 and additional methods as detailed throughout the text of the report. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives with exceptions notated in this Narrative discussion of this report.

Volatile LCS are analyzed with preservatives - HCL/NaHSO4/Methanol depending on level of analysis (high/low) similar to sample analysis. Outliers can be attributed to the presence of chemical preservatives. 2-Chloroethyl vinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

MW-2 was selected for VOA MS/MSD analysis by the laboratory.

1,4-Dioxane by 8270 SIM was subcontracted to ALS Rochester and will be submitted as a separate lab report.

The following parameters (if included in this report) are not offered by NY ELAP: VOA 8260 Soil; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Diisopropyl ether, Ethanol, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl Acetate, n-Butyl Acetate, n-Propyl Acetate. VOA 8260 Liquid; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl acetate, n-Butyl Acetate, n-Propyl Acetate. Pesticides 8081 Soil; DBCP. Herbicides 8151 Soil; 3,5-Dichlorobenzoic Acid, 4-Nitrophenol, Acifluorfen, Bentazon, Chloramben, DCPA, Picloram .Lachat 10-107-6-1B Ammonia in Soil, SM 2540G Total Volatile Solids, Soil TKN, Soil Organic Nitrogen, Percent Moisture, pH in non-potable water and temperature at which pH is measured, SM 4500-SO3 B Sulfite in Liquid, Total Sulfur in Soil, Acid Soluble Chloride by ASTMC1152, Water Soluble Chloride by ASTMC1218, Chlorine Demand by SM 2350 B, Total Residual Chlorine in Liquid and Reactivity to Sulfide and Reactivity to Cyanide.

The test results meet the requirements of the NYSDOH and NELAC standards, except where noted. The information contained in this analytical report is the sole property of American Analytical Laboratories, LLC. or the client for which this report was issued. The results contained in this report are only representative of the samples received. The sample receipt checklist is included as part of this lab report. Conditions can vary at different times and at different sampling conditions. American Analytical is not responsible for the use or interpretation of the data included herein.

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Website: www.American-Analytical.com

Definition Only

WO#: **1802093**
Date: **2/20/2018**

Definitions:

Sample Result and QC Summary Qualifiers - Level I and Level II Reports
ND - Not detected at the reporting limit/Limit of Quantitation

B - The analyte was detected in the associated method blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <5x the blank value as artifact.

E - The value is above the quantitation range

D - Analyte concentration was obtained from diluted analysis or from analysis using reduced sample volume.

J - The analyte was detected below the limit of quantitation but greater than the established Limit of Detection (LOD). There is greater uncertainty associated with these results and data should be considered as estimated.

U - The compound was analyzed for but not detected.

H - Holding time for preparation or analysis has been exceeded.

S - Spike recovery is outside accepted recovery limits.

R - RPD is outside accepted recovery range.

P - Secondary column exceeds 40% difference for GC test.

* - Calibration exceeds method requirement. Due to the large number of analytes for organic testing, the method allows 10% of analytes to have %RSD and/or %D to be >20%.
LOD - Limit of Detection; the lowest level the analyte can be determined to be statistically different from a blank.
LOQ - Limit of Quantitation; the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
PQL - Practical Quantitation Limit; the lowest level that can be reliably achieved within the specific limits of Precision and accuracy. Listed on the QC Summary Forms.
m - Analyte was manually integrated for GC/MS.
+ - Concentration exceeds regulatory level for TCLP

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-3
Lab Order:	1802093	**Collection Date:**	2/15/2018 10:39:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	2/16/2018 5:08:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:08:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:08:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:08:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	2/16/2018 5:08:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-3
Lab Order:	1802093	**Collection Date:**	2/15/2018 10:39:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
Benzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	2/16/2018 5:08:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:08:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	2/16/2018 5:08:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-3
Lab Order:	1802093	**Collection Date:**	2/15/2018 10:39:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	2/16/2018 5:08:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Toluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	2/16/2018 5:08:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	2/16/2018 5:08:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:08:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-1
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:04:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	2/16/2018 5:38:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:38:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:38:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:38:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	2/16/2018 5:38:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-1
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:04:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
Benzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	2/16/2018 5:38:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	2/16/2018 5:38:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	2/16/2018 5:38:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-1
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:04:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	2/16/2018 5:38:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Toluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	2/16/2018 5:38:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	2/16/2018 5:38:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	2/16/2018 5:38:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-2
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:54:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	2/16/2018 6:07:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 6:07:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 6:07:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	2/16/2018 6:07:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	2/16/2018 6:07:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-2
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:54:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
Benzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
cis-1,2-Dichloroethene	1.6	0.25	2.0	J	µg/L	1	2/16/2018 6:07:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	2/16/2018 6:07:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	2/16/2018 6:07:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	2/16/2018 6:07:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM

American Analytical Laboratories, LLC.

Date: *20-Feb-18*

ELAP ID : 11418

CLIENT:	Seacliff Environmental	**Client Sample ID:**	MW-2
Lab Order:	1802093	**Collection Date:**	2/15/2018 11:54:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Fr	**Matrix:**	LIQUID
Lab ID:	1802093-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			**SW8260C**		**SW5030C**		Analyst: **LA**
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	2/16/2018 6:07:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Tetrachloroethene	0.47	0.25	2.0	J	µg/L	1	2/16/2018 6:07:00 PM
Toluene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Trichloroethene	0.35	0.25	2.0	J	µg/L	1	2/16/2018 6:07:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	2/16/2018 6:07:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	2/16/2018 6:07:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	2/16/2018 6:07:00 PM

February 23, 2018 Service Request No:R1801393

Ms. Lori Beyer
American Analytical Inc
56 Toledo Street
Farmindale, NY 11735

Laboratory Results for: Elks Plaza Freeport

Dear Ms.Beyer,

Enclosed are the results of the sample(s) submitted to our laboratory February 16, 2018
For your reference, these analyses have been assigned our service request number **R1801393.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

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Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: American Analytical Inc
Project: Elks Plaza Freeport
Sample Matrix: Water

Service Request: R1801393
Date Received: 02/16/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV, validation deliverables including all summary forms and associated raw data. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Three water samples were received for analysis at ALS Environmental on 02/16/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Approved by _____ Date 02/23/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: MW-3	Lab ID: R1801393-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
1,4-Dioxane	0.046		0.027	0.040	ug/L	8270D

CLIENT ID: MW-2	Lab ID: R1801393-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
1,4-Dioxane	0.048		0.027	0.040	ug/L	8270D

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: American Analytical Inc **Service Request:**R1801393
Project: Elks Plaza Freeport

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1801393-001	MW-3	2/15/2018	1039
R1801393-002	MW-1	2/15/2018	1104
R1801393-003	MW-2	2/15/2018	1154

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES
56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: American Analytical
Address: 56 Toledo Street
City: Farmingdale State: NY Zip: 11735
Project Contact: Lori Beyer
Phone #: 631 454 6100
E-mail: LBeyer@American-analytical.com

Project Information

Project Name: ELKS PLAZA FREEPORT
Street: 157-189 W. Merrick Road
Freeport State: NY Zip:
Project # / Purchase Order #:
Sampler's Name / Company: R+C Formation
Sampler's Signature:

Analytical Test / Information

1,4 DIOXANE BY 8270 SIM

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	Number of Each Preserved Bottle: NONE	HCl	NaOH	HNO_3	H_2SO_4	DI Water (5035A)	MeOH	OTHER	1,4 DIOXANE BY 8270 SIM
	MW-3	G	L	2/15/18	10:39	GL	2	2								X
	MW-1	G	L	↓	11:04	GL	2	2								X
	MW-2	G	L	↓	11:54	GL	2	2								X
	(2 250ml Amber/Sample															

R1801393 5
American Analytical Inc
Elks Plaza Freeport

Turnaround Time (Business Days)

Standard
- [ ] 7-10 Business Days
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *RUSH*

Please contact laboratory for rush service availability

SAMPLE TYPE
G = Grab
C = Composite
B = Blank

MATRIX CODE
L = Liquid (circled)
S = Soil
O = Oil
W = Wipe
PC = Paint Chip
SL = Sludge
SD = Solid
M = Misc

ELECTRONIC DELIVERABLES
NYCRR Part 375 - please circle
Unres/ Comm/ Industrial/ Residential/ Res Residential/ PGW
NJ Soil Clean Up Criteria
CP 51 - Gas / Fuel
TOGS
SCDOH Action Levels
TCLP Hazardous Waste
NYSDEC EQUIS

Comments / Remarks
CATEGORY B DELIVERABLES & EQUIS
Cooler Temp:

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	2/15/18 14:00	Lori Beyer	[signature]	2/16/18 09:15	Gregory O. Esmerian
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME (Hold)	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

R1801393 5
American Analytical Inc
Elks Plaza Freeport

Cooler Receipt and Preservation Check Fo

Project/Client AAL Folder Number

Cooler received on 2-16-18 by: ME

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)		5a	**Perchlorate** samples have required headspace?	Y N (NA)	
2	**Custody papers** properly completed (ink, signed)?	(Y) N		5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)	
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N		6	Where did the bottles originate?	ALS/ROC	(CLIENT)
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y) N		7	Soil VOA received as:	Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 2-16-18 Time: 09:31 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	9.4						
Correction Factor (°C)	0						
Corrected Temp (°C)	9.4						
Temp from:Type of bottle	—						
Within 0-6°C?	Y (N)	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted (Poorly Packed (described below)*) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: 2/16/18

All samples held in storage location: R-002 by GE on 2/16/18 at 0936
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown: Date: 2/16/18 Time: 1414 by: @

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
<2		H_2SO_4								
<4		$NaHSO_4$								
Residual Chlorine (-)		For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
		$Na_2S_2O_3$	-	-						
		ZnAcetate	-	-						
		HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: Client

Explain all Discrepancies/ Other Comments:

* Samples insulated from the ice in the cooler by a large amount of bubble wrap.
ME 2-16-18

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @
PC Secondary Review: 2/16/18

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: American Analytical Inc **Service Request:** R1801393
Project: Elks Plaza Freeport

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1801393-001.01					
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/20/2018	0807	In Lab / JMISIUREWICZ	
		2/20/2018	1449	R-002 / JMISIUREWICZ	
R1801393-001.02					
	8270D				
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/21/2018	0748	In Lab / JMISIUREWICZ	
		2/21/2018	1620	R-002 / JMISIUREWICZ	
R1801393-002.01					
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/20/2018	0808	In Lab / JMISIUREWICZ	
		2/20/2018	1449	R-002 / JMISIUREWICZ	
R1801393-002.02					
	8270D				
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/21/2018	0748	In Lab / JMISIUREWICZ	
		2/21/2018	1619	R-002 / JMISIUREWICZ	
R1801393-003.01					
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/20/2018	0808	In Lab / JMISIUREWICZ	
		2/20/2018	1449	R-002 / JMISIUREWICZ	
R1801393-003.02					
	8270D				
		2/16/2018	1420	SMO / DWARD	
		2/16/2018	1420	R-002 / DWARD	
		2/21/2018	0748	In Lab / JMISIUREWICZ	
		2/21/2018	1619	R-002 / JMISIUREWICZ	

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport		

Sample Name:	MW-3	**Date Collected:**	02/15/18
Lab Code:	R1801393-001	**Date Received:**	02/16/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	JMISIUREWICZ	JMISIUREWICZ

Sample Name:	MW-1	**Date Collected:**	02/15/18
Lab Code:	R1801393-002	**Date Received:**	02/16/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	JMISIUREWICZ	JMISIUREWICZ

Sample Name:	MW-2	**Date Collected:**	02/15/18
Lab Code:	R1801393-003	**Date Received:**	02/16/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	JMISIUREWICZ	JMISIUREWICZ

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

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Semivolatile Organic Compounds by GC/MS

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Analytical Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 10:39
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-3	**Units:**	ug/L
Lab Code:	R1801393-001	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.046**	0.040	1	02/21/18 13:52	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 13:52	

Analytical Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 11:04
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-1	**Units:**	ug/L
Lab Code:	R1801393-002	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	ND U	0.040	1	02/21/18 14:12	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 14:12	

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 11:54
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-2	**Units:**	ug/L
Lab Code:	R1801393-003	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.048**	0.040	1	02/21/18 14:30	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 14:30	

QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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Client: American Analytical Inc **Service Request:** R1801393
Project: Elks Plaza Freeport
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
1,4-Dioxane by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3535A

Sample Name	Lab Code	1,4-Dioxane-d8 64 - 124
MW-3	R1801393-001	97
MW-1	R1801393-002	97
MW-2	R1801393-003	97
Method Blank	RQ1801489-01	94
Lab Control Sample	RQ1801489-02	92
Duplicate Lab Control Sample	RQ1801489-03	85

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Analyzed:**	02/21/18 11:11
Sample Matrix:	Water	**Date Extracted:**	02/21/18

Method Blank Summary
1,4-Dioxane by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	R-MS-56
Lab Code:	RQ1801489-01	**File ID:**	I:\ACQUDATA\5975E\data\022118\AP499.D\
Analysis Method:	8270D	**Analysis Lot:**	581106
Prep Method:	EPA 3535A	**Extraction Lot:**	308588

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1801489-02	I:\ACQUDATA\5975E\data\022118\AP500.D\	02/21/18 11:40
Duplicate Lab Control Sample	RQ1801489-03	I:\ACQUDATA\5975E\data\022118\AP501.D\	02/21/18 11:58
MW-3	R1801393-001	I:\ACQUDATA\5975E\data\022118\AP507.D\	02/21/18 13:52
MW-1	R1801393-002	I:\ACQUDATA\5975E\data\022118\AP508.D\	02/21/18 14:12
MW-2	R1801393-003	I:\ACQUDATA\5975E\data\022118\AP509.D\	02/21/18 14:30

Analytical Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1801489-01	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	ND U	0.040	1	02/21/18 11:11	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	94	64 - 124	02/21/18 11:11	

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QA/QC Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Analyzed:**	02/21/18 11:40
Sample Matrix:	Water	**Date Extracted:**	02/21/18

Lab Control Sample Summary
1,4-Dioxane by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	R-MS-56
Lab Code:	RQ1801489-02	**File ID:**	I:\ACQUDATA\5975E\data\022118\AP500.D\
Analysis Method:	8270D	**Analysis Lot:**	581106
Prep Method:	EPA 3535A	**Extraction Lot:**	308588

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ1801489-01	I:\ACQUDATA\5975E\data\022118\AP499.D\	02/21/18 11:11
Duplicate Lab Control Sample	RQ1801489-03	I:\ACQUDATA\5975E\data\022118\AP501.D\	02/21/18 11:58
MW-3	R1801393-001	I:\ACQUDATA\5975E\data\022118\AP507.D\	02/21/18 13:52
MW-1	R1801393-002	I:\ACQUDATA\5975E\data\022118\AP508.D\	02/21/18 14:12
MW-2	R1801393-003	I:\ACQUDATA\5975E\data\022118\AP509.D\	02/21/18 14:30

Client: American Analytical Inc
Project: Elks Plaza Freeport
Sample Matrix: Water

Service Request: R1801393
Date Analyzed: 02/21/18

Duplicate Lab Control Sample Summary
1,4-Dioxane by GC/MS

Units:ug/L
Basis:NA

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ1801489-02			RQ1801489-03				
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,4-Dioxane	8270D	8.63	10.0	86	7.96	10.0	80	60-119	8	30

Client: American Analytical Inc **Service Request:**R1801393
Project: Elks Plaza Freeport **Date Analyzed:**02/21/18 09:15

Tune Summary
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\022118\AP496.D\ **Analytical Method:** 8270D
Instrument ID: R-MS-56 **Analysis Lot:** 581106

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	50.15	597004	Pass
68	69	0.00	2	1.42	9028	Pass
69	198	0.00	100	53.50	636852	Pass
70	69	0.00	2	0.64	4086	Pass
127	198	10	80	61.26	729280	Pass
197	198	0.00	2	0.00	0	Pass
198	198	100	100	100.00	1190400	Pass
199	198	5	9	6.96	82883	Pass
275	198	10	60	18.42	219243	Pass
365	198	1	100	1.83	21728	Pass
441	442	0.01	24	17.45	121147	Pass
442	442	100	100	100.00	694421	Pass
443	442	15	24	19.49	135315	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1801567-02	I:\ACQUDATA\5975E\data\022118\AP497.D\	02/21/18 09:46	
Method Blank	RQ1801489-01	I:\ACQUDATA\5975E\data\022118\AP499.D\	02/21/18 11:11	
Lab Control Sample	RQ1801489-02	I:\ACQUDATA\5975E\data\022118\AP500.D\	02/21/18 11:40	
Duplicate Lab Control Sample	RQ1801489-03	I:\ACQUDATA\5975E\data\022118\AP501.D\	02/21/18 11:58	
MW-3	R1801393-001	I:\ACQUDATA\5975E\data\022118\AP507.D\	02/21/18 13:52	
MW-1	R1801393-002	I:\ACQUDATA\5975E\data\022118\AP508.D\	02/21/18 14:12	
MW-2	R1801393-003	I:\ACQUDATA\5975E\data\022118\AP509.D\	02/21/18 14:30	

Client: American Analytical Inc **Service Request:**R1801393
Project: Elks Plaza Freeport **Date Analyzed:**02/21/18 09:46

Internal Standard Area and RT SUMMARY
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\022118\AP497.D\ **Lab Code:**RQ1801567-02
Instrument ID: R-MS-56 **Analysis Lot:**581106
Analysis Method: 8270D **Signal ID:**

		Tetrahydrofuran-d8	
		Area	**RT**
	ICAL Result ==>	80,637	3.30
	Upper Limit ==>	161,274	3.80
	Lower Limit ==>	40,319	2.80
Associated Analyses			
Method Blank	RQ1801489-01	85776	3.33
Lab Control Sample	RQ1801489-02	87941	3.31
Duplicate Lab Control Sample	RQ1801489-03	97154	3.34
MW-3	R1801393-001	93498	3.31
MW-1	R1801393-002	82929	3.29
MW-2	R1801393-003	78123	3.26

Raw Data

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Semivolatile Organic Compounds by GC/MS

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www.alsglobal.com

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 10:39
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-3	**Units:**	ug/L
Lab Code:	R1801393-001	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.046**	0.040	1	02/21/18 13:52	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 13:52	

Analytical Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 11:04
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-1	**Units:**	ug/L
Lab Code:	R1801393-002	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	ND U	0.040	1	02/21/18 14:12	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 14:12	

Analytical Report

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Collected:**	02/15/18 11:54
Sample Matrix:	Water	**Date Received:**	02/16/18 12:02
Sample Name:	MW-2	**Units:**	ug/L
Lab Code:	R1801393-003	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3535A

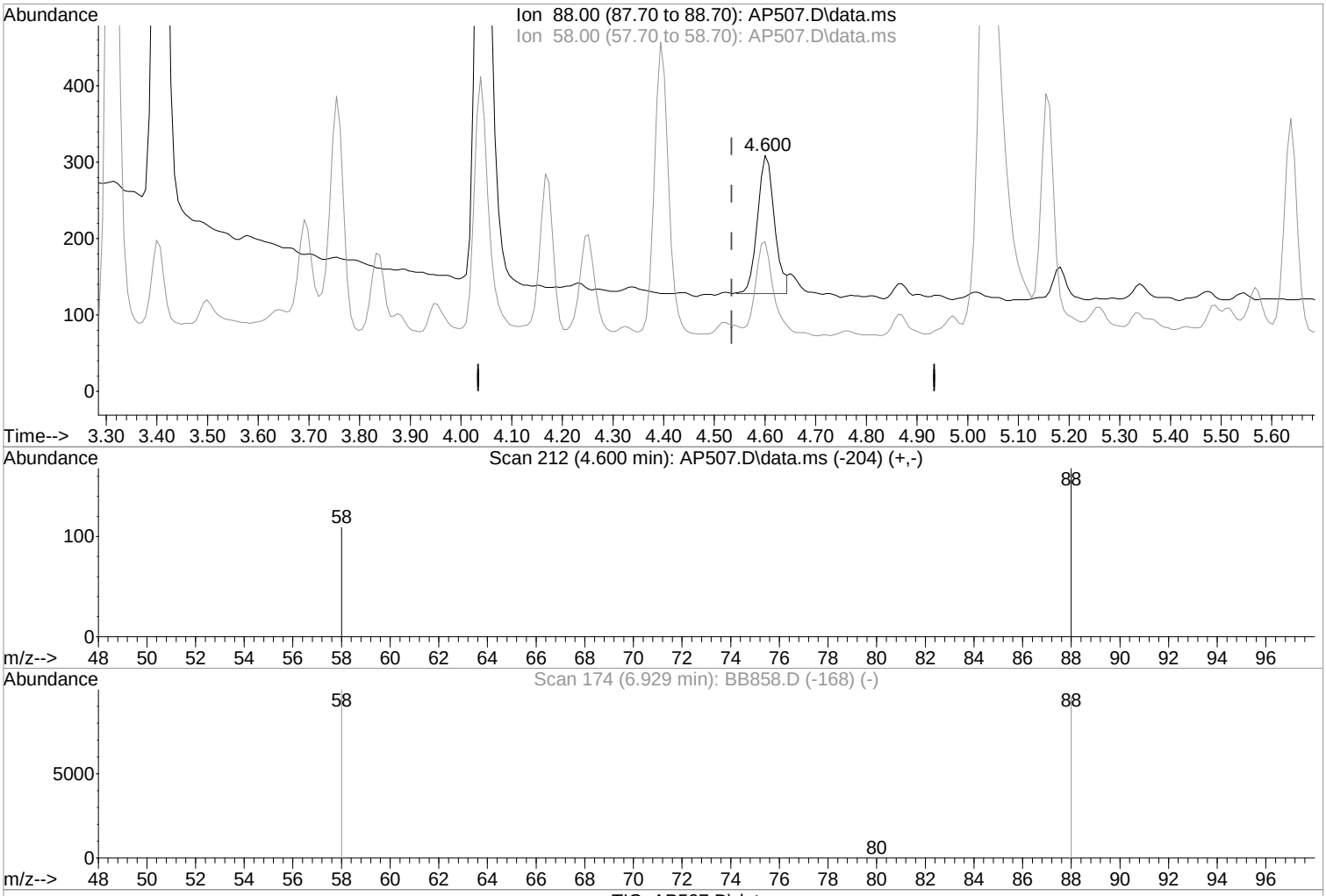
Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.048**	0.040	1	02/21/18 14:30	2/21/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	97	64 - 124	02/21/18 14:30	

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP507.D
Acq On : 21 Feb 2018 1:52 pm
Operator : J.Misiurewicz
Sample : R1801393-001 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 21 15:05:26 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



TIC: AP507.D\data.ms

(2) 1,4-Dioxane (T)

4.600min (+ 0.066) 2.29 PPB m

response 425

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	63.43
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

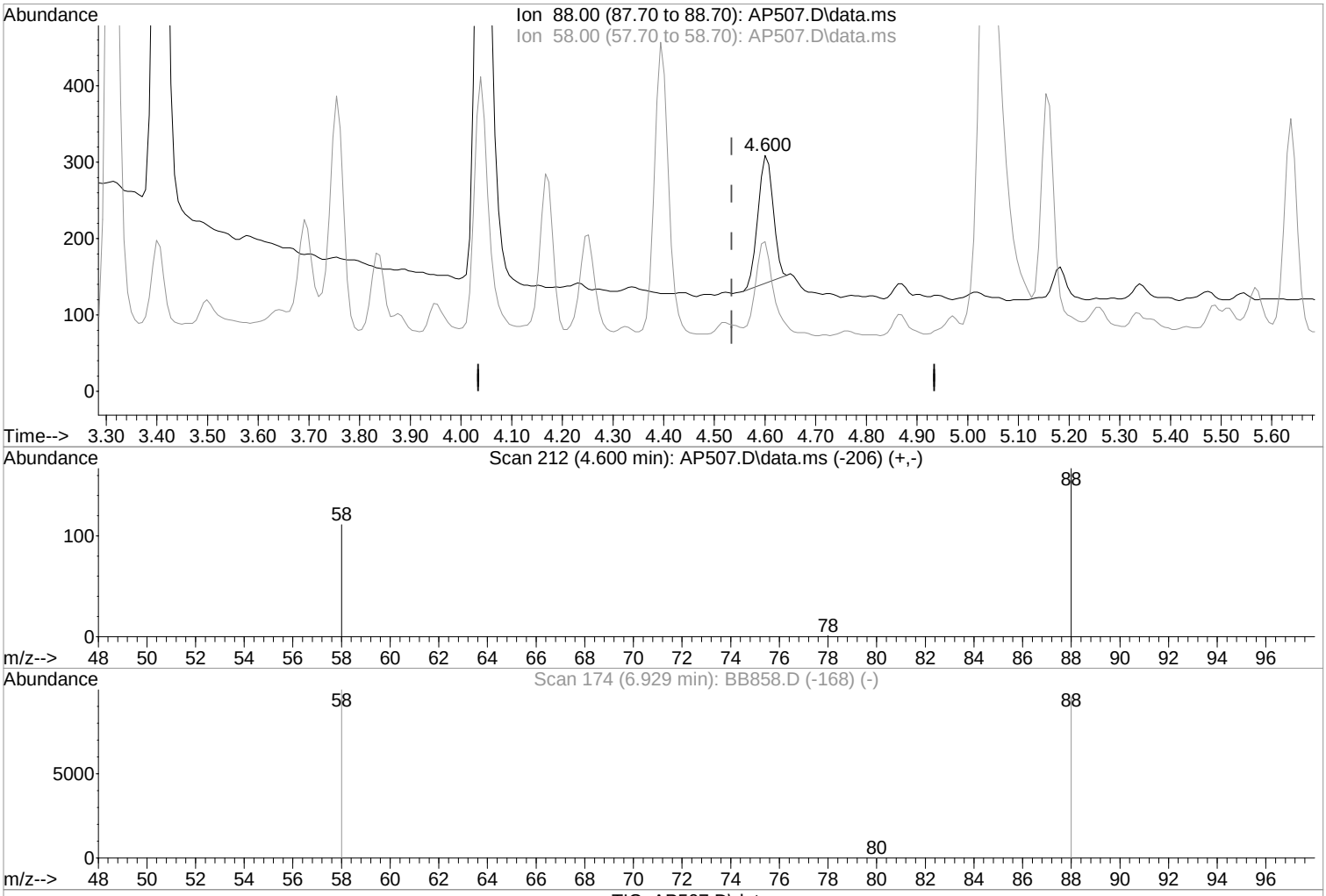
Poor integration.

02/21/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP507.D
Acq On : 21 Feb 2018 1:52 pm
Operator : J.Misiurewicz
Sample : R1801393-001 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 21 15:05:26 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



TIC: AP507.D\data.ms

(2) 1,4-Dioxane (T)

4.600min (+ 0.066) 1.92 PPB

response 355

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	66.27
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

02/21/18

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP507.D
Acq On : 21 Feb 2018 1:52 pm
Operator : J.Misiurewicz
Sample : R1801393-001 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 21 15:08:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

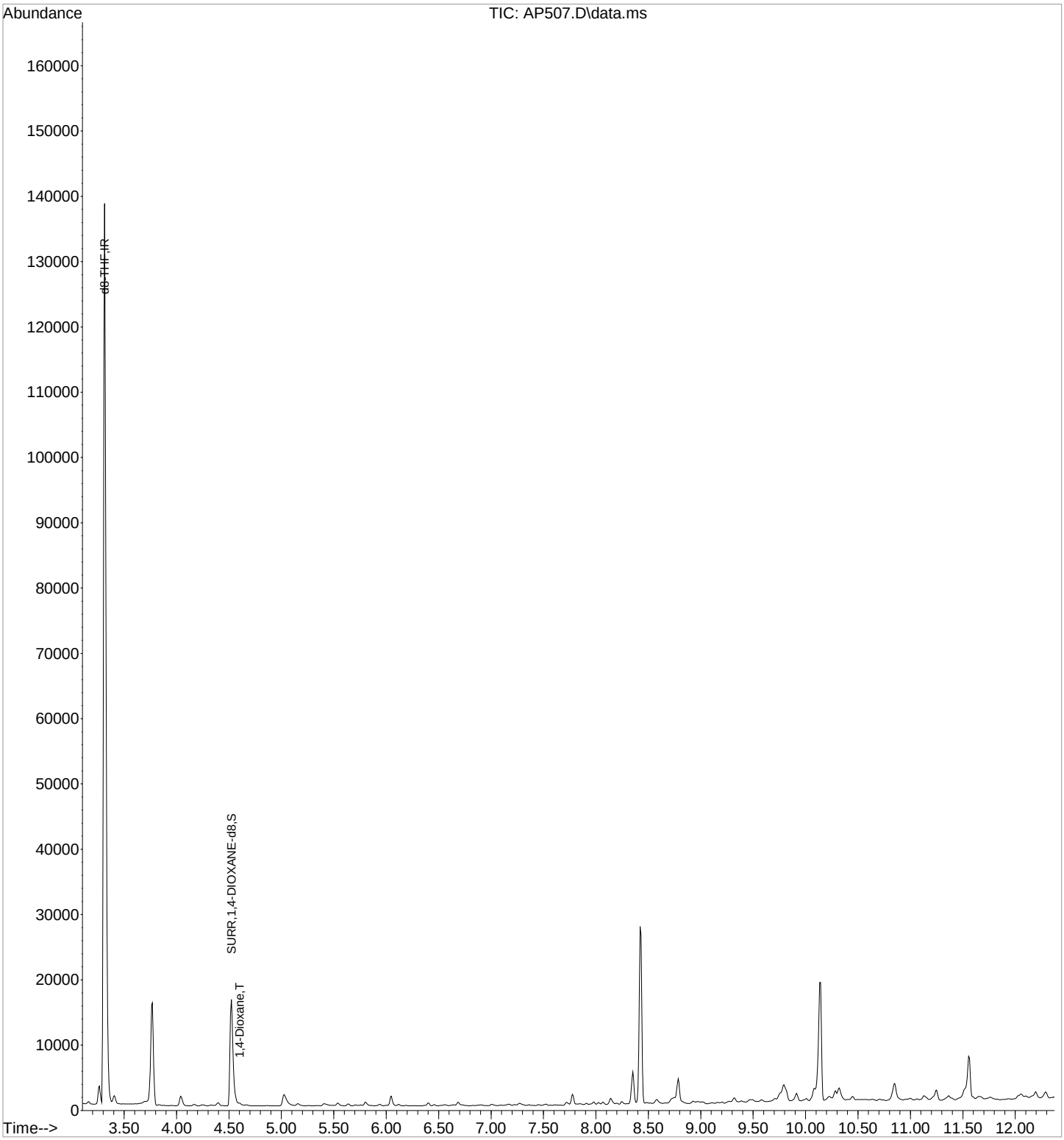
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.314	46	93498	500.00	PPB	0.05
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.522	96	16274	97.06	PPB	0.04
Spiked Amount 100.000	Range 70 - 130		Recovery = 97.06%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.600	88	425m	2.29	PPB	

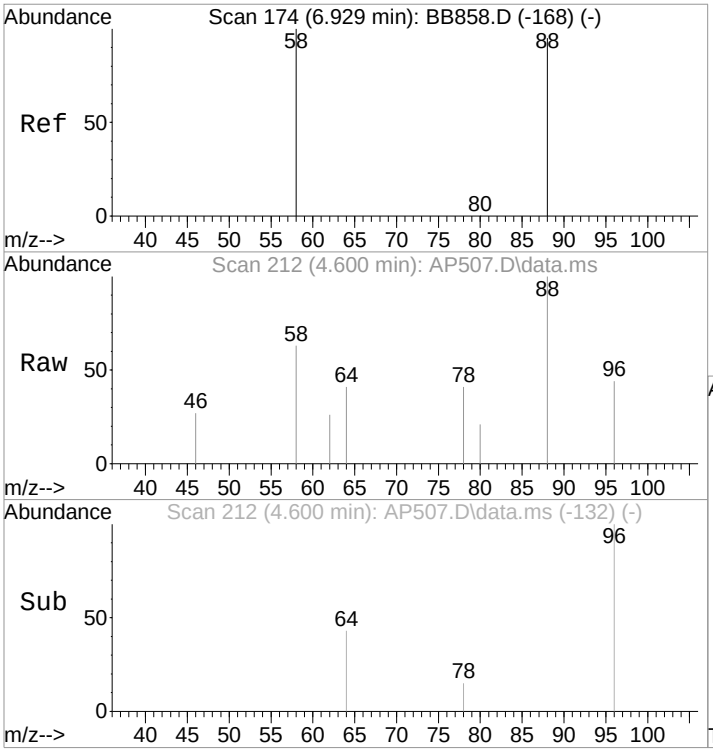
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP507.D
Acq On : 21 Feb 2018 1:52 pm
Operator : J.Misiurewicz
Sample : R1801393-001 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 21 15:08:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

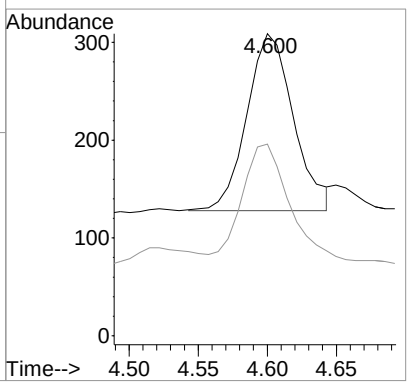




#2
1,4-Dioxane
Concen: 2.29 PPB m
RT: 4.600 min Scan# 212
Delta R.T. 0.066 min
Lab File: AP507.D
Acq: 21 Feb 2018 1:52 pm

Tgt Ion: 88 Resp: 425

Ion	Ratio	Lower	Upper
88	100		
58	63.4	37.0	77.0

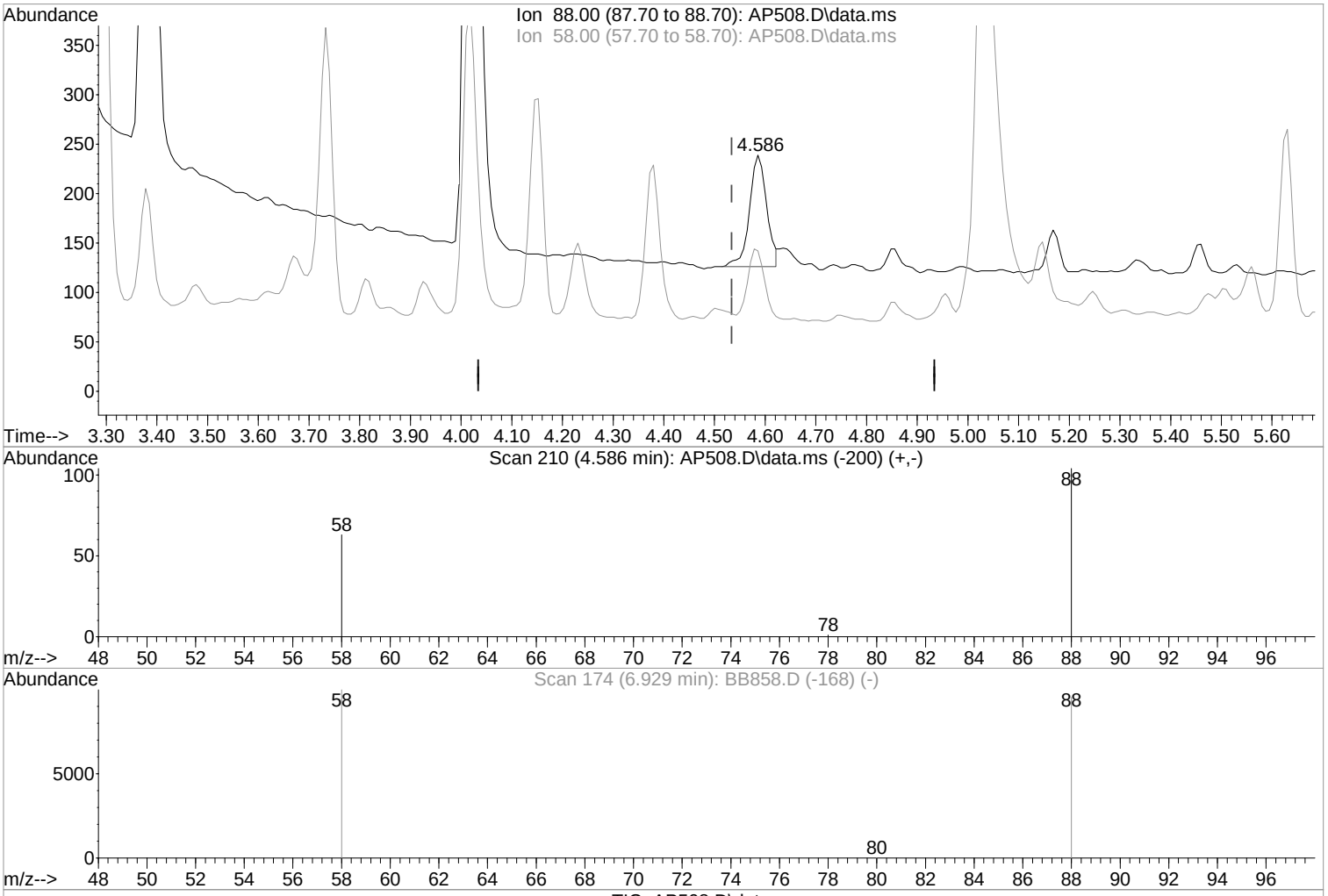


1st DM 02/21/18
2nd MP 02/21/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP508.D
Acq On : 21 Feb 2018 2:12 pm
Operator : J.Misiurewicz
Sample : R1801393-002 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 15:05:28 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



TIC: AP508.D\data.ms

(2) 1,4-Dioxane (T)

4.586min (+ 0.051) 1.64 PPB m

response 269

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	59.41
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

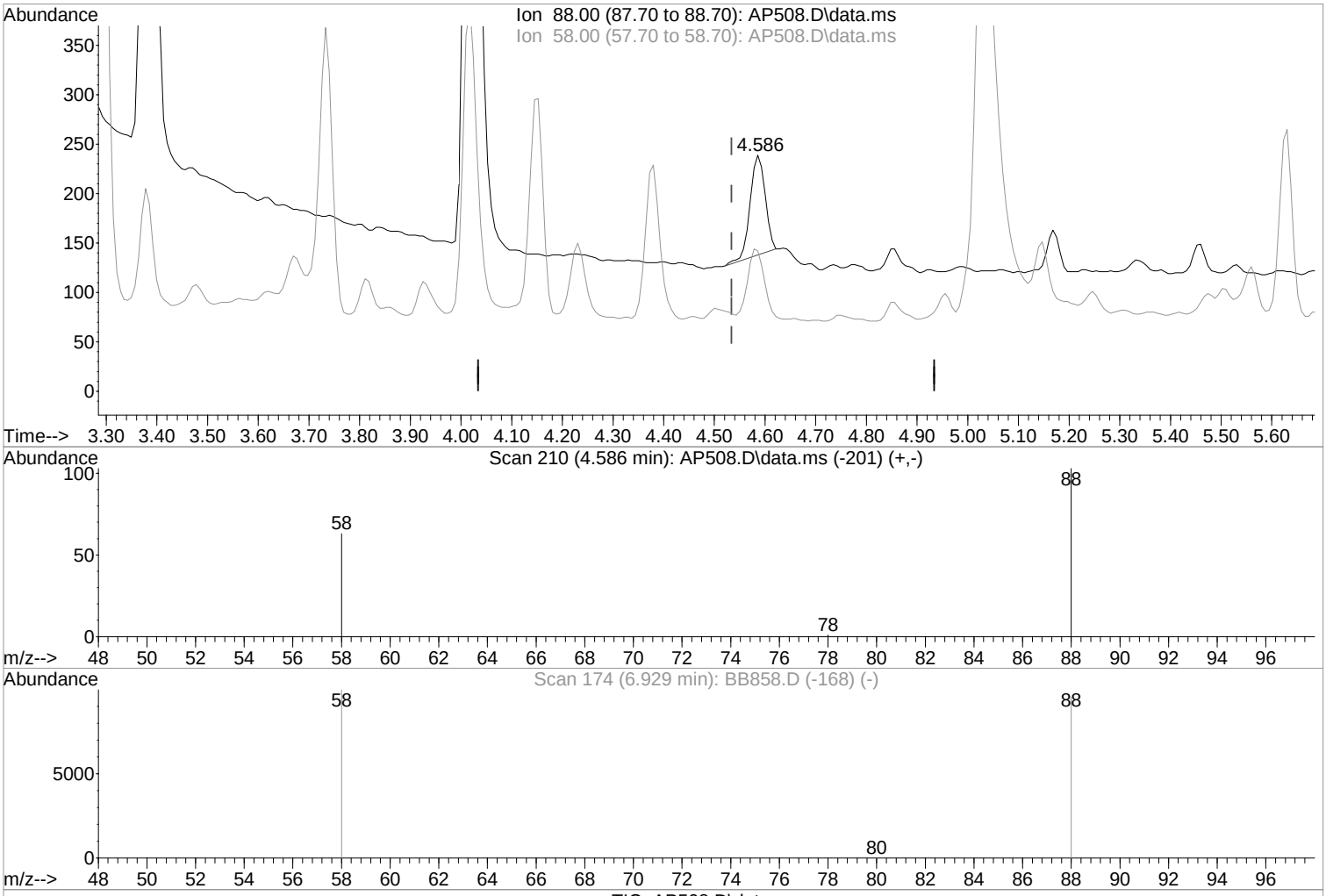
Poor integration.

02/21/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP508.D
Acq On : 21 Feb 2018 2:12 pm
Operator : J.Misiurewicz
Sample : R1801393-002 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 15:05:28 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



TIC: AP508.D\data.ms

(2) 1,4-Dioxane (T)

4.586min (+ 0.051) 1.30 PPB

response 212

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	61.35
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

02/21/18

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP508.D
Acq On : 21 Feb 2018 2:12 pm
Operator : J.Misiurewicz
Sample : R1801393-002 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 15:08:36 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

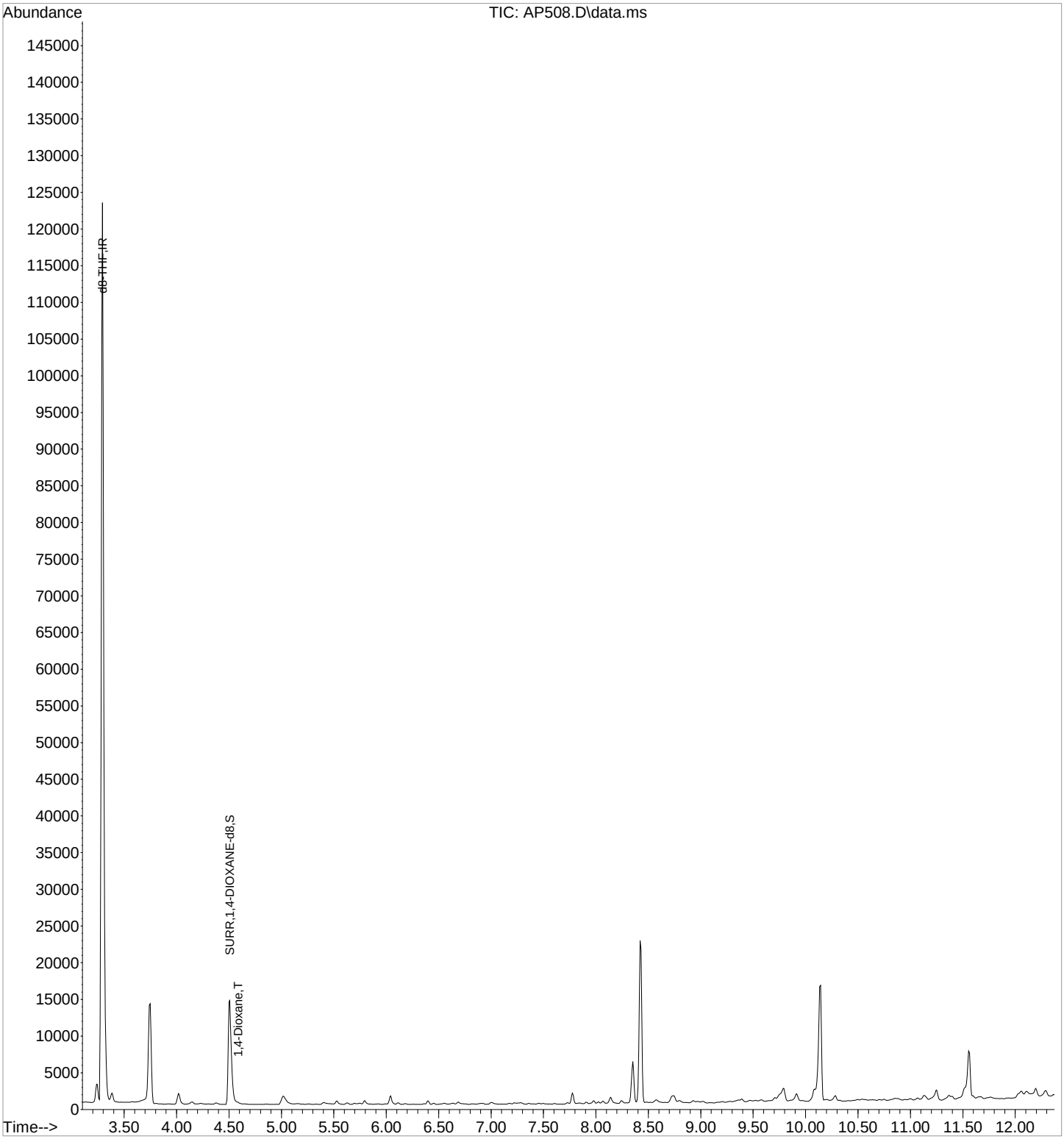
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.293	46	82929	500.00	PPB	0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.508	96	14393	96.78	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery = 96.78%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.586	88	269m	1.64	PPB	

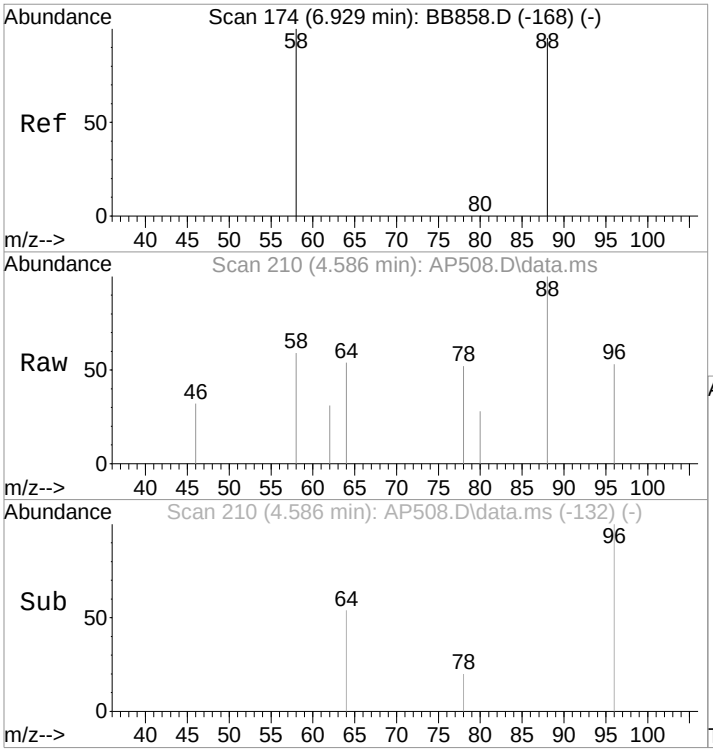
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP508.D
Acq On : 21 Feb 2018 2:12 pm
Operator : J.Misiurewicz
Sample : R1801393-002 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 15:08:36 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

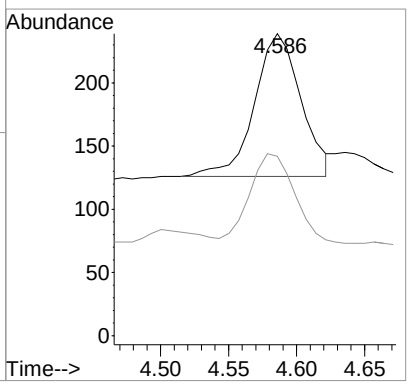




#2
1,4-Dioxane
Concen: 1.64 PPB m
RT: 4.586 min Scan# 210
Delta R.T. 0.051 min
Lab File: AP508.D
Acq: 21 Feb 2018 2:12 pm

Tgt Ion: 88 Resp: 269

Ion	Ratio	Lower	Upper
88	100		
58	59.4	37.0	77.0



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP509.D
Acq On : 21 Feb 2018 2:30 pm
Operator : J.Misiurewicz
Sample : R1801393-003 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 21 15:05:30 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

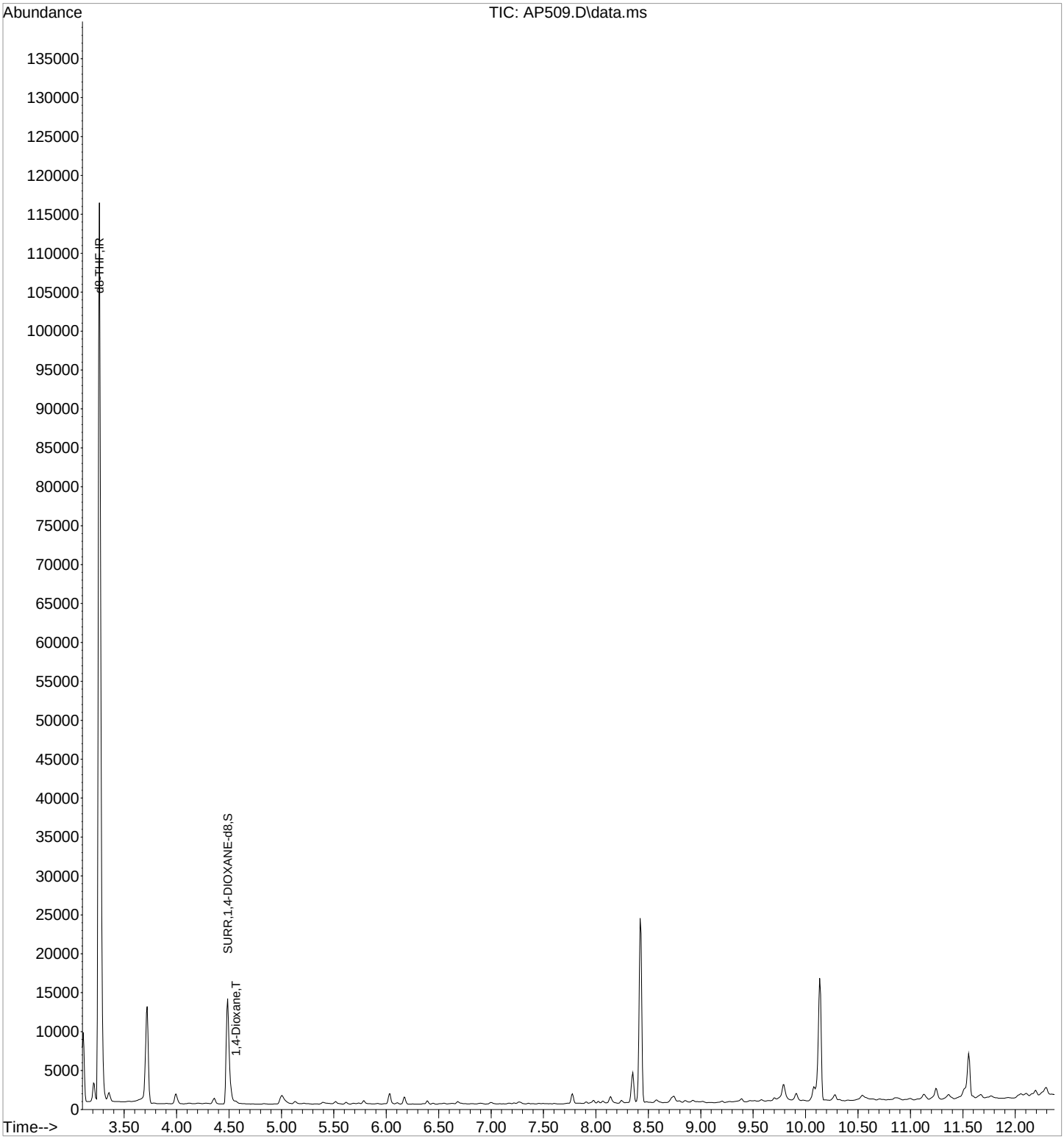
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.264	46	78123	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.486	96	13528	96.56	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery = 96.56%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.564	88	371	2.39	PPB	90

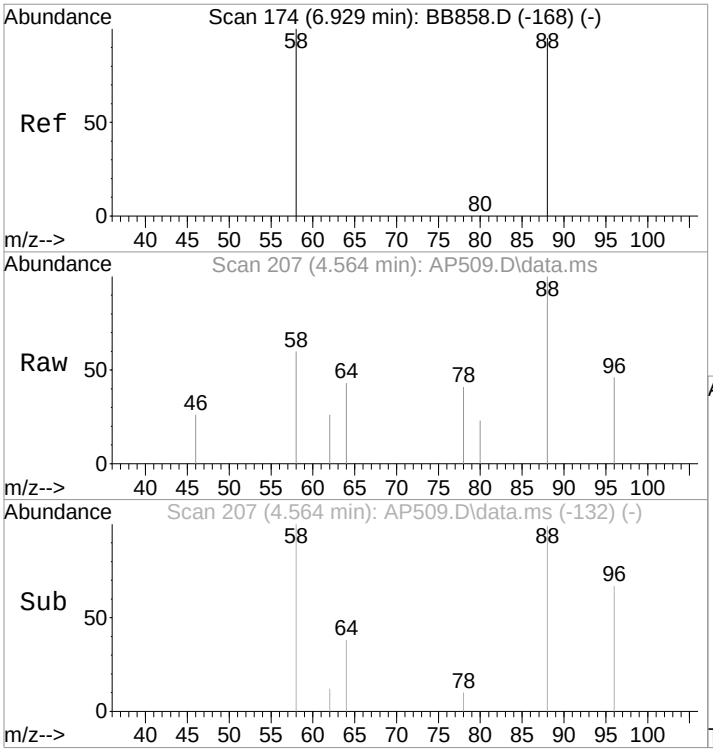
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP509.D
Acq On : 21 Feb 2018 2:30 pm
Operator : J.Misiurewicz
Sample : R1801393-003 Inst : 5975 E
Misc : 308588 8270D DIOX
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 21 15:05:30 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

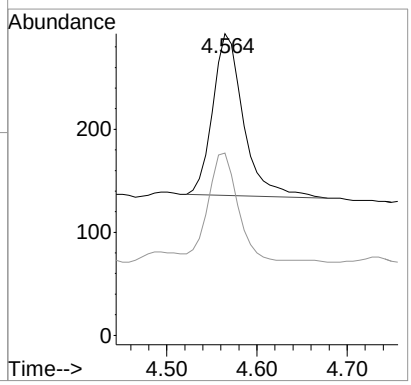




#2
1,4-Dioxane
Concen: 2.39 PPB
RT: 4.564 min Scan# 207
Delta R.T. 0.030 min
Lab File: AP509.D
Acq: 21 Feb 2018 2:30 pm

Tgt Ion: 88 Resp: 371

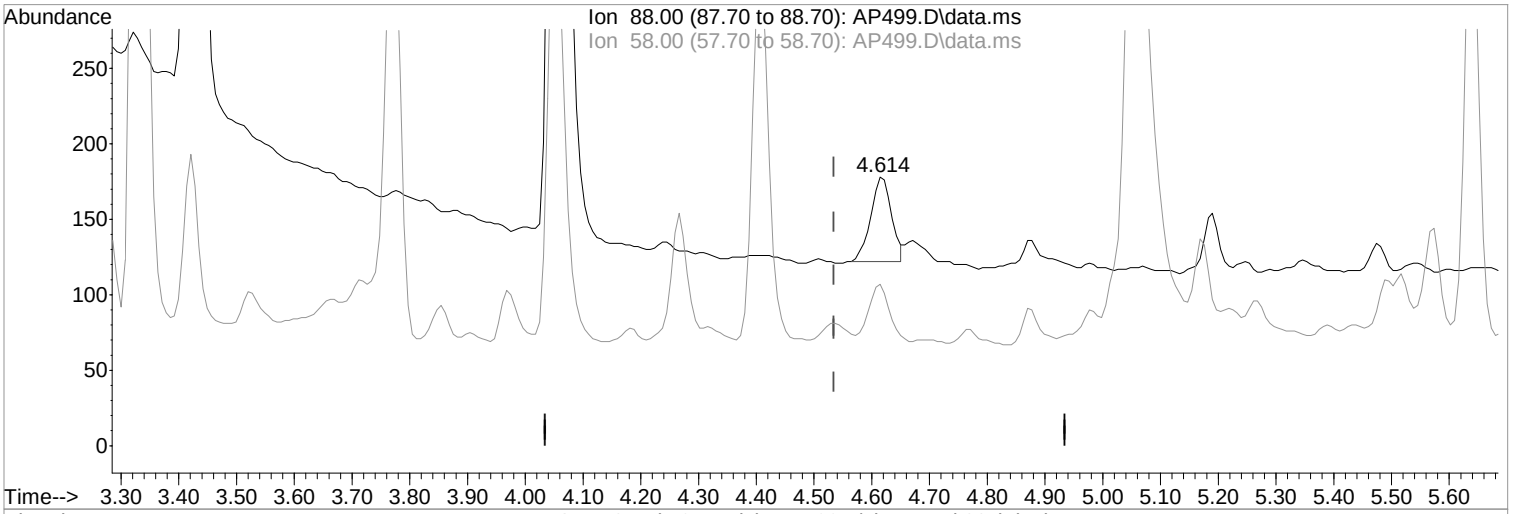
Ion	Ratio	Lower	Upper
88	100		
58	64.6	37.0	77.0

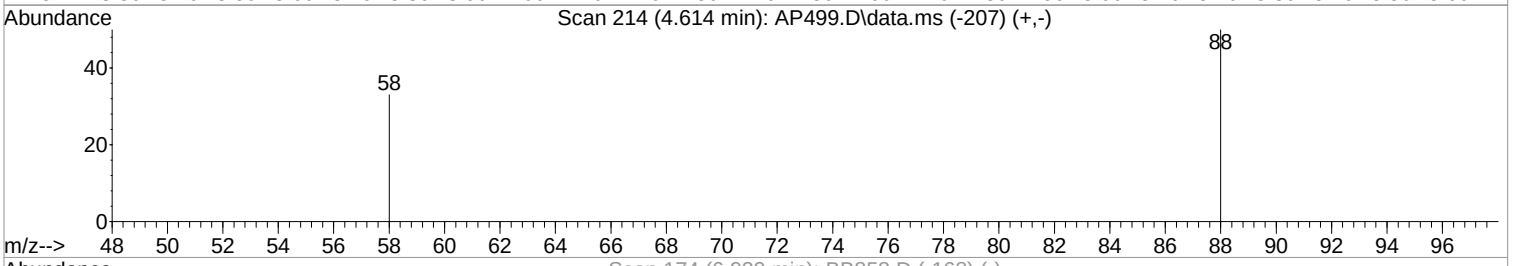


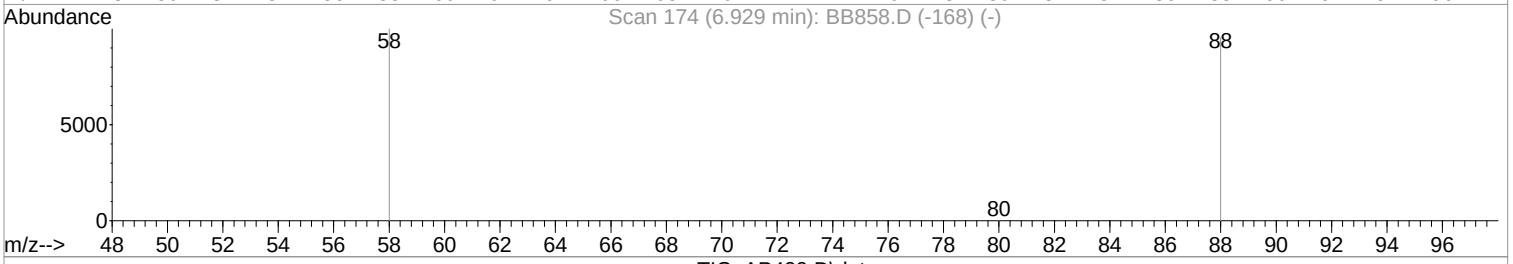
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP499.D
Acq On : 21 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : RQ1801489-01 Inst : 5975 E
Misc : 308588 8270D DIOX BLK
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:51 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration







TIC: AP499.D\data.ms

(2) 1,4-Dioxane (T)

4.614min (+ 0.080) 0.84 PPB m

response 141

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	60.11
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

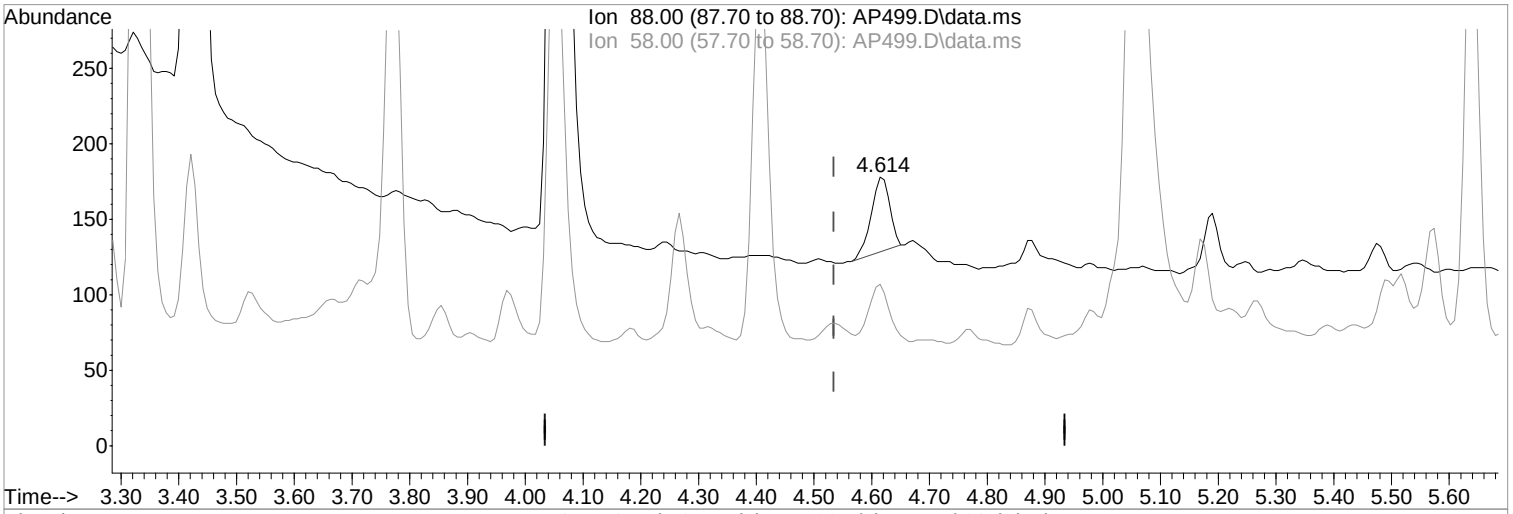
Poor integration.

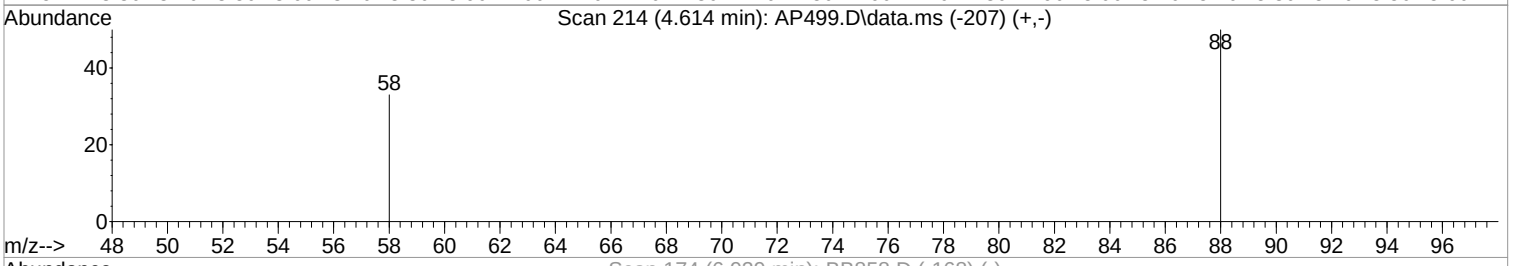
02/21/18

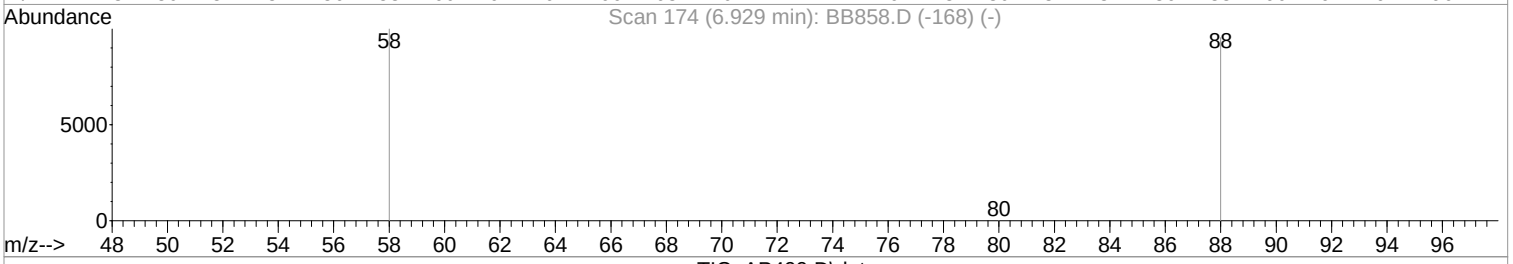
Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP499.D
Acq On : 21 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : RQ1801489-01 Inst : 5975 E
Misc : 308588 8270D DIOX BLK
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:40:51 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration







TIC: AP499.D\data.ms

(2) 1,4-Dioxane (T)

4.614min (+ 0.080) 0.68 PPB

response 113

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	66.34
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

02/21/18

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP499.D
Acq On : 21 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : RQ1801489-01 Inst : 5975 E
Misc : 308588 8270D DIOX BLK
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

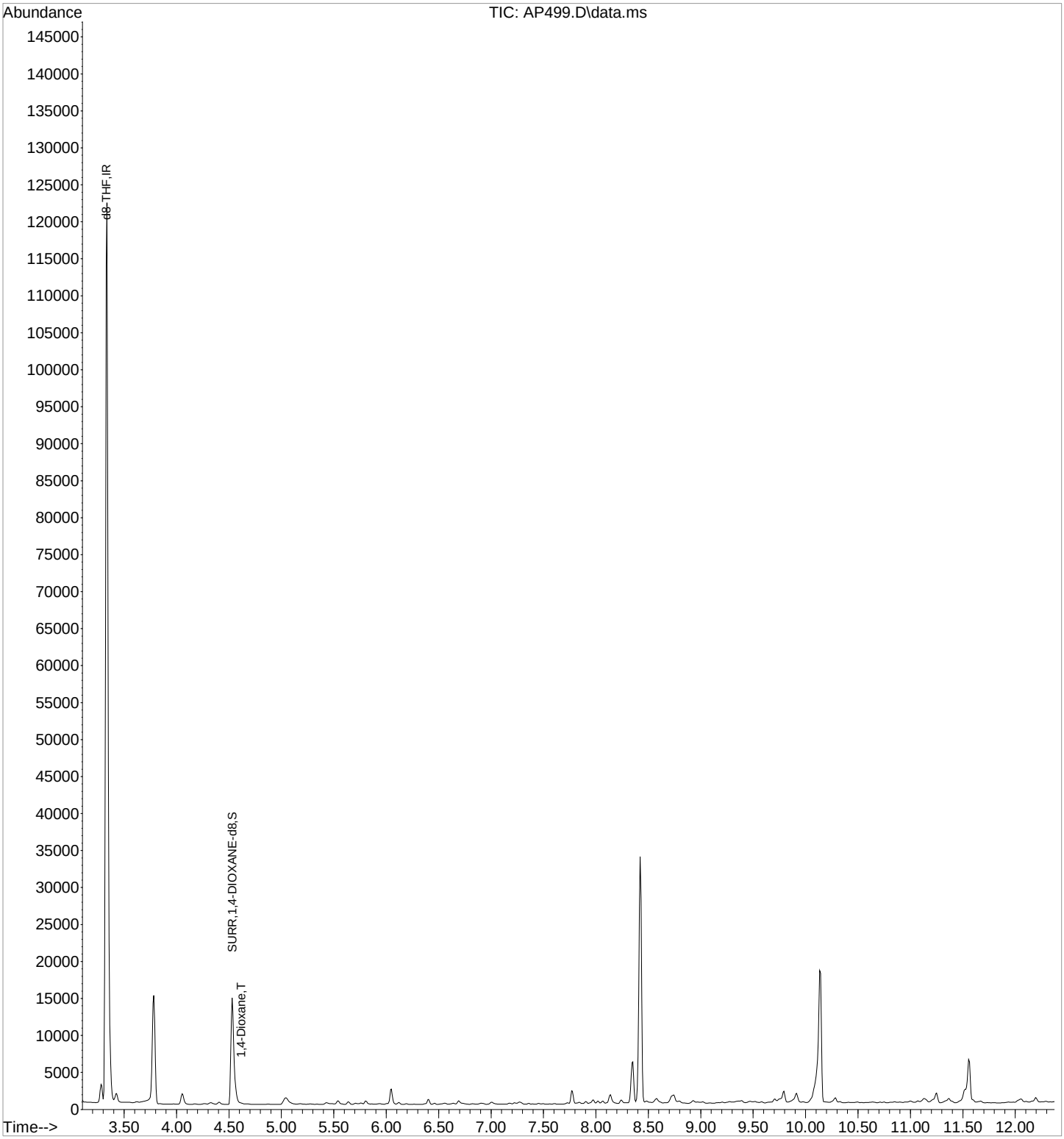
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.328	46	85776	500.00	PPB	0.06
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.529	96	14500	94.27	PPB	0.04
Spiked Amount 100.000	Range 70 - 130		Recovery = 94.27%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.614	88	141m	0.84	PPB	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP499.D
Acq On : 21 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : RQ1801489-01 Inst : 5975 E
Misc : 308588 8270D DIOX BLK
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 21 11:41:03 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP500.D
Acq On : 21 Feb 2018 11:40 am
Operator : J.Misiurewicz
Sample : RQ1801489-02 Inst : 5975 E
Misc : 308588 8270D DIOX LCS
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 12:49:45 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

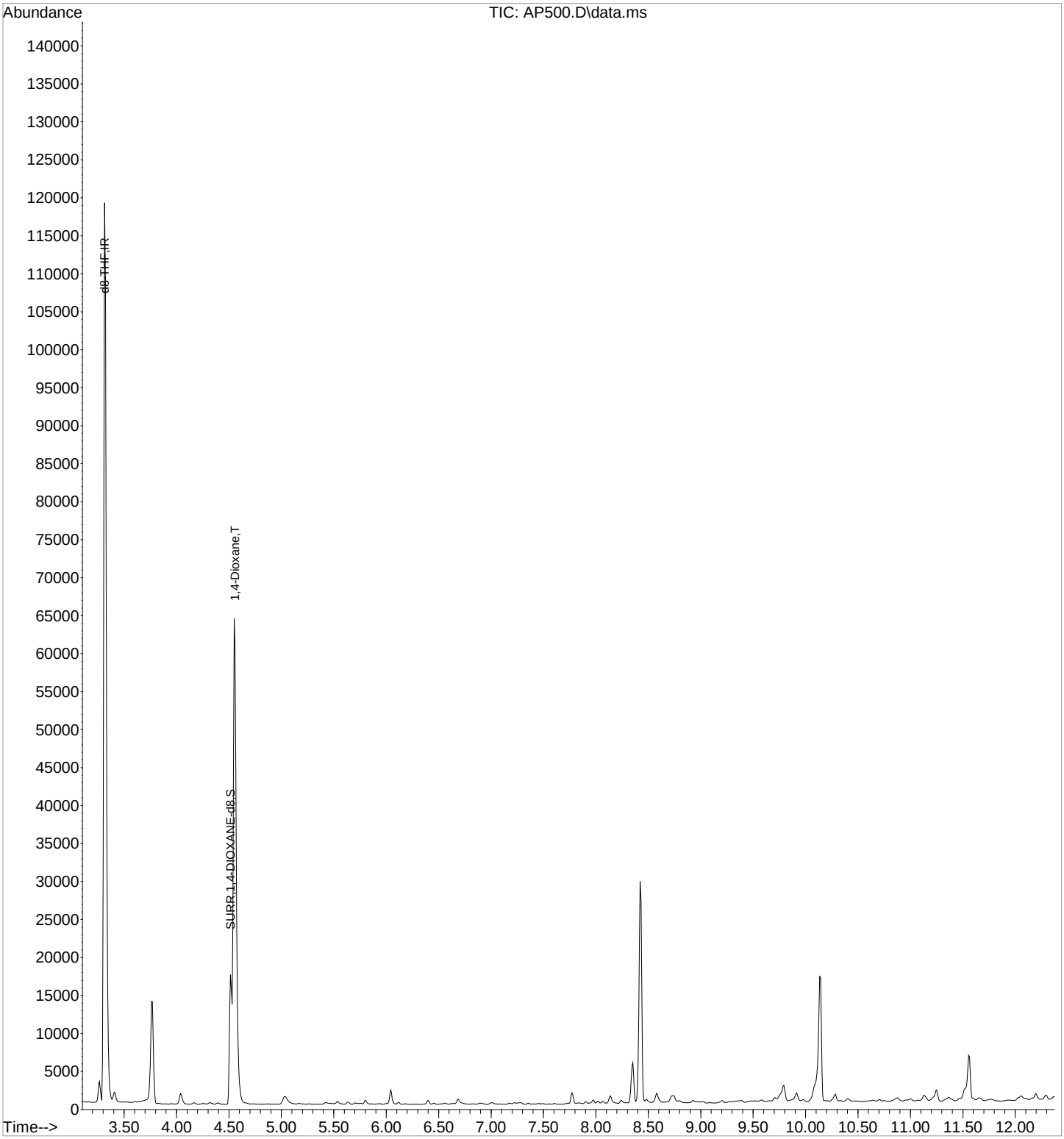
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.314	46	87941	500.00	PPB	0.05
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.515	96	14463	91.72	PPB	0.03
Spiked Amount 100.000	Range 70 - 130		Recovery = 91.72%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.558	88	76273	431.54	PPB	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP500.D
Acq On : 21 Feb 2018 11:40 am
Operator : J.Misiurewicz
Sample : RQ1801489-02 Inst : 5975 E
Misc : 308588 8270D DIOX LCS
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 12:49:45 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP501.D
Acq On : 21 Feb 2018 11:58 am
Operator : J.Misiurewicz
Sample : RQ1801489-03 Inst : 5975 E
Misc : 308588 8270D DIOX LCSD
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 12:49:47 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

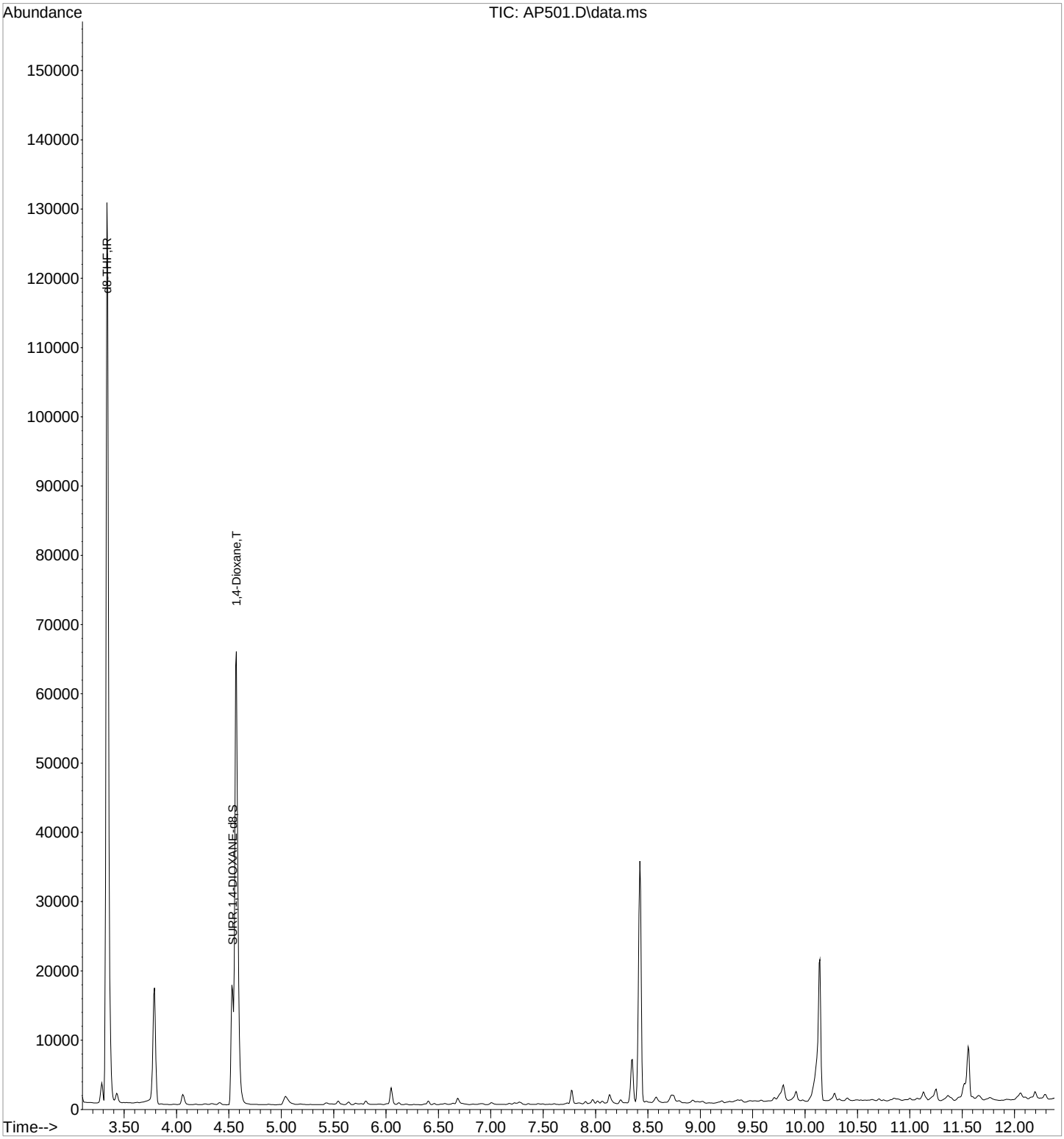
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.335	46	97154	500.00	PPB	0.07
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.536	96	14737	84.61	PPB	0.05
Spiked Amount 100.000	Range 70 - 130		Recovery = 84.61%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.572	88	77740	398.24	PPB	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP501.D
Acq On : 21 Feb 2018 11:58 am
Operator : J.Misiurewicz
Sample : RQ1801489-03 Inst : 5975 E
Misc : 308588 8270D DIOX LCSD
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 12:49:47 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP497.D
Acq On : 21 Feb 2018 9:46 am
Operator : J.Misiurewicz
Sample : CCV Inst : 5975 E
Misc : 200 ppb STD 8270D DIOX
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:18:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

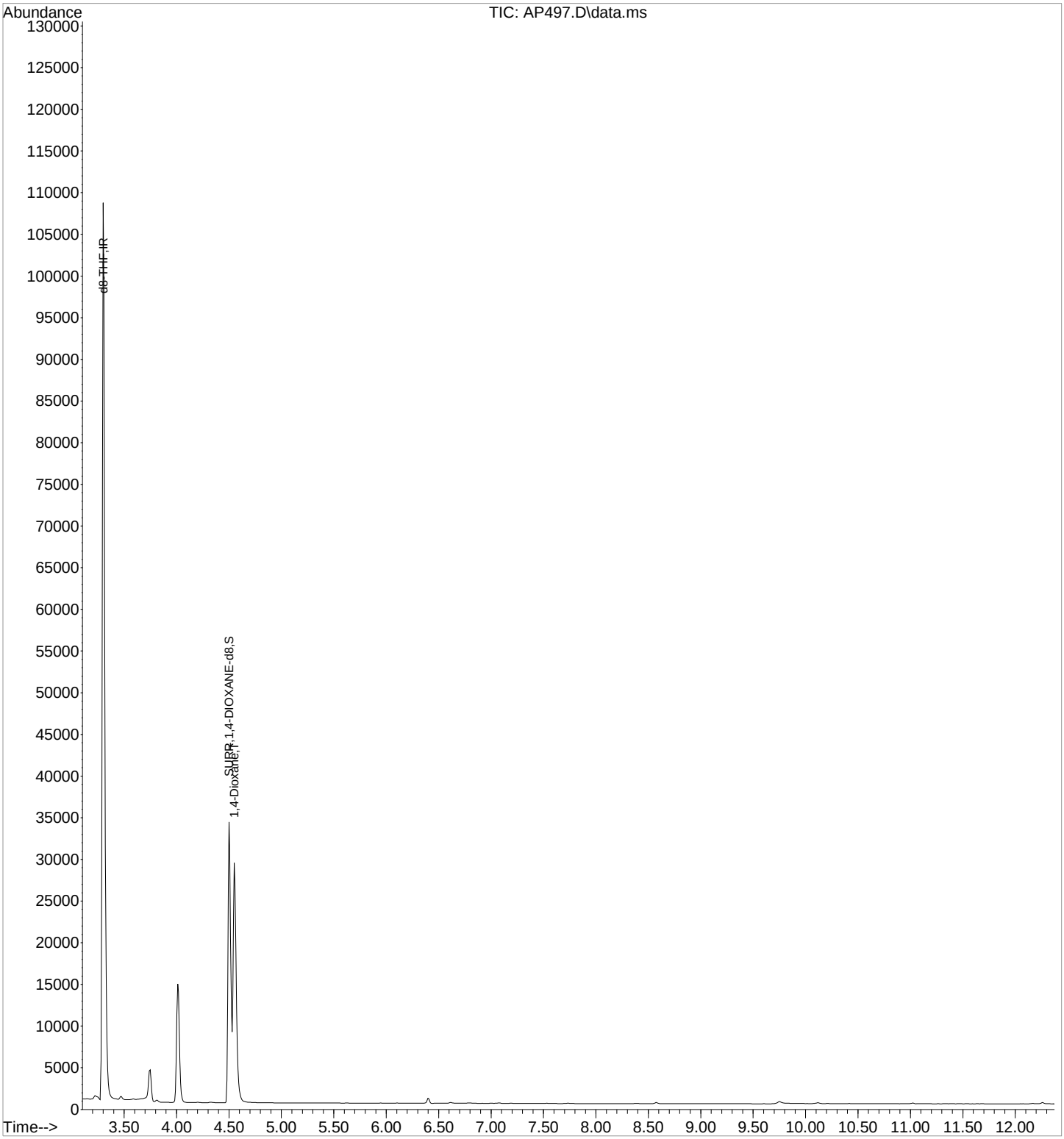
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.300	46	80637	500.00	PPB	0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.501	96	30981	213.77	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery = 213.77%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.550	88	34884	215.65	PPB	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP497.D
Acq On : 21 Feb 2018 9:46 am
Operator : J.Misiurewicz
Sample : CCV Inst : 5975 E
Misc : 200 ppb STD 8270D DIOX
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:18:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP497.D
Acq On : 21 Feb 2018 9:46 am
Operator : J.Misiurewicz
Sample : CCV Inst : 5975 E
Misc : 200 ppb STD 8270D DIOX
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:18:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	120	0.03
2 T	1,4-Dioxane	200.000	215.651	-7.8	118	0.02
3 S	SURR,1,4-DIOXANE-d8	200.000	213.771	-6.9	119	0.02

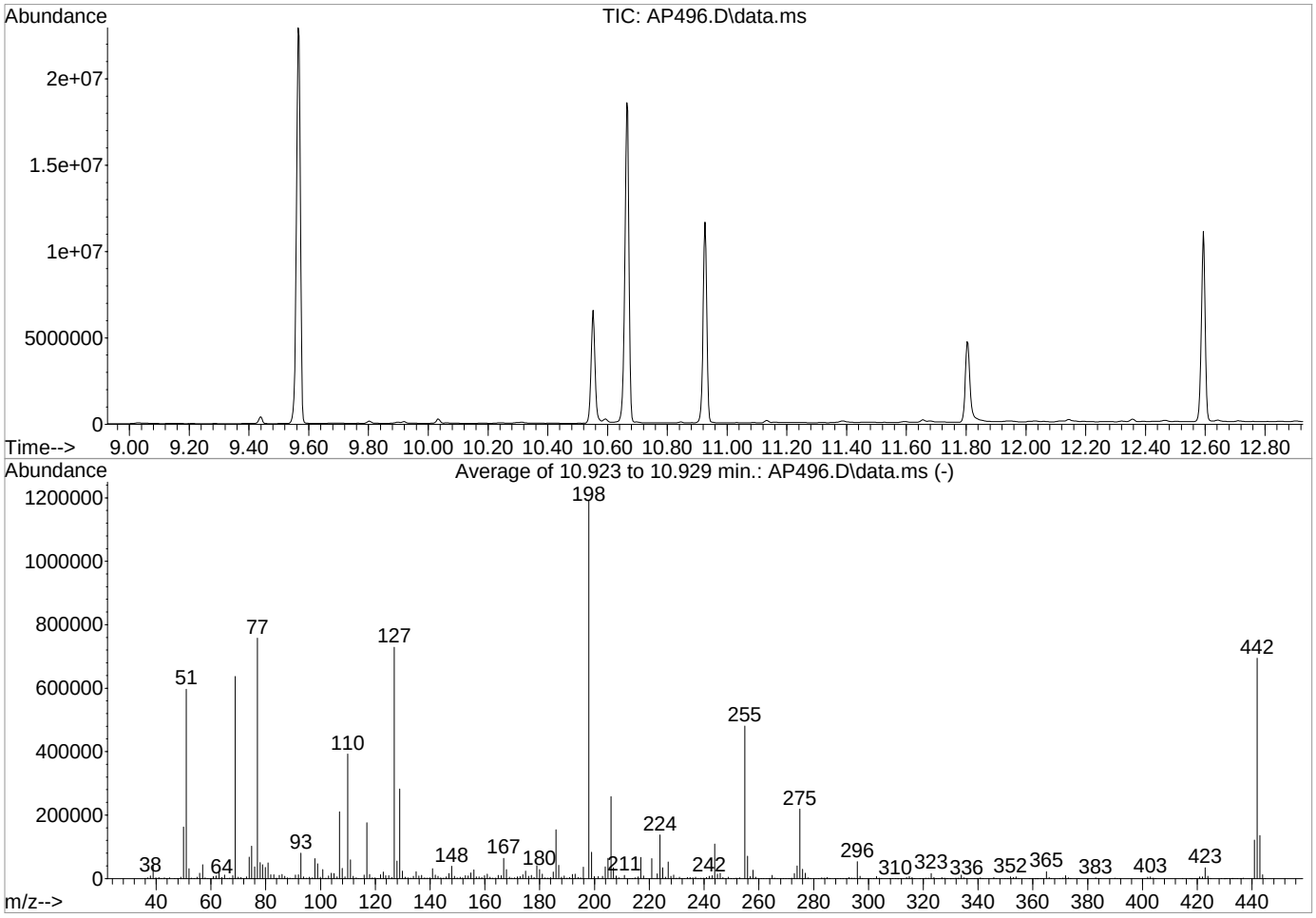
(#) = Out of Range SPCC's out = 0 CCC's out = 0

1st 02/21/18
2nd 02/21/18

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP496.D
Acq On : 21 Feb 2018 9:15 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Title :
Last Update : Tue Feb 13 10:58:46 2018



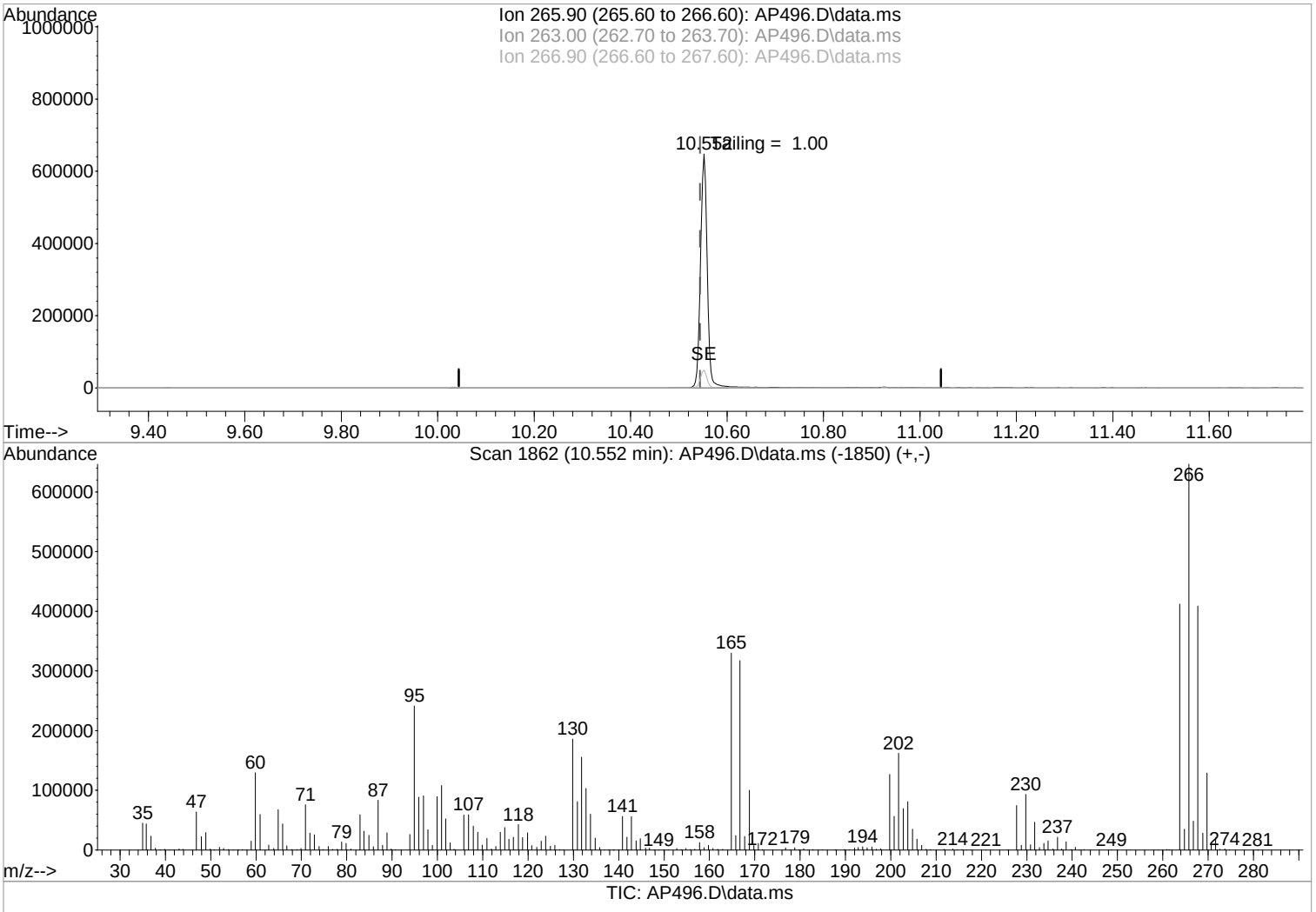
AutoFind: Scans 1988, 1989, 1990; Background Corrected with Scan 1971

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	50.2	597004	PASS
68	69	0.00	2	1.4	9028	PASS
70	69	0.00	2	0.6	4086	PASS
127	198	10	80	61.3	729280	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1190400	PASS
199	198	5	9	7.0	82883	PASS
275	198	10	60	18.4	219243	PASS
365	198	1	500	1.8	21728	PASS
441	442	0.01	24	17.4	121147	PASS
442	442	100	100	100.0	694421	PASS
443	442	15	24	19.5	135315	PASS

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP496.D
Acq On : 21 Feb 2018 9:15 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 09:45:55 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration



(5) Pentachlorophenol (T)

10.553min (+ 0.009) 57.35 ppm

response 6135207

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.00
266.90	7.70	7.49
0.00	0.00	0.00

Manual Integration:

After

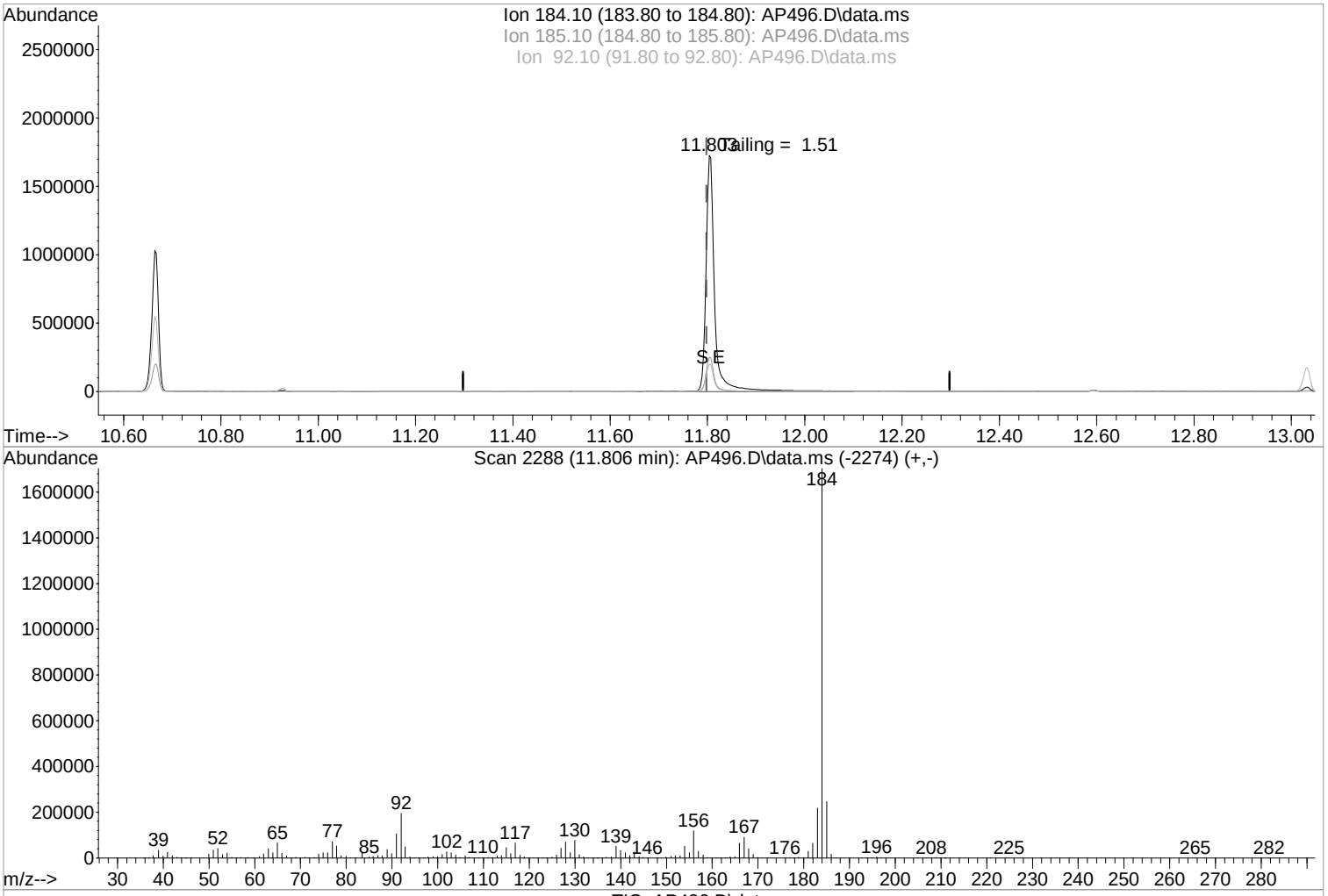
Other - Tailing

02/21/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP496.D
Acq On : 21 Feb 2018 9:15 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 09:45:55 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration



(8) Benzidine (T)

11.806min (+ 0.008) 60.96 ppm

response 19995719

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.46
92.10	10.70	11.42
0.00	0.00	0.00

Manual Integration:

After

Other - Tailing

02/21/18

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP496.D
Acq On : 21 Feb 2018 9:15 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 09:45:55 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration

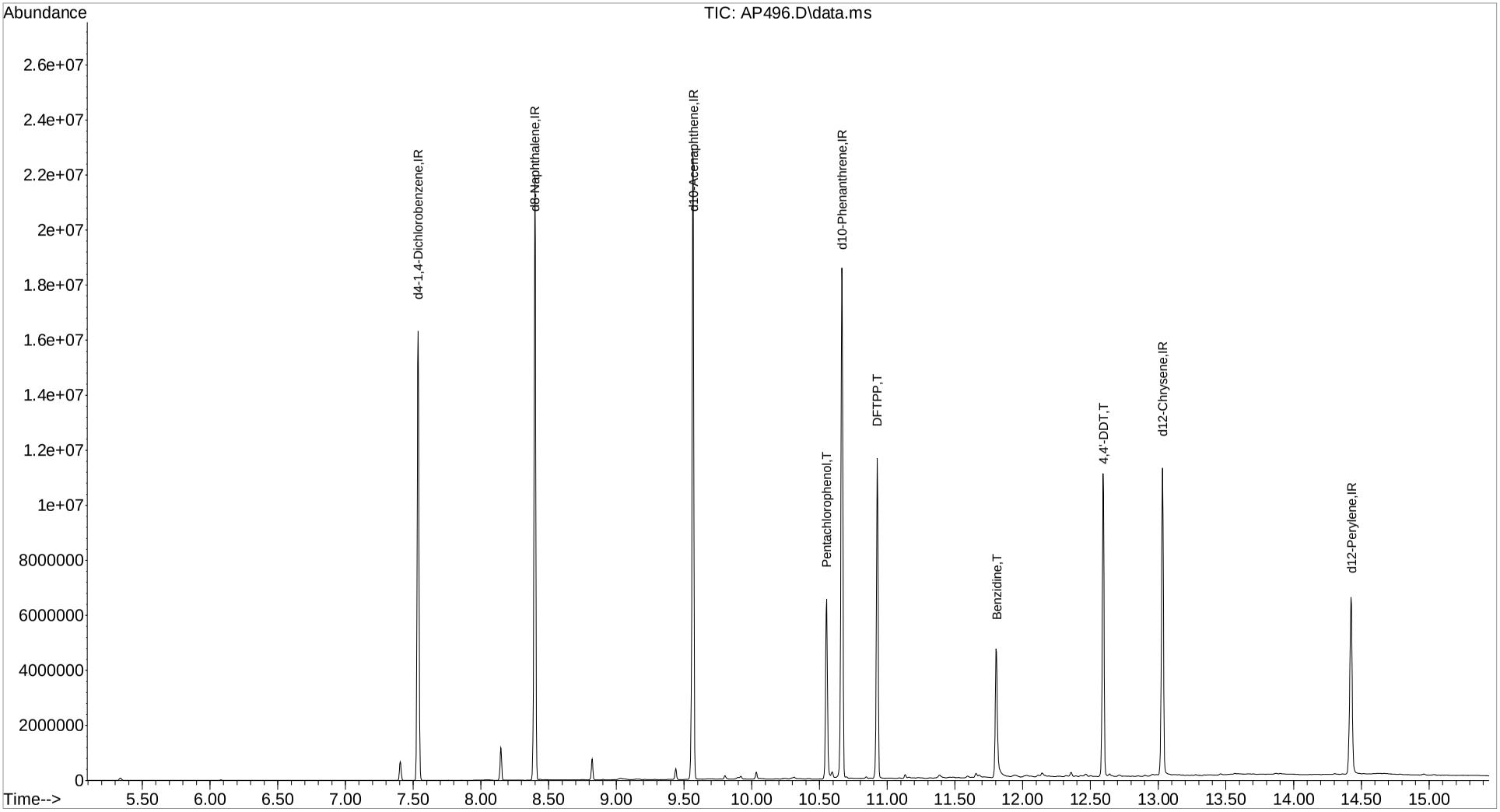
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) d4-1,4-Dichlorobenzene	7.537	152	23222667	20.00	ppm		0.00
2) d8-Naphthalene	8.400	136	79262752	20.00	ppm		0.00
3) d10-Acenaphthene	9.567	164	42200933	20.00	ppm		0.00
4) d10-Phenanthrene	10.667	188	61891359	20.00	ppm		0.00
7) d12-Chrysene	13.034	240	33227562	20.00	ppm		0.00
12) d12-Perylene	14.425	264	24266539	20.00	ppm		0.01
Target Compounds							Qvalue
5) Pentachlorophenol	10.553	266	6135207	57.35	ppm		99
6) DFTPP	10.928	198	11014747	53.58	ppm	#	67
8) Benzidine	11.806	184	19995719	60.96	ppm		98
9) 4,4'-DDE	0.000		0	N.D.			
10) 4,4'-DDD	0.000		0	N.D.			
11) 4,4'-DDT	12.595	235	16094435	49.11	ppm		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022118\
Data File : AP496.D
Acq On : 21 Feb 2018 9:15 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 09:45:55 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration



1st 02/21/18
2nd 02/21/18

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP482.D
Acq On : 20 Feb 2018 12:28 pm
Operator : J.Misiurewicz
Sample : ICV Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 13:43:18 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

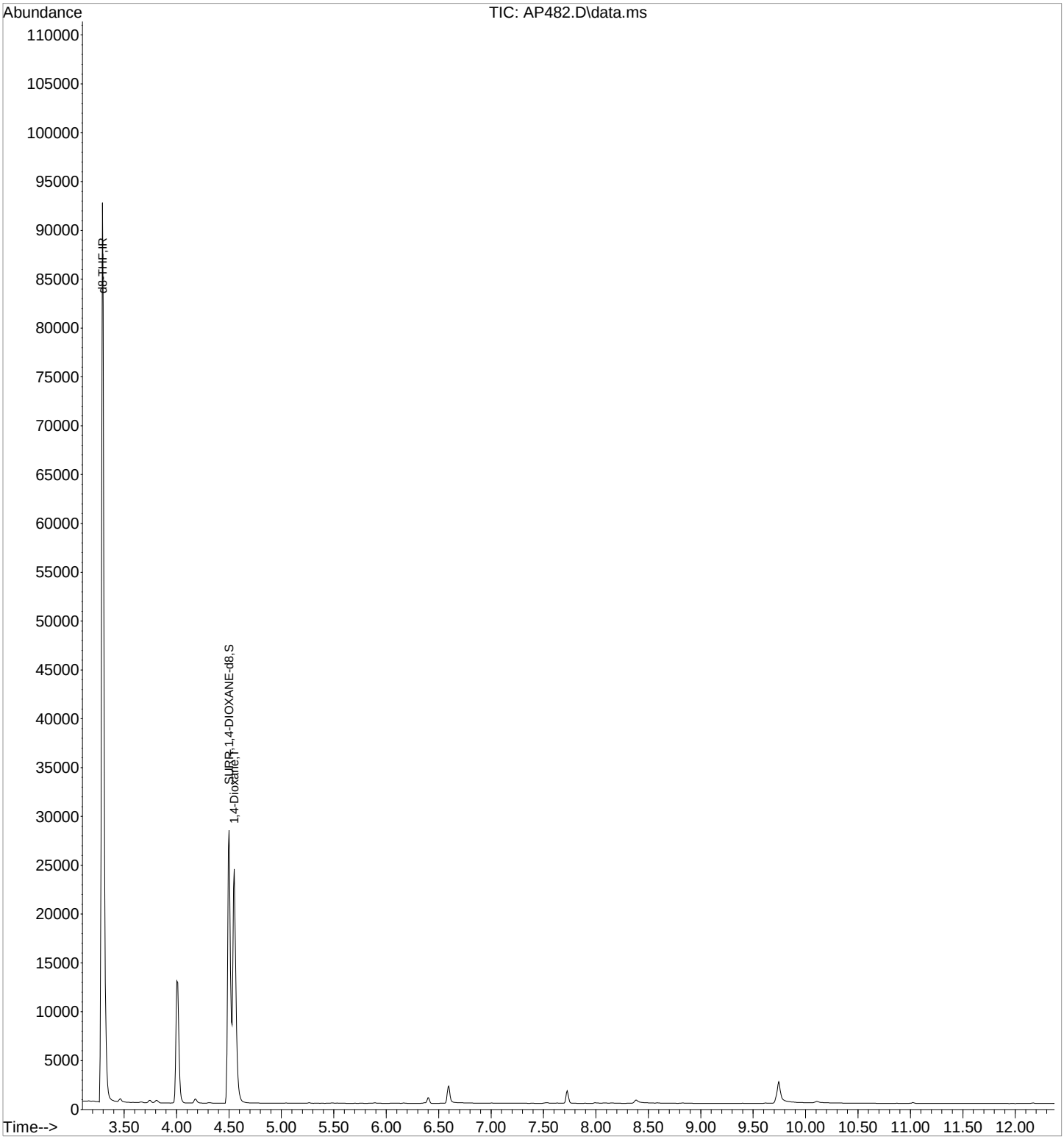
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.293	46	67752	500.00	PPB	0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.501	96	26327	216.20	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery = 216.20%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.550	88	29017	213.50	PPB	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP482.D
Acq On : 20 Feb 2018 12:28 pm
Operator : J.Misiurewicz
Sample : ICV Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 13:43:18 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP482.D
Acq On : 20 Feb 2018 12:28 pm
Operator : J.Misiurewicz
Sample : ICV Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 20 13:43:18 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d8-THF	500.000	500.000	0.0	100	0.03
2	T	1,4-Dioxane	200.000	213.500	-6.8	98	0.02
3	S	SURR,1,4-DIOXANE-d8	200.000	216.197	-8.1	101	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP480.D
Acq On : 20 Feb 2018 11:49 am
Operator : J.Misiurewicz
Sample : 1000 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 20 13:36:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

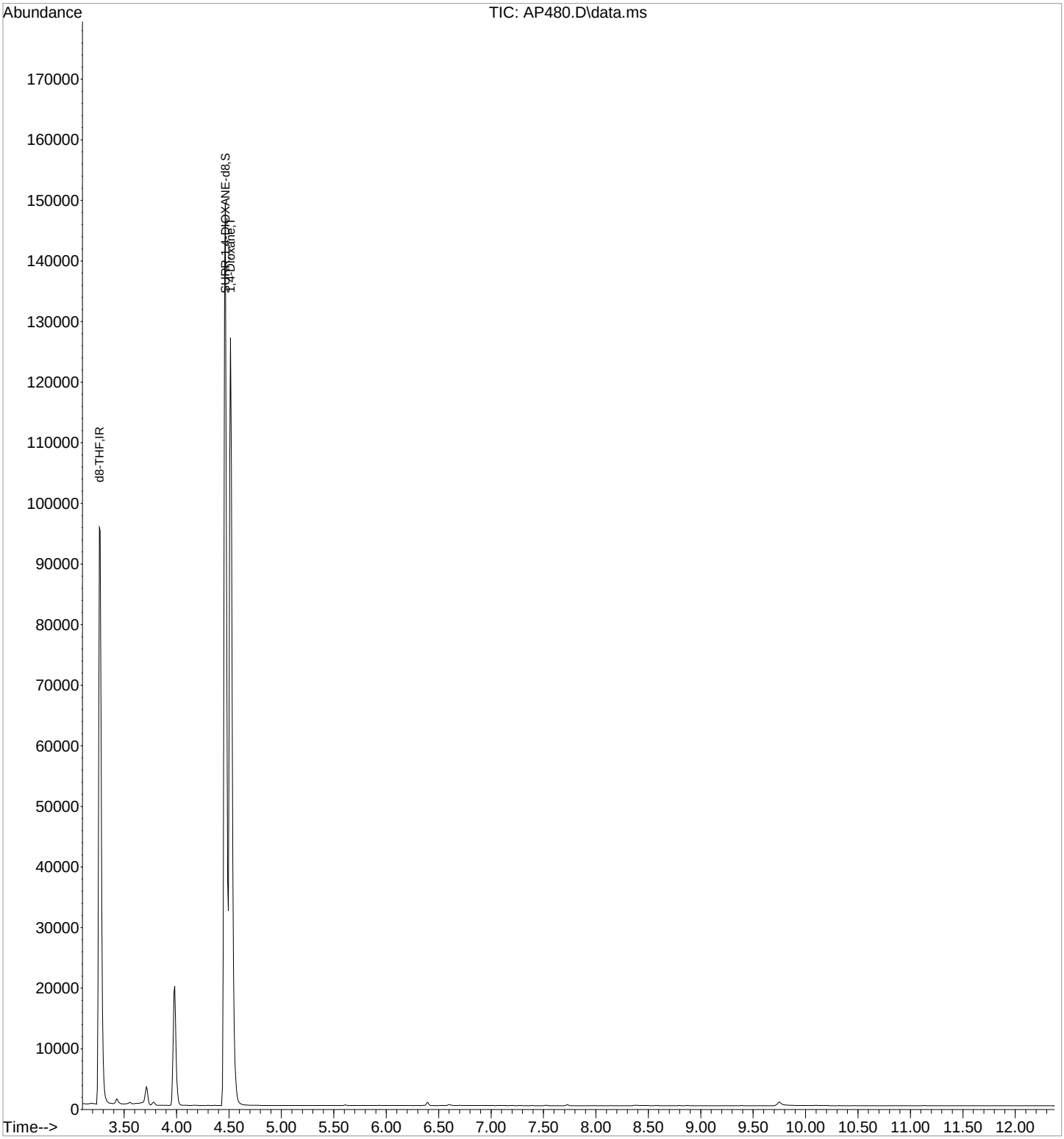
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.264	46	72120	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.465	96	133774	1018.80	PPB	-0.02
Spiked Amount 100.000	Range 70 - 130		Recovery = 1018.80%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.515	88	148093	1016.61	PPB	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP480.D
Acq On : 20 Feb 2018 11:49 am
Operator : J.Misiurewicz
Sample : 1000 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 20 13:36:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP481.D
Acq On : 20 Feb 2018 12:08 pm
Operator : J.Misiurewicz
Sample : 5000 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 20 13:36:13 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

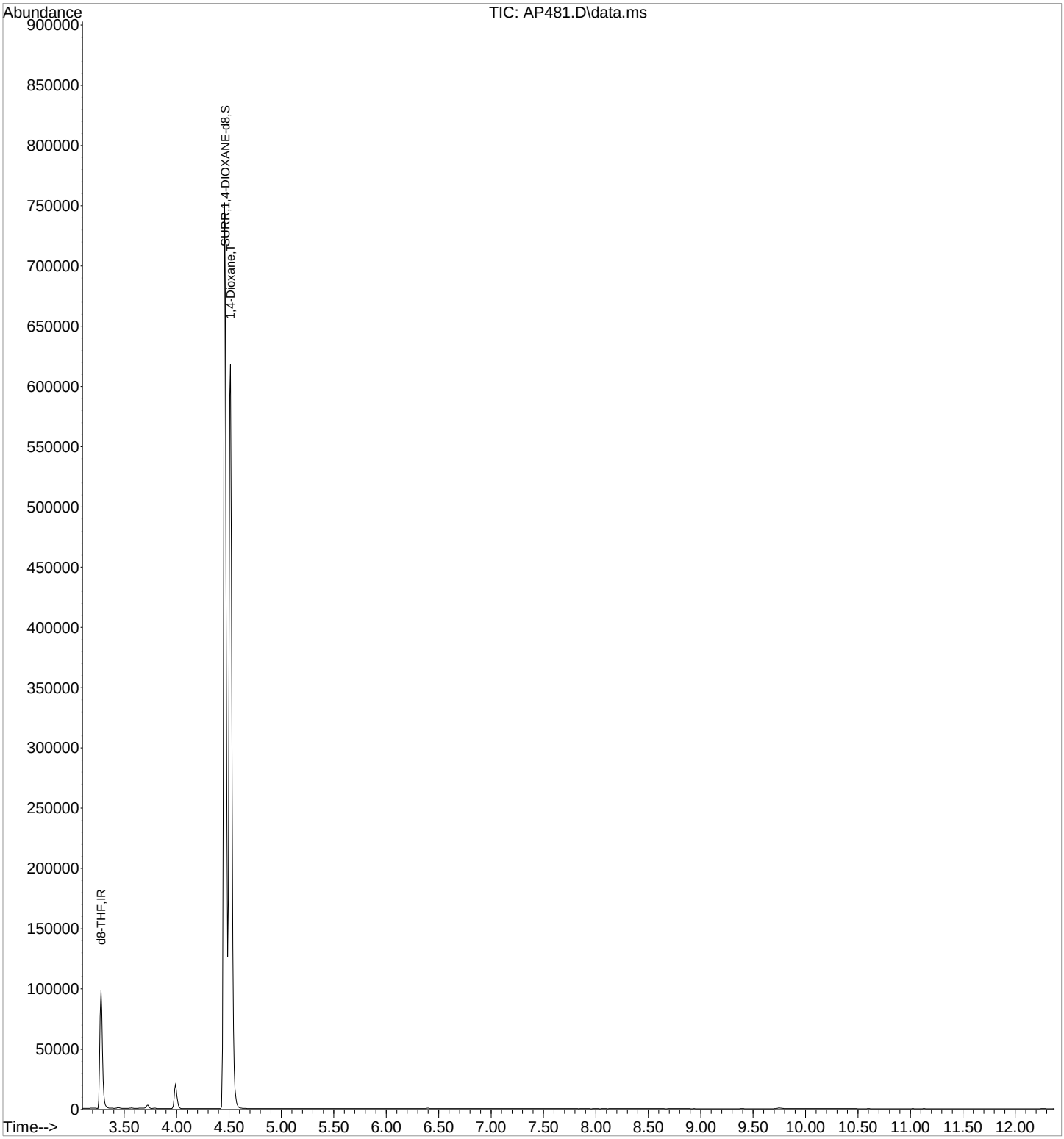
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	68823	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.465	96	653229	4913.43	PPB	-0.02
Spiked Amount 100.000	Range 70 - 130		Recovery = 4913.43%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.515	88	704166	4904.15	PPB	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP481.D
Acq On : 20 Feb 2018 12:08 pm
Operator : J.Misiurewicz
Sample : 5000 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 20 13:36:13 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP479.D
Acq On : 20 Feb 2018 11:30 am
Operator : J.Misiurewicz
Sample : 500 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 20 13:36:09 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

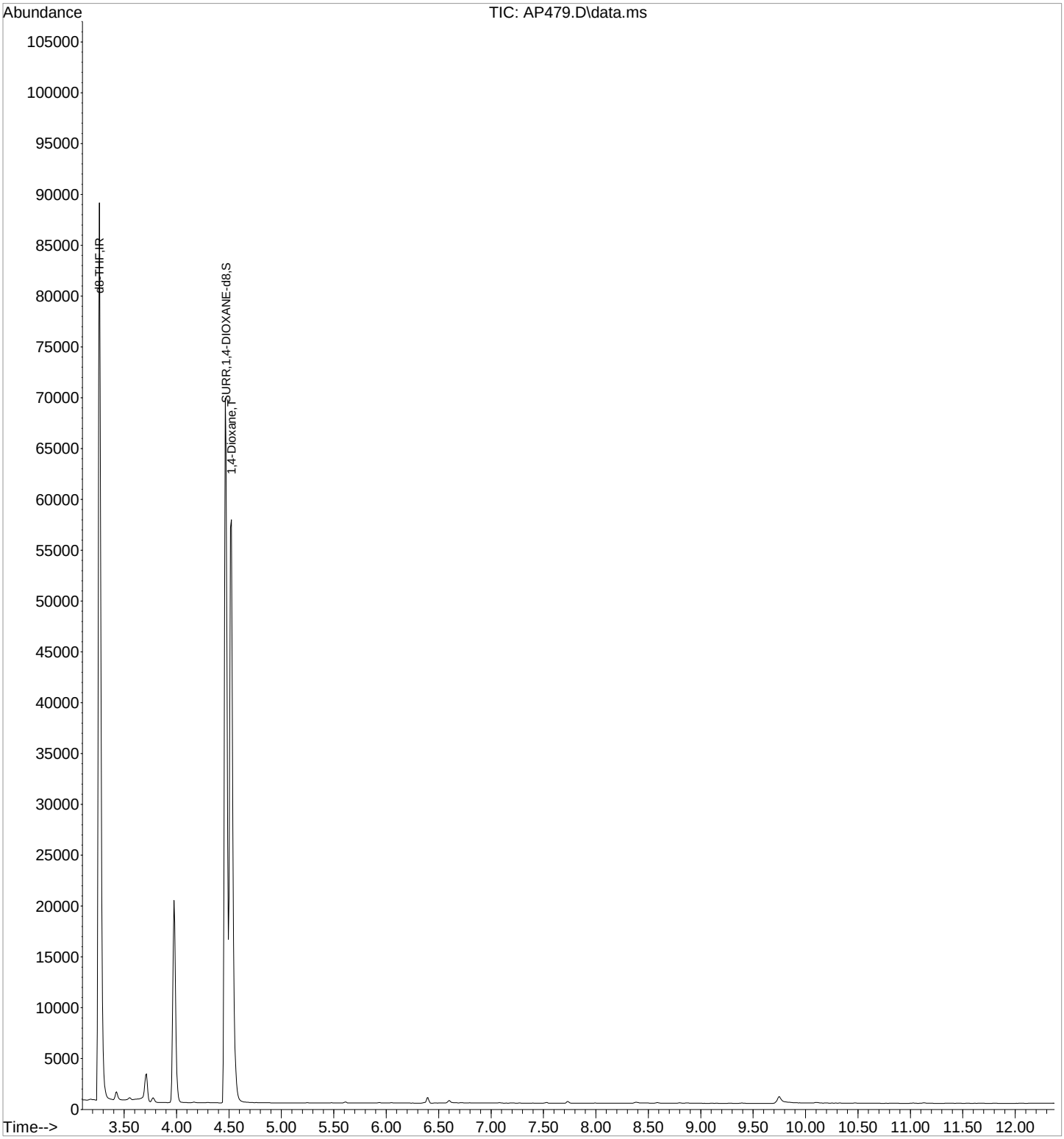
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.265	46	60830	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.472	96	62824	571.29	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery = 571.29%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.522	88	70244	573.85	PPB	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP479.D
Acq On : 20 Feb 2018 11:30 am
Operator : J.Misiurewicz
Sample : 500 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 20 13:36:09 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP478.D
Acq On : 20 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : 200 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 20 13:36:07 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

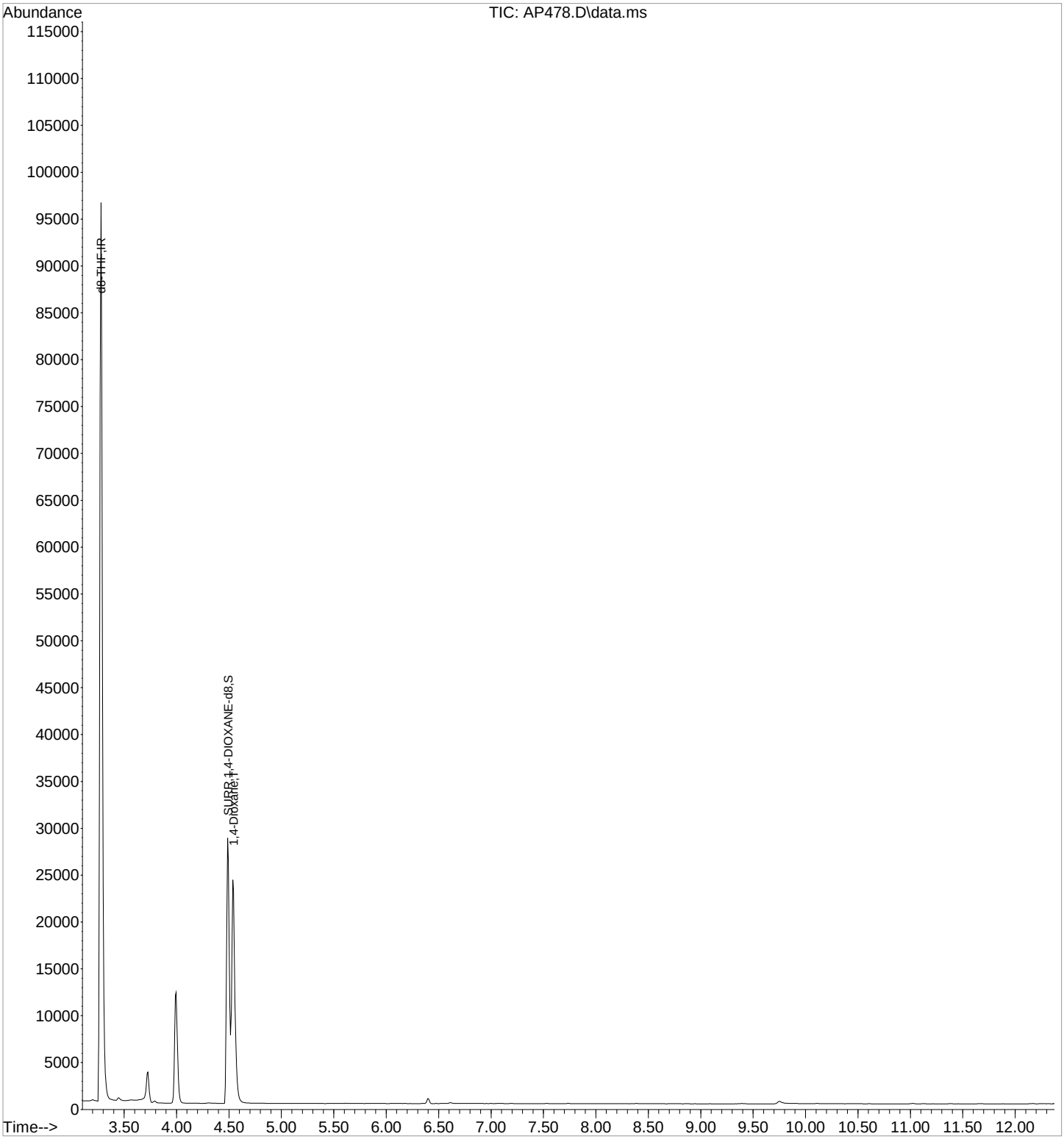
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	67470	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.494	96	26137	215.54	PPB	0.01
Spiked Amount 100.000	Range 70 - 130		Recovery = 215.54%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.544	88	29677	219.26	PPB	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP478.D
Acq On : 20 Feb 2018 11:11 am
Operator : J.Misiurewicz
Sample : 200 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 20 13:36:07 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP477.D
Acq On : 20 Feb 2018 10:52 am
Operator : J.Misiurewicz
Sample : 100 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 20 13:36:05 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

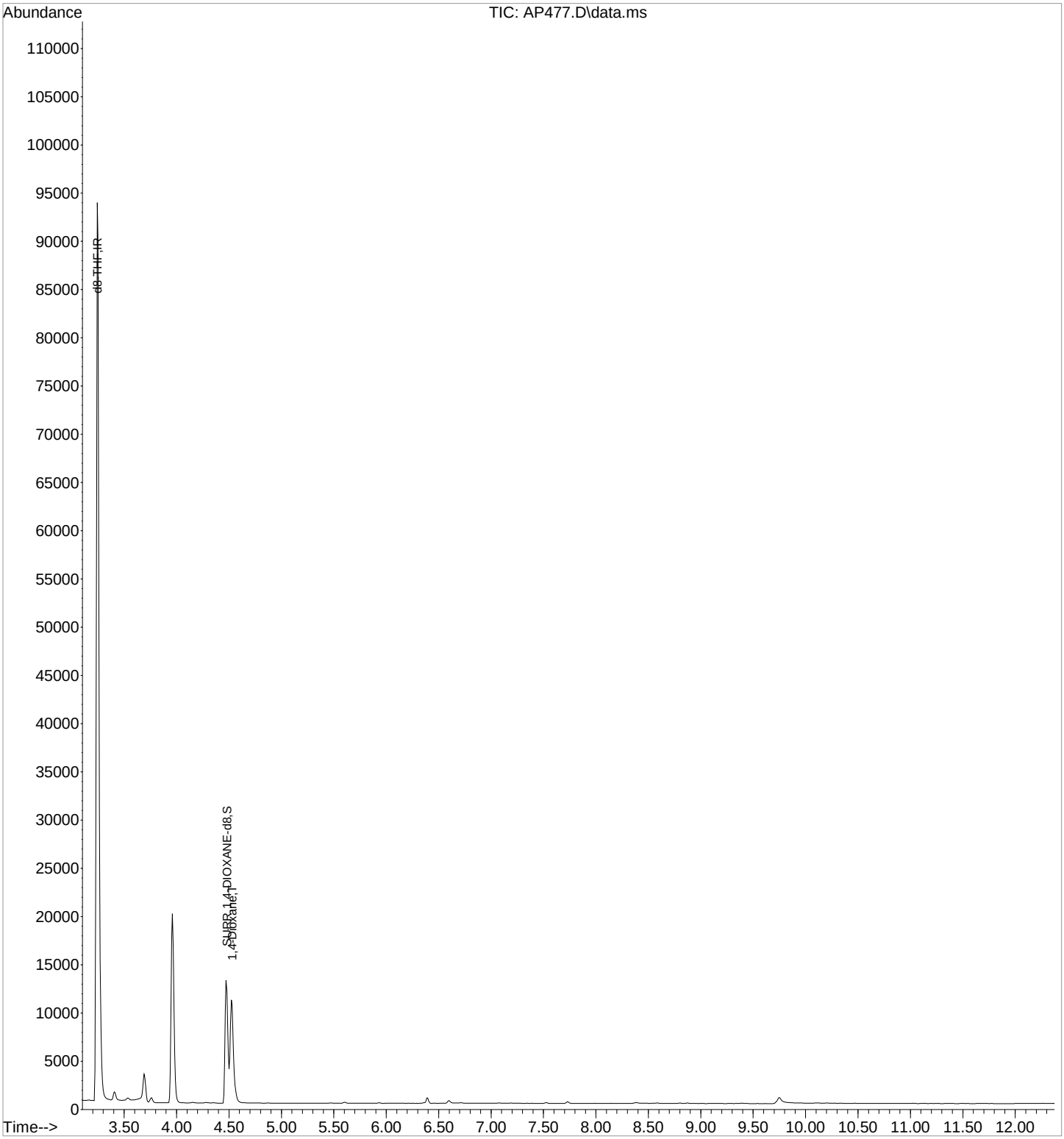
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.243	46	71017	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.479	96	12008	94.30	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery = 94.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.529	88	13579	95.43	PPB	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP477.D
Acq On : 20 Feb 2018 10:52 am
Operator : J.Misiurewicz
Sample : 100 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 20 13:36:05 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP476.D
Acq On : 20 Feb 2018 10:34 am
Operator : J.Misiurewicz
Sample : 20 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 20 13:36:03 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

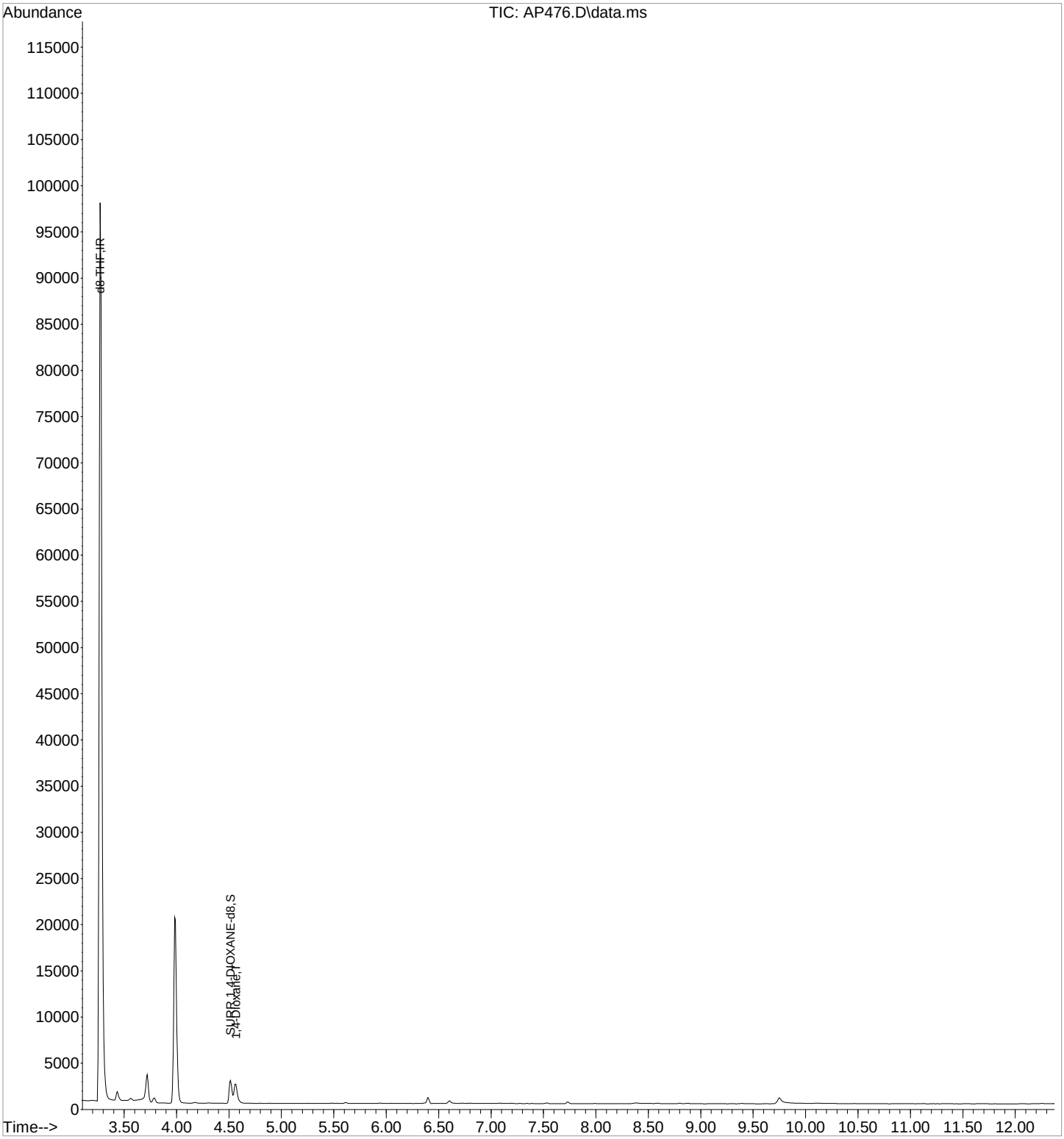
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.271	46	72759	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.515	96	2431	18.71	PPB	0.03
Spiked Amount 100.000	Range 70 - 130		Recovery = 18.71%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.564	88	2654	18.23	PPB	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP476.D
Acq On : 20 Feb 2018 10:34 am
Operator : J.Misiurewicz
Sample : 20 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 20 13:36:03 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP475.D
Acq On : 20 Feb 2018 10:15 am
Operator : J.Misiurewicz
Sample : 10 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 20 13:36:01 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

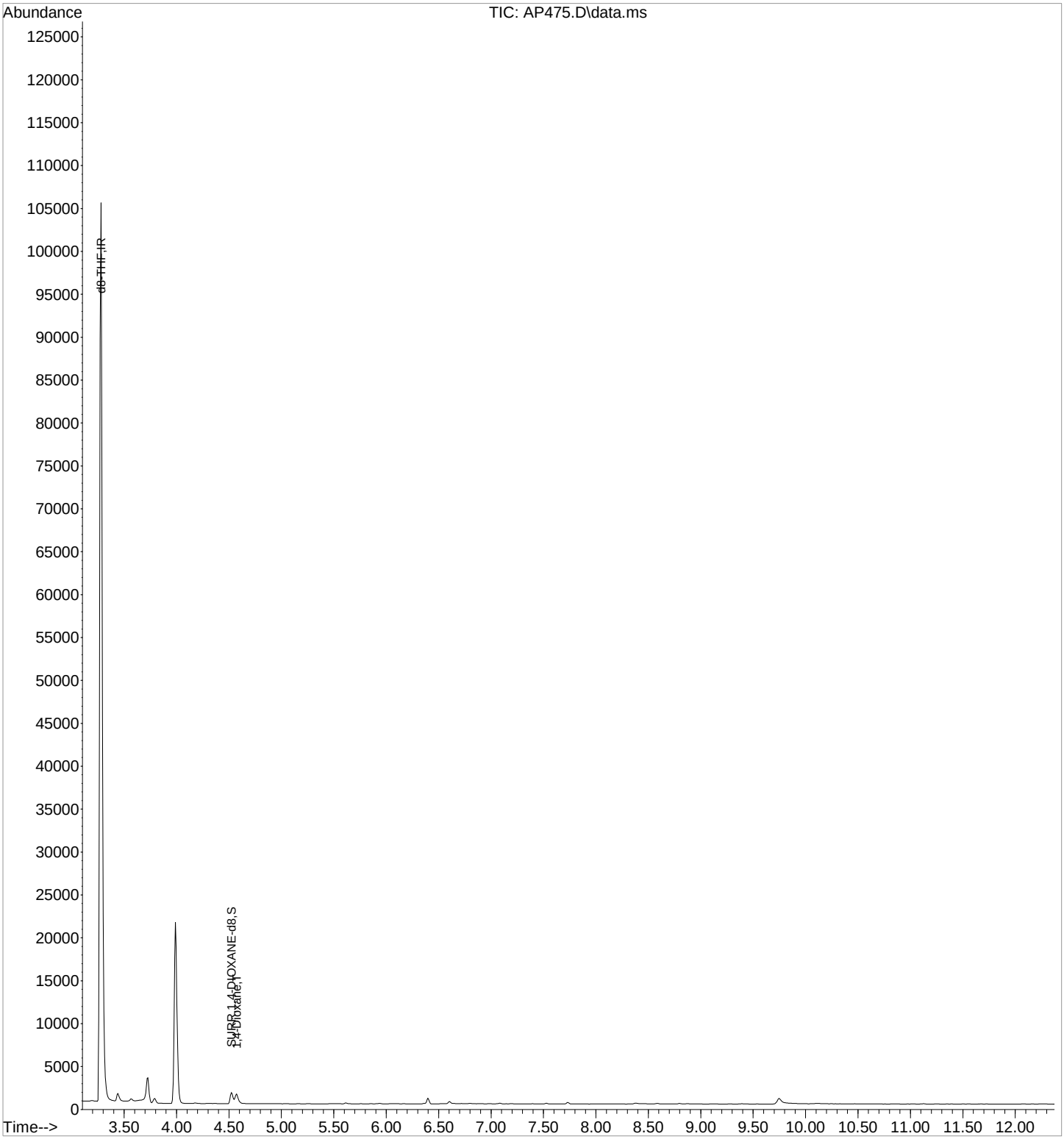
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.279	46	71182	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.522	96	1267	10.00	PPB	0.04
Spiked Amount 100.000	Range 70 - 130		Recovery = 10.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.572	88	1398	9.83	PPB	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP475.D
Acq On : 20 Feb 2018 10:15 am
Operator : J.Misiurewicz
Sample : 10 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 20 13:36:01 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP474.D
Acq On : 20 Feb 2018 9:56 am
Operator : J.Misiurewicz
Sample : 2 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 20 13:35:59 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

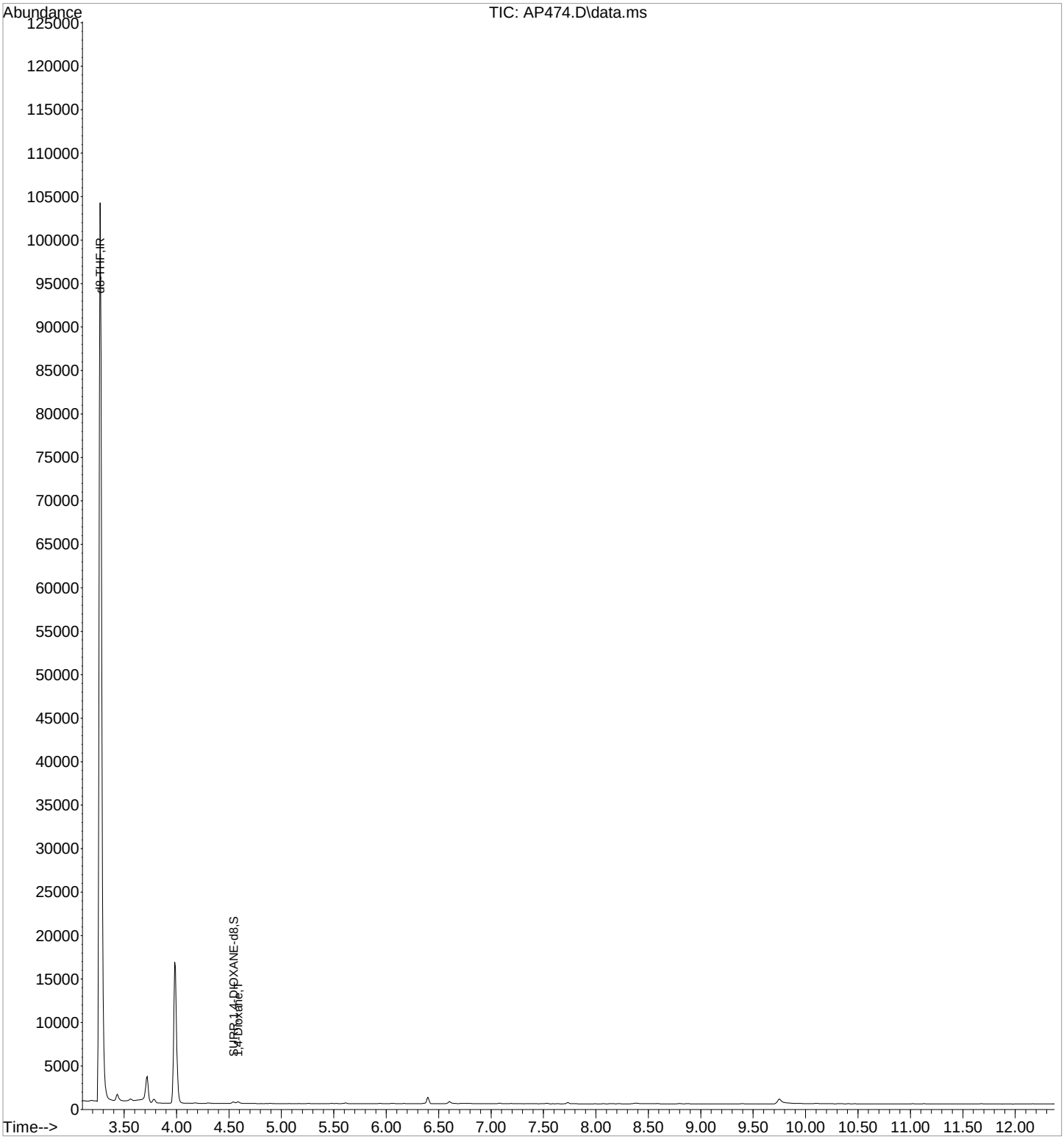
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.271	46	73987	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.543	96	201	1.58	PPB	0.06
Spiked Amount 100.000	Range 70 - 130		Recovery =	1.58%#		
Target Compounds						Qvalue
2) 1,4-Dioxane	4.586	88	236	1.61	PPB	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP474.D
Acq On : 20 Feb 2018 9:56 am
Operator : J.Misiurewicz
Sample : 2 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 20 13:35:59 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP473.D
Acq On : 20 Feb 2018 9:38 am
Operator : J.Misiurewicz
Sample : 1 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 20 13:35:56 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration

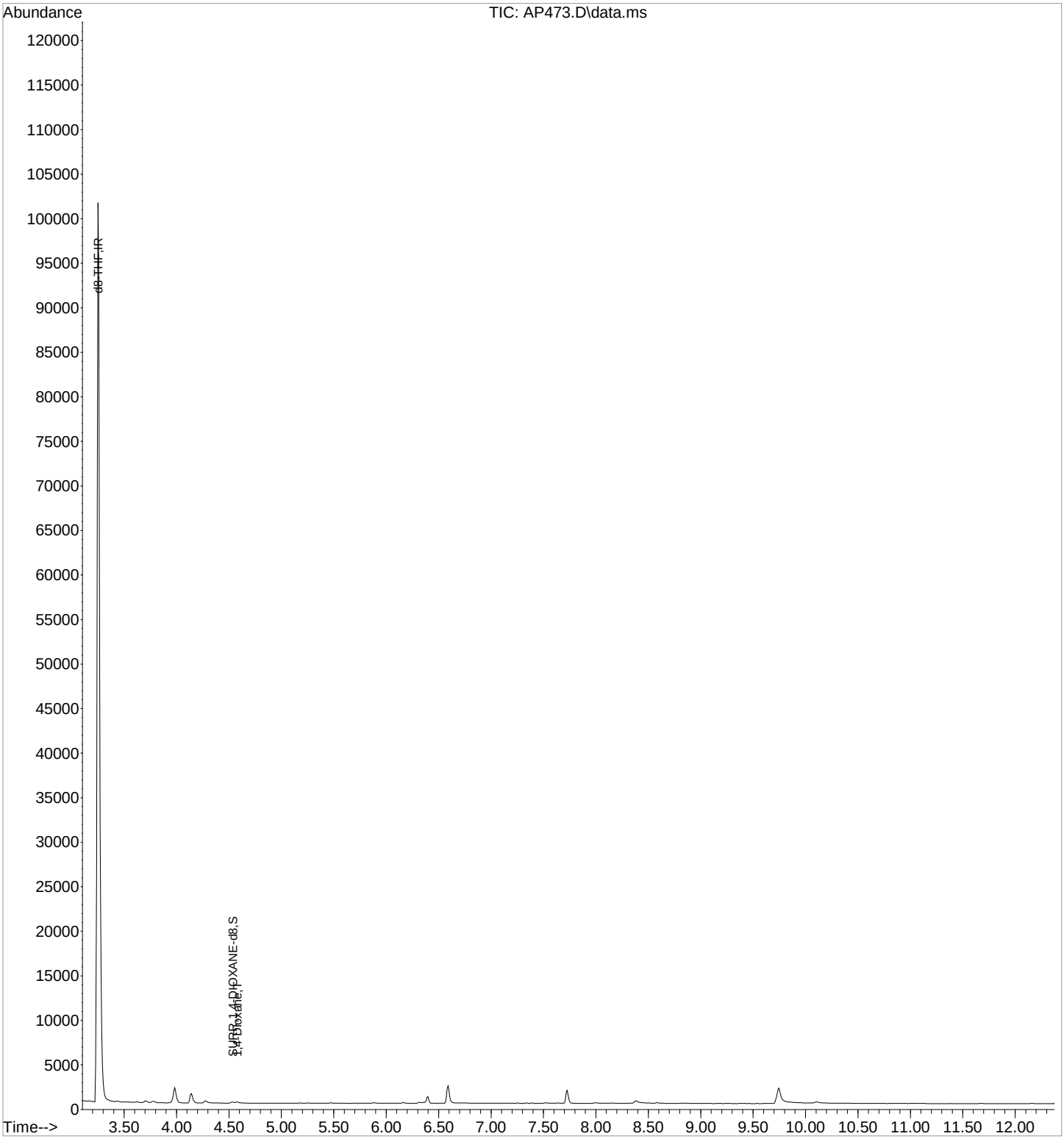
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.250	46	73049	500.00	PPB	-0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.536	96	136	1.11	PPB	0.06
Spiked Amount 100.000	Range 70 - 130		Recovery = 1.11%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	4.579	88	158	1.10	PPB	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP473.D
Acq On : 20 Feb 2018 9:38 am
Operator : J.Misiurewicz
Sample : 1 ppb STD Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 20 13:35:56 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:17:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP472.D
Acq On : 20 Feb 2018 9:19 am
Operator : J.Misiurewicz
Sample : BLK Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 20 13:43:05 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration

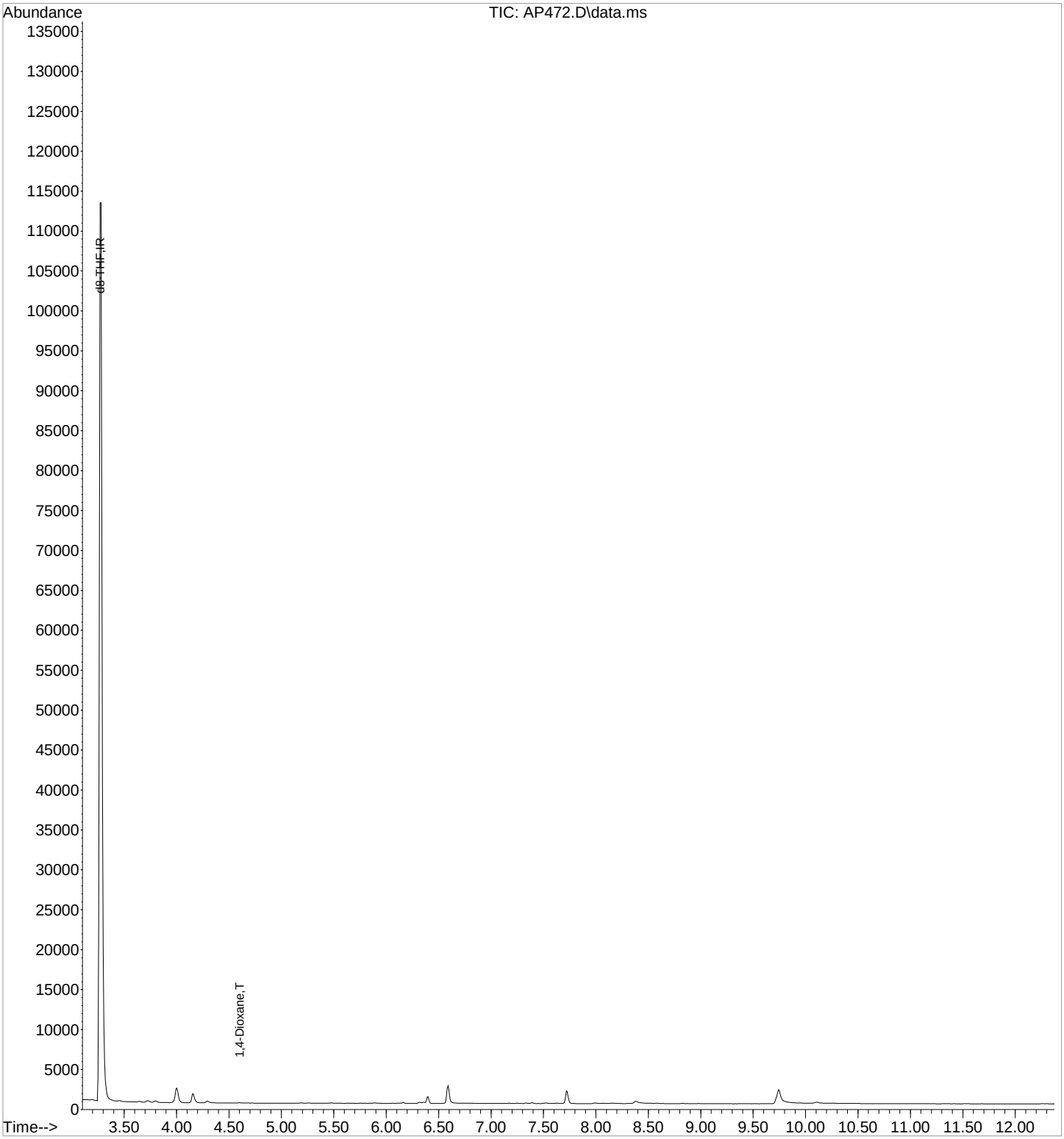
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d8-THF	3.272	46	80292	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	0.000	96	0	0.00	PPB	
Spiked Amount 100.000	Range 70 - 130		Recovery =	0.00%#		
Target Compounds						Qvalue
2) 1,4-Dioxane	4.600	88	31	0.21	PPB	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP472.D
Acq On : 20 Feb 2018 9:19 am
Operator : J.Misiurewicz
Sample : BLK Inst : 5975 E
Misc : Initial Calibration 8270D/522 DIOX
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 20 13:43:05 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX022018.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Tue Feb 20 13:42:37 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP471.D
Acq On : 20 Feb 2018 8:40 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 09:10:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration

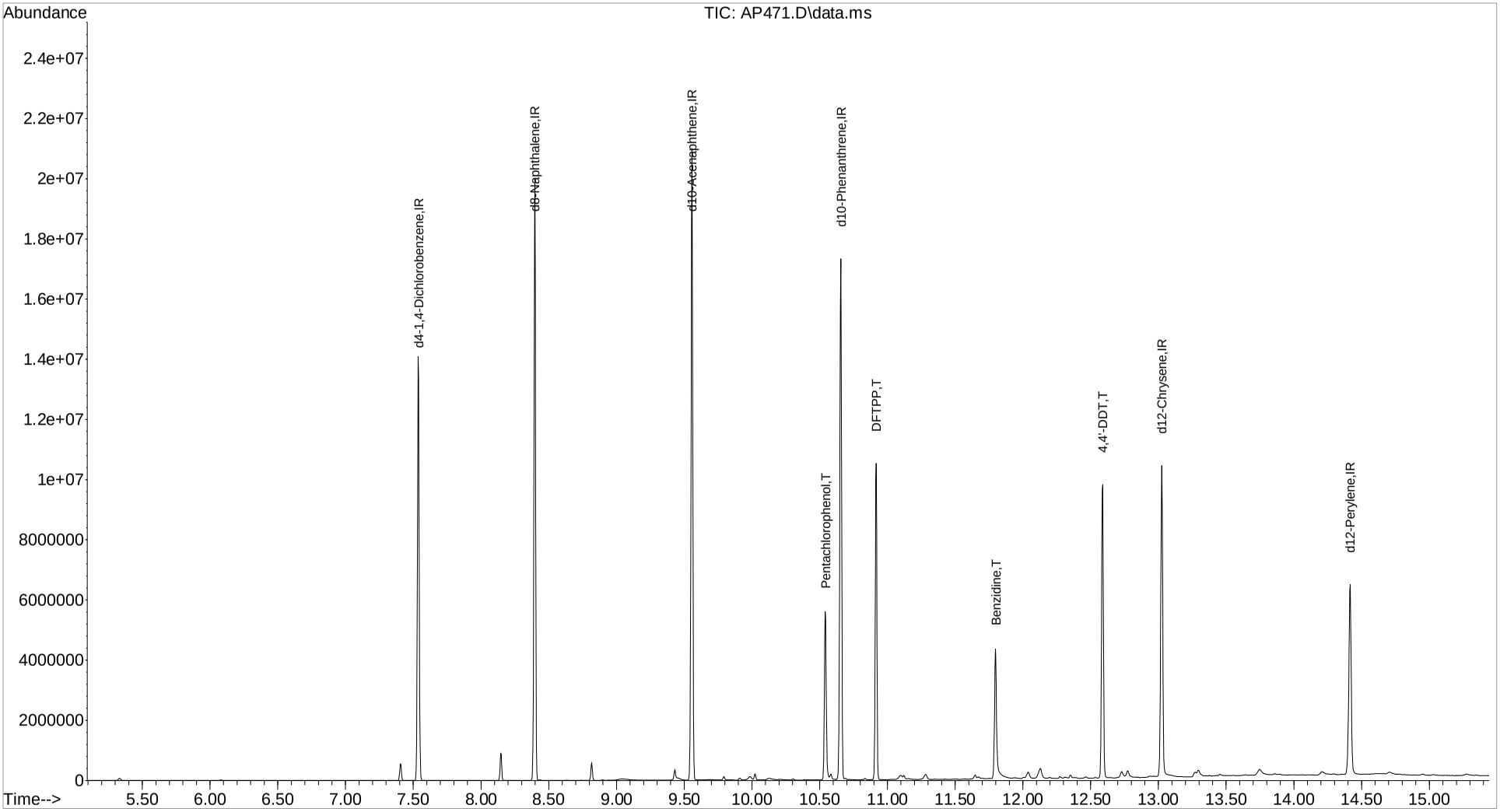
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) d4-1,4-Dichlorobenzene	7.538	152	19729043	20.00	ppm		0.00
2) d8-Naphthalene	8.399	136	71383373	20.00	ppm		0.00
3) d10-Acenaphthene	9.558	164	37543869	20.00	ppm		0.00
4) d10-Phenanthrene	10.657	188	55511597	20.00	ppm		0.00
7) d12-Chrysene	13.026	240	30655225	20.00	ppm		0.00
12) d12-Perylene	14.416	264	23262945	20.00	ppm		0.00
Target Compounds							Qvalue
5) Pentachlorophenol	10.543	266	5157297	53.75	ppm		100
6) DFTPP	10.918	198	9773899	53.01	ppm	#	70
8) Benzidine	11.799	184	17633179	58.27	ppm		98
9) 4,4'-DDE	0.000		0	N.D.			
10) 4,4'-DDD	0.000		0	N.D.			
11) 4,4'-DDT	12.589	235	14827922	49.04	ppm		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP471.D
Acq On : 20 Feb 2018 8:40 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 09:10:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration

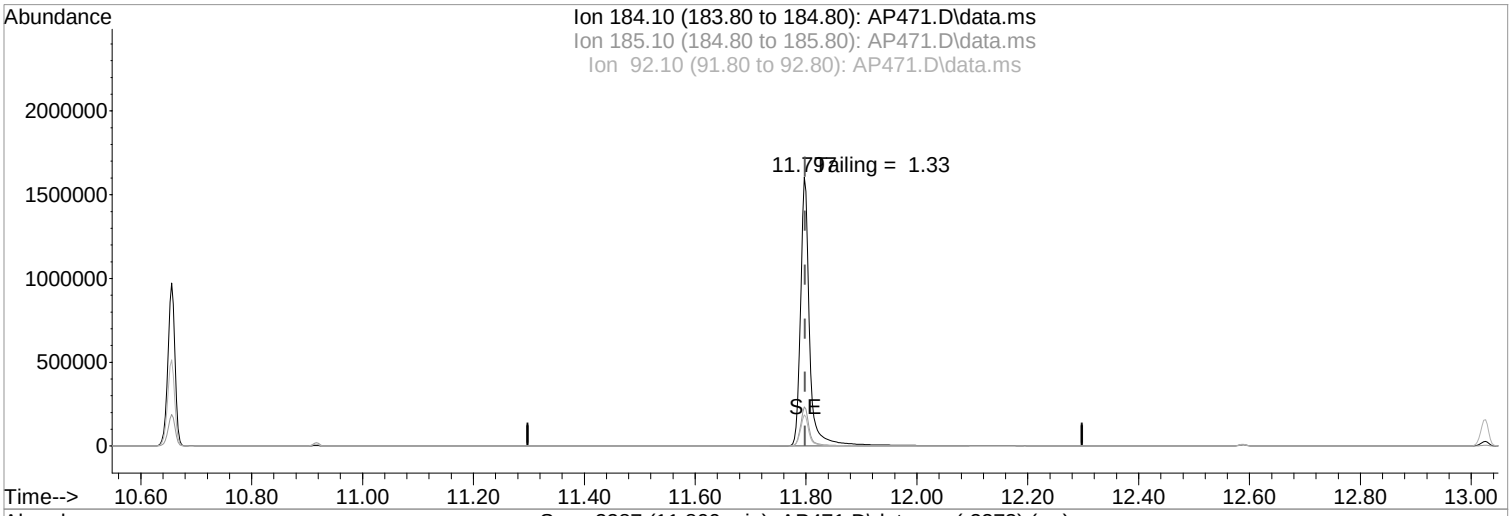


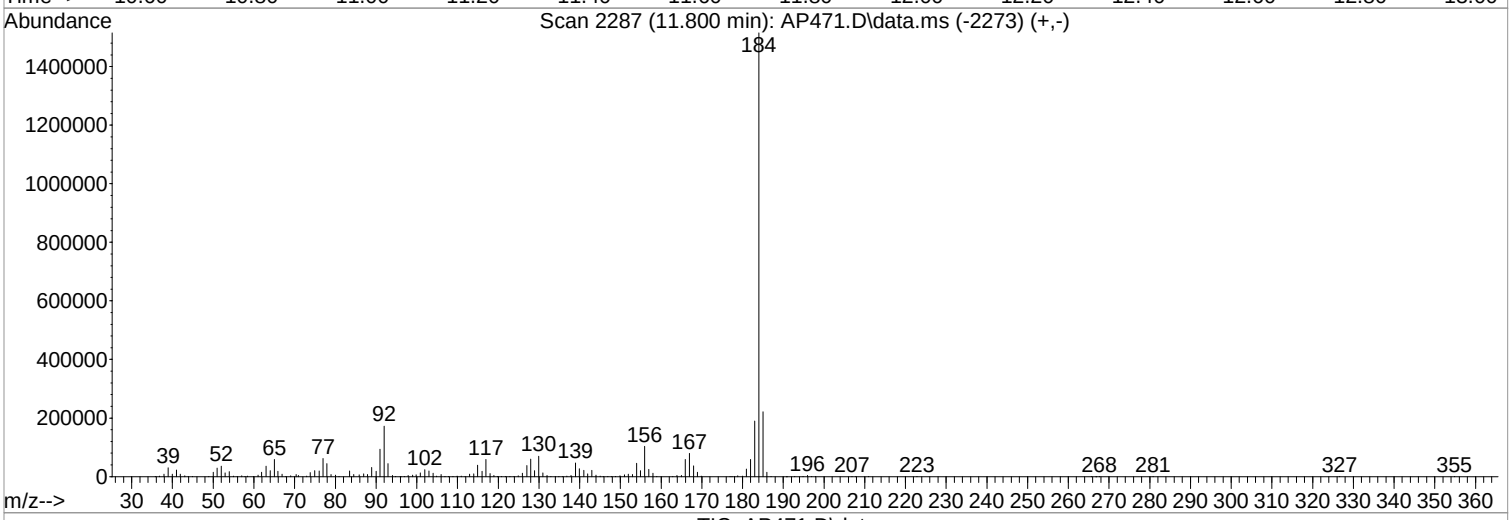
1st 02/21/18
2nd 02/21/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP471.D
Acq On : 20 Feb 2018 8:40 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 09:10:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration





TIC: AP471.D\data.ms

(8) Benzidine (T)

11.799min (+ 0.001) 58.27 ppm

response 17633179

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.57
92.10	10.70	11.36
0.00	0.00	0.00

Manual Integration:

After

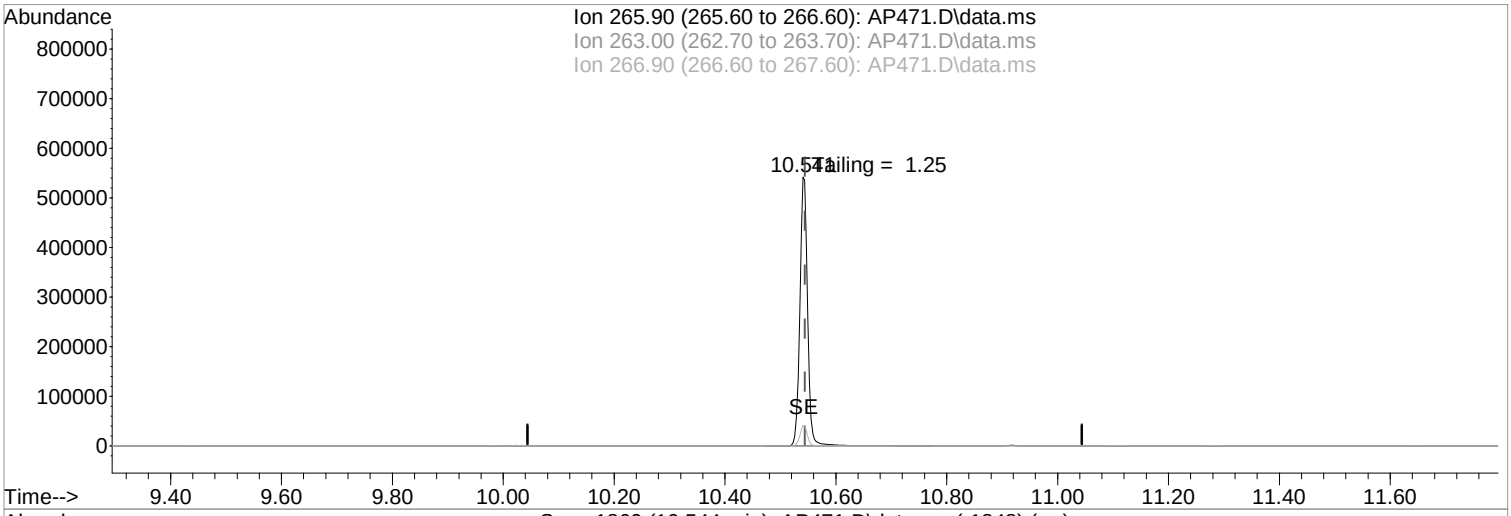
Other - Tailing

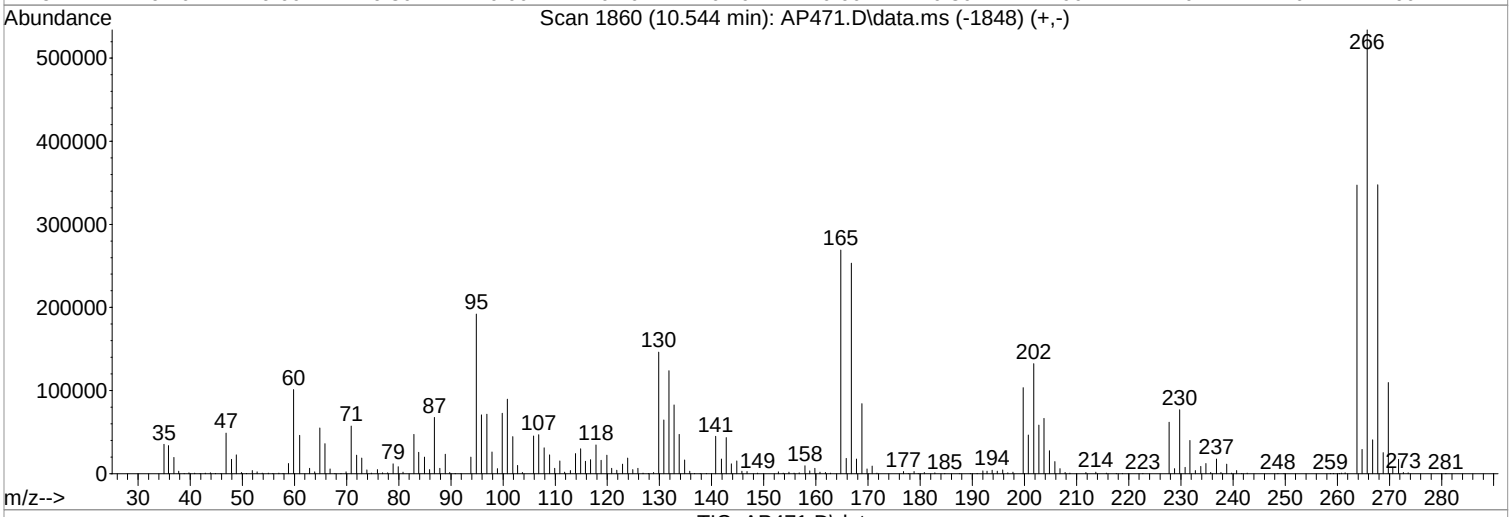
02/20/18

Quantitation Report (Qedit)

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP471.D
Acq On : 20 Feb 2018 8:40 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 09:10:11 2018
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Tue Feb 13 10:58:46 2018
Response via : Initial Calibration





TIC: AP471.D\data.ms

(5) Pentachlorophenol (T)

10.543min (-0.001) 53.75 ppm

response 5157297

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.00
266.90	7.70	7.62
0.00	0.00	0.00

Manual Integration:

After

Other - Tailing

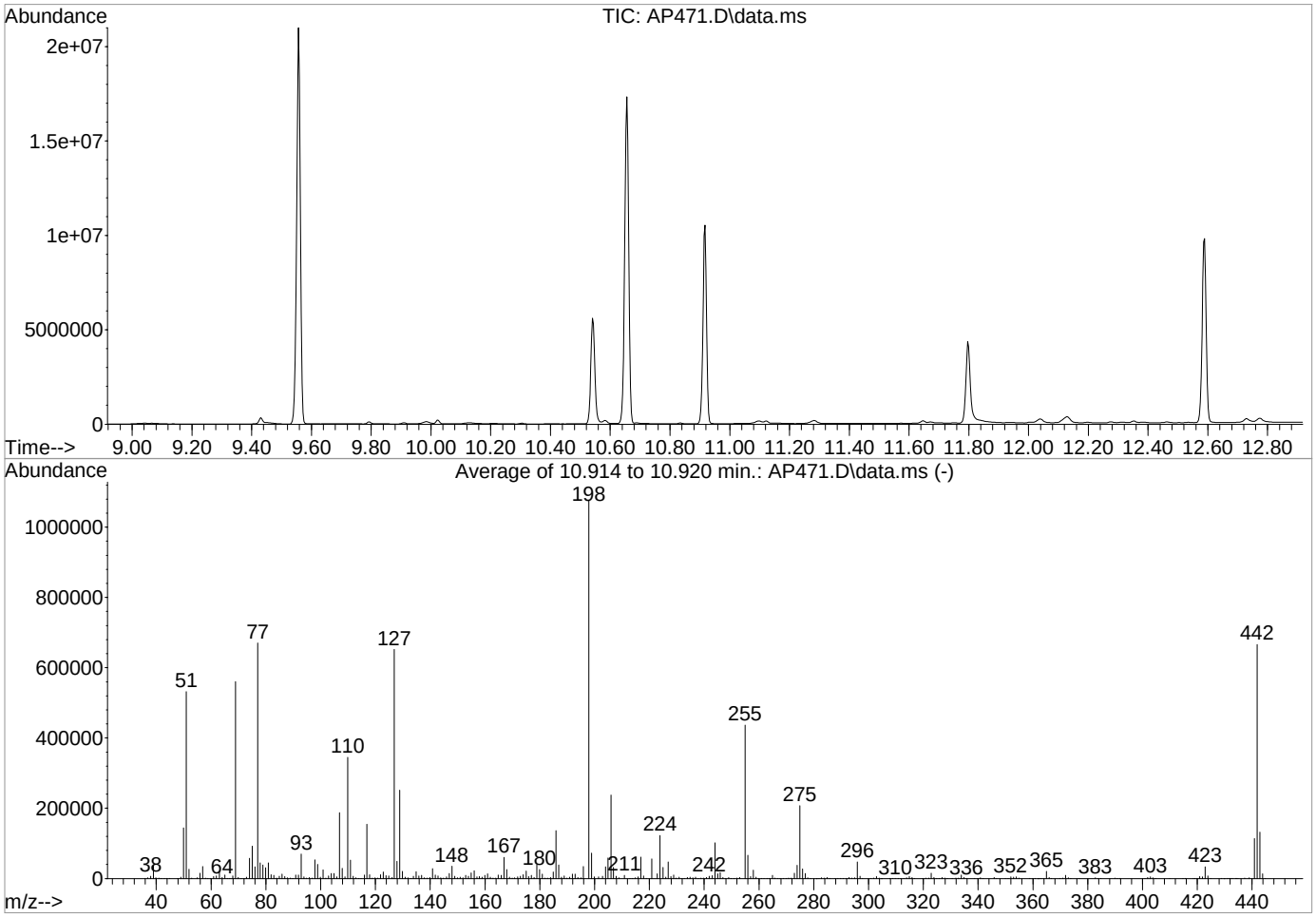
02/20/18

1st 02/21/18
2nd 02/21/18

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP471.D
Acq On : 20 Feb 2018 8:40 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Title :
Last Update : Tue Feb 13 10:58:46 2018



AutoFind: Scans 1986, 1987, 1988; Background Corrected with Scan 1975

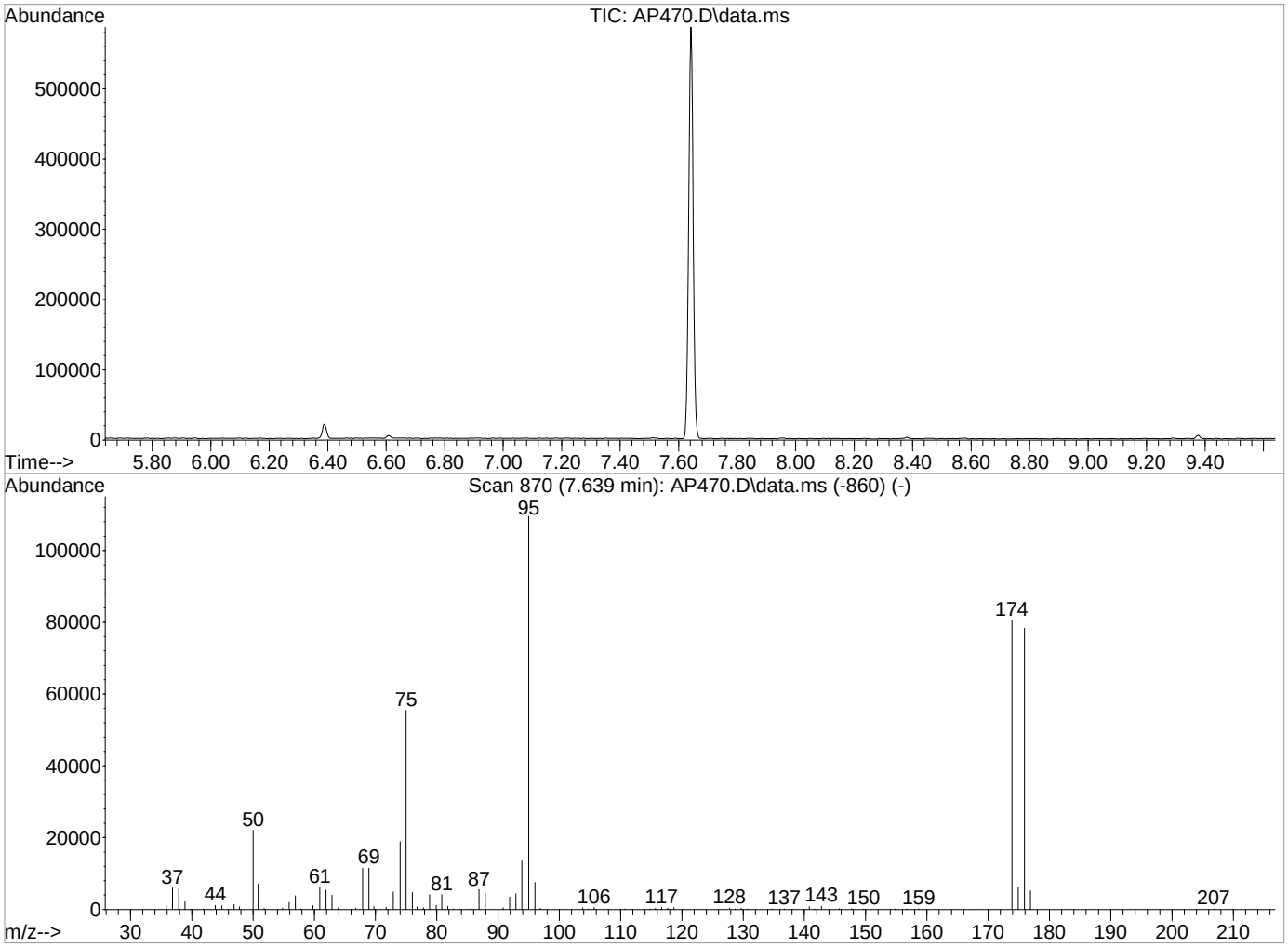
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	49.5	531883	PASS
68	69	0.00	2	1.4	7857	PASS
70	69	0.00	2	0.6	3227	PASS
127	198	10	80	60.7	652153	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1074923	PASS
199	198	5	9	6.7	72459	PASS
275	198	10	60	19.3	206997	PASS
365	198	1	500	1.9	20533	PASS
441	442	0.01	24	17.0	113539	PASS
442	442	100	100	100.0	666453	PASS
443	442	15	24	19.8	132061	PASS

1st 02/21/18
2nd 02/21/18

Data Path : I:\ACQUDATA\5975E\data\022018\
Data File : AP470.D
Acq On : 20 Feb 2018 8:17 am
Operator : J.Misiurewicz
Sample : TUNE Inst : 5975 E
Misc : BFB
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\bfbtune.M
Title :
Last Update : Wed Mar 28 08:41:26 2012



Spectrum Information: Scan 870

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.1	22032	PASS
75	95	30	60	50.6	55440	PASS
95	95	100	100	100.0	109568	PASS
96	95	5	9	6.8	7486	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	73.6	80656	PASS
175	174	5	9	7.7	6231	PASS
176	174	95	101	97.1	78328	PASS
177	176	5	9	6.6	5171	PASS

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: American Analytical Inc
Project: Elks Plaza Freeport

Service Request: R1801393
Calibration Date: 2/20/2018

Initial Calibration Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1800025
Instrument ID: R-MS-56

Signal ID: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	RC1800025-01	1 ppb STD	I:\ACQUDATA\5975E\data\022018\AP473.D	02/20/2018 09:38
02	RC1800025-02	2 ppb STD	I:\ACQUDATA\5975E\data\022018\AP474.D	02/20/2018 09:56
03	RC1800025-03	10 ppb STD	I:\ACQUDATA\5975E\data\022018\AP475.D	02/20/2018 10:15
04	RC1800025-04	20 ppb STD	I:\ACQUDATA\5975E\data\022018\AP476.D	02/20/2018 10:34
05	RC1800025-05	100 ppb STD	I:\ACQUDATA\5975E\data\022018\AP477.D	02/20/2018 10:52
06	RC1800025-06	200 ppb STD	I:\ACQUDATA\5975E\data\022018\AP478.D	02/20/2018 11:11
07	RC1800025-07	500 ppb STD	I:\ACQUDATA\5975E\data\022018\AP479.D	02/20/2018 11:30
08	RC1800025-08	1000 ppb STD	I:\ACQUDATA\5975E\data\022018\AP480.D	02/20/2018 11:49
09	RC1800025-09	5000 ppb STD	I:\ACQUDATA\5975E\data\022018\AP481.D	02/20/2018 12:08

Analyte

1,4-Dioxane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.081	02	2.000	0.7974	03	10.000	0.982	04	20.000	0.9119
05	100.000	0.956	06	200.000	1.1	07	500.000	1.155	08	1000.000	1.027
09	5000.000	1.023									

1,4-Dioxane-d8

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.9309	02	2.000	0.6792	03	10.000	0.89	04	20.000	0.8353
05	100.000	0.8454	06	200.000	0.9685	07	500.000	1.033	08	1000.000	0.9274
09	5000.000	0.9491									

Client: American Analytical Inc
Project: Elks Plaza Freeport

Service Request: R1801393
Calibration Date: 2/20/2018

Initial Calibration Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1800025
Instrument ID: R-MS-56

Signal ID: 1

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,4-Dioxane	TRG	Quadratic	COD	0.9991	≥0.99	1.004	
1,4-Dioxane-d8	SURR	Quadratic	COD	0.9992	≥0.99	0.8954	

Client: American Analytical Inc **Service Request:** R1801393
Project: Elks Plaza Freeport **Calibration Date:** 2/20/2018

Initial Calibration Verification Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1800025 **Signal ID:** 1
Instrument ID: R-MS-56

#	Lab Code	Sample Name	File Location	Aquisition Date
10	RC1800025-10	ICV	I:\ACQUDATA\5975E\data\022018\AP482.D	02/20/2018 12:28

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane	200	214	1.004E0	1.071E0	6.75	±20	Quadratic
1,4-Dioxane-d8	200	216	8.954E-1	9.714E-1	8.10	±20	Quadratic

Client:	American Analytical Inc	**Service Request:**	R1801393
Project:	Elks Plaza Freeport	**Date Analyzed:**	02/21/18 09:46

Continuing Calibration Verification (CCV) Summary
1,4-Dioxane by GC/MS

Analysis Method:	8270D	**Calibration Date:**	2/20/2018
File ID:	I:\ACQUDATA\5975E\data\022118\AP497.D\	**Calibration ID:**	RC1800025
		Analysis Lot:	581106
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,4-Dioxane	208	216	1.0037	1.0411	NA	3.8	±20	Quadratic
1,4-Dioxane-d8	200	214	0.8954	0.9605	NA	6.9	±20	Quadratic

Client: American Analytical Inc **Service Request:**R1801393
Project: Elks Plaza Freeport

Analysis Run Log
1,4-Dioxane by GC/MS

Analysis Method: 8270D **Analysis Lot:**581106
Instrument ID:R-MS-56

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\5975E\data\022118\AP496.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	09:15:00	
I:\ACQUDATA\5975E\data\022118\AP497.D\	Continuing Calibration Verification	RQ1801567-02	2/21/2018	09:46:00	
I:\ACQUDATA\5975E\data\022118\AP499.D\	Method Blank	RQ1801489-01	2/21/2018	11:11:00	
I:\ACQUDATA\5975E\data\022118\AP500.D\	Lab Control Sample	RQ1801489-02	2/21/2018	11:40:00	
I:\ACQUDATA\5975E\data\022118\AP501.D\	Duplicate Lab Control Sample	RQ1801489-03	2/21/2018	11:58:00	
I:\ACQUDATA\5975E\data\022118\AP502.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	12:18:00	
I:\ACQUDATA\5975E\data\022118\AP503.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	12:36:00	
I:\ACQUDATA\5975E\data\022118\AP504.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	12:55:00	
I:\ACQUDATA\5975E\data\022118\AP505.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	13:14:00	
I:\ACQUDATA\5975E\data\022118\AP506.D\	ZZZZZZZ	ZZZZZZZ	2/21/2018	13:33:00	
I:\ACQUDATA\5975E\data\022118\AP507.D\	MW-3	R1801393-001	2/21/2018	13:52:00	
I:\ACQUDATA\5975E\data\022118\AP508.D\	MW-1	R1801393-002	2/21/2018	14:12:00	
I:\ACQUDATA\5975E\data\022118\AP509.D\	MW-2	R1801393-003	2/21/2018	14:30:00	

Analysis: 8270D Diox **Analyst:** Omisi Vrew **Run Method:** SDIOX...2-F / DFTPP DIO
Date: 2/2/18 **Instr.** 5975E **Quant Method:** SDIOX022018.M
LIMS Run#: 581106

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Blk			AP495	—	
2	Tune		186589	96	YT	
3	CCV		186306	97	YCC	
4	Surr check			98	Y	
5	RQ1801489-01	Blk	308588	99	Y	
6	-02	LCS		500	YQ	
7	~~R1801349~~ -03	LCSD		01	YQ	
8	~~R1801489~~-001			02	Y	
9	-002			03	Y	
10	RQ1801489-04			04	YQ	
11	-05			05	YQ	
12	R1801349-003			06	Y	
13	R1801393-001			07	Y	
14	-002			08	Y	
15	-003			09	Y	

OM 2/2/18

All samples = ______mL + ______uL Combined IS/Surr.;

Primary :____________ exp: Secondary :____________ exp:
Primary:____________ exp: Secondary :____________ exp:

Analysis: 8270D/S22	Analyst: OMSNovevicz	Run Method: 5D1oxane2-F / BFB Tune / DFTPP D10
Date: 2/20/18	Instr. 5975E	Quant Method:
		LIMS Run#:

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	Blk			Ap468	—	
1	Blk			69	—	
2	Tune BFB		184996	70	YT	
3	Tune DFTPP		186559	71	YT	
4	Blk		~~188117~~	72	Y	
5	1 ppb STD		~~1877~~ OM 2/20/18	73	Y	
6	2		186494	74	Y	
7	10		95	75	Y	
8	20		96	76	Y	
9	100		97	77	Y	
10	200		186306	78	Y	
11	500		186498	79	Y	
12	1000		99	80	Y	
13	5000		186500	81	Y	
14	ICV		185021	82	YQ	
15	CCV		186306	83	YCC	
16	RQ1801489-01	Blk	308588	84	(N)	Ht7 > RDL re-extract
17	-02	LCS		85		
18	-03	LCSD		86		
19	R1801349-001			87		
20	RQ1801489-04			88		
21	-05			89		
22	R1801349-002			90		
23	-003			91		
24	R1801393-001			92		
25	-002			93		
26	-003			94		

(Calibration 7-13: curve 0220180 . M)

OM 2/20/18

All samples = ______mL + ______uL Combined IS/Surr.;

Primary :____________ exp: Secondary :____________ exp:

Primary:____________ exp: Secondary :____________ exp:

Runlog GCEXT r1 12/5/12

Prep Summary Report

Client: American Analytical Inc **Service Request:**R1801393
Project: Elks Plaza Freeport
Sample Matrix: Water

1,4-Dioxane by GC/MS

Prep Method: EPA 3535A **Extraction Lot:**308588
Analytical Method: 8270D

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
MW-3	R1801393-001	2/15/18	2/16/18	100 mL	2 mL	
MW-1	R1801393-002	2/15/18	2/16/18	100 mL	2 mL	
MW-2	R1801393-003	2/15/18	2/16/18	100 mL	2 mL	
Method Blank	RQ1801489-01MB	NA	NA	100 mL	2 mL	
Lab Control Sample	RQ1801489-02LCS	NA	NA	100 mL	2 mL	
Duplicate Lab Control Sample	RQ1801489-03DLCS	NA	NA	100 mL	2 mL	

Preparation Information Benchsheet

Prep Run#: 308588
Team: Semivoa GCMS/JMISIUREWICZ

Prep WorkFlow: OrgExtSPEaq(7)
Prep Method: EPA 3535A

Status: Prepped
Prep Date/Time: 2/21/18 9 :45 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1801489-01	MB		100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385	
2	RQ1801489-02	LCS		100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/188116; 200.0000 uL/187385	
3	RQ1801489-03	DLCS		100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/188116; 200.0000 uL/187385; 10.0000 uL/184989	
4	R1801349-001	TS Effluent 021418	.01	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385	
5	R1801349-002	HIPOX Discharge 021418	.02	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385	
6	RQ1801489-04	R1801349-002 MS	.02	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/188116; 200.0000 uL/187385; 10.0000 uL/184989	
7	RQ1801489-05	R1801349-002 DMS	.01	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385; 200.0000 uL/188116	
8	R1801349-003	Influent 021418	.02	10mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385	
9	R1801393-001	MW-3	.02	100mL	8270D/1,4-Dioxane	7	X		2.00mL	ligth yellow/Clear	10.0000 uL/184989; 200.0000 uL/187385	
10	R1801393-002	MW-1	.02	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	200.0000 uL/187385; 10.0000 uL/184989	
11	R1801393-003	MW-2	.02	100mL	8270D/1,4-Dioxane	7	X		2.00mL	Colorless/Clear	10.0000 uL/184989; 200.0000 uL/187385	

Spiking Solutions

Name:	SVOA Tetrahydrofuran-D8 100ppm	Inventory ID	184989	Logbook Ref:		Expires On:	04/22/2018
Name:	1,4-Dioxane-d8 1ppm Surr. Std.	Inventory ID	187385	Logbook Ref:		Expires On:	07/18/2018
Name:	EPA 522 LCS Spike 5ppm	Inventory ID	188116	Logbook Ref:		Expires On:	04/05/2018

Preparation Materials

Method 522 400mg charcoal filters	(186207)	Eppendorf Pipette Repeater	EXT #17 (175854)	Water	(186995)
Dichloromethane (Methylene Chloride) 99.9% MeCl2	bottle (56405)	Methanol Purge & Trap MeOH	(183148)	pH Paper 0-14	(187662)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	JTBaker (181723)	Sodium Bisulfate Monohydrate RG	(173529)		

Preparation Information Benchsheet

Prep Run#: 308588
Team: Semivoa GCMS/JMISIUREWICZ

Prep WorkFlow: OrgExtSPEaq(7)
Prep Method: EPA 3535A

Status: Prepped
Prep Date/Time: 2/21/18 9 :45 AM

Preparation Steps

Step:	Extraction	
Started:	~~2/20/18 06:44~~	2/21/18 09:45
Finished:	~~2/20/18 10:38~~	2/21/18 11:35
By:	JMISIUREWICZ	JM 2/21/18
Comments		

Comments: _____

Reviewed By: _____ Date: 2/21/18 Spike Witness: MPEDRO Date: _____

Chain of Custody

Relinquished By:	_____	Date:	_____
Received By:	_____	Date:	_____

Extracts Examined
Yes No

Appendix D

Data Summary Usability Report

PREMIER ENVIRONMENTAL SERVICES, INC.

DATA USABILITY SUMMARY REPORT

ELKS PLAZA
157-189 MERRICK ROAD
FREEPORT, NEW YORK

ORGANIC ANALYSES
IN AQUEOUS SAMPLES

AMERICAN ANALYTICAL LABORATORIES, LLC.
FARMINGDALE, NY

REPORT NUMBER: 1802093

April 2018

Prepared for
Seacliff Environmental
Miller Place, New York

Prepared by
Premier Environmental Services
2815 Covered Bridge Road
Merrick, New York 11566
(516)223-9761

DATA VALIDATION FOR:	Volatile Organic Compounds (VOC's) Semivolatile Organic Analyses (SVOC's)
SITE:	Elks Plaza 157-189 W. Merrick Road Freeport, NY
LABORATORY REPORT NO:	1802093
CONTRACT LAB:	American Analytical Laboratories, L.L.C. Farmingdale, NY
REVIEWER:	Renee Cohen
DATE REVIEW COMPLETED:	April 2018
MATRIX:	Aqueous

The data validation was performed according to the guidelines in the USEPA National Functional Guidelines for Organic Data Review and the USEPA Region II SOPs where applicable. In addition, method and QC criteria specified in the NYSDEC ASP documents were cited. All data are considered valid and acceptable except those analytes which have been deemed unusable "R" (unreliable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material, "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All actions are detailed on the attached sheets.

Table 1 of this report includes a cross reference between the field sample ID and laboratory sample ID's. Copies of the data qualifiers that may be used in this report are located in Appendix A of this report. Qualified data result pages are located in Appendix B of this report. Copies of the Chain of Custody (COC) documents are located in Appendix C of this report.

This data assessment is for three (3) aqueous samples listed on the COC documents that accompanied the samples to the laboratory. The samples were collected and received at the laboratory on February 15, 2018 for the analyses requested on the COC documentation. The samples were analyzed for Volatile Organic Analytes (VOA) and Semivolatile Organic Analytes (SVOA) SIM per the COC documents that accompanied the samples to the laboratory. Semivolatile Organics SIM analyses was used to report 1,4 Dioxane. American Analytical Laboratories, L.L.C. subcontracted the EPA Method 8270D analyses to ALS Environmental located in Rochester, NY.

ORGANIC DATA ASSESSMENT

1. OVERVIEW:

This data review report is for the samples analyzed for Volatile Organic Analytes (VOA's) and 1,4-Dioxane. Analysis was performed in accordance with USEPA SW846 methodologies. Data validation will utilize the validation guidelines listed above, however, QA/QC requirements of SW846 will supersede CLP requirements in terms of calibration and holding time where applicable. The aqueous samples associated with this data set were analyzed and reported for Volatile Organics via the SW846-Method 8260C and 8270D. American Analytical Laboratories, Inc. generated a stand-alone report for these VOA (8260C) analyses. Samples were subcontracted to ALS Environmental located in Rochester, NY. ALS Environmental prepared a stand-alone report for these USEPA Method 8270D analyses. A summary of the applicable QC will be discussed at each section of the report.

2. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. The NYS DEC ASP criteria specifies holding times for aqueous and solid/soil samples. These holding times are based on Validated Time of Sample Receipt (VTSR). The holding times cited in the NY ASP were reviewed.

Three aqueous samples were collected and delivered to the laboratory on February 15, 2018. The samples were analyzed for volatile organic analyses via EPA Method 8260C on February 16, 2018. The samples and associated QC analyses were analyzed within the method holding time. The samples were subcontracted to ALS for 1,4-Dioxane analyses via EPA Method 8270D. These samples were received at ALS on February 16, 2018 and extracted and analyzed on February 21, 2018.

3. SURROGATES:

Samples to be analyzed for Volatile Organic Analytes (VOA) are fortified with three (3) method recommended surrogate compounds. These include Dibromofluoromethane, Toluene d8 and 4-Bromofluorobenzene prior to analysis to evaluate the overall laboratory performance and the efficiency of the analytical technique. Samples to be analyzed for Semivolatile Organic Analytes/1,4-Dioxane are fortified with the surrogate compound 1,4-Dioxane-d4. The surrogate compound was added to the sample prior to extraction to evaluate the overall laboratory performance and the efficiency of the analytical technique. The laboratory reported in-house surrogate recovery QC limits for these analyses. The field sample and QC sample surrogate percent recoveries were summarized in this data report.

The percent recovery of each surrogate compound met in-house QC criteria in the volatile organic analyses and semivolatile organic analyses reported in this data set.

ORGANIC DATA ASSESSMENT

4. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

In addition, a blank spike sample/reference sample/LCS was prepared and analyzed with each sample batch/analysis reported in this data set.

Volatile Organic Analyses - Sample MW-2 was prepared and analyzed as the site-specific MS/MSD with this data set. In-house percent recovery limits were applied to each target analyte. The % recovery of each target analyte met QC criteria in the MS and MSD sample with the exception of 2-Chloroethylvinylether (2-CEVE). The RPD limit of 0-20 was applied to each target analyte. The RPD of the reported target analytes met QC criteria.

A laboratory control sample (LCS) is associated with this data set. In-house QC limits were applied. The percent recovery of each target analyte met QC criteria in the LCS sample with the exception of 2-Chloroethyl vinyl ether (2-CEVE). 2-CEVE is a poor performer compound. 2-CEVE was not detected in the samples reported in this data set. 2-CEVE was not recovered (0%) in the LCS and LCSD sample. 2-CEVE has been deemed unusable "R" qualified.

Qualified data result pages are located in Appendix B of this report.

Semivolatile Organic Analyses – Site specific and/or Batch QC MS/MSD analyses was not reported with these analyses. An LCS/LCSD analysis was reported with these analyses. The percent recovery of 1,4-Dioxane met QC criteria in the LCS and LCSD analysis. The RPD (%) of the LCS/LCSD met QC criteria.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, such as the method, trip, field, or rinse blanks are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Samples were only qualified with those QC samples associated with the particular blank.

A) Method Blank contamination
Volatile Organic Analyses (EPA Method 8260C) – One (1) method blank sample is associated with the samples in this data set. Methylene Chloride (7.8 ug/L) and Acetone (1.6 ug/L) were detected in the associated method blank sample.

Acetone and Methylene Chloride were detected in each of the samples reported in this data set and were "B" qualified by the laboratory. Acetone and Methylene Chloride have been negated "U" qualified from these samples during data review.

Qualified data result pages are located in Appendix B of this report.

Semivolatile Organic Analyses (EPA Method 8270D) – One (1) method blank sample is associated with the samples in this data set. The method blank sample was free from contamination of 1,4-Dioxane.

5. BLANK CONTAMINATION (cont'd):

B) Field or Equipment Rinse Blank (ERB) contamination
A Field Blank sample is not associated with this data set.

C) Trip Blank contamination
A Trip Blank samples is not associated with this data set.

6. GC/MS CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance. Region USEPA and Region II criteria is the sample for analytes in both GC/MS Volatile and GC/MS Semivolatile Organic analyses is the same, therefore, all text discussion is for VOA and SVOA samples analyses.

A) RESPONSE FACTOR
The response factor measures the instrument's response to specific chemical compounds. Region II data review requires that the response factor of all analytes be greater than or equal to 0.05 in both initial and continuing calibration analyses. A value less than 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Region II data validation criteria states that if the minimum RRF criteria is not met in an initial calibration the positive results are qualified "J". Non-detect results in the initial calibration with a RRF <0.05 are qualified "R", unusable. If RRF criteria is not met in the continuing calibration curve analysis, affected positive analytes will be qualified "J" estimated. Those analytes not detected are not qualified. The SW-846 Methods cite specific analytes known as System Performance Check Compounds (SPCC). Minimum response criteria are set for these analytes. If the minimum criteria are not met, analyses must stop and the source of problems must be found and corrected. Data associated with this set has been reviewed for the criteria in the cited in the EPA Method and the Region II criteria.

Volatile Organic Analyses (EPA Method 8260C) – One (1) initial calibration curve analysis is associated with these sample analyses. The laboratory performed an initial multilevel calibration on February 13, 2018 (Inst. 5977V2). The RRF of reported target compounds met QC criteria in this initial calibration curve analysis.

One (1) continuing calibration standard is associated with the calibration curve analyses. Continuing calibration curve analysis was performed February 16, 2018 (V27242.D). The RRF of reported target compounds met QC criteria in the continuing calibration standard analysis.

Semiolatile Organic Analyses (EPA Method 8270D0C) – One (1) initial calibration curve analysis is associated with these sample analyses. The laboratory performed an initial multilevel calibration on February 20, 2018 (Inst. R-MS-56). The RRF of reported target compounds met QC criteria in this initial calibration curve analysis.

One (1) continuing calibration standard is associated with the calibration curve analyses. Continuing calibration curve analysis was performed February 21, 2018 (RQ1801567). The RRF of reported target compounds met QC criteria in the continuing calibration standard analysis.

6. GC/MS CALIBRATION (cont'd):

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the compounds in the continuing calibration standard to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Region II data validation criteria states that the percent RSD of the initial calibration curve must be less than or equal to 20%. The %D must be <20% in the continuing calibration standard. The criteria have been applied to all target analytes. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects may be flagged "UJ", based on professional judgment. If %RSD and %D grossly exceed QC criteria (>90%), non-detects data may be qualified "R", unusable. Data associated with this set has been reviewed for the criteria in the cited in the USEPA Data Validation Guidelines and the USEPA Region II criteria.

Volatile Organic Analyses (EPA Method 8260C) – One (1) initial calibration curve analysis is associated with these sample analyses. The laboratory performed an initial multilevel calibration on February 13, 2018 (Inst. 5977V2). The RSD (%) met QC criteria for each target analyte reported in this data set.

Semivolatile Organic Analyses (EPA Method 8270D) – One (1) initial calibration curve analysis is associated with these sample analyses. The laboratory performed an initial multilevel calibration on February 20, 2018 (Inst. R-MS-56). The RSD (%) met QC criteria for 1,4-Dioxane.

One (1) continuing calibration standard analysis is associated with this data set. Continuing calibration analysis was performed February 21, 2018. The % difference of 1,4-Dioxane met QC criteria in the continuing calibration standard with the analysis.

7. GC/MS INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every run. The method recommends that the internal standard area count must not vary by more than a factor of 2 (-50%to +100%) from the associated continuing calibration standard. The method recommends that the retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. The EPA CLP validation guidelines state that if the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified estimated, "J", and all non-detects below 50% are qualified "UJ", non-detects above 100% should not be qualified or "R" if there is a severe loss of sensitivity. The internal standard evaluation criteria are applied to all field and QC samples.

Volatile Organic Analyses (EPA Method 8260C) - Samples were spiked with the method specific internal standards prior to analysis. The area counts, and retention time of each internal standard met QC criteria in each of the field samples and QC samples reported in this data set.

Semivolatile Organic Analyses (EPA Method 8270D) - Samples were spiked with the method specific internal standard (Tetrahydrofuran-d8) prior to analysis. The area counts, and retention time of the internal standard met QC criteria in each of the field samples and QC samples reported in this data set.

ORGANIC DATA ASSESSMENT

8. GC/MS MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is Bromofluorobenzene (BFB). The tuning standard for semivolatile organics is DFTPP. If the mass calibration is in error, or missing, all associated data will be classified as unusable, "R".

Volatile Organic Analyses - The tune criteria listed in the data report met or exceeded that required by the method. All tuning criteria associated with these sample analyses were met.

Semivolatile Organic Analyses - The tune criteria listed in the data report met or exceeded that required by the method. All tuning criteria associated with these sample analyses were met.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within $\pm$ 0.06 RRT units of the standard compound, and have an ion spectra which has a ratio of the primary and secondary ion intensities with 20% of that in the standard compound. Target compounds are identified on the GC by using the analytes retention time. Concentration is quantitated from the initial calibration curve.

Volatile Organic Analyses – Three (3) aqueous samples was analyzed and reported within this data set. The samples in this data set were analyzed and reported without dilution. Results reported between the laboratory detection limit and the laboratory quantitation limit (LOQ) have been reported and qualified "J" by the laboratory. The volatile organic data associated with this sample set is acceptable for use with the noted data qualifiers.

Semivolatile Organic Analyses – Three (3) aqueous samples was analyzed and reported within this data set. The samples in this data set were analyzed and reported without dilution. Results reported between the laboratory detection limit and the laboratory quantitation limit (LOQ) have been reported and qualified "J" by the laboratory. The semivolatile organic data associated with this sample set is acceptable for use without data qualifiers.

10. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Analytical QC criteria were met for these analyses except for what was described in the above report. The data reported agrees with the raw data provided in the final report. The laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package.

The data provided for this data set is acceptable for use, with noted data qualifiers. The qualified data result pages are located in Appendix B of this report.

TABLE 1

American Analytical Laboratories, LLC. - Workorder Sample Summary

WO#: 1802093

Date Reported: 2/20/2018
Revision v1

Client: Seacliff Environmental

Project: Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY

Lab Sample ID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1802093-001A	MW-3		2/15/2018 10:39 AM	2/15/2018 1:08 PM	Liquid
1802093-002A	MW-1		2/15/2018 11:04 AM	2/15/2018 1:08 PM	Liquid
1802093-003A	MW-2		2/15/2018 11:54 AM	2/15/2018 1:08 PM	Liquid

Client: American Analytical Inc **Service Request:**R1801393

Project: Elks Plaza Freeport

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1801393-001	MW-3	2/15/2018	1039
R1801393-002	MW-1	2/15/2018	1104
R1801393-003	MW-2	2/15/2018	1154

APPENDIX A

DATA QUALIFIER DEFINITIONS

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

APPENDIX B

American Analytical Laboratories, LLC. - Analytical Report

WO#: 1802093

Date Reported: 2/20/2018
Revision v1

Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 10:39:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-001	**Matrix:**	Liquid
Client Sample ID:	MW-3		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
VOLATILE SW-846 METHOD 8260			**Method: 8260**		**SW5030C**			**Analyst: LA**
1,1,1,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1,1-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1,2,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1,2-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,1-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2,3-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2,3-Trichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2,4,5-Tetramethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2,4-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2,4-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2-Dibromo-3-chloropropane	0.030	U	0.030	0.030	2.0	µg/L	1	2/16/2018 5:08 PM
1,2-Dibromoethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,3,5-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,3-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,3-dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,4-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
1,4-Dioxane	0.25	U	0.25	0.25	1.0	µg/L	1	2/16/2018 5:08 PM
2,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
2-Butanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:08 PM
2-Chloroethyl vinyl ether	0.25	U UJ	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
2-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
2-Hexanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:08 PM
2-Propanol	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
4-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
4-Isopropyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
4-Methyl-2-pentanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:08 PM
Acetone	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 5:08 PM
Benzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Bromobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Bromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Bromodichloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Bromoform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Bromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Carbon disulfide	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Carbon tetrachloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Chlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Chlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Chloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM

American Analytical Laboratories, LLC. - Analytical Report

WO#: 1802093

Date Reported: 2/20/2018
Revision v1

Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 10:39:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-001	**Matrix:**	Liquid
Client Sample ID:	MW-3		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Chloroform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Chloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
cis-1,2-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
cis-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Cyclohexane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Dibromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Dibromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Dichlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Diisopropyl ether	0.50	U	0.50	0.50	2.0	µg/L	1	2/16/2018 5:08 PM
Ethanol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 5:08 PM
Ethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Freon-114	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Hexachlorobutadiene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Isopropylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
m,p-Xylene	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:08 PM
Methyl Acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Methyl tert-butyl ether	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Methylene chloride	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 5:08 PM
n-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
n-Propylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Naphthalene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
o-Xylene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
p-Diethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
p-Ethyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
sec-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Styrene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
t-Butyl alcohol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 5:08 PM
tert-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Tetrachloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Toluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
trans-1,2-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
trans-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Trichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Trichlorofluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Vinyl acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Vinyl chloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Xylenes, Total	0.75	U	0.75	0.75	6.0	µg/L	1	2/16/2018 5:08 PM
Acrolein	1.0	U	1.0	1.0	10	µg/L	1	2/16/2018 5:08 PM
Acrylonitrile	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:08 PM
Surr: 4-Bromofluorobenzene	98.1			76-123		%Rec	1	2/16/2018 5:08 PM
Surr: Dibromofluoromethane	118			71-132		%Rec	1	2/16/2018 5:08 PM
Surr: Toluene-d8	106			80-120		%Rec	1	2/16/2018 5:08 PM

American Analytical Laboratories, LLC. - Analytical Report

WO#: 1802093

Date Reported: 2/20/2018
Revision v1

Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 11:04:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-002	**Matrix:**	Liquid
Client Sample ID:	MW-1		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
VOLATILE SW-846 METHOD 8260			**Method: 8260**		**SW5030C**			**Analyst: LA**
1,1,1,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1,1-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1,2,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1,2-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,1-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2,3-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2,3-Trichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2,4,5-Tetramethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2,4-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2,4-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2-Dibromo-3-chloropropane	0.030	U	0.030	0.030	2.0	µg/L	1	2/16/2018 5:38 PM
1,2-Dibromoethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,3,5-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,3-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,3-dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,4-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
1,4-Dioxane	0.25	U	0.25	0.25	1.0	µg/L	1	2/16/2018 5:38 PM
2,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
2-Butanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:38 PM
2-Chloroethyl vinyl ether	0.25	U U J	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
2-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
2-Hexanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:38 PM
2-Propanol	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
4-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
4-Isopropyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
4-Methyl-2-pentanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:38 PM
Acetone	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 5:38 PM
Benzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Bromobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Bromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Bromodichloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Bromoform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Bromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Carbon disulfide	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Carbon tetrachloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Chlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Chlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Chloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM

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Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 11:04:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-002	**Matrix:**	Liquid
Client Sample ID:	MW-1		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Chloroform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Chloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
cis-1,2-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
cis-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Cyclohexane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Dibromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Dibromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Dichlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Diisopropyl ether	0.50	U	0.50	0.50	2.0	µg/L	1	2/16/2018 5:38 PM
Ethanol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 5:38 PM
Ethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Freon-114	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Hexachlorobutadiene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Isopropylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
m,p-Xylene	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 5:38 PM
Methyl Acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Methyl tert-butyl ether	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Methylene chloride	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 5:38 PM
n-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
n-Propylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Naphthalene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
o-Xylene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
p-Diethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
p-Ethyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
sec-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Styrene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
t-Butyl alcohol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 5:38 PM
tert-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Tetrachloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Toluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
trans-1,2-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
trans-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Trichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Trichlorofluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Vinyl acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Vinyl chloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Xylenes, Total	0.75	U	0.75	0.75	6.0	µg/L	1	2/16/2018 5:38 PM
Acrolein	1.0	U	1.0	1.0	10	µg/L	1	2/16/2018 5:38 PM
Acrylonitrile	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 5:38 PM
Surr: 4-Bromofluorobenzene	96.2			76-123		%Rec	1	2/16/2018 5:38 PM
Surr: Dibromofluoromethane	119			71-132		%Rec	1	2/16/2018 5:38 PM
Surr: Toluene-d8	107			80-120		%Rec	1	2/16/2018 5:38 PM

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Date Reported: 2/20/2018
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Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 11:54:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-003	**Matrix:**	Liquid
Client Sample ID:	MW-2		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
VOLATILE SW-846 METHOD 8260			**Method: 8260**		**SW5030C**			**Analyst: LA**
1,1,1,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1,1-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1,2,2-Tetrachloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1,2-Trichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,1-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2,3-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2,3-Trichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2,4,5-Tetramethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2,4-Trichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2,4-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2-Dibromo-3-chloropropane	0.030	U	0.030	0.030	2.0	µg/L	1	2/16/2018 6:07 PM
1,2-Dibromoethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2-Dichloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,3,5-Trimethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,3-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,3-dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,4-Dichlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
1,4-Dioxane	0.25	U	0.25	0.25	1.0	µg/L	1	2/16/2018 6:07 PM
2,2-Dichloropropane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
2-Butanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 6:07 PM
2-Chloroethyl vinyl ether	0.25	U UJ	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
2-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
2-Hexanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 6:07 PM
2-Propanol	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
4-Chlorotoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
4-Isopropyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
4-Methyl-2-pentanone	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 6:07 PM
Acetone	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 6:07 PM
Benzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Bromobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Bromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Bromodichloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Bromoform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Bromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Carbon disulfide	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Carbon tetrachloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Chlorobenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Chlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Chloroethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM

American Analytical Laboratories, LLC. - Analytical Report

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Client:	Seacliff Environmental	**Collection Date:**	2/15/2018 11:54:00 AM
Project:	Elks Plaza Freeport, 157-189 W. Merrick Rd, Freeport, NY		
Lab ID:	1802093-003	**Matrix:**	Liquid
Client Sample ID:	MW-2		

Analysis	Result	Qual	DL	LOD	LOQ	Units	DF	Date Analyzed
Chloroform	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Chloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
cis-1,2-Dichloroethene	1.6	J	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
cis-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Cyclohexane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Dibromochloromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Dibromomethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Dichlorodifluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Diisopropyl ether	0.50	U	0.50	0.50	2.0	µg/L	1	2/16/2018 6:07 PM
Ethanol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 6:07 PM
Ethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Freon-114	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Hexachlorobutadiene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Isopropylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
m,p-Xylene	0.50	U	0.50	0.50	4.0	µg/L	1	2/16/2018 6:07 PM
Methyl Acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Methyl tert-butyl ether	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Methylene chloride	5.0	U	5.0	5.0	5.0	µg/L	1	2/16/2018 6:07 PM
n-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
n-Propylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Naphthalene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
o-Xylene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
p-Diethylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
p-Ethyltoluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
sec-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Styrene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
t-Butyl alcohol	2.5	U	2.5	2.5	10	µg/L	1	2/16/2018 6:07 PM
tert-Butylbenzene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Tetrachloroethene	0.47	J	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Toluene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
trans-1,2-Dichloroethene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
trans-1,3-Dichloropropene	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Trichloroethene	0.35	J	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Trichlorofluoromethane	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Vinyl acetate	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Vinyl chloride	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Xylenes, Total	0.75	U	0.75	0.75	6.0	µg/L	1	2/16/2018 6:07 PM
Acrolein	1.0	U	1.0	1.0	10	µg/L	1	2/16/2018 6:07 PM
Acrylonitrile	0.25	U	0.25	0.25	2.0	µg/L	1	2/16/2018 6:07 PM
Surr: 4-Bromofluorobenzene	95.7			76-123		%Rec	1	2/16/2018 6:07 PM
Surr: Dibromofluoromethane	117			71-132		%Rec	1	2/16/2018 6:07 PM
Surr: Toluene-d8	106			80-120		%Rec	1	2/16/2018 6:07 PM

APPENDIX C

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES

56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: Seacliff Environmental
Address: PO Box 2085
City: Miller Place State: NY Zip: 11764
Project Contact: Jim Demartinis
Phone #: 631-828-5994
E-mail:

Project Information

Project Name: Elks Plaza Freeport
Street: 157-169 N Merrick Road
City: Freeport State: NY Zip:
Project # / Purchase Order #:
Sampler's Name / Company: Chris Nickol RtC Formation
Sampler's Signature:

Analytical Test / Information

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	Number of Each Preserved Bottle: NONE	HCl	NaOH	HNO_3	H_2SO_4	DI Water (50.15A)	MeOH	OTHER	Full 8260 VOCs	1,4-Dioxane by 8270 SIM
180203-001	MW-3	G	L	2/15/18	1039	G	4	2	2							X	X
002	MW-1	"	"	"	1104	"	"	"	"							X	X
003	MW-2	"	"	"	1154	"	"	"	"							X	X

Turnaround Time (Business Days)

Standard
[X] 7-10 Business Days
[ ] 3 Day *RUSH*
[ ] 5 Day *RUSH*
[ ] 2 Day *RUSH*
[ ] 4 Day *RUSH*
[ ] 1 Day *RUSH*
Please contact laboratory for rush service availability

SAMPLE TYPE

G = Grab
C = Composite
B = Blank

MATRIX CODE

L = Liquid PC = Paint Chip
S = Soil SL = Sludge
O = Oil SD = Solid
W = Wipe M = Misc

ELECTRONIC DELIVERABLES

NYCRR Part 375 - please circle
Unres/ Comm/ Industrial/ Residential/ Res Residential/ PGW
NJ Soil Clean Up Criteria
SCDOH Action Levels
CP 51 - Gas / Fuel
TCLP Hazardous Waste
TOGS
NYSDEC EQUIS

Comments / Remarks

CAT B DELIVERABLE

Cooler Temp: 1.3 °C

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
	12/15/18 1:08		P Masi	2/15/18 1308	P Masi
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

CHAIN OF CUSTODY

AMERICAN ANALYTICAL LABORATORIES

56 Toledo Street, Farmingdale NY 11735
(T) 631-454-6100 (F) 631-454-8027
www.american-analytical.com

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: American Analytical
Address: 56 Toledo Street
City: Farmingdale State: NY Zip: 11735
Project Contact: Lori Beyer
Phone #: 631 454 6100
E-mail: LBeyer@American-Analytical.com

Project Information

Project Name: ELKS PLAZA FREEPORT
Street: 157-189 W. Merrick Road
Freeport State: NY Zip:
Project # / Purchase Order #:
Sampler's Name / Company: R+C Formation
Sampler's Signature:

Analytical Test / Information

1,4 DIOXANE BY 8270 SIM

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	NONE	HCl	NaOH	HNO_3	H_2SO_4	DI Water (5035A)	MeOH	OTHER	1,4 DIOXANE BY 8270 SIM
	MW-3	G	L	2/15/18	10:39	GL	2	2								X
	MW-1	G	L		11:04	GL	2	2								X
	MW-2	G	L		11:54	GL	2	2								X
	(2) 250ml Amber/Sample															

R1801393 5
American Analytical Inc
Elks Plaza Freeport

Turnaround Time (Business Days)
Standard
☐ 7-10 Business Days ☐ 3 Day *RUSH*
☐ 5 Day *RUSH* ☐ 2 Day *RUSH*
☐ 4 Day *RUSH* ☐ 1 Day *RUSH*
Please contact laboratory for rush service availability

SAMPLE TYPE
G = Grab
C = Composite
B = Blank

MATRIX CODE
L = Liquid PC = Paint Chip
S = Soil SL = Sludge
O = Oil SD = Solid
W = Wipe M = Misc

ELECTRONIC DELIVERABLES
NYCRR Part 375 - please circle
Unres/ Comm/ Industrial/ Residential/ Res Residential/ PGW
NJ Soil Clean Up Criteria SCDOH Action Levels
CP 51 - Gas / Fuel TCLP Hazardous Waste
TOGS NYSDEC EQUIS

Comments / Remarks
CATEGORY B DELIVERABLES & EQUIS

Cooler Temp:

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	2/15/18 14:00	LORI BEYER (to Fed Ex)	[signature]	2/16/18 09:15	Gregory O. Esmerian
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

Appendix E

Well Sampling Logs

GROUNDWATER SAMPLING LOG

157-189 W Merrick Road
Freeport, New York

Well ID:	MW-1
Date:	2/15/18
Sampling Personnel:	CN+MY
Weather:	Cloudy 45°F

WELL INFORMATION

Well Depth (ft):	22.37
Water Level Depth (ft):	12.62
Well Diameter (in):	2

WELL WATER INFORMATION

Length of Water Column (ft):	9.75
Volume of Water in Well (gal):	1.58
Total Volume Purged (gal):	7.0
Duration of Pumping (min):	10

EVACUATION INFORMATION

Pump On: 10:55 Pump Off: 11:05

Time: / *Parameter*	10:57	10:59	11:01	11:03				
DO (mg/L)	4.23	4.19	4.22	4.23				
Temperature (°C)	15.51	15.47	15.48	15.47				
pH	6.91	6.91	6.90	6.90				
Cond (umho's/cm)	980	980	980	980				
Turbidity (NTU)	61.5	57.4	42.4	44.8				

GROUNDWATER SAMPLING LOG

157-189 W Merrick Road
Freeport, New York

Well ID:	MW-2
Date:	2/15/18
Sampling Personnel:	CN+ MY
Weather:	Cloudy 45°F

WELL INFORMATION

Well Depth (ft):	22.20
Water Level Depth (ft):	11.85
Well Diameter (in):	2

WELL WATER INFORMATION

Length of Water Column (ft):	10.35
Volume of Water in Well (ga	1.69
Total Volume Purged (gal):	8.0
Duration of Pumping (min):	10

EVACUATION INFORMATION

Pump On: 11:45

Pump Off: 11:55

Time: / *Parameter*	11:47	11:49	11:51	11:53			
DO (mg/L)	7.33	7.33	7.33	7.30			
Temperature (°C)	13.46	13.46	13.46	13.48			
pH	7.30	7.34	7.34	7.34			
Cond (umho's/cm)	927	927	928	929			
Turbidity (NTU)	541.0	540.0	540.0	539.0			

GROUNDWATER SAMPLING LOG

157-189 W Merrick Road
Freeport, New York

Well ID:	MW-3
Date:	2/15/18
Sampling Personnel:	CN+MY
Weather:	Cloudy 45°F

WELL INFORMATION

Well Depth (ft):	22.40
Water Level Depth (ft):	11.82
Well Diameter (in):	2

WELL WATER INFORMATION

Length of Water Column (ft):	10.58
Volume of Water in Well (gal	1.72
Total Volume Purged (gal):	8.0
Duration of Pumping (min):	10

EVACUATION INFORMATION

Pump On: 10:30

Pump Off: 10:40

Time: / *Parameter*	10:32	10:34	10:36	10:38			
DO (mg/L)	1.26	1.26	1.26	1.27			
Temperature (°C)	13.65	13.65	13.66	13.66			
pH	6.95	6.95	6.95	6.94			
Cond (umho's/cm)	1530	1530	1530	1530			
Turbidity (NTU)	141.0	138.0	135.0	138.0			