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Project Title:	GWF Tracy (Compliance)
TN #:	242873
Document Title:	ANNUAL COMPLIANCE REPORT- 2021
Description:	ANNUAL COMPLIANCE REPORT- 2021- Condition of Certification COMPLIANCE-7
Filer:	Anwar Ali
Organization:	MRP San Joaquin Energy LLC
Submitter Role:	Public
Submission Date:	4/28/2022 10:25:44 AM
Docketed Date:	4/28/2022

MRP San Joaquin Energy, LLC

April 18, 2022

Mr. Anwar Ali, Compliance Project Manager
California Energy Commission
1516 9th Street
Sacramento, CA 95814-5512

RE: Tracy Combined-Cycle Power Plant (08-AFC-07) 2021 Annual Report of Operations

Dear Mr. Ali,

In accordance with the Commission's Conditions of Certification for Tracy Combined Cycle Power Plant (08-AFC-07) Compliance-7, MRP San Joaquin Energy Inc. submits for your review and files the annual compliance reports for the period beginning on January 1, 2021 through December 31, 2021.

If you have any questions regarding the information provided in this report, please feel free to contact Mr. Taylor Leach at (209)275-7079. E-mail: taylor.leach@naes.com Thank you for your time and consideration regarding this matter.

Respectfully,

John Archibald
Plant Manager
MRP San Joaquin Energy, LLC

TRACY COMBINED CYCLE POWER PLANT (08-AFC-07)
FACILITY INFORMATION AND DOCUMENT CERTIFICATION

Owner: MRP San Joaquin Energy LLC.
Address: 14950 W. Schulte Road, Tracy, CA 95377
Primary Contact: Taylor Leach, Environmental Health and Safety Specialist
Phone: 209.275.7079

Facility Address: 14950 W. Schulte Road, Tracy, CA 95377
Alternate Contact: John Archibald, Plant Manager
Phone: 209.248.6838

STATEMENT OF FACT

I certify under penalty of perjury that I have personally examined and am familiar with the information submitted in the Annual Report of Compliance; and based on my inquiry of those individuals immediately responsible for obtaining the information, I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

4.18.22

John Archibald
Plant Manager
MRP San Joaquin Energy LLC.

Date

MRP San Joaquin Energy, LLC

Tracy Combined Cycle Power Plant Project
(08-AFC-07)

2021
Annual Compliance Report

Prepared by:
MRP San Joaquin Energy, LLC
Tracy, California

April 18, 2022

14950 W. SCHULTE RD; TRACY, CALIFORNIA 95377 – TEL. (209) 248-6841

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Report of Operations

Introduction

In accordance with the California Energy Commission requirements, condition compliance -7, MRP San Joaquin Energy LLC. (MRP) has prepared the 2021 Annual Compliance Report.

Project Description

The Tracy Combined Cycle Power Plant is a nominal 344 MW combined cycle power plant that consist of two 88 MW nominally rated General Electric Model PG 7121 EA combustion turbine generator sets with Heat Recovery Steam Generators with 380 MMBTU duct burners and a 168 nominally rated steam turbine shared by the two combustion turbine generators and associated equipment necessary for combined-cycle operation. The facility is located at 14950 West Schulte Road, Tracy, California.

Tracy Peaker Plant was licensed by the California Energy Commission (CEC) on July 19 2002 under Adoption Docket No. 01-AFC-16 and began commercial operations on June 1, 2003. On June 30, 2008, GWF Energy LLC submitted an Application for Certification to the California Energy commission to modify the peaker plant by converting the facility into a combined cycle power plant. On March 24, 2010, the California Energy Commission (CEC) issued a license to GWF Energy LLC (GWF) for the construction and operation of the GWF Tracy Combined Cycle Power Plant (TCC) (08-AFC-7C). After conversion was completed, both units started commercial operation on November 1, 2012. The units currently operate under a power purchase agreement with Pacific Gas and Electric Company that commenced on November 1, 2012 and will expire on October 31, 2022. On November 2012, GWF Energy was acquired by Starwest, but continued to operate as GWF Energy LLC. On November of 2015, GWF Energy LLC was acquired by AltaGas and merged into the AltaGas San Joaquin Energy Inc. On November 2018, AltaGas San Joaquin Energy Inc. was acquired by Middle River Power and Merged into MRP San Joaquin Energy, LLC. (MRP)

This document constitutes the Annual Compliance Report (ACR) for the MRP Tracy Combined Cycle Power Plant (GWF Tracy project), as required by Condition of Certification (COC) General Compliance-7 (COMPL-7) in the CEC Final Decision. The information contained in this report covers all conditions applicable to the operations phase of this project. All construction related conditions were deemed complete.

Summary of Current Project

The units continue to operate under the power purchase agreement with Pacific Gas and Electric Company that commenced on November 1, 2012. They operate as required by PG&E based on power demands. Below is the production summary for the years 2012 - 2021.

Year	Unit A		Unit B	
	Fired Hours	MWh(net)	Fired Hours	MWh(net)

2012	1217	130,741	1269	123,934
2013	2675	303,394	2703	307,147
2014	2802	309,522	2968	332,923
2015	3558	388,521	3403	374,823
2016	1626	101,862	1546	99,865
2017	4030	475,374	3728	403,960
2018	3851	268,299	3725	257,735
2019	4750	296,664	3574	307,396
2020	2789	309,175	3649	393,493
2021	3493	388,26	3687	414,487

*No significant changes to facility operations occurred during this reporting period.

Conditions of Certification Compliance Matrix

The COC compliance matrix is a tracking tool used by the CPM to assure compliance with all conditions assigned to the project. The compliance matrix was developed in September 2010. During site mobilization and construction phases, the matrix was used in the Monthly compliance report to satisfy condition Compliance-6. It has been modified to remove conditions of certification that were completed during mobilization, and construction phases and is now used to comply with the Annual reporting requirements of Compliance-7. A copy of the updated matrix for COC COMPL-5 is included in Appendix A.

Post Certification Changes

No post-certification changes occurred during this reporting period.

Permits and Applications

On May 14, 2013, Authority to construct permits (Permits N-4597-1-7, N-4597-2-7, N-4597-5-0, and N-4597-6-0) issued by SJVAPCD for conversion from simple cycle to combined cycle were administratively amended to incorporate the Authority to Construct to Title V Operating permits N-4597-1-7, N-4597-2-7, N-4597-5-0 and N-4597-6-0. The Title V permit also included permit N-4597-4-3 to operate a diesel fired emergency IC engine as well as the facility wide permit N-4597-0-2.

On December 3, 2013, GWF submitted to SJVAPCD an application to renew the Title V operating permits for this facility. The new permits were received on February 17, 2015. The new Title V permits for facility permit N-4597 were Facility wide permit N-4597-0-3, Permit unit N-4597-1-8, N4597-2-8, N4597-4-4 and N4597-5-1 and N4597-6-1.

A permit renewal application was submitted on August 28, 2018 and a notice of complete application was received from the District on September 27, 2018. The SJVAPCD has finalized the permit renewal process. New permit numbers for facility permit N-4597 are facility wide permit N-4597-0-4, Permit unit N-4597-1-9, N4597-2-9, N4597-4-5, and N4597-5-2 and N-4597-6-2.

On November 7, 2019 Authorities to Construct (ATC) N-4597-1-10 and N-4597-2-10 were issued to change conditions for the Oxidation Catalyst modification. On March 5, 2021 Permits N-4597-1-11 and N-4597-2-11 were issued. Copies of the most recent permit is included in Appendix B.

Compliance Activities Scheduled for 2022

- CGA CEMS quarterly Audits, condition AQ-59 – To be scheduled for quarters 1st, 2nd, and 4th of 2022
- CTG source test, conditions AQ-46 and AQ-247 – To be scheduled for 3rd quarter 2022
- CTG CEMS RATA, condition AQ-60 – To be scheduled for 3rd quarter 2022
- Facility inspection by designated biologist, condition Bio-2 - To be scheduled for December 2022

Additions to Compliance Files

- CGA CEMS quarterly Audits, condition AQ-59 – Audits performed on January 2021, April 2021, July 2021, and October 2021.
- CTG source test, conditions AQ-46 and AQ-47 – Test performed on August 5 and August 6, 2021. A VOC retest was performed on September 10, 2021.
- CTG CEMS RATA, condition AQ-60 – Test performed on August 5 and August 6, 2021.
- Facility inspection by designated biologist, condition Bio-2 - Performed on December 6, 2021.

Contingency Plan for Unplanned Facility Closure Evaluation

Compliance-12 requires MRP to review the on-site contingency plan and recommend changes to bring the plan up to date. MRP has reviewed the plan and determined that the plan will not require updates. The plan was revised to reflect new ownership in 2019 by MRP San Joaquin Energy, LLC, new insurance and other minor changes to the facility. A Copy of the revised contingency plan are also included in Appendix C.

There were no unplanned temporary closures of the plant during the reporting period. If unplanned temporary closures or unplanned permanent closures were to occur, MRP will follow CEC notification requirements outlined in condition Compliance-12 and Compliance-13 and prepare a closure plan as required.

Complaints, Notices of Violation, Official Warnings, and Citations

MRP Tracy Combined Cycle Power Plant received a Notice of Violation from the SJVAPCD on September 28, 2021 for a failed VOC source test. It is believed that the failed source test was due to sample contamination, but MRP is still in discussion with SJVAPCD. A copy of the Notice as well as the follow up report are included in Appendix D of this report. No other Notices of Violation (NOV), complaints, other notices or citations from any Regulatory agency in conjunction with the operations of the Tracy Combined Cycle Power Plant were received in 2021.

Specific Conditions

- **AQ-SC9- Wet Surface Air Cooler PM10 Emissions**

  This condition requires testing of the wet surface air cooler spray water for total dissolved solids (TDS) to determine compliance with an annual particulate matter emissions limit as PM10 of 110 lb/year.

  The spray water was tested the third quarter of 2021 as required and the emissions demonstrating compliance with the limit were calculated. Copies of the analytical report as well as the PM10 calculation are included in Appendix E.

- **Bio-2 Biological Resources Mitigation Implementation and Monitoring Plan**
  Ms. Molly Sandomire, designated Biologist, conducted a visual biological resources assessment of The Tracy Combined Cycle facility on December 6, 2021. The status report prepared by Ms. Molly Sandomire of TRC is provided in Appendix F.

- **Haz-1 - Hazardous Materials Inventory**
  Condition Haz-1 requires submittal in the annual report of the list of hazardous materials.

  An updated list of hazardous materials is included in Appendix G.

- **Haz-7 – Site Specific Operations Site Security Plan**
  Condition Haz-7 requires the project owner to maintain on site a site-specific operations site security plan and make it available for review and approval. A plan was prepared prior to the start of commissioning as required, reviewed in 2016 and is available at the site.

  This condition also requires the project owner to include in the annual report a statement that all current project employee and appropriate contractor background investigations have been performed and that updated certification statements have been appended to the operations security plan. Four new employees were hired in 2021. Documents are provided in Appendix H.

- **Land-1 – Mitigation for the Loss of Farmland**
  This condition requires MRP to provide updates in the annual report on the status of farmland/easement purchase(s) and the continued implementation of the TCC's agricultural mitigation plan.

  On December 15, 2010, GWF submitted to the CPM the mitigation agreement between the Central Valley Farmland Trust and GWF Energy LLC that provides for the mitigation of prime farmland associated with the GWF Combined Cycle Project construction. Payment of the mitigation fees associated with the agreement was made on December 17, 2010.

  No changes have occurred since. The TCC agricultural mitigation plan that included the American Farmland Trust agreement (AFT) and a lease agreement between Kagehiro

Ranches (Jepsen Webb Ranch, LLC) to continue the farming of the designated land are still in force.

- **Noise-2 – Noise Complaints**
  This condition requires MRP throughout the operation of the project to document, investigate, evaluate and attempt to resolve all project-related noise complaints.

  No complaints were received during the reporting period of 2021. See Appendix I.

- **Soil & Water-2 – Storm water BMP monitoring and maintenance activities.**
  The new storm water Industrial General Permit (IGP) became effective July 1, 2015. Alta Gas Tracy Combined Cycle Power plant filed a Notice of Intent to comply with the new IGP. MRP discharges all its storm water to the on-site storm water basin. On 2019, The site filed for a NOT (Notice of Termination) with the Regional Water Board and was approved based on exceptions for Natural Gas fired power plants.

  The site is equipped with storm water drains throughout the facility. The drains are covered with a fine steel mesh to keep any large materials from entering the drain system. In addition, the facility ground surfaces are either, asphalt (16.1%), concrete (28.2%), gravel (37.6%), soil (6.0%) and the basin takes up 12.1%. The only areas with exposed dirt are around the stormwater basin and the basin is protected from the inside by rocks to minimize erosion.

  The basin sediment level was calculated, and no changes were detected. The results are included in Appendix J.

- **Soil & Water-4 - Annual Water Use Summary**
  When metering devices are serviced, tested and calibrated, this condition requires the project owner to provide a report summarizing these activities in the next annual report. The metering device (flow meter) was calibrated in 2019 and a magnetic flowmeter verification was conducted in 2022.

  The condition also requires the project owner to provide a Water Use Summary that states the source and quantity of raw surface water used on a monthly basis and on an annual basis in units of acre-feet. In subsequent annual reports the project owner is required to provide prior annual water use including yearly range and yearly average.

  The report for the water flow meter calibration performed in 2019 and Water use summaries for the 2013 thru 2021 years are included in Appendix K.

- **Soil & Water-6 – Industrial Wastewater and Contact Stormwater.**
  This condition requires the owner provide evidence of industrial wastewater and contact stormwater disposal, via a licensed hauler, to an appropriately licensed facility in the annual compliance report.

MRP discharges all its stormwater to the on-site stormwater basin. No stormwater leaves the site. Wastewater generated by turbine washing is hauled off-site and disposed of as non-hazardous waste. Contact storm water is collected in the secondary containment areas built around equipment to catch stormwater. The water is checked for oil residue and either left to evaporate or sent to the oil/water separator. The water from the clean water side of the oil/water separator is recycled to the raw water storage tank for use in the facility's water systems. Refer to Appendix L.

- **Vis-4 – Landscape Maintenance**
  This condition requires the project owner to report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation.

  MRP has a contract with Golden Valley Nursery, located at 26701 S. Lammers Road in Tracy. The irrigation system is tested and repaired on a monthly basis or more often if required. Weed abatement is scheduled every two months. Tree trimming is on as required basis.

  No trees were replaced in 2021. Weeds were removed during the spring to 3 to 8 ft. from base of trees as required.

- **Vis-6 – Surface Treatment Maintenance**
  Vis-6 requires MRP to provide a status report regarding surface treatment maintenance.

  The report is provided in Appendix M.

- **Waste-6 – Hazardous Waste Disposal.**
  Waste-6 requires the project owner to document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year. It also requires the owner to provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan; and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.

  The Waste Management Plan is included in Appendix N. The hazardous and non-hazardous waste tables have been revised and copies of the revised tables as well as copies of the hazardous waste manifests and a summary of all wastes shipped out for disposal are included in Appendix N.

Appendix A

Compliance Matrix
Compliance-7

MRP San Joaquin Energy
Tracy Combined Cycle Power Plant

CEC Compliance Project Manager: Anwar Ali

ANNUAL COMPLIANCE MATRIX - PROJECT No. 08-AFC-07

Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-SC8	Quarterly operation reports		Submit the quarterly operation reports that include operational and emissions information including incidences of non-compliance; (see AQ conditions) to the to CPM and APCO .	No later than 30 days following the end of each calendar quarter.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-SC8	Quarterly Operation Reports Records		This information shall be maintained on site for a minimum of five years and shall be provided to the CPM and District personnel upon request.	Upon request	Upon request		Ongoing
AQ-SC9	Wet surface air cooler requirements		The wet surface air cooler spray water shall be tested for total dissolved solids and that data shall be used to determine and report the particulate matter emissions from the wet surface air cooler. The wet surface air cooler spray water shall be tested at least once annually during the anticipated summer operation peak period (July through September).	Sample - 3rd quarter operations	3rd quarter operations	Samples Tested on: August 10, 2021	Sample - 3rd Quarterly Report
AQ-SC9	Wet surface air cooler requirements		Provide water quality test results and emissions estimates as part of the 4th quarter's quarterly operational report (AQ-SC8).	4th quarter operational report	4th quarter operational report	Quarterly January 17 2022	Report Sample - 4th Quarterly Report
Equipment Description, Unit N-4597-1-8 **Equipment Description, Unit N-4597-2-8**							
		Title V Permit conditon					
AQ-17	Particulate matter emissions - no exceed of 0.1 grains/dscf	Permit # 4597-1-11 and 2-11 condition # 1	Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. Submit results of source test to CPM and Air District in accordance with AQ-50	Annual Test	Source testing data becomes available	Source Test performance Dates: August 05-06, 2021; Source Test report submittal date: September 13, 2021	see AQ-50 for submittal
AQ-18	Air contaminate release	NA	No air contaminant shall be released into the atmosphere which causes a public nuisance. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request

MRP San Joaquin Energy
Tracy Combined Cycle Power Plant

CEC Compliance Project Manager: Anwar Ali

ANNUAL COMPLIANCE MATRIX - PROJECT No. 08-AFC-07

Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-19	Air contaminate discharge	Permit # 4597-0-4 condition #22	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20 percent opacity. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-20	Breakdown Conditions - Notify the District within 1 hour	Permit # 4597-1-11 and 2-11 condition # 2	Owner/operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Within an hour	Breakdown Conditions	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022 Breakdown Initial Notification: February 27, 2021	Ongoing and Quarterly Report (included in AQ-SC8)
AQ-21	Breakdown Conditions Reporting - Written Notification After Corrections are completed	Permit # 4597-1-11 and 2-11 condition # 3	The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Within 10 days	Breakdown Conditions Reporting	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022 Breakdown Report Submittal: March 5, 2021	Ongoing and Quarterly Report (included in AQ-SC8)
AQ-22	Equipment operation / maintenance.	Permit # 4597-1-11 and 2-11 condition # 4	All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-23	Equipment operation / maintenance.	Permit # 4597-1-11 and 2-11 condition # 5	The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request

MRP San Joaquin Energy
Tracy Combined Cycle Power Plant

CEC Compliance Project Manager: Anwar Ali

ANNUAL COMPLIANCE MATRIX - PROJECT No. 08-AFC-07

Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-24	Equipment operation / maintenance.	Permit # 4597-11 and 2-11 condition # 6	Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5 percent or greater, except for up to three minutes in any hour. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-25	Equipment operation / maintenance.	Permit # 4597-1-11 and 2-11 condition # 7	A Selective Catalytic Reduction (SCR) system and an oxidation catalyst shall serve these gas turbines. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-26	Equipment operation / maintenance.	Permit # 4597-1-11 and 2-11 condition # 8	During all types of operation, including startup and shutdown periods, ammonia injection to to SCR shall occur once the minimum temperature at the catalyst face has been reached to ensure NOx emission reductions can occur with a reasonable level of ammonia slip. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Ongoing, site is available for inspection upon request
AQ-27	Equipment operation / maintenance.	Permit # 4597-1-11 and 2-11 condition # 9	The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-29	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 10	The CTG shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

MRP San Joaquin Energy
Tracy Combined Cycle Power Plant

CEC Compliance Project Manager: Anwar Ali

ANNUAL COMPLIANCE MATRIX - PROJECT No. 08-AFC-07

Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-30	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 11	Emission rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) – 8.10 lb/hr and 2.0 ppmvd @ 15% O2; CO – 3.90 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) – 1.13 lb/hr and 1.5 ppmvd @ 15% O2; PM10 – 4.40 lb/hr; or SOX (as SO2) 2.03 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-31	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 12	Emission rates from this CTG with the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) – 10.30 lb/hr and 2.0 ppmvd @ 15% O2; CO – 6.00 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) – 3.22 lb/hr and 2.0 ppmvd @ 15% O2; PM10 – 5.80 lb/hr; or SOX (as SO2) – 2.63 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages.. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-32	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 13	During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) – 390.5 lb/event; CO – 562.5 lb/event; VOC (as methane) – 10.5 lb/event; PM10 – 11.0 lb/event; or SOX (as SO2) – 4.1 lb/event. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-33	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 14	During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) –104.0 lb/event; CO – 148.0 lb/event; VOC (as methane) – 2.6 lb/event; PM10 – 3.0 lb/event; or SOX (as SO2) – 1.1 lb/event. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

MRP San Joaquin Energy
Tracy Combined Cycle Power Plant

CEC Compliance Project Manager: Anwar Ali

ANNUAL COMPLIANCE MATRIX - PROJECT No. 08-AFC-07

Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-34	CTG exhaust/emissions	Permit # 4597-1-11 and 2-11 condition # 15	A start up event is defined as the period beginning with the gas turbine initial firing until the unit meets the lb/hr and ppmvd emission limits in Condition 30 (AQ-30) or Condition 31 (AQ-31) depending on the operating conditions of the duct burners during the start up event. A shutdown event is defined as the period beginning with the turbine shutdown sequence and ending with the cessation of firing the gas turbine engine. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-35	Startup emissions	Permit # 4597-1-11 and 2-11 condition # 16	The duration of each startup shall not exceed three hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-36	Shutdown emissions	Permit # 4597-1-11 and 2-11 condition # 17	The duration of each shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-37	Emissions	Permit # 4597-1-11 and 2-11 condition # 18	The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-38	Ammonia emissions	Permit # 4597-1-11 and 2-11 condition # 19	The ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 or 9.40 lb/hr over a 24 hour rolling average. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-39	Ammonia emissions	Permit # 4597-1-11 and 2-11 condition # 20	Approved district calculation for the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, d is the correction factor; derived annually during compliance testing by comparing the measured and calculated ammonia slip. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Ongoing - Calculate Annually
AQ-40	CTG Daily Emissions Limits	Permit # 4597-1-11 and 2-11 condition # 21	Daily emissions from the CTG shall not exceed the following limits: NOX (as NO2) – 814.9 lb/day; CO – 1071.6 lb/day; VOC – 78.6 lb/day; 139 PM10 – 132.0 lb/day; or SOX (as SO2) – 58.7 lb/day. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-41	CTG Annual Emissions - Annual Compliance	Permit # 4597-1-11 and 2-11 condition # 22	Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOX (as NO2) – 88,881 lb/year; CO – 74,598 lb/year; VOC – 15,145 lb/year; PM10 – 32,250 lb/year; or SOX (as SO2) – 7,084 lb/year. Compliance with the annual NOx and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM10 and SOx emission limits shall be demonstrated using the most recent source test results. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-42	Time	Permit # 4597-1-11 and 2-11 condition # 23	Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. No verification necessary.	NA	NA		Ongoing

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AQ-43	Emissions Time	Permit # 4597-1-11 and 2-11 condition # 24	Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. No verification necessary.	NA	NA		Ongoing
AQ-44	Natural gas usage	Permit # 4597-1-11 and 2-11 condition # 25	The combined natural gas fuel usage for permit units N-4597-1 and N-45967-2 shall not exceed 20,454 scf/year. (District Rule 2550) A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-45	Collection of exhaust stack emissions	Permit # 4597-1-11 and 2-11 condition # 26	The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOX, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. Make site available for inspections by Air District, ARB, and CEC.	Upon request	Request for site access		Ongoing, site is available for inspection upon request
AQ-46	Source testing - steady state NOx, CO, VOC, and NH3 emission rates	Permit # 4597-1-11 and 2-11 condition # 27	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (AQ-50).	Within 60 days after Source Testing	Completion of annual source testing	Source Test performance Dates: August 05-06, 2021; VOC Retest: September 10, 2021 Source Test report submittal date: September 13, 2021 VOC Retest report submittal date: October 4, 2021	Open Item - Annual Source Testing

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AQ-47	Source testing - Annual PM10 emission rate	Permit # 4597-1-11 and 2-11 condition # 28	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (AQ-50).	Within 60 days after Source Testing	Completion of annual source testing	Source Test performance Dates: August 05-06, 2021; VOC Retest: September 10, 2021 Source Test report submittal date: September 13, 2021 VOC Retest report submittal date: October 4, 2021	Open Item - Annual Source Testing
AQ-48	Source testing Commissioning - startup and shutdown Nox, CO, and VOC -Certifiable data	Permit # 4597-1-11 and 2-11 condition # 29	Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (N-4597-1 or N-4597-2) within 60 days after the end of the commissioning period. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (AQ-50). Testing for startup and shutdown emissions shall be conducted upon initial operation and at least once every seven years.	Within 60 days	Commissioning Completion of initial source testing	Initial Source Test performance Dates: October 31, 2012 Initial Source Test report submittal date: December 21, 2012 Most Recent Test performance Dates: August 13-14, 2019; Source Test report submittal date: October 03, 2019	Ongoing - Every seven years. Next test during the 2026 source test
AQ-48	Source testing - startup and shutdown Nox, CO, and VOC -Non-Certifiable data	Permit # 4597-1-11 and 2-11 condition # 29	If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a pre-approved protocol (AQ-50). Testing for startup and shutdown emissions shall be conducted upon initial operation and at least once every seven years.	Within 60 days	Once every 12 months if Non-compliant	Initial Source Test performance Dates: October 31, 2012 Initial Source Test report submittal date: December 21, 2012 Most Recent Test performance Dates: August 13-14, 2019; Source Test report submittal date: October 03, 2019	Ongoing - Every seven years. Next test during the 2026 source test
AQ-49	Source testing- Gas Turbine and Aux Burner	Permit # 4597-1-11 and 2-11 condition # 30	Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with Condition AQ-50	N/A	Demonstrate Compliance during source testing	Source Test Protocol Submittal Dates May 18, 2021	Ongoing

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AQ-50	Source testing Notification	Permit # 4597-1-11 and 2-11 condition # 31	The District must be notified 30 days prior to any compliance source test; Submit correspondence in the MCR	No less than 30 days prior	Source testing	Source Test Protocol Submittal Dates May 18, 2021	Performed Annually -
AQ-50-52; (AQ-137)	Source test plan	Permit # 4597-1-11 and 2-11 condition # 31	Submit proposed source testing plans to CPM and ARCO prior to source testing for approval	No less than 15 days prior	Planned source testing	Source Test Protocol Submittal Dates May 18, 2021	Submitted Annually
AQ-50	Source testing Results	Permit # 4597-1-11 and 2-11 condition # 31	Submit source test results no later than 60 days following the source test date to both the District and CPM	Within 60 days	Completion of annual source testing	Source Test performance Dates: August 05-06, 2021; VOC Retest: September 10, 2021 Source Test report submittal date: September 13, 2021 VOC Retest report submittal date: October 4, 2021	Submitted Annually
AQ-51	Source testing plan - Test Methods	Permit # 4597-1-11 and 2-11 condition # 32	The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100 and EPA Method 19 (Acid Rain Program); CO - EPA Method 10 or 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 and 202 (front half and back half) or 201a and 202; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or ARB Method 100. NOx testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with Condition AQ-50.	Include in the Annual Source Test Protocol	N/A	Source Test Protocol Submittal Dates May 18, 2021	Submitted Annually
AQ-52	Sulfur content - fuel sulfur content limit within Compliance	Permit # 4597-1-11 and 2-11 condition # 33	Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	ongoing

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AQ-52	Sulfur content - fuel sulfur content limit Non-Compliance	Permit # 4597-1-11 and 2-11 condition # 33	If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	ongoing
AQ-52	Sulfur content - Unit is not Operating	Permit # 4597-1-11 and 2-11 condition # 33	If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	ongoing
AQ-52	Sulfur content	Permit # 4597-1-11 and 2-11 condition # 33	The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-53	Sulfur content - Compliance with the rolling 12-month average fuel sulfur content limit	Permit # 4597-1-11 and 2-11 condition # 34	Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months ÷ Total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-53	Sulfur content - Unit is not Operating	Permit # 4597-1-11 and 2-11 condition # 34	If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-53	Sulfur content - Compliance with the rolling 12-month average fuel sulfur content limit	Permit # 4597-1-11 and 2-11 condition # 34	The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-54	Sulfur content - Methods of Monitoring	Permit # 4597-1-11 and 2-11 condition # 35	Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-55	CTG fuel consumption	Permit # 4597-1-11 and 2-11 condition # 36	The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. Make site available for inspections by Air District ARB, and CEC. Equip CTG unit with continuous monitoring system to record fuel consumption	Upon request	Request for site access		Open item, site is available for inspection upon request
AQ-59	CEMS audit.	Permit # 4597-1-11 and 2-11 condition # 40	Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. Audits of continuous emission monitors shall be conducted quarterly. The District shall be notified prior to completion of the audits.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly. Except when RATA is performed.	CGA Performance dates January 6, 12, 2021; April 8, 30, 2021; July 14, 2021; October 6, 18, 2021; RATA August 5-6, 2021	Quarterly Report
AQ-59	CEMS audit. Report in quarterly reports	Permit # 4597-1-11 and 2-11 condition # 40	The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this Condition as part of the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-60	Relative accuracy test audit (RATA)	Permit # 4597-1-11 and 2-11 condition # 41	The owner/operator shall perform a relative accuracy test audit (RATA) for NOX, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR Part 75 Appendix B, at least once every four calendar quarters. The owner/operator shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this Condition as part of the quarterly operation report (AQ-SC8).	RATA perform once every four calendar quarters;	Annual	Source Test performance Dates: August 05-06, 2021; VOC Retest: September 10, 2021 Source Test report submittal date: September 13, 2021 VOC Retest report submittal date: October 4, 2021	Demonstrating compliance with this Condition as part of the quarterly operation report (AQ-SC8)
AQ-61	CEMS monitoring equipment / device inspections	Permit # 4597-1-11 and 2-11 condition # 42	APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission to verify the monitoring devices are properly installed and operational.	Upon request	Request for site access.		Open item, site is available for inspection upon request
AQ-62	CEMS monitoring quality control / assurance	NA	The owner/operator shall develop and keep onsite a quality assurance plan for all the continuous monitoring equipment described in 40 CFR 60.4345(a), (c), and (d). The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission to verify the monitoring devices are properly installed and operational.	Upon request	Request for site access.		Open item, site is available for inspection upon request
AQ-63	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 43	Results of the CEM system shall be averaged over a one hour period for NOX emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of 40 CFR 60.13. The project owner shall submit to the CPM and APCO CEMS audits demonstrating compliance with this Condition as part of the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-64	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 44	The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. The project owner shall submit to the District and CPM the report of CEM operations upon notice from the APCO.	Upon notice from APCO	APCO Notification		Open Item- APCO Notification
AQ-65	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 45	The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis.	available to the District's on a daily basis	CEM data available to the District's automated polling system on a daily basis		ongoing
AQ-66	CEM system is NOT providing polling data	Permit # 4597-11 and 2-11 condition # 46	Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. The project owner shall provide required non-polled CEM data to the District by a District-approved alternative method.	District-approved alternative method	CEM system is not providing polling data		ongoing
AQ-67	Excess NOx emissions - 30 day rolling average	Permit # 4597-1-11 and 2-11 condition # 47	Excess NOx emissions shall be defined as any 30 day operating period in which the 30 day rolling average NOx concentration exceeds an applicable emissions limit. A 30 day rolling average NOx emission rate is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both).	N/A - No verification Required	N/A		ongoing

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AQ-68	Continuous Emission Monitoring System (CEM) - NOx Emissions	Permit # 4597-1-11 and 2-11 condition # 48	For the purpose of determining excess NOx emissions, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 of 40 CFR 60 Appendix A. For any hour in which the hourly O2 concentration exceeds 19.0% O2, a diluents cap value of 19% O2 may be used in the emission calculations.	N/A - No verification Required	N/A		ongoing
AQ-69	Continuous Emission Monitoring System (CEM) - SOx Emissions	Permit # 4597-1-11 and 2-11 condition # 49	Excess SOx emissions is each unit operating hour included in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SOx begins when a sample is not taken by its due date. A period of monitor downtime for SOx also begins on the date and hour of a required sample, if invalid results are obtained. A period of SOx monitoring downtime ends on the date and hour of the next valid sample.	N/A - No verification Required	N/A		ongoing
AQ-70	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 50	The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. The project owner shall submit to the District and CPM the report of CEM operations, emission data, and monitor downtime data in the quarterly operation report (AQ-SC8) that follows the definitions of this Condition.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-71	NOx control system operating parameters	Permit # 4597-1-11 and 2-11 condition # 51	The owner/operator shall submit to the District information correlating the NOX control system operating parameters to the associated measured NOX output. The information must be sufficient to allow the District to determine compliance with the NOX emission limits of this permit during times that the CEMS is not functioning properly. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2021; The determination of compliance with NOx emission limits if the CEM system is demonstrated using operating parameters and SCR conversion calculations. Predicted stack NOx is determined using a Prediction Neural Net. A neural net is a non-linear regression generated from JMP statistical software using operating data. The net developed for predicting stack NOx conversion three (3) nodes. Each node is an equation which uses three (3) operating parameters. 1.Ammonia Flow (lb/hr) 2.Stack Flow (kscfh) Stack Flow`= Fd*GCV*Gas Flow/1000000 * 20.9/(20.9-O2) 3.Total Gas Flow (kscfh) (Gas kscf/hr = CTG gas + DB Gas) The operating parameters fuel flow, engine NOx, SCR Temperature, ammonia flow and Stack O2 are used to provide inputs to the conversion equation. The Neural net formula for this determination is in column 5 The predicted Stack Nox is then determined as follows: Stack Nox = Inlet Nox - (Inlet Nox * Nox Conversion)	Submitted when CEMS not functioning properly. A breakdown report would be submitted in these cases along with the correlation methodology. Additional Information: H1_1: TanH(0.5 * ((-5.32140825617981) + 0.322556668572793 * :NH3 + -0.000144109788711927 * :Stk Flow + 0.00439854896669914 * :Total Gas)) H1_2: TanH(0.5 * ((-1.90686902055115) + -0.0371990125630299 * :NH3 + -0.000016417960120794 6 * :Stk Flow + 0.00281388412898056 * :Total Gas)) H1_3: TanH(0.5 * ((-11.1980316912685) + 0.122250240321383 * :NH3 + -0.000008298438819325 1 * :Stk Flow + 0.00730780287949905 * :Total Gas)) Nox Conversion: 0.686072768611141 + 0.0350836766682709 * :H1_1 + -0.208567171691691 * :H1_2 + -0.000046420227248374 2 * :H1_3
AQ-72	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 52	The owner/operator shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-73	Continuous Emission Monitoring System (CEM)	Permit # 4597-1-11 and 2-11 condition # 53	The owner/operator shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NOx and CO mass emission rates (lb/hr and lb/twelve month rolling period), and VOC, PM10 and SOx emission rates (lb/twelve month rolling period). A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-74	System operating log	Permit # 4597-1-11 and 2-11 condition # 54	The owner/operator shall maintain a system operating log, updated on a daily basis, which includes the following information: The actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, and type and quantity of fuel used. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2021 to December 2021)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-75	SGT operation	Permit # 4597-1-11 and 2-11 condition # 55	The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Upon request	Request for site access.		Quarterly Report
Facility-wide Conditions							
Emergency Standby Generator Engine	**471 HP Caterpillar Model 3456 DI TA AA diesel-fired emergency IC engine powering a 300 kW electrical generator**						
AQ-104	Particulate Matter Emissions Limits (see AQ-111)	Permit # 4597-4-5 condition # 1	Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] The project owner shall submit the results of certification tests to both the District and CPM in accordance with AQ-111	NA	(see AQ-111)	No emissions testing required by SJVAPCD. Manufacturer Performance Specifications guarantee these levels of emissions. Manufacturers performance specifications available upon request	
AQ-105	No air contaminant - Released	NA	No air contaminant shall be released into the atmosphere which causes a public nuisance. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request	upon request	when requested	This condition was removed from the Title V operating Permit by the SJVAPCD on modification from Construction ATC to Title V operating permit	Open item, site is available for inspection upon request

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AQ-106	No air contaminant - Discharged	NA	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20 percent opacity. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested	This condition was removed from the Title V operating Permit by the SJVAPCD on modification from Construction ATC to Title V operating permit	Open item, site is available for inspection upon request
AQ-107	Exhaust stack shall vent vertically upward	Permit # 4597-4-5 condition # 5	The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested	This condition was changed from the Title V operating Permit by the SJVAPCD on modification from Construction ATC to Title V operating permit to read as follows: The exhaust stack(s) shall not be fitted with a fixed rain cap or any similar device…	Open item, site is available for inspection upon request
AQ-108	Engine - operational non-resettable elapsed time meter	Permit # 4597-4-5 condition # 6	This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-109	CARB certified diesel fuel - Sulfur Limit	Permit # 4597-4-5 condition # 11	Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-110	IC Engine Emissions Limits	Permit # 4597-4-5 conditions # 7, 8, and 9	Emissions from this IC engine shall not exceed any of the following limits: 4.69 g-NOx/bhp-hr, 0.12 g-CO/bhp-hr, or 0.04 g-VOC/bhp-hr. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	upon request	when requested	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-111	IC Engine Emissions Limits - PM10	Permit # 4597-4-5 condition # 10	Emissions from this IC engine shall not exceed 0.029 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	upon request	when requested	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-112	Engine	Permit # 4597-4-5 condition # 6	This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-113	Engine	Permit # 4597-4-5 condition # 3	During periods of operation for maintenance, testing, and required regulatory purposes, the owner/operator shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Report	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-114	Emergency Situation Definition	Permit # 4597-4-5 condition # 12	An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the owner/operator.	NA	NA		Open item
AQ-115	Engine	Permit # 4597-4-5 condition # 13	This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Report	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-116	Engine - Operating Duration Limits (50 hrs/calendar yr)	Permit # 4597-4-5 condition # 14	This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Report	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-117	Engine - Monthly records of emergency and non-emergency operation	Permit # 4597-4-5 condition # 15	The owner/operator shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Report	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-118	Engine - Records Retained Onsite	Permit # 4597-4-5 condition # 24	All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request.	upon request	when requested		Open item, Records are available for inspection upon request
AQ-118	Engine - Records Retained Onsite	NA	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly Jan 30th; April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Report	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
Equipment Description, Unit N-4597-5-1	**39 MMBTU/HR natural gas-fired English and Tube Inc Model 28D375 Boiler with an Ultra-Low-NOx burner and Flue Gas Recirculation.**						
AQ-121	Particulate Matter Emissions Limits (see AQ-144)	Permit # 4597-5-2 condition # 1	Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. The project owner shall submit the results of fuel tests to both the District and CPM in accordance with AQ-144.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	(see AQ-144)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	See AQ-144

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AQ-122	No air contaminant - Released	NA	No air contaminant shall be released into the atmosphere which causes a public nuisance. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-123	No air contaminant - Discharged	NA	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20 percent opacity. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-128	Equipment operation / maintenance	Permit # 4597-5-2 condition # 2	All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-129	Operations of equipment - Flue gas recirculation	Permit # 4597-5-2 condition # 3	The flue gas recirculation (FGR) system shall be operated properly and shall be maintained per the manufacturer's recommendations. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-130	Operations of equipment - Equipment Fuel Meter	Permit # 4597-5-4 condition # 4	A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. The fuel meter shall be calibrated per the fuel meter manufacturers recommendations. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		Open item, site is available for inspection upon request
AQ-131	Operations of equipment - Boiler Maximum Hrs-4,000 hrs/yr	Permit # 4597-5-2 condition # 5	The boiler shall operate a maximum of 4,000 hours per calendar year. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2019 to December 2019)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-132	Aux Boiler Sulfur Content	Permit # 4597-5-2 condition # 6	The boiler shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2019 to December 2019)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-133	Aux Boiler Emission rates	Permit # 4597-5-2 condition # 7	Emission rates from this unit shall not exceed any of the following limits: NOx (as NO2) – 6.0 ppmvd @ 3% O2 or 0.0073 lb/MMBtu; VOC (as methane) – 0.005 lb/MMBtu; CO - 50.0 ppmvd @ 3% O2 or 0.037 lb/MMBtu; PM10 - 0.007 lb/MMBtu; or SOx (as SO2) - 0.0019 lb/MMBtu. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Annual Source Test	Annual Source Test	Source Test performance Date: January 24, 2017 and January 31, 2020	Nox, CO and O2 are determinned during source test. Compliance with SO2 is based on natural gas sulfur content and compliance with PM10 is demonstrated by calculation using AP42 Section 1.4.2 (particulate emission factor natural gas fired boilers). VOC has been demonstrated in practice by the use of Natural Gas as determined by SJVAPCD. See AQ-135.
AQ-135	Aux Boiler Source Testing	Permit # 4597-5-2 condition # 8	Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	once every twelve (12) months	Source Testing	Source Test performance Date: January 24, 2017 and January 31, 2020	Annually - +-30 days. Test demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-136	Aux Boiler	Permit # 4597-5-2 condition # 11	All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.

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AQ-137	Aux Boiler Source Testing Plan	Permit # 4597-5-2 condition # 12	Source testing shall be conducted using the methods and procedures approved by the District. A source test plan must be submitted for approval at least 15 days prior to testing. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	15 days prior	Aux Boiler Source Testing Plan	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-138	Aux Boiler Source Testing	Permit # 4597-5-2 condition # 12	The results of each source test shall be submitted to the District within 60 days thereafter. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with Condition AQ-50. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.	60 days following the source test	Source Testing - Aux Boiler	Source Test report submittal date: February 15, 2017 and February 18, 2020	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-139	Aux Boiler Source Testing Units	Permit # 4597-5-2 condition # 14	The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-140	Aux Boiler Emissions Source Testing	Permit # 4597-5-2 condition # 15	For emissions source testing, the arithmetic average of three 30- consecutive-minute (or longer periods as necessary) test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-141	Aux Boiler Source Testing - NOX emissions	Permit # 4597-5-2 condition # 16	NOX emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. Test demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-142	Aux Boiler Source Testing - CO emissions	Permit # 4597-5-2 condition # 17	CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.

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AQ-143	Aux Boiler Source Testing - Stack Gas O2	Permit # 4597-5-2 condition # 18	Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. The project owner shall submit the proposed protocol for the source tests to both the District and CPM for approval in accordance with condition AQ-50.	NA	NA	Source Test Protocol Submittal Dates December 13, 2016 and December 9, 2019	ongoing. est demonstrated compliance in 2013, 2014, 2017 and 2020. Next test to be scheduled in 2023.
AQ-144	Aux Boiler short-term (daily) fuel sulfur content limit	Permit # 4597-5-2 condition # 19	Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8)	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-145	Sulfur content - Compliance with the rolling 12-month average fuel sulfur content limit	Permit # 4597-5-2 condition # 20	Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months ÷ Total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content.	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-145	Sulfur content - Compliance with the rolling 12-month average fuel sulfur content limit	NA	The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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AQ-146	Sulfur Content - Monitoring	Permit # 4597-5-2 condition # 21	Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-147	CEMs protocol	NA	Provide Continuous Emission Monitoring System (CEM) protocol for approval by APCD and CPM at least 60 days prior to installation of CEM. Make site available for inspection.	at least 60 days prior and upon request	installation of CEM and upon request		MRP San Joaquin Energy is performing the Alternate monitoring scheme, A letter was submitted to the SJVAPCD and CPM and was approved on 6/7/12.
AQ-147	CEMs protocol	NA	Submit the chosen method of monitoring (either CEMS or chosen alternate monitoring scheme) at least 30 days prior to initial operation of this boiler. (District submittal number 29, not AQ-147)	at least 30 days prior	initial operation of this boiler		MRP San Joaquin Energy is performing the Alternate monitoring scheme, A letter was submitted to the SJVAPCD and CPM and was approved on 6/7/12.
AQ-147	CEMs protocol	NA	The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.	upon request	when requested		MRP San Joaquin Energy is performing the Alternate monitoring scheme, A letter was submitted to the SJVAPCD and CPM and was approved on 6/7/12.
AQ-148	CEMs protocol	Permit # 4597-5-2 condition # 27	The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission upon request.	upon request	when requested		Site is available for inspection upon request
AQ-149	Daily Fuel Records	Permit # 4597-5-2 condition # 28	Owner/operator shall maintain daily records of the type and quantity of fuel combusted by the boiler. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report. Site is available for inspection upon request
AQ-150	Fuel Records	Permit # 4597-5-2 condition # 29	Owner/operator shall keep a record of the cumulative annual quantity of hours operated for this unit. The record shall be updated at least monthly. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report

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CEC Compliance Project Manager: Anwar Ali

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Reporting Period: January 1, 2021 - December 31, 2021

COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-151	Records	Permit # 4597-5-2 condition # 30	All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report and site is available for inspection upon request
Equipment Description, Unit N-4597-6-0	**235 BHP Cummins Model CFP7E-50 TIER 3 diesel-fired emergency IC enginepowering a firewater pump or equivalent.**						
AQ-154	Particulate Matter Emissions Limits (see AQ-111)	Permit # 4597-6-2 condition # 1	Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. The project owner shall submit the results of certification tests to both the District and CPM in accordance with AQ-167.	NA	(see AQ-167)	Compliance of District Rule 4201.3.1 is via a CAPCOA/CARB/EPA IX Title V periodic Monitoring Recommendations memo dated July 2001. The District's grain loading limit of 0.1 grain/dscf does not need to be source tested provided the following conditions are met and are contained in the PTO. 1) Engine usage is limited to maintenance, testing, and time of actual unforeseen emergencies (see condition 8 below), 2) usage for maintenance and testing is not to exceed 200 hours per year (Condition 8 limits operation to 50 hours per year), and 3) maintain records of all engine usage and maintenance (see condition 10 below).	
AQ-155	No air contaminant - Released	NA	No air contaminant shall be released into the atmosphere which causes a public nuisance. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		
AQ-156	No air contaminant - Discharged	NA	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20 percent opacity. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	upon request	when requested		
AQ-161	Equipment operation / maintenance.	Permit # 4597-6-2 condition # 2	The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Site is available for inspection upon requestg

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-162	Equipment Meter	Permit # 4597-6-2 condition # 3	This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Site is available for inspection upon requestg
AQ-163	Equipment operation	NA	This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90 percent control efficiency. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Site is available for inspection upon requestg
AQ-164	Equipment operation / maintenance.	Permit # 4597-6-2 condition # 4	This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access		Site is available for inspection upon requestg
AQ-165	Equipment Fuel - Sulfur Content	Permit # 4597-6-2 condition # 5	Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.	Upon request	Request for site access	Invoices demonstrating type ol CARB diesel kept in facility	Site is available for inspection upon requestg
AQ-166	Equipment Emission Limits	Permit # 4597-6-2 condition # 6	Emissions from this IC engine shall not exceed any of the following limits: 2.67 g-NOx/bhp-hr, 2.39 g-CO/bhp-hr, or 0.16 g-VOC/bhp-hr. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Upon request	Request for site access	Manufacturer Performance Specifications available upon request	Quarterly Report
AQ-167	Equipment Emission Limits for PM10	Permit # 4597-6-2 condition # 7	Emissions from this IC engine shall not exceed 0.12 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Upon request	Request for site access	Manufacturer Performance Specifications available upon request	Quarterly Report

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
AQ-168	Engine - Operating Duration Limits (50 hrs/calendar yr)	Permit # 4597-6-2 condition # 8	This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-169	Equipment operation / maintenance Records	Permit # 4597-6-2 condition # 10	The owner/operator shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, emergency firefighting, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly April 30th; July 30th; Oct 30th; Jan. 30th;	Quarterly Operations Reports -(Include in 4 quarterly reports from January 2020 to December 2020)	Quarterly April 27, 2021; July 2, 2021; October 12, 2021; January 13, 2022	Quarterly Report
AQ-170	Equipment Records	Permit # 4597-6-0 condition # 11	All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Upon request	Request for site access		Quarterly Report
Bio-1			Submit temporary or permanent replacement request for Designated Biologist to CPM	10 Working days prior to replacement	Planned modification of Designated Biologist	Ms. Molly Sandomire was approved as Designated Biologist and Erin Bergquist as Alternate Designated Biologist on December 6,2021.	Construction Completed
Bio-2	Designated Biologist Duties		The Designated Biologist shall maintain written records of the tasks specified above and those included in the biological resources mitigation implementation and monitoring plan (BRMIMP), with summaries of these records submitted in the annual report		Annual Report	Facility inspection by Ms. Molly Sandomire was conducted on December 6,2021. Report is included in Appendix F	Annual Report
Bio-2	Designated Biologist Duties		Designated Biologist for site inspection and annual report. Bio Inspection in the 3rd quarter of the year.	3rd Quarter	Annual Inspection	Facility inspection by Ms. Molly Sandomire was conducted on December 6,2021. Report is included in Appendix F	Annual Report

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Bio-2	Designated Biologist Duties		During project operation, the Designated Biologist shall submit record summaries in the annual compliance report as discussed in Bio-2 unless their duties are ceased as approved by the CPM.	NA	Annual Report	Facility inspection by Ms. Molly Sandomire was conducted on December 6,2021. Report is included in Appendix F	Annual Report
Bio-2	Designated Biologist Duties		Designated Biologist performs relevant duties discussed in Bio-2 for plant closure.		Plant Closure	NA	Not Started - Plant Closure
Bio-2	Designated Biologist Duties		Perform - Designated Biologist performs required duties during all phases of the project.	NA	NA	Designated Biologist is assigned and approved. See above.	Construction Completed
Bio-4	Designated Biologist and Biological Monitor Activities		If required by the Designated Biologist and biological monitors, the operation managers shall halt site ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist. Designated Biologist shall: • Require a halt to all activities in any area when there would be an unauthorized adverse impact to biological resources if the activities continued; • Inform the project owner and the operation managers when to resume activities; and • Notify the CPM if there is a halt of any activities, and advise the CPM of any corrective actions that have been taken, or shall be instituted, as a result of the work stoppage.. Submit notification to CMP of any non-compliance or ordered construction halt. Submit corrective actions	Next working day	Non-compliance event or halt in construction	No incidents have occurred since the start of commercial operations of the combined cycle power plant to require halting operations.	Ongoing - operations
Bio-5			Implement a CPM-approved worker environmental awareness program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation, and closure are informed about sensitive biological resources associated with the project.		Worker Environmental Awareness Training	Training records available upon request	Ongoing - operations
Bio-5			Maintenance and contractor will be trained in accordance with the WEAP video; plant manager to provide training.		Worker Environmental Awareness Training	Training records available upon request	Ongoing - operations
Bio-5			Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.		Worker Environmental Awareness Training	Training records available upon request	Ongoing - operations
Bio-5			During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.	6 months after termination	operational personnel - termination of employment	Training records available upon request	Ongoing - operations

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
Compl-5	Compliance Matrix		Submit comprehensive compliance matrix (spreadsheet format) annually 1. The technical area; 2. The Condition number; 3. A brief description of the verification action or submittal required by the Condition; 4. The date the submittal is required; 5. The expected or actual submittal date; 6. The date a submittal or action was approved by the Chief Building Official (CBO), CPM, or delegate agency, if applicable; 7. The compliance status of each Condition, e.g., “not started,” “in progress” or “completed” 8. If the Condition was amended, the date of the amendment.	Annual	Annual Reporting	Matrix Complete as per requirement. Submitted with this report in Appendix A	Annual Report
Compl-7	Annual Compliance Report		Submit Annually after construction 1. An updated compliance matrix showing the status of all Conditions of Certification (fully satisfied Conditions do not need to be included in the matrix after they have been reported as completed); 2. A summary of the current project operating status and an explanation of any significant changes to facility operations during the year; 3. Documents required by specific Conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter, with the Condition it satisfies, and submitted as attachments to the Annual Compliance Report; 4. A cumulative listing of all post-Certification changes approved by the Energy Commission or cleared by the CPM; 5. An explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided; 6. A listing of filings submitted to, or permits issued by, other governmental agencies during the year; 7. A projection of project compliance activities scheduled during the next year; 8. A listing of the year’s additions to the on-site compliance file; 9. An evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date [see Compliance Conditions for Facility Closure addressed later in this section]; and 10. A listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved matters, and	Operations/Post Construction	On-line operations	Report completed April 29, 2021.	Annual Report
Compl-9	Annual Fees		Submit payment of Annual energy Facility Compliance Fee, which is adjusted annually.	Annual Fee	July 1 of each year during certification	Payment submitted on 6/15/2021	

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
Compl-10	Reporting of Complaints, Notices, and Citations		Report all notices, complaints, violations to CPM The telephone number is posted at the project site and made easily visible to passersby during operation. This number is also posted on the Energy Commission's web page.	Operations	Receipt of any complaints, notices, or violations	No complaints were received durng the reporting period.	On going
Compl-10	Reporting of Complaints, Notices, and Citations		GWF will report and provide copies to the CPM of all complaint forms, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and citations, within 10 days of receipt. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the NOISE Conditions of Certification. All other complaints shall be recorded on the complaint form (Attachment A).	Within 10 days	Receipt of any complaints, notices, or violations	No complaints were received durng the reporting period.	On going
Compl-11	Planned Facility Closure		Submit closure plan to CPM	12-month prior to start of closure	Planned closure	NA	Not Started - Facility Closure
Compl-12	Unplanned Temporary Facility Closure		Submit on-site contingency plan to CPM	time agreed to by the CPM) prior to	Planned temporary closure	8/3/2012 Revised 041/23/19 New owner and insurance carrier	APPROVED
Compl-12	Unplanned Temporary Facility Closure		In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM. The report includes the status of the insurance coverage and major equipment warranties must be updated in the annual compliance reports.	Annual	Annual Report	See above for changes	Annual Report
Compl-12	Unplanned Temporary Facility Closure		The project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the circumstances and expected duration of the closure.	24 - hours for notification	Unplanned Temporary Facility Closure	There were no unplanned temporary facility closure this year.	Not Started - Unplanned Facility Closure
Compl-12	Unplanned Temporary Facility Closure		Unplanned temporary closure is likely to be permanent, or for a duration of more than 12 months, a closure plan consistent with the requirements for a planned closure shall be developed and submitted to the CPM within 90 days of the CPM's determination (or other period of time agreed to by the CPM).	within 90 days	Unplanned Temporary Facility Closure	There were no unplanned temporary facility closure this year.	Not Started - Unplanned Facility Closure

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
Compl-13	Unplanned Permanent Facility Closure		The project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the circumstances and expected duration of the closure.	24 - hours for notification	Unplanned Permanent Facility Closure	There were no unplanned temporary facility closure this year.	Not Started - Unplanned Facility Closure
Compl-13	Unplanned Permanent Facility Closure		A closure plan, consistent with the requirements for a planned closure, shall be developed and submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.	within 90 days	Unplanned Permanent Facility Closure	There is no unplanned permament facility closure this year.	Not Started - Facility Closure
Waste-5	Waste Management enforcement actions		Notify CPM of any impending waste management-related enforcement action by any regulatory agencies.	Within 10 days	Issuance of a hazardous waste enforcement action	There are no impending waste management related inforcement action by any regulatory agency.	Ongoing - operations
Waste-6	Operation Waste Management Plan		Include in Annual Compliance Plan, actual volume of wastes generated, waste management methods, comparison of actual versus projects, and any Waste Management Plan updates. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary.	Annually	Annual Reporting	Volume of wastes generated is included in Appendix N. Also included waste management methods used as well as the plan updates that will be included in the revision of the waste management plan.	Annual Report
Haz-1	Haz Mat Business Plan Update		The project owner shall not use any hazardous materials not listed in Appendix B, below, or in greater quantities or strengths than those identified by chemical name in Appendix B, below, unless approved in advance by the Compliance Project Manager (CPM). The project owner shall provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility.	Annual Reporting	Annual Reporting	A list of Hazardous materials used at the site is provided in Appendix G	Annual Report

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
Haz-7	Operation Site Security Plan		Verify updates and compliance with Site Security Plan as part of Annual Report In the annual compliance report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. In the annual compliance report, the project owner shall include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations. The Operation Security Plan shall include the following: 1. Written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on site or off site; 2. A statement (refer to sample, Attachment A), signed by the project owner certifying that background investigations have been conducted on all project personnel. B. A statement(s) (refer to sample, Attachment B), signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors 3. A statement(s) (refer to sample, Attachment C), signed by the owners or authorized representative of hazardous	Annually	Annual Compliance Report	Statements and certifications that background investigations have been performed are included in Appendix H	Annual Report
Land-1	Prime farmland mitigation (3.28 acres)		Provide updates to CMP in the Annual Compliance Report on the status of farmland/easement purchases and the continued implementation of the TPP's agricultural mitigation plan; farmland and/or easements have been purchased within three years of the start of operation.	annual update; purchase farmland or easements by 2015	Annual Reporting	The TPP agricultural mitigation plan that included the American Farmland Trust agreement (AFT) and a lease agreement between Kagehiro Ranches (Jepsen Webb Ranch, LLC) to continue the farming of the designated land are still in force.	Annual Report
Noise-2	Noise Complaint Resolution - Construction and Operation		Document and resolve noise complaints; file Noise Complaint Resolution Form or similar instrument with CPM and local jurisdiction	Within 5 days	Receipt of noise complaint	No complaints were received durng the reporting period. See Appendix I	During operation
			If noise mitigation is required and not resolved within 3 days, submit Noise Complaint Resolution for with CPM when mitigation is completed	Within 3 days	Noise complaint resolved	No complaints were received durng the reporting period. See Appendix I	During operation

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S&W-2	Drainage, grading, and erosion & sediment control plans		Once operational, submit to the CPM with an annual compliance reports regarding results of stormwater BMP monitoring and maintenance activities. This plan shall address appropriate methods and actions, both temporary and permanent, for the protection of water quality and soil resources, demonstrate no increase in offsite flooding potential, meet local requirements, and identify all monitoring and maintenance activities. Monitoring activities shall include routine measurement of the volume of accumulated sediment in the stormwater retention basin. Maintenance activities must include removal of accumulated sediment from the retention basin when an average depth of 0.5 feet of sediment has accumulated in the retention basin. Civil-1: All maps shall be presented at a legible scale. <u>Verification</u>: Once operational, the project owner shall provide in the annual compliance report information on the results of stormwater BMP monitoring and maintenance activities.	Annually - During Operations	Annual Compliance Report	MRP San Joaquin Energy discharges all its storm water to the on-site storm water basin. The site is equipped with storm water drains throughout the facility. The drains are covered with a fine steel mesh to keep any large materials from entering the drain system. In addition, the facility ground surfaces are either asphalt (16.1%), concrete (28.2%), gravel (37.6%), soil (6.0%) and the basin takes up 12.1%. The only areas with exposed dirt are around the stormwater basin and the basin is protected from the inside by rocks to minimize erosion. The basin sediment level was calculated and no changes were detected. The results are included in Appendix J. On 2019, The site filed for a NOT (Notice of Termination) with the Regional Water Board and was approved based on exceptions for Natural Gas fired power plants.	Annual Report
			The facility submitted a Notice of Intent as required under the new Industrial General Stormwater Permit.			The facility submitted a Notice of Intent as required under the new Industrial General Stormwater Permit.	
S&W-4	Annual Water Use Summary		Provide monthly total water used, serviced, tested and calibrated, maintenance, and compliance activities to the CPM in the annual report, including a Water Use Summary. Water use shall not exceed the annual water-use limit of 54.4 acre-feet per year. The project owner shall monitor and record the total water used on a monthly basis. For calculating the annual water use, the term “year” will correspond to the date established for the annual compliance report submittal.	Annually	Annual Report	The water use summaries as well as the water flow meter calibrations are included in Appendix K.	Annual Report
S&W-4	Annual Water Use Summary		For the first year of operation, the project owner shall prepare an annual Water Use Summary, which will include the monthly range and monthly average of daily raw surface water usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet.	Annually; First year of operation	Annually; First year of operation	The water use reports are included in Appendix K.	Annual Report

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S&W-4	Annual Water Use Summary		For subsequent years, the annual Water Use Summary shall also include the yearly range and yearly average water use by the project; the monthly range and monthly average of daily raw surface water usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet.	Annually	Annual Report	The water use reports are included in Appendix K.	Annual Report
S&W-6	Industrial wastewater and contact stormwater		Provide CPM evidence that industrial wastewater and contact stormwater disposal is being handled by a licensed disposal and transportation facility in the annual compliance report; Provide a copy of the manifest as evidence.	Annually	Annual Reporting	Refer to Appendix L of this report	Annual Report
Visual-4	Revised Perimeter Landscaping Plan		Submit a report on landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation.	Annual	Annual Reporting	Report provided in the annual compliance report	Annual Report
Visual-5	Lighting Mitigation Plan		Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation.	Within 48 hours	Receipt of complaint	No complaints were received durng the reporting period.	Open item
Visual-5	Lighting Mitigation Plan		The project owner shall notify the CPM within 48 hours after completing implementation of the proposal.	Within 48 hours	Receipt of complaint	No complaints were received durng the reporting period.	Open item
Visual-5	Lighting Mitigation Plan		A copy of the complaint resolution form report shall be submitted to the CPM within 30 days	Within 30 days	Receipt of complaint	No complaints were received durng the reporting period.	Open item
Visual-6	Surface Treatment Maintenance		The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify (a): the condition of the surfaces of all structures and buildings at the end of the reporting year; (b) maintenance activities that occurred during the reporting year; and (c) the schedule of maintenance activities for the next year.	Annual	Annual Reporting	Refer to Appendix M of this report	Annual Report

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COC No.	Condition Short Description		Verification Action	Submittal Timing	Submittal Trigger Event	Actual Submittal Date	Compliance Status
WS-5	Automatic External Defibrillator (AED)		Submit documentation that verifies an automatic external defibrillator (AED) is located on-site during construction and operations	30 days prior to site mobilization	Site Mobilization	22-Nov-10 7-Dec-10	Submitted invoice 22-Nov-10 Submitted photo 7-Dec-10 APPROVED
			Submit copy of training and maintenance program for AED to CPM; implement training program	30 days prior to site mobilization	Site Mobilization	CPR, First Aid and AED training performed on 05/27/2021, 6/1/2021. and 06/4/2021 by the Red Cross. AED inspections are performed monthly and batteries are replaced prior to expiration dates.	Ongoing - operations

Appendix B

Permits and Applications

FACILITY: N-4597-0-4 **EXPIRATION DATE:** 06/30/2024

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit

11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit

13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit

14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit

15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit

16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit

18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit

19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit

20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit

21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

24. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit

26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit

27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit

28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit

29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit

30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit

31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit

32. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit

33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

34. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit

35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit

37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit

38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

42. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

43. All equipment shall be maintained in proper operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

44. The permittee shall maintain records of the cumulative annual facility-wide NOx, VOC, and PM10 emissions. The records shall be updated daily. [District Rule 2201] Federally Enforceable Through Title V Permit

45. Should the facility, as defined in 40 CFR 68.3, become subject to part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 CFR 68.10. The facility shall certify compliance as part of the annual certification as required by 40 CFR Part 70. [40 CFR Part 68, Subpart G] Federally Enforceable Through Title V Permit

PERMIT UNIT: N-4597-1-11 **EXPIRATION DATE:** 06/30/2024

EQUIPMENT DESCRIPTION:
88 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC MODEL PG 7121 EA NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH AN INLET AIR FILTRATION AND COOLING SYSTEM (EVAPORATIVE AND FOGGING) DRY LOW NOX COMBUSTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AN OXIDATION CATALYST, HEAT RECOVERY STEAM GENERATOR #1 (HRSG) WITH A 380 MMBTU/HR DUCT BURNER (MAXIMUM FIRING RATE 345 MMBTU/HR) AND A 168 MW NOMINALLY RATED STEAM TURBINE (SHARED WITH N-4597-2)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Owner/operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1] Federally Enforceable Through Title V Permit
3. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During all types of operation, including startup and shutdown periods, ammonia injection in to the SCR system shall occur once a minimum catalyst face temperature of 435 degrees Fahrenheit has been reached. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The CTG shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Emission rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.10 lb/hr and 2.0 ppmvd @ 15% O2; CO - 3.90 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 1.13 lb/hr and 1.5 ppmvd @ 15% O2; PM10 - 4.40 lb/hr; or SOx (as SO2) - 2.03 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

12. Emission rates from this CTG with the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 10.30 lb/hr and 2.0 ppmvd @ 15% O2; CO - 6.00 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.22 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 5.80 lb/hr; or SOx (as SO2) - 2.63 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

13. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 390.5 lb/event; CO - 562.5 lb/event; VOC (as methane) - 10.5 lb/event; PM10 - 11.0 lb/event; or SOx (as SO2) - 4.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

14. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) -104.0 lb/event; CO - 148.0 lb/event; VOC (as methane) - 2.6 lb/event; PM10 - 3.0 lb/event; or SOx (as SO2) - 1.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

15. A start up event is defined as the period beginning with the gas turbine initial firing until the unit meets the steady state lb/hr and ppmvd emission limits of this permit. A shutdown event is defined as the period beginning with the turbine shutdown sequence and ending with the cessation of firing the gas turbine engine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

16. The duration of each startup shall not exceed three hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

17. The duration of each shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

18. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 2201 and 40 CFR 60.4333(a)] Federally Enforceable Through Title V Permit

19. The ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 or 9.40 lb/hr over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

20. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; or 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the owner/operator shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

21. Daily emissions from the CTG shall not exceed the following limits: NOx (as NO2) - 814.9 lb/day; CO - 1071.6 lb/day; VOC - 78.6 lb/day; PM10 - 132.0 lb/day; or SOx (as SO2) - 58.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 88,881 lb/year; CO - 74,598 lb/year; VOC - 15,145 lb/year; PM10 - 32,250 lb/year; or SOx (as SO2) - 7,084 lb/year. Compliance with the annual NOx and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM10 and SOx emission limits shall be demonstrated using the most recent source test results. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

25. The combined natural gas fuel usage for permit units N-4597-1 and N-4597-2 shall not exceed 20,454 MMscf/year. [District Rule 2550] Federally Enforceable Through Title V Permit

26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure the steady state NOx, CO, VOC, and NH3 emission rates (lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. [District Rules 1081, 2080, 2201 and 4703, 40 CFR 60.4340, and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

28. Source testing to measure the PM10 emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rule 1081, 2201 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

29. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (N-4597-1 or N-4597-2) at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

30. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [District Rule 4703] Federally Enforceable Through Title V Permit

31. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100 and EPA Method 19 (Acid Rain Program); CO - EPA Method 10 or 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 and 202 (front half and back half) or 201a and 202; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or ARB 100. NOx testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i) and 40 CFR 60.4400(a)(2), (3), and (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. [District Rule 2201 an 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

34. Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months / total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

35. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

36. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

37. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit

38. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

39. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specifications 2, 3, and 4, and/or 40 CFR 75 Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

41. The owner/operator shall perform a relative accuracy test audit (RATA) for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR Part 75 Appendix B, at least once every four calendar quarters. The owner/operator shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. [District Rule 1080] Federally Enforceable Through Title V Permit

42. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of 40 CFR 60.13. [District Rule 4703 and 40 CFR 60.13 and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

44. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

46. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

47. Excess NOx emissions shall be defined as any 30 day operating period in which the 30 day rolling average NOx concentration exceeds an applicable emissions limit. A 30 day rolling average NOx emission rate is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(h) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

48. For the purpose of determining excess NOx emissions, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 of 40 CFR 60 Appendix A. For any hour in which the hourly O2 concentration exceeds 19.0 percent O2, a diluent cap value of 19 percent O2 may be used in the emission calculations. [40 CFR 60.4350(b)] Federally Enforceable Through Title V Permit

49. Excess SOx emissions is each unit operating hour included in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SOx begins when a sample is not taken by its due date. A period of monitor downtime for SOx also begins on the date and hour of a required sample, if invalid results are obtained. A period of SOx monitoring downtime ends on the date and hour of the next valid sample. [40 CFR 60.4385(a) and (c)] Federally Enforceable Through Title V Permit

50. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

51. The owner/operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit during times that the CEMS is not functioning properly. [District Rule 4703] Federally Enforceable Through Title V Permit

52. The owner/operator shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

53. The owner/operator shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NOx and CO mass emission rates (lb/hr and lb/twelve month rolling period), and VOC, PM10 and SOx emission rates (lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

54. The owner/operator shall maintain a system operating log, updated on a daily basis, which includes the following information: The actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, and type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit

55. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

56. This unit shall be equipped with temperature measurement devices that continuously measure oxidation catalyst temperature. [40 CFR 64] Federally Enforceable Through Title V Permit

57. Except during periods of startup, shutdown, or when conducting combustor tuning activities, the measured oxidation catalyst temperature shall be equal to or greater than 450 degrees Fahrenheit and shall be less than or equal to 700 degrees Fahrenheit. [40 CFR 64] Federally Enforceable Through Title V Permit

58. Upon detecting any excursion from the acceptable oxidation catalyst temperature range, the owner/operator shall investigate the excursion and take corrective action to minimize the excursion and prevent the recurrence as expeditiously as possible. [40 CFR 64] Federally Enforceable Through Title V Permit

59. The owner/operator shall keep records of the oxidation catalyst temperature and any maintenance/repairs performed on the temperature monitoring system. [40 CFR 64] Federally Enforceable Through Title V Permit

60. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit

61. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit

62. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

63. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

64. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

65. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

66. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

67. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

68. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

69. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

70. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

71. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

72. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

73. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

74. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

75. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

76. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

77. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

78. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

PERMIT UNIT: N-4597-2-11 **EXPIRATION DATE:** 06/30/2024

EQUIPMENT DESCRIPTION:
88 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC MODEL PG 7121 EA NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH AN INLET AIR FILTRATION AND COOLING SYSTEM (EVAPORATIVE AND FOGGING) DRY LOW NOX COMBUSTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AN OXIDATION CATALYST, HEAT RECOVERY STEAM GENERATOR #1 (HRSG) WITH A 380 MMBTU/HR DUCT BURNER (MAXIMUM FIRING RATE 345 MMBTU/HR) AND A 168 MW NOMINALLY RATED STEAM TURBINE (SHARED WITH N-4597-1)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Owner/operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1] Federally Enforceable Through Title V Permit
3. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
6. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
7. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During all types of operation, including startup and shutdown periods, ammonia injection in to the SCR system shall occur once a minimum catalyst face temperature of 435 degrees Fahrenheit has been reached. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The CTG shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Emission rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.10 lb/hr and 2.0 ppmvd @ 15% O2; CO - 3.90 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 1.13 lb/hr and 1.5 ppmvd @ 15% O2; PM10 - 4.40 lb/hr; or SOx (as SO2) - 2.03 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

12. Emission rates from this CTG with the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 10.30 lb/hr and 2.0 ppmvd @ 15% O2; CO - 6.00 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.22 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 5.80 lb/hr; or SOx (as SO2) - 2.63 lb/hr. NOx (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit

13. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 390.5 lb/event; CO - 562.5 lb/event; VOC (as methane) - 10.5 lb/event; PM10 - 11.0 lb/event; or SOx (as SO2) - 4.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

14. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) -104.0 lb/event; CO - 148.0 lb/event; VOC (as methane) - 2.6 lb/event; PM10 - 3.0 lb/event; or SOx (as SO2) - 1.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

15. A start up event is defined as the period beginning with the gas turbine initial firing until the unit meets the steady state lb/hr and ppmvd emission limits of this permit. A shutdown event is defined as the period beginning with the turbine shutdown sequence and ending with the cessation of firing the gas turbine engine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

16. The duration of each startup shall not exceed three hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

17. The duration of each shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

18. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 2201 and 40 CFR 60.4333(a)] Federally Enforceable Through Title V Permit

19. The ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 or 9.40 lb/hr over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

20. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; or 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the owner/operator shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

21. Daily emissions from the CTG shall not exceed the following limits: NOx (as NO2) - 814.9 lb/day; CO - 1071.6 lb/day; VOC - 78.6 lb/day; PM10 - 132.0 lb/day; or SOx (as SO2) - 58.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOx (as NO2) - 88,881 lb/year; CO - 74,598 lb/year; VOC - 15,145 lb/year; PM10 - 32,250 lb/year; or SOx (as SO2) - 7,084 lb/year. Compliance with the annual NOx and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM10 and SOx emission limits shall be demonstrated using the most recent source test results. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

25. The combined natural gas fuel usage for permit units N-4597-1 and N-4597-2 shall not exceed 20,454 MMscf/year. [District Rule 2550] Federally Enforceable Through Title V Permit

26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure the steady state NOx, CO, VOC, and NH3 emission rates (lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. [District Rules 1081, 2080, 2201 and 4703 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

28. Source testing to measure the PM10 emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rule 1081, 2201 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

29. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (N-4597-1 or N-4597-2) at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

30. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [District Rule 4703] Federally Enforceable Through Title V Permit

31. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100 and EPA Method 19 (Acid Rain Program); CO - EPA Method 10 or 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 and 202 (front half and back half) or 201a and 202; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or ARB 100. NOx testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i) and 40 CFR 60.4400(a)(2), (3), and (b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. [District Rule 2201 an 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

34. Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months / total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

35. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

36. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

37. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

38. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

39. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specifications 2, 3, and 4, and/or 40 CFR 75 Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

41. The owner/operator shall perform a relative accuracy test audit (RATA) for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR Part 75 Appendix B, at least once every four calendar quarters. The owner/operator shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. [District Rule 1080] Federally Enforceable Through Title V Permit

42. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of 40 CFR 60.13. [District Rule 4703 and 40 CFR 60.13 and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

44. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

45. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

46. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

47. Excess NOx emissions shall be defined as any 30 day operating period in which the 30 day rolling average NOx concentration exceeds an applicable emissions limit. A 30 day rolling average NOx emission rate is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(h) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

48. For the purpose of determining excess NOx emissions, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 of 40 CFR 60 Appendix A. For any hour in which the hourly O2 concentration exceeds 19.0 percent O2, a diluent cap value of 19 percent O2 may be used in the emission calculations. [40 CFR 60.4350(b)] Federally Enforceable Through Title V Permit

49. Excess SOx emissions is each unit operating hour included in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SOx begins when a sample is not taken by its due date. A period of monitor downtime for SOx also begins on the date and hour of a required sample, if invalid results are obtained. A period of SOx monitoring downtime ends on the date and hour of the next valid sample. [40 CFR 60.4385(a) and (c)] Federally Enforceable Through Title V Permit

50. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

51. The owner/operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit during times that the CEMS is not functioning properly. [District Rule 4703] Federally Enforceable Through Title V Permit

52. The owner/operator shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

53. The owner/operator shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NOx and CO mass emission rates (lb/hr and lb/twelve month rolling period), and VOC, PM10 and SOx emission rates (lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

54. The owner/operator shall maintain a system operating log, updated on a daily basis, which includes the following information: The actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, and type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit

55. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

56. This unit shall be equipped with temperature measurement devices that continuously measure oxidation catalyst temperature. [40 CFR 64] Federally Enforceable Through Title V Permit

57. Except during periods of startup, shutdown, or when conducting combustor tuning activities, the measured oxidation catalyst temperature shall be equal to or greater than 450 degrees Fahrenheit and shall be less than or equal to 700 degrees Fahrenheit. [40 CFR 64] Federally Enforceable Through Title V Permit

58. Upon detecting any excursion from the acceptable oxidation catalyst temperature range, the owner/operator shall investigate the excursion and take corrective action to minimize the excursion and prevent the recurrence as expeditiously as possible. [40 CFR 64] Federally Enforceable Through Title V Permit

59. The owner/operator shall keep records of the oxidation catalyst temperature and any maintenance/repairs performed on the temperature monitoring system. [40 CFR 64] Federally Enforceable Through Title V Permit

60. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit

61. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit

62. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

63. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

64. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

65. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

66. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

67. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

68. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

69. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

70. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

71. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

72. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

73. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

74. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

75. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

76. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

77. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

78. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-4597-4-5 **EXPIRATION DATE:** 06/30/2024

EQUIPMENT DESCRIPTION:
471 HP CATERPILLAR MODEL 3456 DI TA AA DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING A 300 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
6. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702] Federally Enforceable Through Title V Permit
7. NOx emissions shall not exceed 4.69 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. CO emissions shall not exceed 0.12 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC emissions shall not exceed 0.04 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. PM10 emissions shall not exceed 0.029 g/bhp-hr based on U.S EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
11. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115] Federally Enforceable Through Title V Permit
12. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

15. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

16. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

17. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

18. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

19. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

20. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

21. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

22. The permittee must collect and submit an annual report including location, dates and times of operation if the engine operates for more than 15 hours and up to 100 hours per year for emergency demand response. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

23. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

24. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-4597-5-2 **EXPIRATION DATE:** 06/30/2024

EQUIPMENT DESCRIPTION:
39 MMBTU/HR NATURAL GAS-FIRED ENGLISH BOILER AND TUBE INC MODEL 28D375 BOILER (S/N 31015) WITH AN ULTRA-LOW-NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The flue gas recirculation (FGR) system shall be operated properly and shall be maintained per the manufacturer's recommendations. [District Rule 2201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. The fuel meter shall be calibrated per the fuel meter manufacturer's recommendations. [District Rule 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
5. The boiler shall operate a maximum of 4,000 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The boiler shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit shall not exceed any of the following limits: NOx (as NO2) - 6 .0 ppmvd @ 3% O2 or 0.0073 lb/MMBtu; VOC (as methane) - 0.005 lb/MMBtu; CO - 50.0 ppmvd @ 3% O2 or 0.037 lb/MMBtu; PM10 - 0.007 lb/MMBtu; or SOx (as SO2) - 0.0019 lb/MMBtu. [District Rules 2201, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
8. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute (or longer periods as necessary) test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months divided by the total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D5504, D6228, D6667 or Gas Processors Association Standard 2377. [District Rule 2201] Federally Enforceable Through Title V Permit
22. The minimum flue gas recirculation rate shall be established by source testing the unit per Rules 4305, 4306, and 4320 at three firing rates (low, mid, and high). The normal range shall be no lower than the minimum flue gas recirculation rate that complies with the NOx and CO emission limits as demonstrated through source testing at a similar fire rate. The source test emission measurements shall be made with the unit operating at conditions representative of normal operations. No measurements shall be made within the first two hours after a continuous period in which fuel flow to the unit is shut off 30 minutes or longer, or within 30 minutes after a re-ignition as defined in District Rule 4306. A flow transmitter shall be calibrated prior to the source test. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The normal flue gas recirculation rate or level shall be re-established during each source test required by the permit. The flow transmitter shall be calibrated prior to each source test. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

24. Permittee shall continuously monitor and record the flue gas recirculation rate using a flow transmitter and the plant's CEM DAHS during period when this boiler is in use. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

25. If the flue gas recirculation rate is less than the normal range during periods of normal operation, permittee shall return the flue gas recirculation rate to the normal range as soon as possible, but no later than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range or level within 1 hour of operation after detection, permittee shall notify the District within the following 1 hour and shall conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the auxiliary boiler emission limits at the new flue gas recirculation rate. A district-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, permittee may stipulate that a violation has occurred and may be subject to enforcement action. Permittee shall correct the violation, demonstrate compliance has been re-established, and resume monitoring. If the deviations are the result of a qualifying breakdown condition pursuant to District Rule 1100, permittee may fully comply with District Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. Permittee shall keep records of the normal flue gas recirculation rate range established during source testing, the date and time of flue gas recirculation rate monitoring, and the measured flue gas recirculation rate and the firing rate at the time of the monitoring event. The records shall include a description of any corrective action taken to maintain the flue gas recirculation rate within the normal range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

27. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Owner/operator shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rule 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit

29. Owner/operator shall keep a record of the cumulative annual quantity of hours operated for this unit. The record shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-4597-6-2 **EXPIRATION DATE:** 06/30/2024

EQUIPMENT DESCRIPTION:
235 BHP CUMMINS MODEL CFP7E-50 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
6. Emissions from this IC engine shall not exceed any of the following limits: 2.475 g-NOx/bhp-hr, 1.193 g-CO/bhp-hr, or 0.062 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed 0.111 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
8. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems". Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
9. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
10. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

AUTHORITY TO CONSTRUCT

PERMIT NO: N-4597-1-10 **ISSUANCE DATE:** 11/07/2019

LEGAL OWNER OR OPERATOR: MRP SAN JOAQUIN ENERGY, LLC
MAILING ADDRESS: 14950 W SCHULTE RD
TRACY COMBINED CYCLE POWER PLANT
TRACY, CA 95377

LOCATION: 14950 W SCHULTE RD
TRACY COMBINED CYCLE POWER PLANT
TRACY, CA 95377

EQUIPMENT DESCRIPTION:
MODIFICATION OF 88 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC MODEL PG 7121 EA NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH AN INLET AIR FILTRATION AND COOLING SYSTEM (EVAPORATIVE AND FOGGING) DRY LOW NOX COMBUSTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AN OXIDATION CATALYST, HEAT RECOVERY STEAM GENERATOR #1 (HRSG) WITH A 380 MMBTU/HR DUCT BURNER (MAXIMUM FIRING RATE 345 MMBTU/HR) AND A 168 MW NOMINALLY RATED STEAM TURBINE (SHARED WITH N-4597-2): REPLACE THE EXISTING OXIDATION CATALYST WITH A NEW CORMETECH MODEL METEOR 107 CELL OXIDATION CATALYST

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Owner/operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1] Federally Enforceable Through Title V Permit
4. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
8. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During all types of operation, including startup and shutdown periods, ammonia injection in to the SCR system shall occur once a minimum catalyst face temperature of 435 degrees Fahrenheit has been reached. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The CTG shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
12. Emission rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) - 8.10 lb/hr and 2.0 ppmvd @ 15% O2; CO - 3.90 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 1.13 lb/hr and 1.5 ppmvd @ 15% O2; PM10 - 4.40 lb/hr; or SOX (as SO2) - 2.03 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
13. Emission rates from this CTG with the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) - 10.30 lb/hr and 2.0 ppmvd @ 15% O2; CO - 6.00 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.22 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 5.80 lb/hr; or SOX (as SO2) - 2.63 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
14. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) - 390.5 lb/event; CO - 562.5 lb/event; VOC (as methane) - 10.5 lb/event; PM10 - 11.0 lb/event; or SOX (as SO2) - 4.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) -104.0 lb/event; CO - 148.0 lb/event; VOC (as methane) - 2.6 lb/event; PM10 - 3.0 lb/event; or SOX (as SO2) - 1.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
16. A start up event is defined as the period beginning with the gas turbine initial firing until the unit meets the steady state lb/hr and ppmvd emission limits of this permit. A shutdown event is defined as the period beginning with the turbine shutdown sequence and ending with the cessation of firing the gas turbine engine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
17. The duration of each startup shall not exceed three hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. The duration of each shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
19. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 2201 and 40 CFR 60.4333(a)] Federally Enforceable Through Title V Permit
20. The ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 or 9.40 lb/hr over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; or 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the owner/operator shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

22. Daily emissions from the CTG shall not exceed the following limits: NOX (as NO2) - 814.9 lb/day; CO - 1071.6 lb/day; VOC - 78.6 lb/day; PM10 - 132.0 lb/day; or SOX (as SO2) - 58.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOX (as NO2) - 88,881 lb/year; CO - 74,598 lb/year; VOC - 15,145 lb/year; PM10 - 32,250 lb/year; or SOX (as SO2) - 7,084 lb/year. Compliance with the annual NOx and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM10 and SOx emission limits shall be demonstrated using the most recent source test results. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The combined natural gas fuel usage for permit units N-4597-1 and N-4597-2 shall not exceed 20,454 MMscf/year. [District Rule 2550] Federally Enforceable Through Title V Permit

27. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOX, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure the steady state NOx, CO, VOC, and NH3 emission rates (lb/hr and ppmvd @ 15% O2) shall be conducted within 60 days of initial startup under this permit and at least once every 12 months thereafter. [District Rules 1081, 2080, 2201 and 4703, 40 CFR 60.4340, and 40 CFR 60.4400]

29. Source testing to measure the PM10 emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rule 1081, 2201 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

30. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (N-4597-1 or N-4597-2) at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

31. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

32. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100 and EPA Method 19 (Acid Rain Program); CO - EPA Method 10 or 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 and 202 (front half and back half) or 201a and 202; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or ARB 100. NOx testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i) and 40 CFR 60.4400(a)(2), (3), and (b)] Federally Enforceable Through Title V Permit

34. Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. [District Rule 2201 an 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

35. Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months / total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

36. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

37. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

38. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOX, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703] Federally Enforceable Through Title V Permit

39. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

40. The NOX, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specifications 2, 3, and 4, and/or 40 CFR 75 Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

41. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. The owner/operator shall perform a relative accuracy test audit (RATA) for NOX, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR Part 75 Appendix B, at least once every four calendar quarters. The owner/operator shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. [District Rule 1080] Federally Enforceable Through Title V Permit

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Results of the CEM system shall be averaged over a one hour period for NOX emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of 40 CFR 60.13. [District Rule 4703 and 40 CFR 60.13 and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

47. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

48. Excess NOx emissions shall be defined as any 30 day operating period in which the 30 day rolling average NOx concentration exceeds an applicable emissions limit. A 30 day rolling average NOx emission rate is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(h) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

49. For the purpose of determining excess NOx emissions, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 of 40 CFR 60 Appendix A. For any hour in which the hourly O2 concentration exceeds 19.0 percent O2, a diluent cap value of 19 percent O2 may be used in the emission calculations. [40 CFR 60.4350(b)] Federally Enforceable Through Title V Permit

50. Excess SOx emissions is each unit operating hour included in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SOx begins when a sample is not taken by its due date. A period of monitor downtime for SOx also begins on the date and hour of a required sample, if invalid results are obtained. A period of SOx monitoring downtime ends on the date and hour of the next valid sample. [40 CFR 60.4385(a) and (c)] Federally Enforceable Through Title V Permit

51. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. The owner/operator shall submit to the District information correlating the NOX control system operating parameters to the associated measured NOX output. The information must be sufficient to allow the District to determine compliance with the NOX emission limits of this permit during times that the CEMS is not functioning properly. [District Rule 4703] Federally Enforceable Through Title V Permit

53. The owner/operator shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

54. The owner/operator shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NOx and CO mass emission rates (lb/hr and lb/twelve month rolling period), and VOC, PM10 and SOx emission rates (lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

55. The owner/operator shall maintain a system operating log, updated on a daily basis, which includes the following information: The actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, and type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit

56. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

57. This unit shall be equipped with temperature measurement devices that continuously measure oxidation catalyst temperature. [40 CFR 64]

58. Except during periods of startup, shutdown, or when conducting combustor tuning activities, the measured oxidation catalyst temperature shall be equal to or greater than 450 degrees Fahrenheit and shall be less than or equal to 700 degrees Fahrenheit. [40 CFR 64]

59. Upon detecting any excursion from the acceptable oxidation catalyst temperature range, the owner/operator shall investigate the excursion and take corrective action to minimize the excursion and prevent the recurrence as expeditiously as possible. [40 CFR 64]

60. The owner/operator shall keep records of the oxidation catalyst temperature and any maintenance/repairs performed on the temperature monitoring system. [40 CFR 64]

61. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit

62. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit

63. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

64. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

65. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

66. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

67. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

68. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

69. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

70. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

71. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

72. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

73. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

74. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

75. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

76. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

77. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

78. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

79. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

AUTHORITY TO CONSTRUCT

PERMIT NO: N-4597-2-10 **ISSUANCE DATE:** 11/07/2019

LEGAL OWNER OR OPERATOR: MRP SAN JOAQUIN ENERGY, LLC
MAILING ADDRESS: 14950 W SCHULTE RD
TRACY COMBINED CYCLE POWER PLANT
TRACY, CA 95377

LOCATION: 14950 W SCHULTE RD
TRACY COMBINED CYCLE POWER PLANT
TRACY, CA 95377

EQUIPMENT DESCRIPTION:
MODIFICATION OF 88 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC MODEL PG 7121 EA NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH AN INLET AIR FILTRATION AND COOLING SYSTEM (EVAPORATIVE AND FOGGING) DRY LOW NOX COMBUSTION, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AN OXIDATION CATALYST, HEAT RECOVERY STEAM GENERATOR #1 (HRSG) WITH A 380 MMBTU/HR DUCT BURNER (MAXIMUM FIRING RATE 345 MMBTU/HR) AND A 168 MW NOMINALLY RATED STEAM TURBINE (SHARED WITH N-4597-1): REPLACE THE EXISTING OXIDATION CATALYST WITH A NEW CORMETECH MODEL METEOR 107 CELL OXIDATION CATALYST

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Owner/operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1] Federally Enforceable Through Title V Permit
4. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
N-4597-2-10 Nov 7 2019 4:25PM – KAHLONJ Joint Inspection NOT Required

5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
7. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for up to three minutes in any hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
8. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve this gas turbine engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During all types of operation, including startup and shutdown periods, ammonia injection in to the SCR system shall occur once a minimum catalyst face temperature of 435 degrees Fahrenheit has been reached. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The CTG shall only be fired on PUC-regulated natural gas with a sulfur content value not exceeding 0.66 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a daily basis and 0.25 grains of sulfur compounds (as S) per 100 dry standard cubic feet on a 12-month rolling average basis. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
12. Emission rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) - 8.10 lb/hr and 2.0 ppmvd @ 15% O2; CO - 3.90 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 1.13 lb/hr and 1.5 ppmvd @ 15% O2; PM10 - 4.40 lb/hr; or SOX (as SO2) - 2.03 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
13. Emission rates from this CTG with the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits: NOX (as NO2) - 10.30 lb/hr and 2.0 ppmvd @ 15% O2; CO - 6.00 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.22 lb/hr and 2.0 ppmvd @ 15% O2; PM10 - 5.80 lb/hr; or SOX (as SO2) - 2.63 lb/hr. NOX (as NO2) emission rates are one hour rolling averages. All other emission rates are three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
14. During start-up, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) - 390.5 lb/event; CO - 562.5 lb/event; VOC (as methane) - 10.5 lb/event; PM10 - 11.0 lb/event; or SOX (as SO2) - 4.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. During shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOX (as NO2) -104.0 lb/event; CO - 148.0 lb/event; VOC (as methane) - 2.6 lb/event; PM10 - 3.0 lb/event; or SOX (as SO2) - 1.1 lb/event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
16. A start up event is defined as the period beginning with the gas turbine initial firing until the unit meets the steady state lb/hr and ppmvd emission limits of this permit. A shutdown event is defined as the period beginning with the turbine shutdown sequence and ending with the cessation of firing the gas turbine engine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
17. The duration of each startup shall not exceed three hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. The duration of each shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
19. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 2201 and 40 CFR 60.4333(a)] Federally Enforceable Through Title V Permit
20. The ammonia (NH3) emissions shall not exceed 5 ppmvd @ 15% O2 or 9.40 lb/hr over a 24 hour rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; or 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the owner/operator shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

22. Daily emissions from the CTG shall not exceed the following limits: NOX (as NO2) - 814.9 lb/day; CO - 1071.6 lb/day; VOC - 78.6 lb/day; PM10 - 132.0 lb/day; or SOX (as SO2) - 58.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following limits: NOX (as NO2) - 88,881 lb/year; CO - 74,598 lb/year; VOC - 15,145 lb/year; PM10 - 32,250 lb/year; or SOX (as SO2) - 7,084 lb/year. Compliance with the annual NOx and CO emission limits shall be demonstrated using CEM data and compliance with the annual VOC, PM10 and SOx emission limits shall be demonstrated using the most recent source test results. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The combined natural gas fuel usage for permit units N-4597-1 and N-4597-2 shall not exceed 20,454 MMscf/year. [District Rule 2550] Federally Enforceable Through Title V Permit

27. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOX, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure the steady state NOx, CO, VOC, and NH3 emission rates (lb/hr and ppmvd @ 15% O2) shall be conducted within 60 days of initial startup under this permit and at least once every 12 months thereafter. [District Rules 1081, 2080, 2201 and 4703 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

29. Source testing to measure the PM10 emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rule 1081, 2201 and 40 CFR 60.4400] Federally Enforceable Through Title V Permit

30. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (N-4597-1 or N-4597-2) at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

31. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

32. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx - EPA Method 7E or 20 or ARB Method 100 and EPA Method 19 (Acid Rain Program); CO - EPA Method 10 or 10B or ARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 and 202 (front half and back half) or 201a and 202; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or ARB 100. NOx testing shall also be conducted in accordance with the requirements of 40 CFR 60.4400(a)(2), (3), and (b). EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703 and 40 CFR 60.4400(1)(i) and 40 CFR 60.4400(a)(2), (3), and (b)] Federally Enforceable Through Title V Permit

34. Testing to demonstrate compliance with the short-term (daily) fuel sulfur content limit shall be conducted monthly. If a monthly test indicates that a violation of the daily fuel sulfur content limit has occurred then weekly testing shall commence and continue until eight consecutive tests show compliance. Once compliance with the daily fuel sulfur content is demonstrated on eight consecutive weekly tests, testing may return to the monthly schedule. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. [District Rule 2201 an 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

35. Compliance with the rolling 12-month average fuel sulfur content limit shall be demonstrated monthly. The 12-month rolling average fuel sulfur content shall be calculated as follows: 12-month rolling average fuel sulfur content = Sum of the monthly average fuel sulfur contents for the previous 12 months / total number of months the unit has operated in during the previous 12 months. The monthly average fuel sulfur content is the average fuel sulfur content of all tests conducted in a given month. If the unit is not operated during an entire calendar month, fuel sulfur content testing shall not be required for that specific month. Owner/operator shall keep a monthly record of the rolling 12-month average fuel sulfur content. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

36. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

37. The CTG shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

38. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOX, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

39. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

40. The NOX, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specifications 2, 3, and 4, and/or 40 CFR 75 Appendix A, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit

41. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. The owner/operator shall perform a relative accuracy test audit (RATA) for NOX, CO and O2 as specified by 40 CFR Part 60, Appendix F, 5.11, or 40 CFR Part 75 Appendix B, at least once every four calendar quarters. The owner/operator shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. If the RATA test is conducted as specified in 40 CFR Part 75 Appendix B, the RATA shall be conducted on a lb/MMBtu basis. [District Rule 1080] Federally Enforceable Through Title V Permit

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit

44. Results of the CEM system shall be averaged over a one hour period for NOX emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of 40 CFR 60.13. [District Rule 4703 and 40 CFR 60.13 and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

45. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit

47. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

48. Excess NOx emissions shall be defined as any 30 day operating period in which the 30 day rolling average NOx concentration exceeds an applicable emissions limit. A 30 day rolling average NOx emission rate is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30 day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx or O2 (or both). [40 CFR 60.4350(h) and 40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

49. For the purpose of determining excess NOx emissions, for each unit operating hour in which a valid hourly average is obtained, the data acquisition system and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 of 40 CFR 60 Appendix A. For any hour in which the hourly O2 concentration exceeds 19.0 percent O2, a diluent cap value of 19 percent O2 may be used in the emission calculations. [40 CFR 60.4350(b)] Federally Enforceable Through Title V Permit

50. Excess SOx emissions is each unit operating hour included in the period beginning on the date and hour of any sample for which the fuel sulfur content exceeds the applicable limits listed in this permit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. Monitoring downtime for SOx begins when a sample is not taken by its due date. A period of monitor downtime for SOx also begins on the date and hour of a required sample, if invalid results are obtained. A period of SOx monitoring downtime ends on the date and hour of the next valid sample. [40 CFR 60.4385(a) and (c)] Federally Enforceable Through Title V Permit

51. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. The owner/operator shall submit to the District information correlating the NOX control system operating parameters to the associated measured NOX output. The information must be sufficient to allow the District to determine compliance with the NOX emission limits of this permit during times that the CEMS is not functioning properly. [District Rule 4703] Federally Enforceable Through Title V Permit

53. The owner/operator shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

54. The owner/operator shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, calculated NOx and CO mass emission rates (lb/hr and lb/twelve month rolling period), and VOC, PM10 and SOx emission rates (lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

55. The owner/operator shall maintain a system operating log, updated on a daily basis, which includes the following information: The actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, and type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit

56. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

57. This unit shall be equipped with temperature measurement devices that continuously measure oxidation catalyst temperature. [40 CFR 64]

58. Except during periods of startup, shutdown, or when conducting combustor tuning activities, the measured oxidation catalyst temperature shall be equal to or greater than 450 degrees Fahrenheit and shall be less than or equal to 700 degrees Fahrenheit. [40 CFR 64]

59. Upon detecting any excursion from the acceptable oxidation catalyst temperature range, the owner/operator shall investigate the excursion and take corrective action to minimize the excursion and prevent the recurrence as expeditiously as possible. [40 CFR 64]

60. The owner/operator shall keep records of the oxidation catalyst temperature and any maintenance/repairs performed on the temperature monitoring system. [40 CFR 64]

61. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR 64] Federally Enforceable Through Title V Permit

62. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR 64] Federally Enforceable Through Title V Permit

63. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64] Federally Enforceable Through Title V Permit

64. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

65. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

66. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

67. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

68. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

69. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

70. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

71. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

72. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

73. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

74. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

75. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

76. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

77. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

78. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

79. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

Appendix C

Contingency Plan for Unplanned Facility Closure
Compliance-12

MRP San Joaquin Energy, LLC

On Site Contingency Plan for Unplanned Temporary and Permanent Closures

MRP San Joaquin Energy, LLC. - Combined Cycle Power Plant.

14950 West Schulte Road
Tracy, CA 95377

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1.0 Introduction

This On-Site Contingency Plan was prepared to support the Application for Certification submitted to the California Energy Commission (CEC) (CEC Docket No. 08-AFC-7) for the GWF Tracy Combined Cycle Power Plant (GWF Tracy) project. The plan fulfills the requirements for Conditions of Certification (COCs) Compliance-12 and Compliance-13 for managing unplanned temporary and unplanned permanent closures. The On-Site Contingency Plan will help to ensure that all necessary steps to mitigate public health and safety impacts and environmental impacts are taken in a timely manner during unexpected plant closures. The plan covers written procedures concerning site security, hazardous materials and waste removal, and insurance and warranty coverage. The plan was revised to reflect new ownership by MRP San Joaquin Energy, LLC, new insurance and other minor changes to the facility.

2.0 Responsibilities

Plant Owner - The Plant Owner has the overall responsibility for ensuring all provisions of this plan are administered and adhered to.

Plant Manager - The Plant Manager is responsible for overseeing the program, and notification to the CEC.

3.0 Contingency Plan

3.1 Notification Procedures

In the event of an unexpected temporary or permanent closure, the Plant Manager or designee shall notify the CEC's Compliance Project Manager (CPM) and other responsible agencies within 24 hours, and take all necessary steps to implement this Plan. Notification shall be made by either telephone, fax, or e-mail (see Table 1). The Plant Manager shall keep the CPM informed of the circumstances and expected duration of the closure.

If it is determined that a temporary closure is likely to be permanent, or for a duration of more than twelve months, a closure plan consistent with CEC requirements for a planned closure shall be developed and submitted to the CPM within 90 days of such determination (or other period of time mutually agreed to by the owner and the CPM).

Table 1. Agencies to Notify

California Energy Commission	
Craig Hoffman Compliance Project Manager California Energy Commission 1516 9th St., MS 2000 Sacramento, CA 95814-5512	Tel: 916-654-4781 Fax: 916-654-3882 e-mail: Anwar.ali@energy.ca.gov
County of San Joaquin Office of Emergency Services	
Michael R. Cockrell Director of Emergency Operations 2101 E. Earhart Ave., Suite 300 Stockton, CA 95206	Tel: 209-953-6200 Fax: 209-953-6268 e-mail: sjcoes@sjgov.org
City of Tracy Fire Department	
Fire Department Administration 835 Central Avenue Tracy, CA 95376	Tel: (209) 831-6700 Fax: (209) 831-6703 e-mail: firedept@ci.tracy.ca.us
San Joaquin County Environmental Health Department	
Dennis Fields 1868 E. Hazelton Ave. Stockton, CA 95205	Tel: 209- 468-3420 Fax: (209) 944-9015 e-mail: hsaeed@co.san-joaquin.ca.us
Central Valley Regional Water Quality Control Board	
Greg Vaughn 11020 Sun Center Drive, Suite 200 Rancho Cordova, CA 95670-6114	Tel: 916 -464-3291 Fax: 916- 464-4645 e-mail: VaughnG@rb5s.swrcb.ca.gov
Byron-Bethany Irrigation District	
Rick Gilmore General Manager 7995 Bruns Road Byron, CA 94514	Tel: (209)835-0375 ext. 12 Fax: (209)835-2869 e-mail: r.gilmore@bbid.org
San Joaquin Valley Air Pollution Control District	
Rupi Gill Northern Region Office 4800 Enterprise Way Modesto, CA 95356	Tel: (209) 557-6400 Fax: (209) 557-6475 e-mail: rupi.gill@valleyair.org
PG&E	
Michael Steele Account Executive, Generation Specialist Energy Solutions & Service 4040 West Lane, Stockton, Ca 95204	Tel: (209) 825-6985 e-mail: mfs4@pge.com
CAISO	
Ronni Reese Senior Contracts Analyst 250 Outcropping Way Folsom, CA 95630	Tel: (916) 608-7027 Fax: (916) 608-7279 e-mail: RReese@caiso.com
USEPA Region 9	
Laura Yannayon US EPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901	Tel: 415-972-3534 e-mail: yannayon.laura@epa.gov

3.2 Plant Shut down Procedure

In the event of a plant closure, personnel will shut down all operating equipment that is not necessary to respond to an emergency, in accordance with plant operating procedures. In the event of an emergency shutdown (e.g., fire, earthquake, sabotage, etc.), MRP San Joaquin Energy, LLC Tracy Combined Cycle Power Plant (SJE) personnel should consult the SJE Emergency Action Plan (EAP). The purpose of the EAP is to provide emergency response guidelines so that SJE operations and management personnel can adequately evaluate the situation and respond in the interests of protecting personnel, company resources, and the environment.

The EAP provides guidelines for emergencies, including accidental release of toxic gases, chemical spills, fires, explosions, bomb threats, civil disobedience, and personnel injuries. There are several situations that may require emergency response by site personnel. The response required for each situation may vary, and each requires a separate course of action. Personnel should reference the EAP for proper response.

3.3 Site Security and Emergency Response

In the event of an unexpected closure, SJE will follow all procedures in the Operations Site Security Plan (COC HAZ-7) and the Emergency Action Plan (COC Worker Safety 2). A Plant Operator is on site 24 hours per day and will direct emergency vehicles through the facility gate if necessary.

3.4 Hazardous Material and Waste Removal

Handling and disposal of all hazardous materials and wastes shall be in accordance with all applicable laws, ordinances, regulations, and standards. The table in Attachment 1 identifies all hazardous materials in reportable quantities that are located at SJE. In the event of an unexpected temporary closure, not all hazardous materials will require removal. If such an event occurs, SJE will conduct visual inspections of all hazardous material storage vessels on a daily basis to assess container condition. SJE has implemented a HMBP to assist with identification and handling of all hazardous materials.

Whenever practical, hazardous materials will be returned to the vendor or transferred to a certified disposal facility. Qualified transporters will be used if it is deemed necessary to remove any hazardous material(s).

If the unexpected temporary closure also results in a release of hazardous materials or waste, plant personnel will consult the Emergency Action Plan, HMBP, and/or Risk Management Plan. These plans address accidental release prevention and emergency policies, a hazardous materials inventory, employee training, location of safety equipment, main utility shutoffs, notification methods, and accident investigation procedures. In addition, the Storm Water Pollution Prevention Plan (SWPP) and the Spill Prevention Control and Countermeasure Plan (SPCC) describe the necessary actions in the event of a spill that might threaten off site locations. Both structural and non-structural Best Management Practices (BMPs) are utilized at the site to reduce pollutants in storm water discharge. Structural BMPs include such measures as valves, berms, curbs, and containment structures that are used to hold or divert storm water. Non-structural

BMPs include such measures as regular inspections; good housekeeping practices; employee training; and special procedures for storing/loading hazardous materials and wastes. Plant personnel shall consult all of these plans prior to proceeding with any hazardous material or waste removal.

4.0 Insurance and Warranty Coverage

SJE is insured under the insurance policies listed in Table 2 below.

Table 2. Insurance Policies

INSURANCE			
Insurance Type	**Vendor**	**Description**	**Date of Policy**
Property & Business Interruption			
	Factory Mutual Insurance Company (FM Global)	Real & Personal Property, Earth Movement, Flood, Expediting Expense, Machinery Breakdown & Time Element	04/07/2021 – 04/07/2022
General Liability			
	Federal Insurance Company (Chubb)	Premises & Operations	04/07/2021 – 04/07/2022
Business Automobile			
	Federal Insurance Company (Chubb)	Liability, Physical Damage & Hired Car Physical Damage	04/07/2021 – 04/07/2022
Umbrella Liability			
	Federal Insurance Company (Chubb)	Bodily Injury, Property Damage, Personal Injury	04/07/2021 – 04/07/2022
Excess Liability			
	The Ohio Casualty Insurance Company (Liberty Mutual)	Bodily Injury, Property Damage, Personal Injury	04/07/2021 – 04/07/2022

Pollution Legal Liability			
	Allianz Underwriters Insurance Company	On-site cleanup costs, off-site cleanup costs, Third party bodily injury and property damage, and, Emergency Response Costs	05/20/2019 - 05/20/2022

5.0 Unexpected Temporary Closure

In the event the facility is closed temporarily and there are additional tasks to be performed or notifications beyond those items addressed in this plan, SJE will coordinate to ensure proper notification of other impacted parties are notified such as project neighbors and local governments.

5.1 Biological Resources

In the case of temporary closure, measures to protect biological resources would be needed only if there were a potential to disturb the ground surfaces or release harmful materials. If such an event occurs, SJE will consult with responsible agencies to plan clean up and mitigation of impacts to biological resources.

6.0 Permanent Closure

In the event the facility is closed permanently, there are additional tasks that need to be performed, including preparing a facility closure plan, notifying agencies, ensuring site security, removing hazardous materials and waste.

6.1 Facility Closure Plan

In order to ensure that the permanent closure does not create adverse impacts, a closure process will be undertaken by SJE that provides for careful consideration of available options, applicable laws, ordinances, regulations, standards, and local plans in existence at the time of closure. SJE will meet with the CEC and other agencies as necessary prior to the development of the closure plan to establish the elements of the plan. In accordance with CEC Conditions of Certification, the plan will include the following:

1. Identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment or other project related remnants that will remain at the site;

2. Identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;

3. Identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and

4. Address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure and applicable Conditions of Certification.

In the event of an unplanned permanent closure, the plan will be submitted to the CPM within 90 days following the CPM's determination that an unplanned temporary closure is likely to be permanent.

6.2 Agency Notification

Additional notification may be necessary in the event of a permanent closure, including re-notifying each of the agencies listed in Table 1. The Closure Plan will also be sent to those appropriate agencies with which SJE has a current permit.

6.3 Site Security

Prior to permanent closure, the Plant Manager or designee will notify the Tracy Fire Department and San Joaquin County Sheriff Department, giving the notice that the existing level of site surveillance will not be in effect. This will enable these agencies to respond appropriately in the event of a disturbance or fire. It may be necessary for SJE to provide site security for a period of time following permanent closure, the Plant Manager or designee will determine the need for such interim security and will address it in the Closure Plan, if necessary.

6.4 Removal of Hazardous Materials and Waste

As required by the CEC's Commission Decision, SJE is responsible for removing all hazardous materials from the site as part of permanent site closure. If SJE intends to redevelop the site, other plans may be made to either remove or store materials in different locations. The details of the removal will be covered in the Closure Plan.

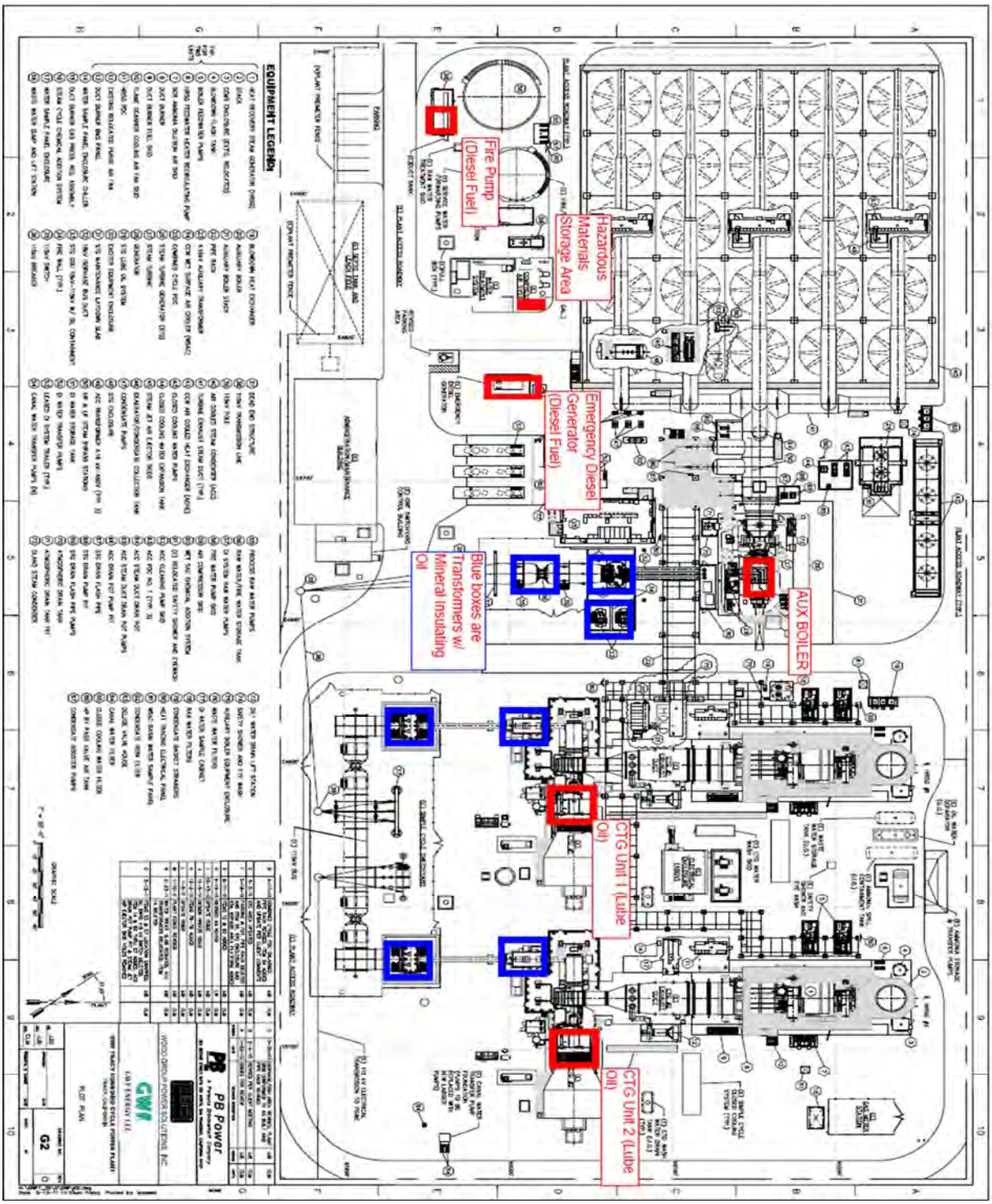
6.5 Biological, Cultural and Paleontological Resources

When a permanent Closure Plan is prepared, it will include the take avoidance and mitigation requirements in effect at the time for the species that would be impacted. The plan may also include reclamation of areas where facilities would be removed. This may include ripping of soil, contouring of disturbed areas, implementation of erosion control, revegetation, and other measures deemed appropriate at the time the Closure Plan is developed.

Biological resources compliance reporting for closure activities would likely include pre-activity survey reports, environmental monitoring reports during reclamation, and a final report describing the closure activities and any follow-on reclamation work that would be required.

The permanent Closure Plan will include a description regarding the potential of the closure activities to impact cultural and paleontological resources. The closure requirements are to be based upon the Cultural Resources and Paleontological Resources Final Report. If no activities are proposed that would potentially impact either of these resources, no mitigation measures will be required.

Figure 1: Map of Hazardous Materials and Petroleum Products at Tracy Combined Cycle Power Plant


Fire Pump (Diesel Fuel)
Hazardous Materials Storage Area
Emergency Diesel Generator (Diesel Fuel)
Blue boxes are Transformers w/ Mineral Insulating Oil
AUX BOILER
CTG Unit 1 (Lube Oil)
CTG Unit 2 (Lube Oil)

Attachment 1: List of Hazardous Materials and Petroleum Products at Tracy Combined Cycle Power Plant

Significant Material	Location	Secondary Containment	Maximum Daily Amounts	Application
Aqueous Ammonia	ammonia storage tank.	Concrete secondary containment surrounding the tank and equipment and underground spill containment tank.	9,000 gallons	CTG NOx control
Aqueous Ammonia	Boiler Chemistry tote feeding area	Concrete secondary containment	990 gallons	Boiler chemistry control.
Lubrication Oil	Oil reservoir tanks on Boiler Feed water pump #1 skid serving HRSG on CTG unit #1.	Steel skid with containment lip.	185 gallons	Lubricate rotating pump bearings and other rotating pump parts.
Lubrication Oil tank under	Oil reservoir tanks on Boiler Feed water pump #1 skid serving HRSG on CTG unit #1.	Steel skid with	185 gallons	Lubricate rotating pump bearings and other rotating pump parts.
Lubrication Oil tank under	Oil reservoir tanks on Boiler Feed water pump #2 skid serving HRSG on CTG unit #2.	containment lip.	185 gallons	Lubricate rotating pump bearings and other rotating pump parts.
Lubrication Oil tank under	Oil reservoir tanks on Boiler Feed water pump #1 skid serving HRSG on CTG unit #1.	Steel skid with containment lip.	185 gallons	Lubricate rotating pump bearings and other rotating pump parts.
Lubrication Oil tank under	belly tank under CTG Unit#1	system in metal enclosure with bermed perimeter.	3,300 gallons	Lubricate rotating equipment (e.g., gas turbine turbine bearings)
Lubrication Oil tank under	belly tank under CTG Unit#2	system in metal enclosure with bermed perimeter.	3,300 gallons	Lubricate rotating equipment (e.g., gas turbine bearings)
Lubrication Oil tank under	tank under STG	system in metal enclosure with bermed perimeter.	4,750 gallons	Lubricate rotating equipment (e.g., steam turbine bearings)
Diesel Fuel #2	Located in fire pump shed	Fire pump: Double-walled tank	500 gallons	fuel to power fire pump
Diesel Fuel #2	Located in and the belly tank of the emergency diesel generator	Generator: Single-walled steel tank within a formed concrete structure with a concrete pad	400 gallons	Fuel to power emergency diesel generator
Biocide Sodium hypochlorite (10%), sodium bromide(85%), sodium hydroxide(5%)	Closed loop cooling water system Porta feed staging area	Porta Feed Secondary containment	110 gallons	Biocide for closed loop cooling water system serving STG
TRAC 108 Sodium Nitrate	Closed loop cooling water system Porta feed staging area	Secondary containment for reservoir, pump and pipes	110 gallons	Corrosion inhibitor for closed loop cooling water system serving STG
Dilute Propylene Glycol (Antifreeze)	Closed loop water cooling system serving CTG #1	Secondary containment for reservoir, pump and pipes	751 gallons	To cool CTG #1 lubrication oil
Dilute Propylene Glycol (Antifreeze)	Closed loop water cooling system serving CTG #2	Secondary containment at circ pump skid, WSAC and Fin Fan AC	751 gallons	To cool CTG #2 lubrication oil

Significant Material	Location	Secondary Containment	Maximum Daily Amounts	Application
Calcium Hypochlorite	Water treatment shed	Secondary containment	100 pounds Solid material.	Water Treatment – Tablets diluted in water
ZOK (cleaning fluid)	Concentrated in water treatment shed	Secondary containment	110 gallons concentrated liquid in chemical storage shed.	Gas turbine compressor cleaning fluid
Transformer Oil/Mineral Insulating Oil – Diala Oil AXOil/Mineral	Switchyard south of CTG#1	Secondary containment	12,885 gallons	Cooling and electrical insulation in Electrical Transformer
Transformer Oil/Mineral Insulating Oil – Diala Oil AX	Switchyard south of CTG#2	Secondary containment	12,885 gallons	Cooling and electrical insulation in Electrical Transformer
Transformer Oil/Mineral Insulating Oil – Diala Oil AX	Area between HRSG #1 and HRSG #2	Secondary containment	572 gallons	Cooling and electrical insulation in Electrical Transformer
Transformer Oil/Mineral Insulating Oil – Diala Oil AX	Area between HRSG #1 and HRSG #2	Secondary containment	572 gallons	Cooling and electrical insulation in Electrical Transformer
Transformer Oil/Mineral Insulating Oil – Diala Oil AX	South of STG	Secondary containment	9,847 gallons	Cooling and electrical insulation in Electrical Transformer
Transformer Oil/Mineral Insulating Oil – Diala Oil AX	Southeast of STG	Secondary containment	1,139 gallons	Cooling and electrical insulation in Electrical Transformer
Used Oil	Water treatment shed.	Drums are stored on self-contained pallets for transport to other locations.	100 gallons	Waste
Waste Oil and Oily Debris	Water treatment shed	Drums are stored on self-contained pallets for transport to other locations.	500 pounds	Waste
Coagulant	Water Treatment Area	Secondary containment	110 gallons	Coagulant for clarifier
Flocculent	Water Treatment Area	Secondary containment	110 gallons	Flocculent for Clarifier
Argon, Compressed	CEMS Shack Unit 1	Secondary containment	250 Pounds	Welding gas
Oxygen, Compressed	CEMS Shack Unit 1	Secondary containment	250 Pounds	Welding Gas
Calcium hypochlorite	Potable water Treatment Skid	Secondary containment for reservoir, pump and pipes	100 Pounds	Biocide for potable Water System
Oxalic Acid, Dihydrate 99.6%	Hazardous Materials Storage Area	Secondary containment	400 pounds	Chemical cleaning of Ultrafiltration unit membranes
Monoethanolamine	Boiler Chemistry tote feeding area	Secondary containment for reservoir, pump and pipes	990 gallons	Control of Steam Boiler chemistry

Appendix D

Complaints, Notices of Violation, Official Warnings, and Citations

MRP San Joaquin Energy, LLC

September 13, 2021

San Joaquin Valley Air Pollution Control District
Ms. Lisa Middleton
Air Compliance Source Test Division
4800 Enterprise Way
Modesto, CA 95356
Phone No.: (209) 557-6400

Subject: Title V Deviation Follow-up Report
MRP San Joaquin Energy, LLC – Tracy Combined Cycle Power Plant
Facility ID N-4597

Dear Ms. Middleton:

In accordance with Condition 2 of Facility Wide Requirements of the Title V Permit for Facility ID N-4597, please find enclosed the Title V Deviation Follow-up Report. This deviation was first discovered on September 2, 2021 and promptly reported to the district upon discovery.

Please call Taylor Leach at (209) 275-7079 or e-mail (Taylor.Leach@naes.com) if you require additional information or if you have any questions regarding this report.

Respectfully,

Claude Couvillion
Vice President of Operation
MRP San Joaquin Energy, LLC

CC: Mr. Matt Salazar
Air and TRI Enforcement Office
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Anwar Ali
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

BREAKDOWN / TITLE V - DEVIATION REPORTING FORM

Check the appropriate box if using this form to submit/report a:

☐ Breakdown Notification (must be reported within 1 hour)

☒ Title V Deviation

☐ Breakdown Follow-up Report

☐ Title V Deviation/Breakdown Follow-up Report

This form can be used to file the initial report of an equipment breakdown, and as the follow-up report for both a breakdown and/or deviation from a Federal Title V permit condition. The required reports must be submitted to the nearest District regional office as follows:

- Breakdown follow-up reports no later than 10 days after returning to compliance
- Deviation reports no later than 10 days after discovery

Company Name: MRP San Joaquin Energy, LLC - Tracy Combined Cycle Power Plant Facility ID: **N-4597**

Breakdown - Initial Notification:

Reported by: NA Date: NA

Reported to: NA Time: NA

BREAKDOWN / DEVIATION INFORMATION

1.	Permit unit and condition number(s): N-4597-0-4 Condition #5; N-4597-1-11 Condition #11
2.	Equipment involved: Turbine Generator 1
3.	Location of operation: 14950 W Schulte Rd, Tracy, CA 95377
4.	Description of permit condition: N-4597-0-4 Condition #5: The permittee must comply with all conditions of the permit… N-4597-1-11 Condition #11: Emissiosn rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits:… VOC (as methane) – 1.13 lb/hr and 1.5ppmvd @ 15% O2…

5. Date, time, and duration of breakdown/deviation:

Start of Deviation: 8/6/2021, 0800 PST (date/time corresponding to the end of the first run of the source test with duct burners off)

End of Deviation: Pending. Deviation period will end upon completion of a successful retest, or upon agency approval to discard the result of the first test run due to invalid/erroneous data, in which case no deviation has occurred. See below.

6. Description of breakdown/deviation (include excess and visible emissions, if applicable):

The annual VOC source test performed on 8/6/2021 failed to demonstrate compliance. The first run was an extreme outlier at 324.5 ppm @ 15% O2, while the following runs were well below the limit at 0.2 (second run) and 0.1 (third run) ppm @ 15% O2, which drove the three-run average to 108.9 ppm @ 15% O2. This exceeded the permitted limit of 1.5 ppm @ 15% O2.

The test also did not demonstrate compliance with the lb/hr limit. The first run was an extreme outlier at 382.77 lb/hr, while the following runs were well below the limit at 0.20 (second run) and 0.18 (third run) lb/hr, which drove the three-run average to 127.7 lb/hr. This exceeded the permitted limit of 1.13 lb/hr. Here is a table from the source test report demonstrating the extreme differences between run 1 and runs 2 and 3 in another format.

Run Number	1-1-DB OFF	2-1-DB OFF	3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	–
Time	0730-0800	0809-0839	0848-0918	–
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	330.0*	0.2	0.2	0.2
ppmvd @ 15% O_2	324.5*	0.2	0.1	0.2
lb/hr	382.77*	0.20	0.18	0.19
lb/day	9186.6*	4.8	4.2	4.5
lb/MMBtu	0.414*	< 0.001	< 0.001	< 0.001

Note: * This result was deleted from calculation of the average result. See section 4.1 for a description of the apparent contamination of this sample.

7. Date and time when breakdown/deviation was discovered:

09/2/2021 at 11:48 am PDT when a phone call was received from the source test company.

8. Date and time compliance was achieved:

Pending agency concurrence that the cause of the high VOCs measured in the first run sample was due to contamination of the sample, and not due to the performance of the gas turbine emission control systems. San Joaquin Energy (SJE) believes the results are erroneous and requests approval to eliminate the first run result from the source test average calculation to demonstrate compliance with the limit, or to invalidate the test all together. If the agency concurs, a deviation has not occurred. Otherwise, SJE believes a valid retest is warranted to demonstrate ongoing compliance with the VOC limits,

avoiding a deviation. SJE proactively performed a retest on 9/10/2021 and is awaiting results from the source test company.

9. Probable cause of breakdown/deviation:

Montrose (the source testing company) stated that they used the sampling canisters and tubing straight out of the sample bag in succession provided by the analytical laboratory. Enthalpy Analytical lab Managers stated that the canisters are batch cleaned and certified. There is no way to prove this statement. The lab also reviewed the usage history of the canister, and the previous sample did not have the same identified erroneous contaminants.

When Montrose reviewed the results from lab analysis, it was discovered that Unit 1, Run1, DB-OFF, had a result of 330 ppm VOC. The lab explained that there were very high peaks for non-target analytes. See attached GC results (Attachment 1). Therefore, further analysis was conducted to pinpoint the cause for the erroneous results. See attached analysis (Attachment 2). It was discovered that the cause for the erroneous result was contamination of the sample from Propanol and/or Oxalic Acid/Formic Acid which is not expected to be found in NG turbine exhaust. See attached analysis and statements (Attachment 1, 2, 3).

SJE was notified of the contaminated sample on 9/2/2021, and Montrose explained that the probe tip was contaminated with a cleaning product such as hand sanitizer and that the contamination was obvious. See attached statement (Attachment 4).

SJE believes the results are erroneous and should be discarded for the following reasons:

- Speciation testing was conducted on the sample from the erroneous first test run, which showed obvious contamination from a cleaning product. Since the certified source test company identified a source of contamination, they eliminated the run from the test average in the final, certified test report.
- The three test runs were conducted in succession with less than 10 minutes apart. There was no change in the operation of the turbine across all three runs. Relevant tables from the Source Test Report are included in Attachment 5. Summary tables for testing conducted on both Unit 1 and 2 are included to illustrate the consistency in emissions measurements throughout the test, except for the VOC results for Run 1 on Unit 1 with Duct Burners Off (Table 4-4).
- The only emission control equipment regulating VOC on the turbine exhaust is the oxidation catalyst, which has no moving parts and was replaced in November 2018.
- The SJVAPCD combined cycle conversion engineering evaluation (N-1113502) states that the maximum daily VOC potential to emit with the DB off is 1.5 ppm @ 15% O2 and 1.13 lbs/hr. The catalyst manufacturer guarantees a control efficiency of 93.5%. Pre-controlled emissions assuming a 93.5% control efficiency is 17 lbs/hour, which is far less than the 382.77 test result for Run 1. This is one data source to support the fact that it is not possible to emit 382.77 lbs/hour VOC with even a partially functioning catalyst in place.
- There have been no emissions exceedances before or after the erroneous result that occurred on 8/6/2021, indicating that the oxidation catalyst is operating properly.
- The oxidation catalyst is a control system for CO and VOC. If there was a performance issue with the oxidation catalyst to cause VOC emissions to fluctuate to 330 ppm, the results for CO would also fluctuate. CO is more likely to be show issues with the control system than VOC. CO concentrations remained stable throughout the entire test.

10. Measures taken to correct this occurrence and prevent recurrence:

Measures taken to correct and prevent this occurrence are undetermined at this point since the cause of higher emissions during Run 1 was not within SJE's control. As stated in Section 9, the source test company eliminated the results of Run 1 from the test average based on a known source of contamination on their part. SJE also believes the result from Run 1 of the source test is erroneous. SJE is requesting approval from the SJVAPCD to use the average from the second two runs of the source test to demonstrate compliance with the emission limits, or to concur that the test is inconclusive.

SJE performed a VOC retest on Unit 1, DB-OFF on 9/9/2021, to prevent an extended period of excess emissions if a violation is assessed. Results will be provided as soon as the source test company issues a certified test report.

- Attach photographs of defective equipment.
- Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction; Rule 1100 – *Equipment Breakdown* assigns the burden of proof to the source owner/operator seeking relief.

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and addresses all deviations that resulted from this event:

Signature of Responsible Official *(Responsible Official only required for Title V Permit Holders)*	9/13/2021 Date
Claude Couvillion Name of Responsible Official	312.766.8716 Telephone
Vice President of Operations Title of Responsible Official	jcouvillion@mrpgenco.com Email

Attachment 1

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321017.D
Acq On : 24 Aug 2021 10:36 am
Operator : GSG
Sample : 449053-009,272666,26x,PDF:1
Misc : I1 IS:S15707, 1.3x20mL
ALS Vial : 8 Sample Multiplier: 26

1-VOC-1-DB OFF

Quant Time: Aug 24 15:45:43 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	35.610	14059925	10.864 ppbv
Spiked Amount	10.000		Recovery =	108.64%
2) S	Bromochloromethane	23.853	2207602	10.237 ppbv
3) S	1,4-Difluorobenzene	27.363	17387743	12.811 ppbv
4) S	Chlorobenzene-d5	33.627	13320674	9.945 ppbv
	Target Compounds			
5) T	Propane	8.250f	1411137	176.379 ppbC
6) H	Total TNMNEHC	26.650	2171382791	330183.762 ppbC

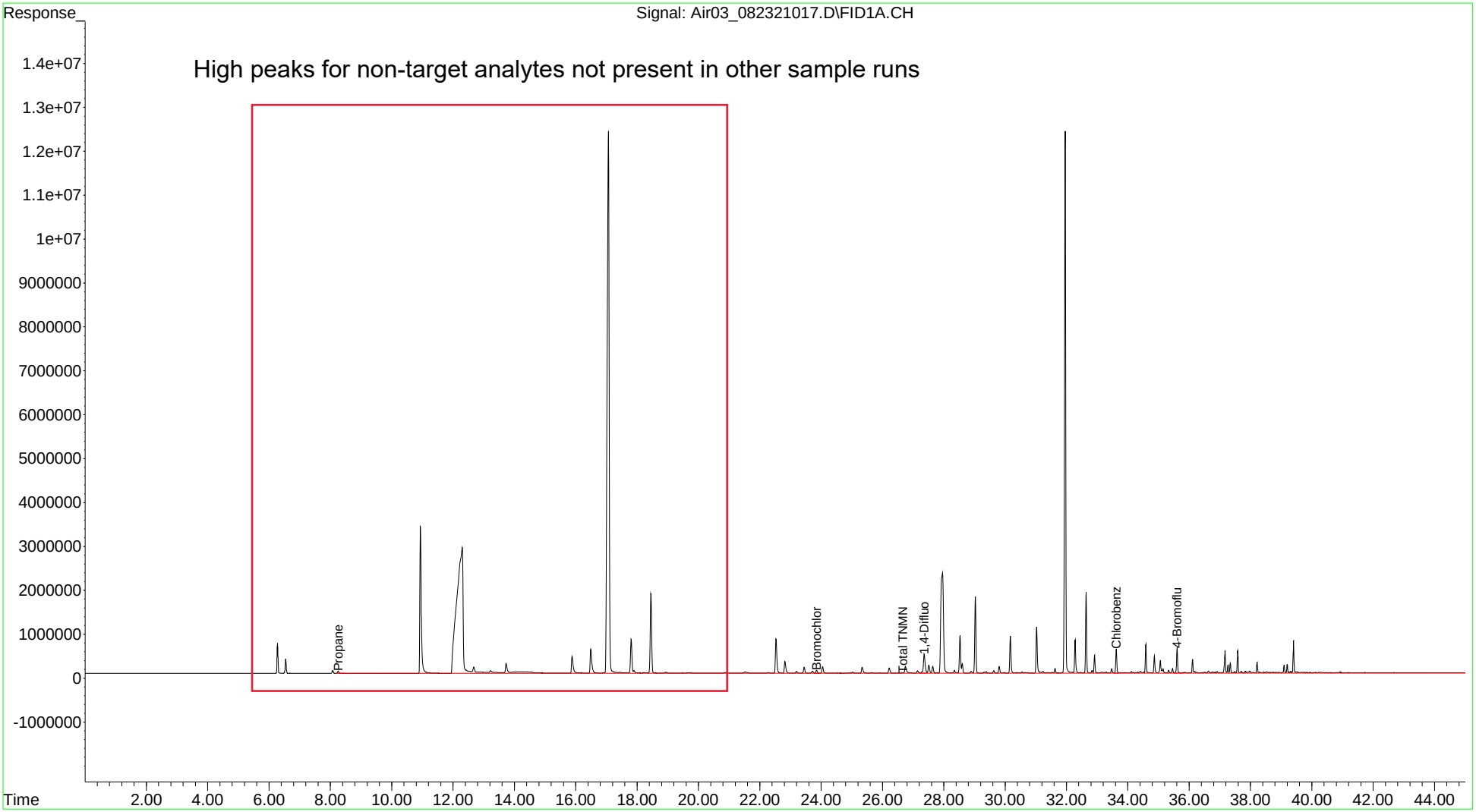
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321017.D
Acq On : 24 Aug 2021 10:36 am
Operator : GSG
Sample : 449053-009,272666,26x,PDF:1
Misc : I1 IS:S15707, 1.3x20mL
ALS Vial : 8 Sample Multiplier: 26

1-VOC-1-DB OFF

Quant Time: Aug 24 15:45:43 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321016.D
Acq On : 24 Aug 2021 9:43 am
Operator : GSG
Sample : 449053-010,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 9 Sample Multiplier: 1.2

2-VOC-1-DB OFF

Quant Time: Aug 24 15:45:10 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	35.610	14409152	11.134	ppbv
Spiked Amount	10.000		Recovery =	111.34%	
2) S	Bromochloromethane	23.830	2570998	11.922	ppbv
3) S	1,4-Difluorobenzene	27.347	15395611	11.344	ppbv
4) S	Chlorobenzene-d5	33.625	15038856	11.227	ppbv
	Target Compounds				
5) T	Propane	0.000	0	N.D.	ppbC
6) H	Total TNMNEHC	26.650	24777682	172.151	ppbC

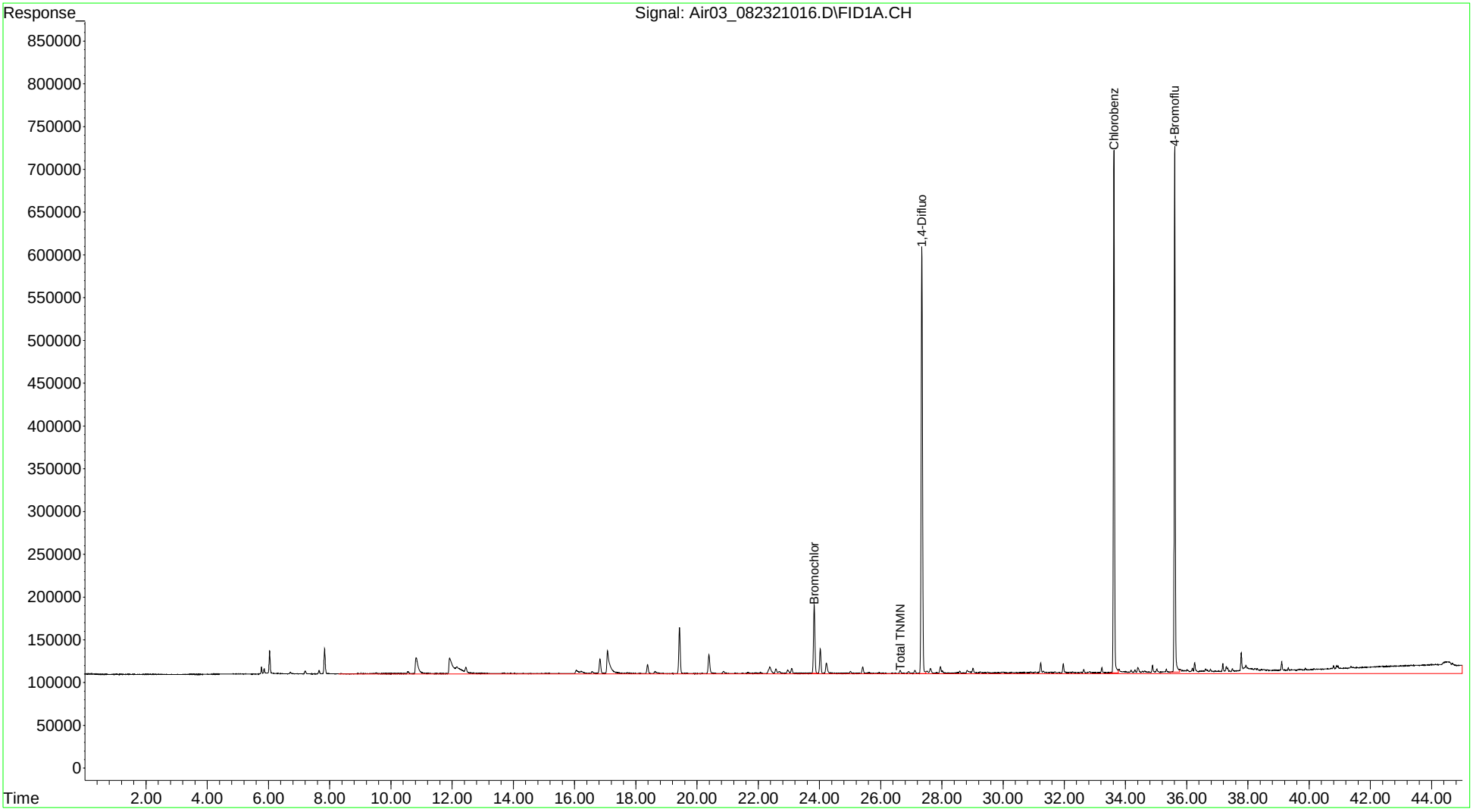
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321016.D
Acq On : 24 Aug 2021 9:43 am
Operator : GSG
Sample : 449053-010,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 9 Sample Multiplier: 1.2

2-VOC-1-DB OFF

Quant Time: Aug 24 15:45:10 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321012.D
Acq On : 23 Aug 2021 10:10 pm
Operator : GSG
Sample : 449053-011,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 10 Sample Multiplier: 1.2

3-VOC-1-DB OFF

Quant Time: Aug 24 15:43:35 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

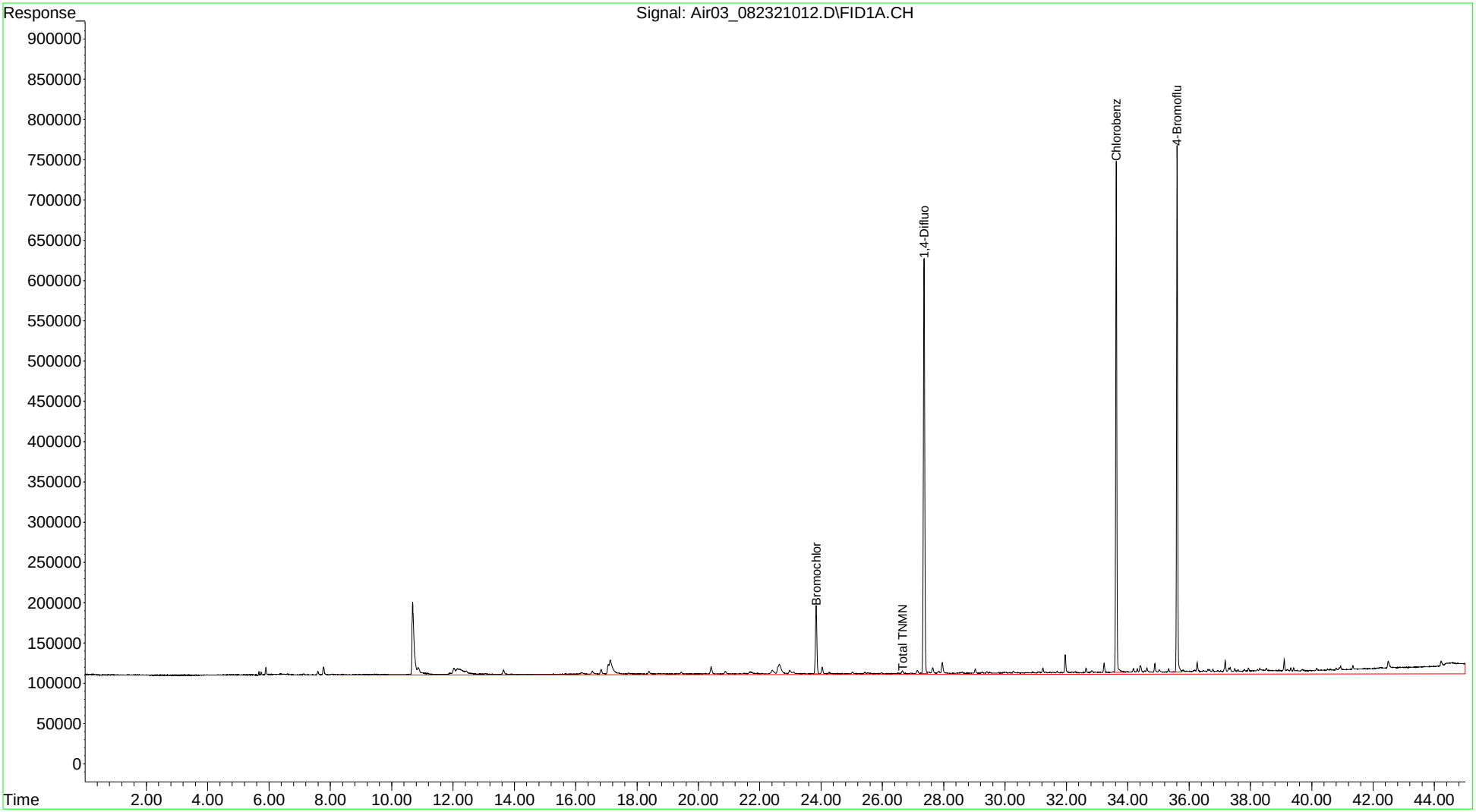
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	35.610	15102420	11.670	ppbv
Spiked Amount	10.000		Recovery =	116.70%	
2) S	Bromochloromethane	23.839	2777563	12.879	ppbv
3) S	1,4-Difluorobenzene	27.358	16064430	11.836	ppbv
4) S	Chlorobenzene-d5	33.627	15579243	11.631	ppbv
	Target Compounds				
5) T	Propane	0.000	0	N.D.	ppbC
6) H	Total TNMNEHC	26.650	21124977	146.513	ppbC

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321012.D
Acq On : 23 Aug 2021 10:10 pm
Operator : GSG
Sample : 449053-011,272666,1.2x,PDF:1 3-VOC-1-DB OFF
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 10 Sample Multiplier: 1.2

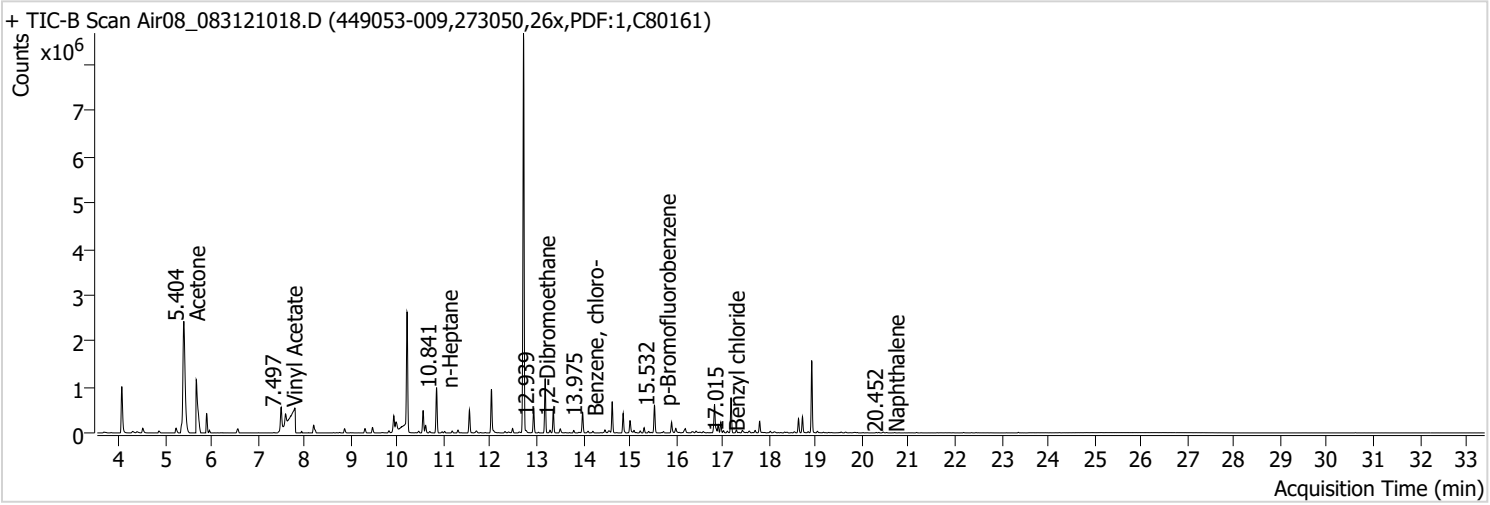
Quant Time: Aug 24 15:43:35 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Attachment 2

Quantitation Results Report (Not Reviewed)

Data File	Air08_083121018.D	Operator	GSG
Acq. Method	TO15_Acq_111920	Acq. Date-Time	8/31/2021 11:03:03 PM
Sample Name	449053-009,273050,26x,PDF:1,C80161	Instrument	Air-MS-08
Vial	8	Multiplier	1.00
DA Method File	TO15_081321.m	Comment	1.3x10mL
Tune File	bfb.u	Tune Date	5/29/2021 9:21:42 AM
Batch Name	2021 Aug 31 1607 TO15_081321.m.batch.bin	Last Calib Update	8/16/2021 12:11:02 PM
Ref Library			



Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
M Bromochloromethane	8.198	130.0	76735	10.0000	nL/L	#	-0.004
M 1,4-Difluorobenzene	9.924	114.0	246615	10.0000	nL/L		-0.004
M Chlorobenzene-d5	13.980	82.0	140697	10.0000	nL/L	#	-0.005
System Monitoring Compounds							
S p-Bromofluorobenzene	15.532	174.0	202743	10.3048	nL/L		0.000
Spiked Amount: 10.000	Range: 60.0 - 140.0%			Recovery = 103.05%			
Target Compounds							QValue
T Propylene	3.685	41.0	11282	3.4259	nL/L	#	85
T Freon 12	0.000		0	N.D.			
T Chloromethane	3.970	50.0	478	0.1032	nL/L		50
T Freon 114	0.000		0	N.D.			
T Vinyl Chloride	0.000		0	N.D.			
T 1,3-Butadiene	4.319	54.0	1178	0.3076	nL/L	#	1
T Butane	4.391	43.0	32801	5.2842	nL/L	#	80
T Bromomethane	0.000		0	N.D.			
T Chloroethane	4.808	64.0	365	0.1112	nL/L	#	50
T Ethanol	4.865	45.0	96984	81.3725	nL/L		97
T Vinyl bromide	0.000		0	N.D.			
T Acrolein	5.236	56.0	134293	75.1199	nL/L		100
T Acetone	5.404	58.0	4516772	1698.6237	nL/L	#	58
T Isopropanol (IPA)	5.691	45.0	1508409	223.4251	nL/L	#	58
T Trichloromonofluoromethane	0.000		0	N.D.			
T n-Pentane	5.892	43.0	478498	62.6461	nL/L	#	88
T Tert-butyl alcohol (TBA)	6.139	59.0	6296	0.5417	nL/L		61
T 1,1-Dichloroethene	6.150	61.0	371	0.0316	nL/L		36
T Methylene Chloride	6.272	51.0	484	0.2120	nL/L	#	35
T 3-Chloropropene	6.564	76.0	1133	0.4101	nL/L	#	1
T Freon 113	0.000		0	N.D.			
T Carbon Disulfide	6.564	76.0	1133	0.0607	nL/L		57

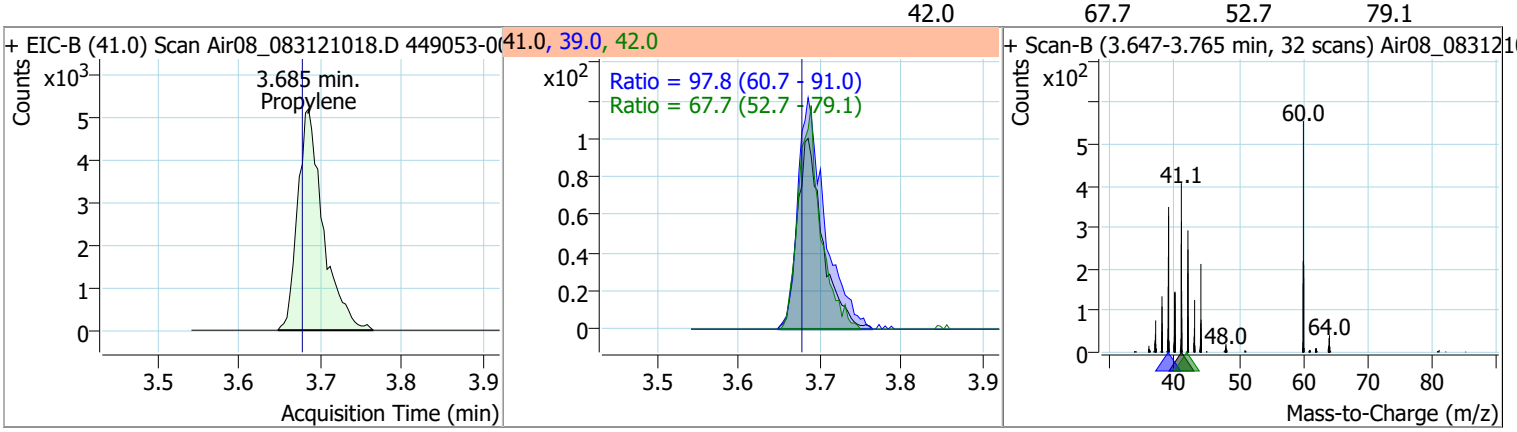
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
T trans-1,2-Dichloroethene	0.000		0	N.D.			
T 1,1-Dichloroethane	0.000		0	N.D.			
T MTBE	7.493	73.0	7184	0.3677	nL/L	#	1
T Vinyl Acetate	7.497	43.0	187628	16.9588	nL/L		78
T 2-Butanone	7.591	72.0	74225	27.2190	nL/L	#	1
T cis-1,2-Dichloroethene	8.088	61.0	142	0.0147	nL/L	#	30
T Ethyl Acetate	8.088	61.0	142	0.0825	nL/L		1
T n-Hexane	8.229	57.1	33749	3.5281	nL/L	#	80
T Chloroform	8.088	83.0	1023	0.0595	nL/L		26
T Tetrahydrofuran	8.687	72.0	2194	0.7904	nL/L		88
T 1,2-Dichloroethane	0.000		0	N.D.			
T 1,1,1-Trichloroethane	0.000		0	N.D.			
T Benzene	9.662	78.0	3044	0.1517	nL/L	#	86
T Carbon Tetrachloride	0.000		0	N.D.			
T Cyclohexane	9.912	84.0	13761	1.4879	nL/L	#	1
T 1,2-Dichloropropane	10.546	63.0	2246	0.3598	nL/L	#	22
T Methane, bromodichloro-	10.553	83.0	10073	0.6582	nL/L	#	27
T 1,4-Dioxane	0.000		0	N.D.			
T Trichloroethene	10.591	132.0	177	0.0170	nL/L	#	1
T TPH Gasoline (C3 to C12)	9.992	0.0	57213705	21.0498	nL/L		94
T 2,2,4-Trimethylpentane	10.553	56.0	145182	16.4093	nL/L	#	1
T Methyl methacrylate	10.694	69.0	3140	0.5395	nL/L	#	1
T n-Heptane	10.841	71.0	235712	38.0308	nL/L		87
T cis-1,3-Dichloropropene	0.000		0	N.D.			
T 4-Methyl-2-Pentanone	11.346	58.0	3107	0.6732	nL/L	#	36
T trans-1,3-Dichloropropene	0.000		0	N.D.			
T 1,1,2-Trichloroethane	12.074	97.0	105	0.0123	nL/L	#	1
T Toluene	12.313	91.0	16653	0.6622	nL/L		99
T 2-Hexanone	12.476	58.0	33479	5.8824	nL/L	#	79
T Dibromochloromethane	0.000		0	N.D.			
T 1,2-Dibromoethane	12.939	108.9	285	0.0209	nL/L	#	1
T Tetrachloroethene	13.382	166.0	326	0.0201	nL/L	#	79
T 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
T Benzene, chloro-	13.975	112.0	144	0.0061	nL/L	#	1
T Ethylbenzene	14.383	91.0	6545	0.1819	nL/L		97
T m,p-Xylenes	14.544	91.0	32931	1.1099	nL/L		96
T Bromoform	0.000		0	N.D.			
T Styrene	14.931	104.0	364	0.0175	nL/L	#	1
T 1,1,2,2-Tetrachloroethane	15.001	83.0	14381	0.7329	nL/L	#	49
T o-Xylene	15.049	91.0	11638	0.3658	nL/L		97
T n-Nonane	15.221	85.0	6763	1.0666	nL/L	#	84
T Isopropylbenzene	15.672	105.0	1975	0.0423	nL/L	#	79
T 2-Chlorotoluene	16.016	126.0	705	0.0599	nL/L		100
T n-Propylbenzene	16.247	91.0	5001	0.0589	nL/L	#	1
T 4-Ethyltoluene	16.413	105.1	5751	0.1304	nL/L	#	89
T 1,3,5-Trimethylbenzene	16.504	105.0	6467	0.1612	nL/L		94
T 1,2,4-Trimethylbenzene	17.015	105.1	25193	0.6378	nL/L		96
T Benzyl chloride	17.015	91.0	2821	0.0906	nL/L		56
T 1,3-Dichlorobenzene	0.000		0	N.D.			
T 1,4-Dichlorobenzene	0.000		0	N.D.			
T 1,2-Dichlorobenzene	17.761	146.0	69	0.0024	nL/L	#	1
T 1,2,4-Trichlorobenzene	20.275	180.0	432	0.0223	nL/L	#	77
T Naphthalene	20.452	128.0	7829	0.2221	nL/L	#	94
T 1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	21.011	225.0	142	0.0053	nL/L	#	72

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

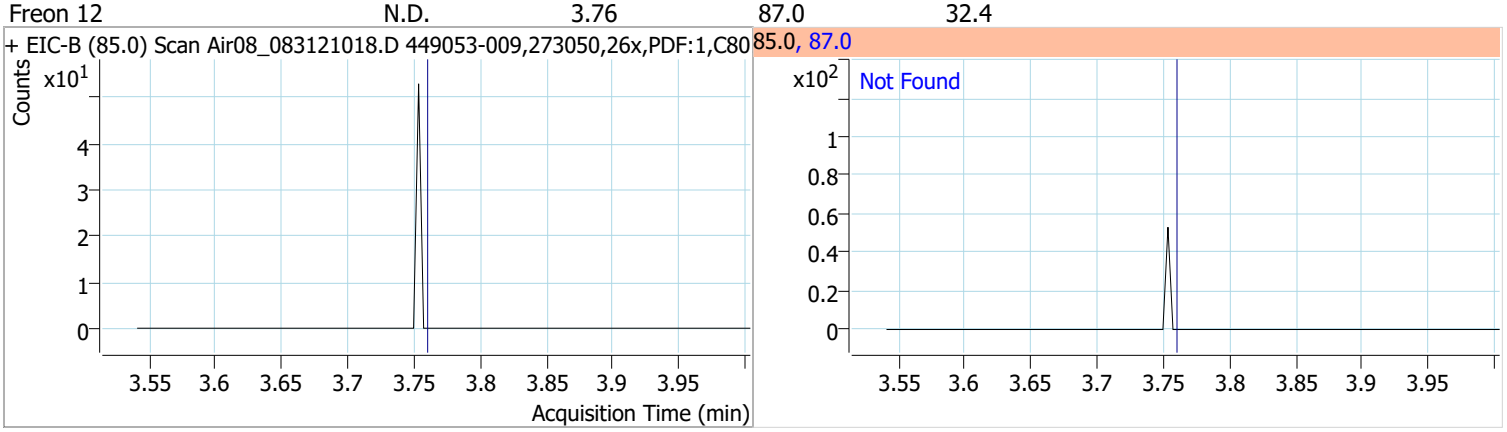
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitation Results Report (Not Reviewed)

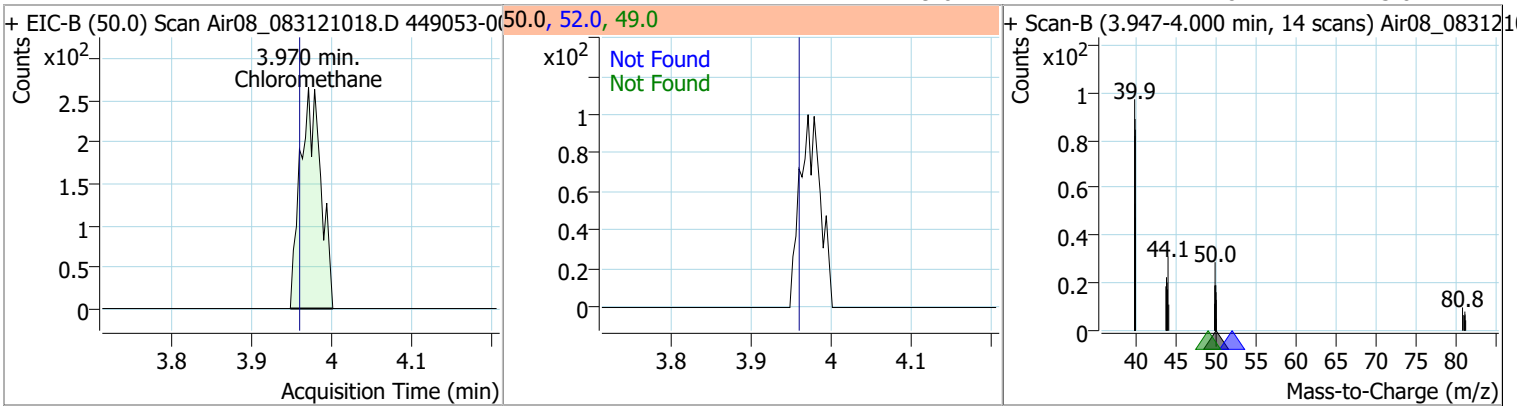
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Propylene	3.4259	3.69	0.01	11282	39.0	97.8	60.7	91.0
					42.0	67.7	52.7	79.1



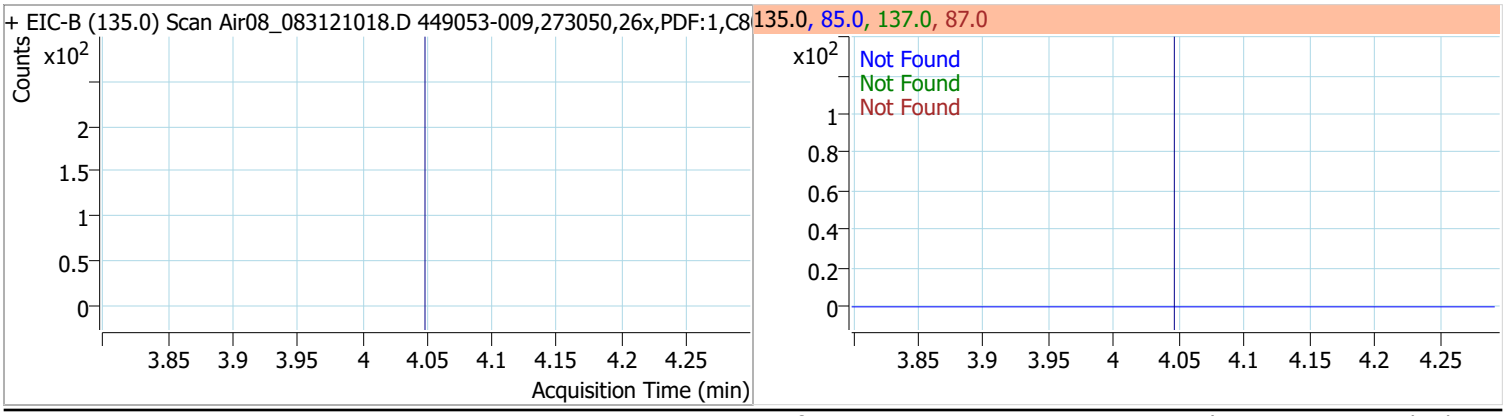
Compound	Conc.	Exp RT	QIon	Exp Ratio
Freon 12	N.D.	3.76	87.0	32.4



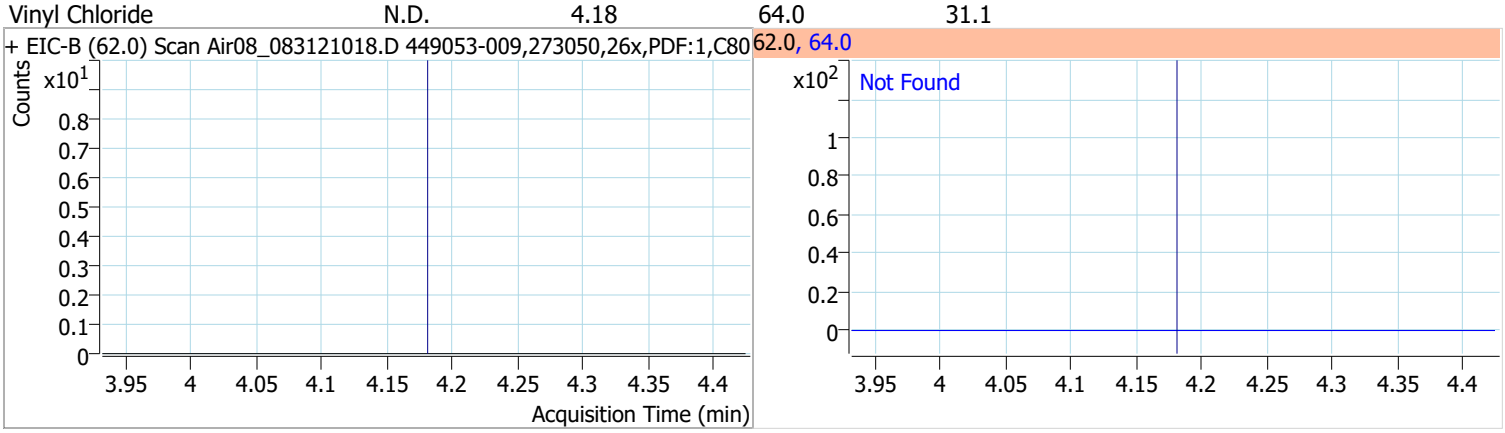
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloromethane	0.1032	3.97	0.01	478	52.0		25.9	38.8
					49.0		8.7	13.0



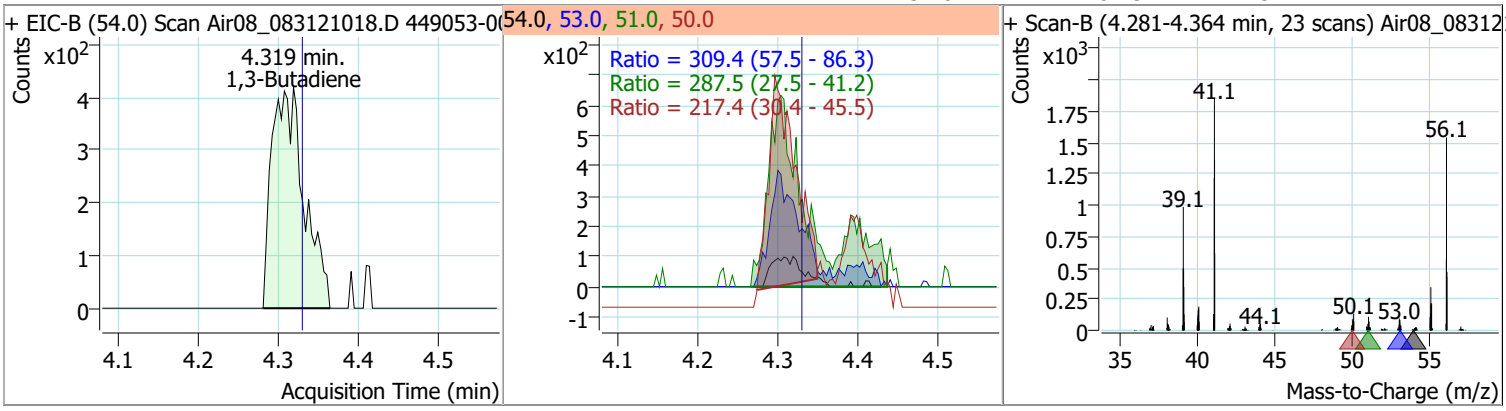
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Freon 114	N.D.	4.05	85.0	154.7	87.0	50.2	137.0	32.3



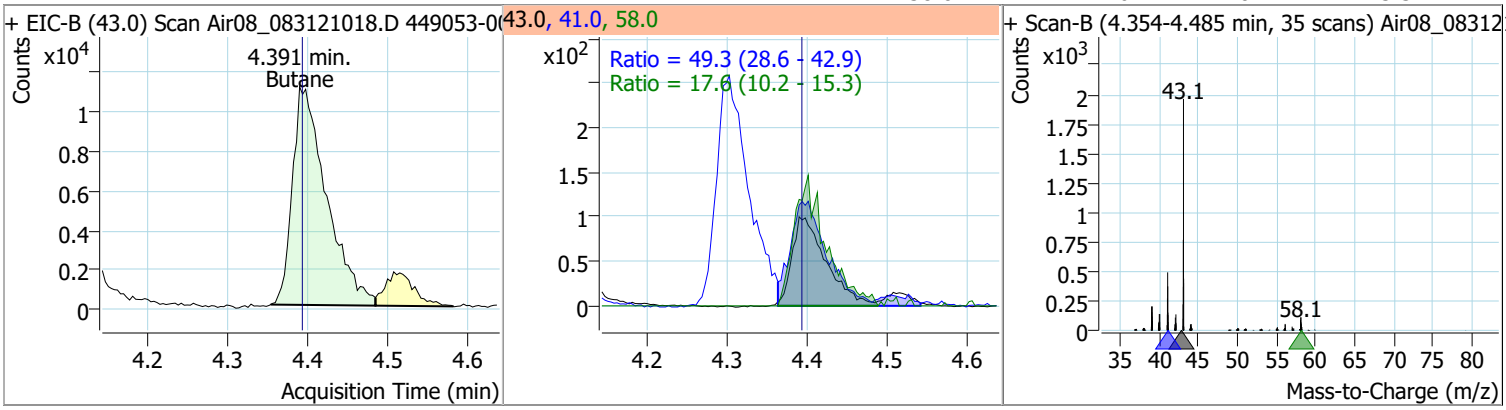
Compound	Conc.	Exp RT	QIon	Exp Ratio
Vinyl Chloride	N.D.	4.18	64.0	31.1



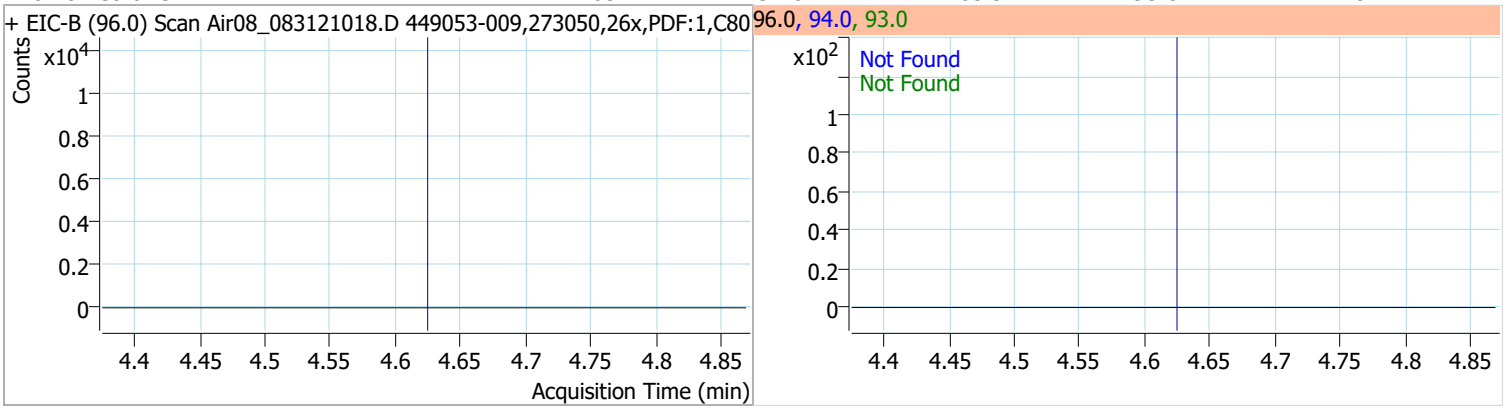
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3-Butadiene	0.3076	4.32	-0.01	1178	53.0	309.4	57.5	86.3
					50.0	217.4	30.4	45.5
					51.0	287.5	27.5	41.2



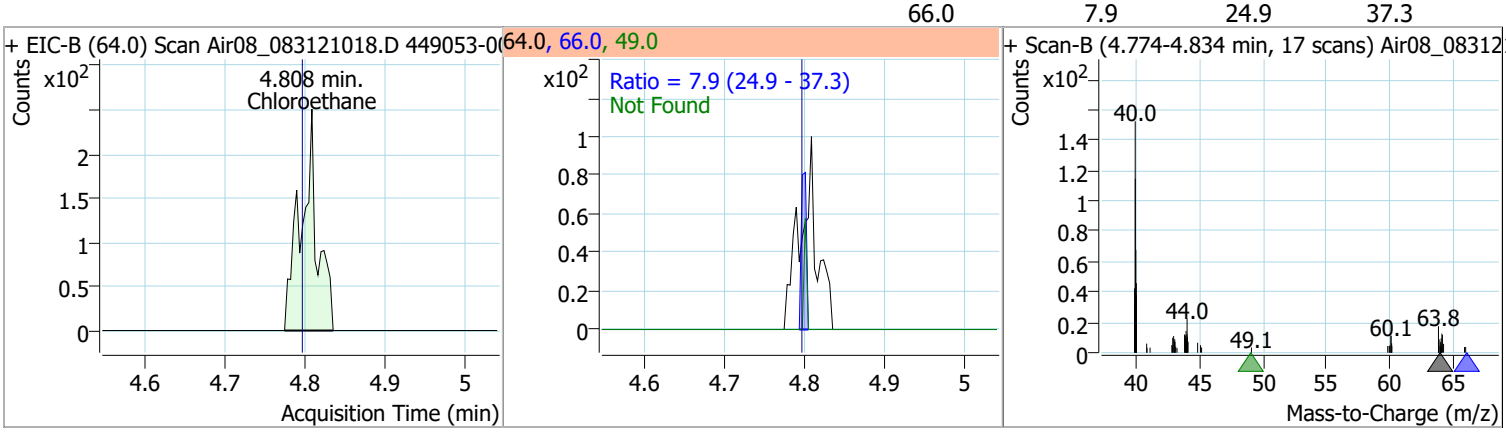
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Butane	5.2842	4.39	0.00	32801	41.0	49.3	28.6	42.9
					58.0	17.6	10.2	15.3



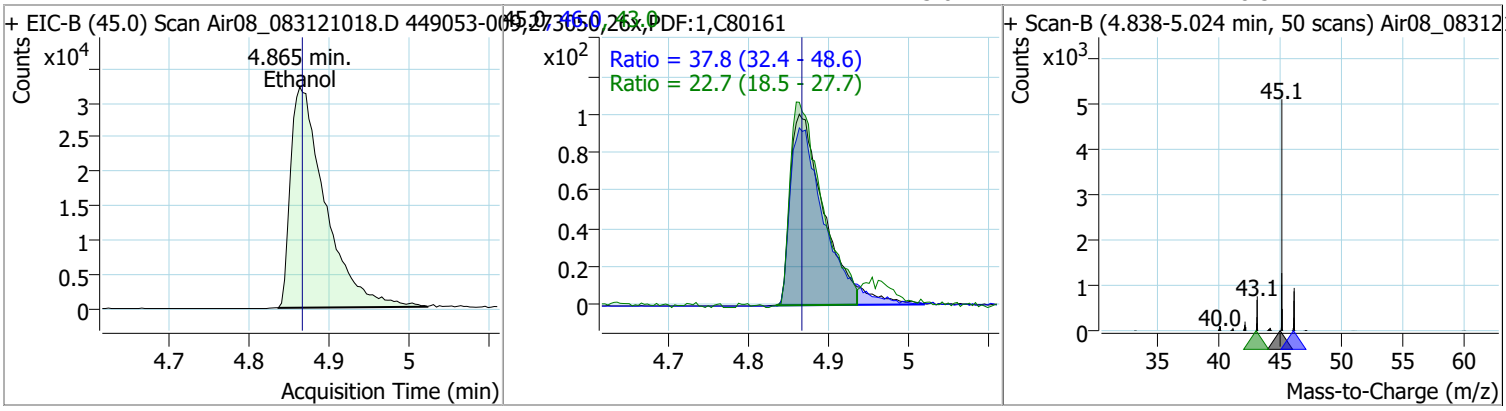
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
Bromomethane	N.D.	4.63	94.0	105.9	93.0	22.0



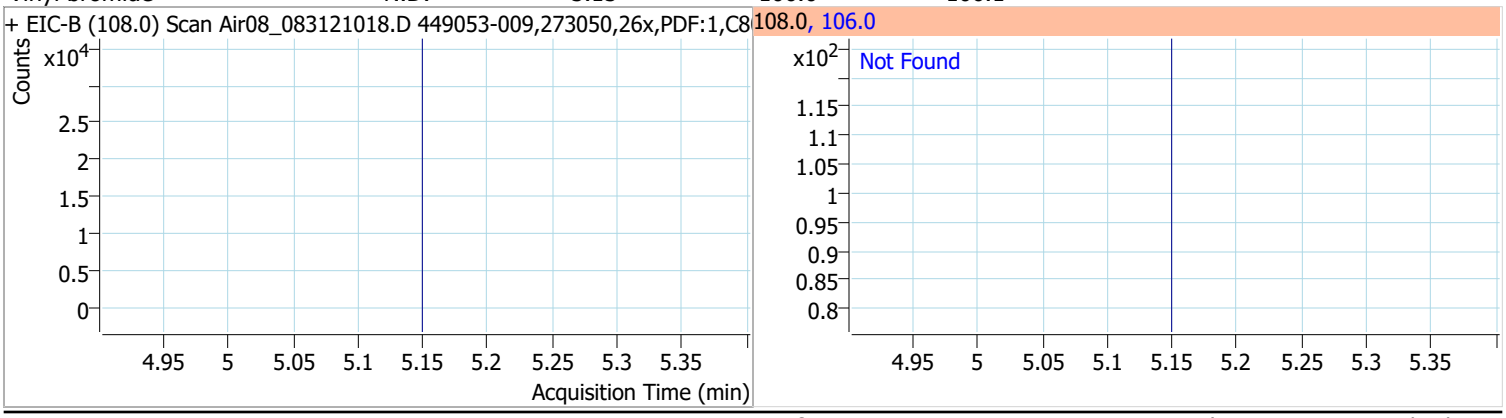
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloroethane	0.1112	4.81	0.01	365	49.0		25.1	37.7
					66.0	7.9	24.9	37.3



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethanol	81.3725	4.86	0.00	96984	46.0	37.8	32.4	48.6
					43.0	22.7	18.5	27.7

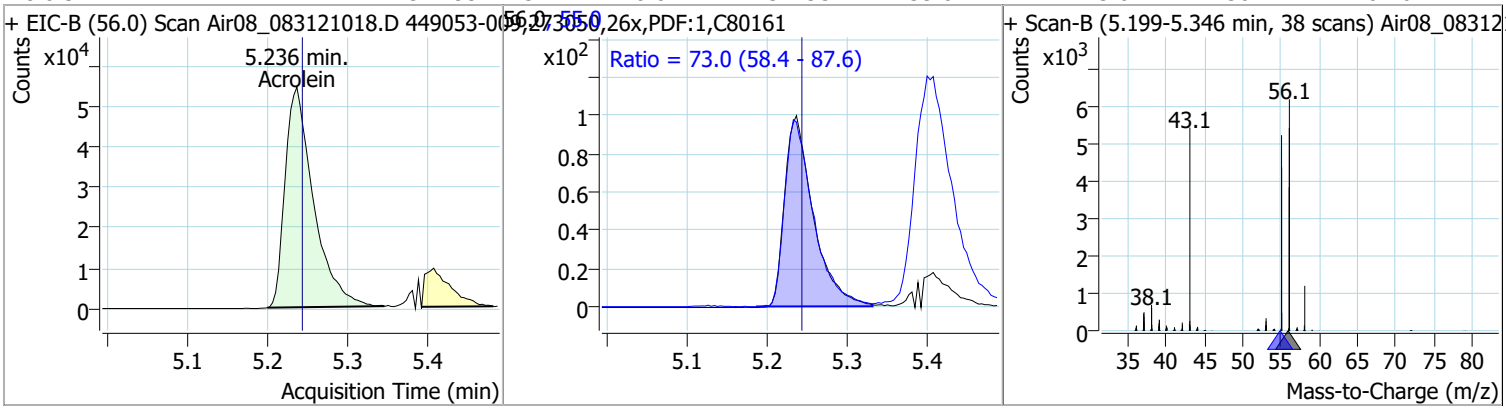


Compound	Conc.	Exp RT	QIon	Exp Ratio
Vinyl bromide	N.D.	5.15	106.0	106.1

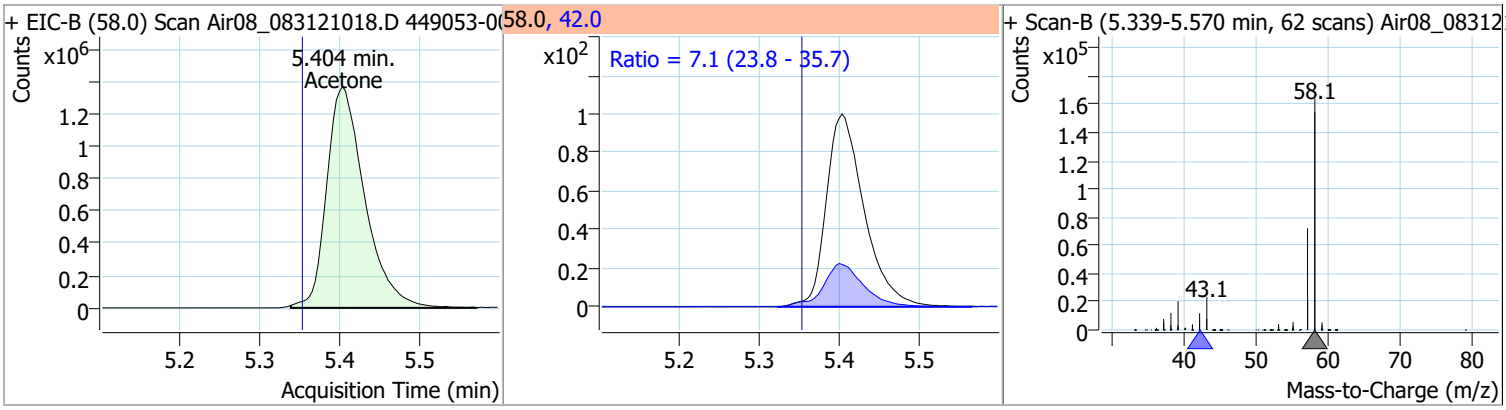


Quantitation Results Report (Not Reviewed)

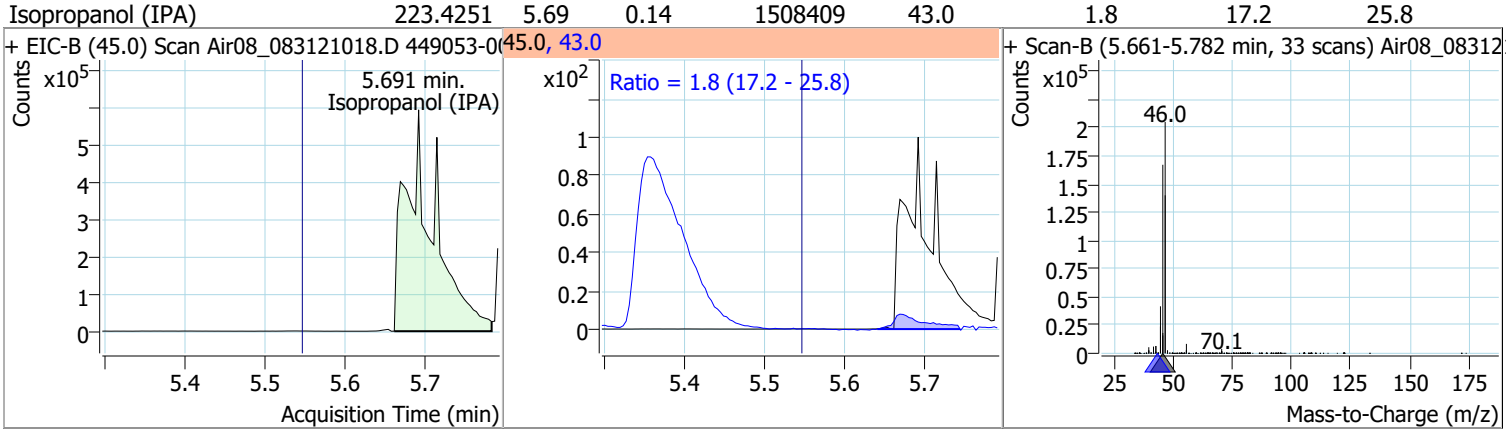
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Acrolein	75.1199	5.24	-0.01	134293	55.0	73.0	58.4	87.6



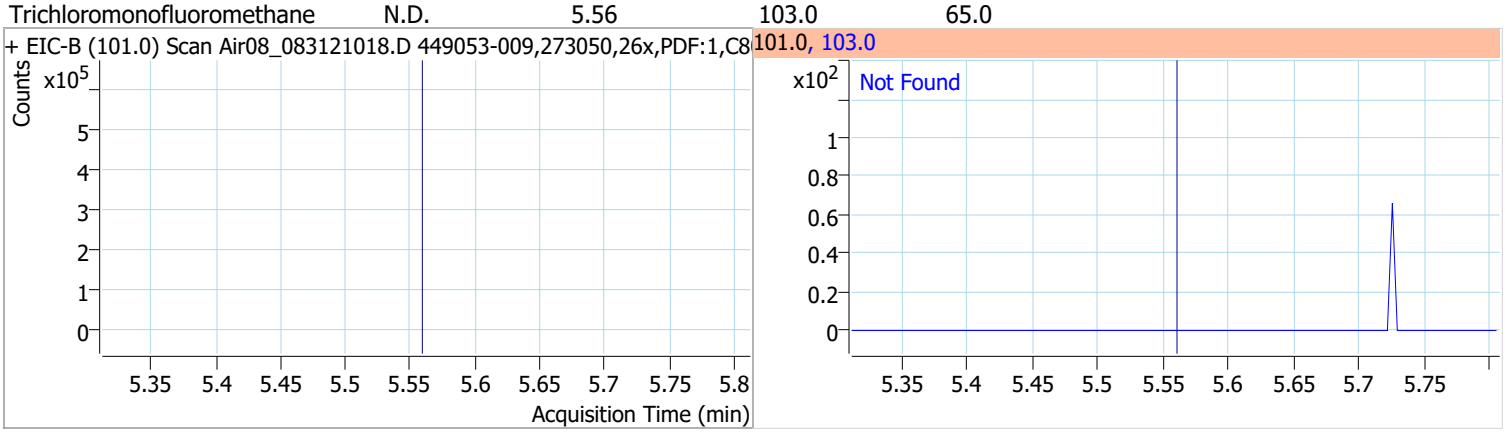
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Acetone	1698.6237	5.40	0.05	4516772	42.0	7.1	23.8	35.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Isopropanol (IPA)	223.4251	5.69	0.14	1508409	43.0	1.8	17.2	25.8

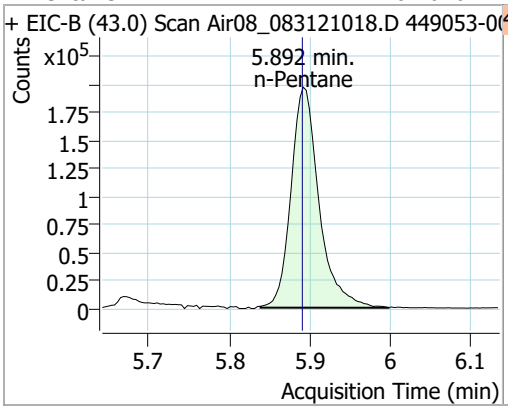


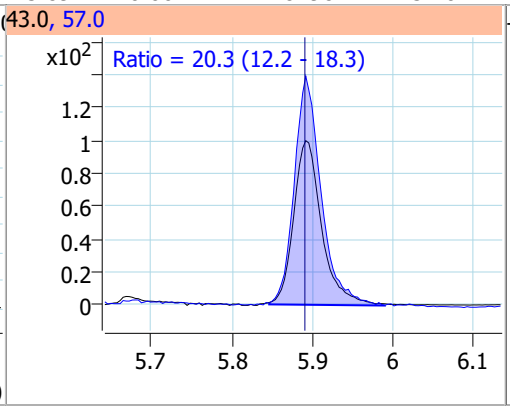
Compound	Conc.	Exp RT	QIon	Exp Ratio
Trichloromonofluoromethane	N.D.	5.56	103.0	65.0

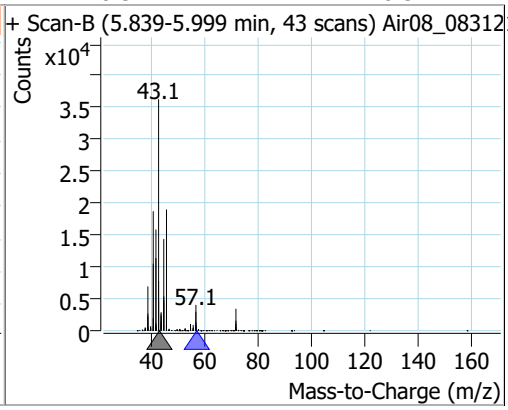


Quantitation Results Report (Not Reviewed)

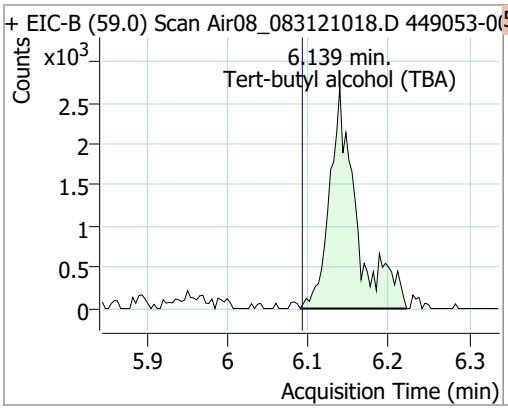
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Pentane	62.6461	5.89	0.00	478498	57.0	20.3	12.2	18.3

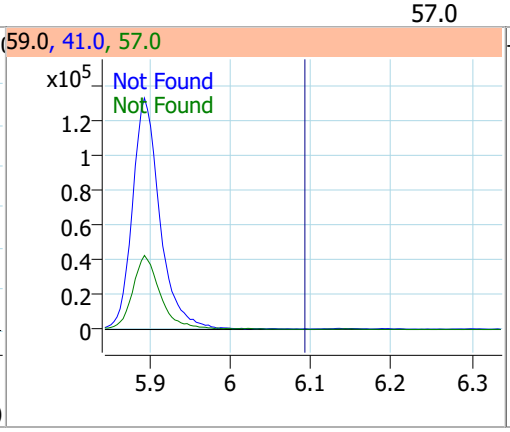


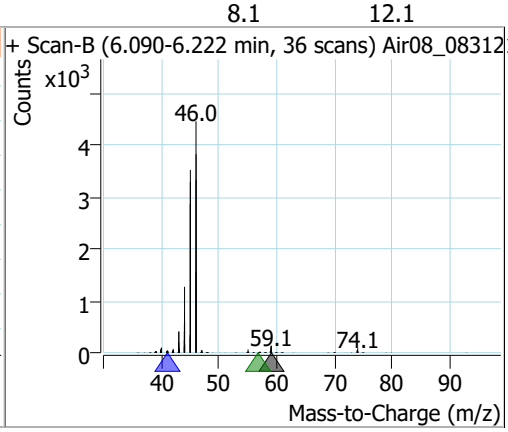




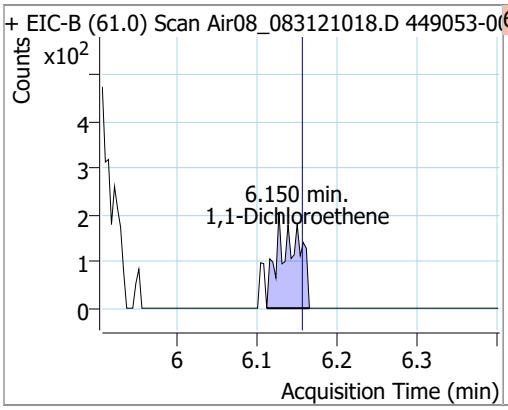
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tert-butyl alcohol (TBA)	0.5417	6.14	0.05	6296	41.0		16.8	25.2
					57.0		8.1	12.1

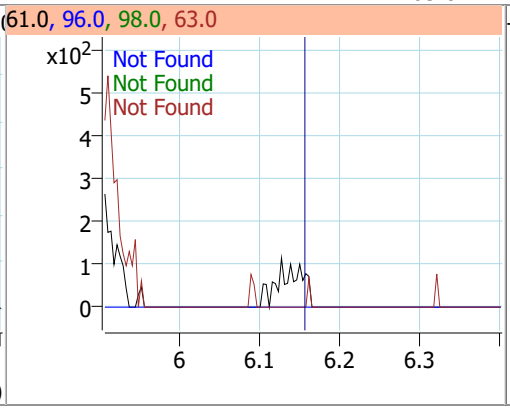


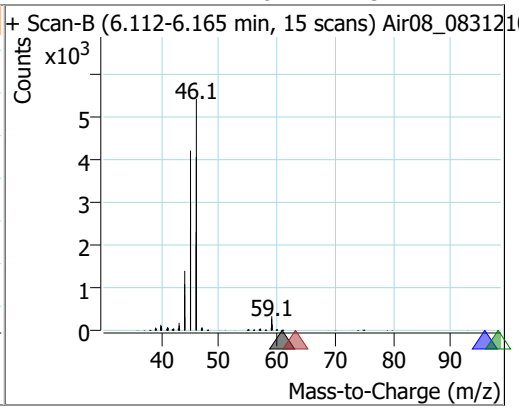




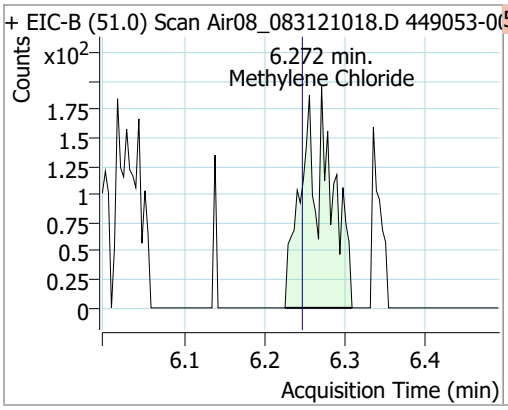
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1-Dichloroethene	0.0316	6.15	-0.01	371	96.0		40.1	60.2
					98.0		25.8	38.7
					63.0		24.8	37.2

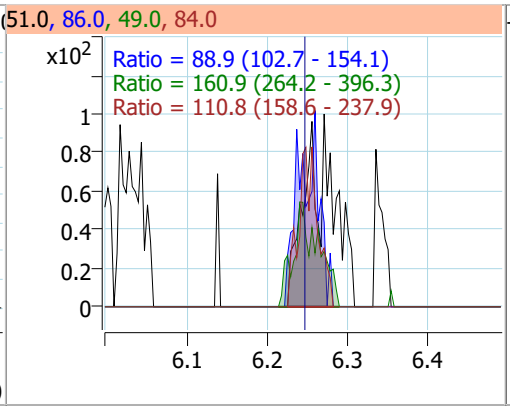


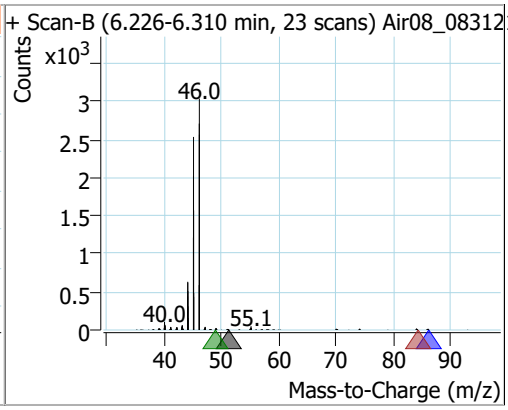




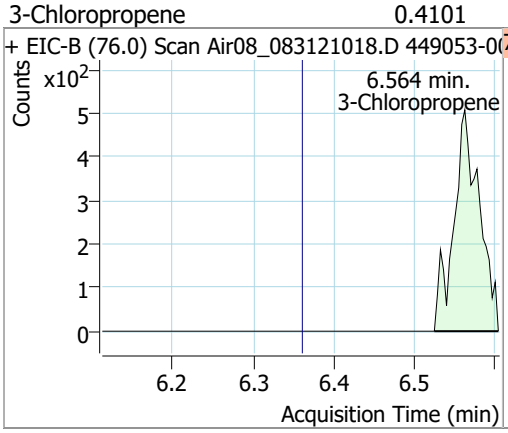
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methylene Chloride	0.2120	6.27	0.02	484	49.0	160.9	264.2	396.3
					84.0	110.8	158.6	237.9
					86.0	88.9	102.7	154.1

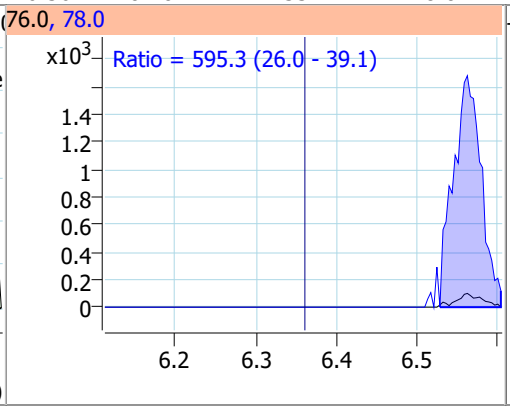


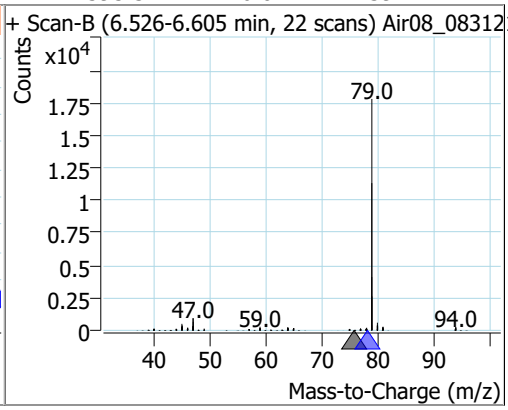




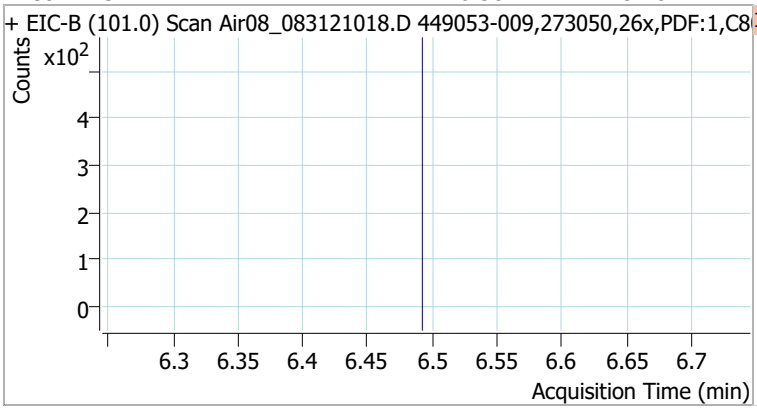
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
3-Chloropropene	0.4101	6.56	0.20	1133	78.0	595.3	26.0	39.1

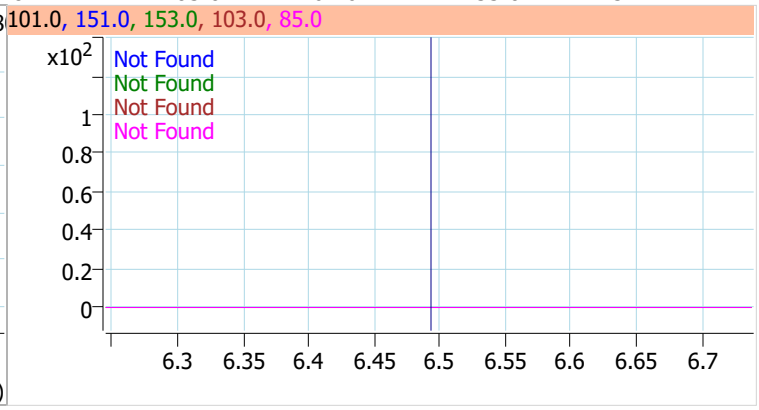




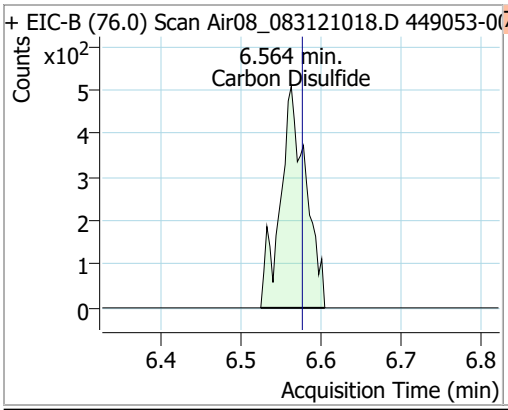


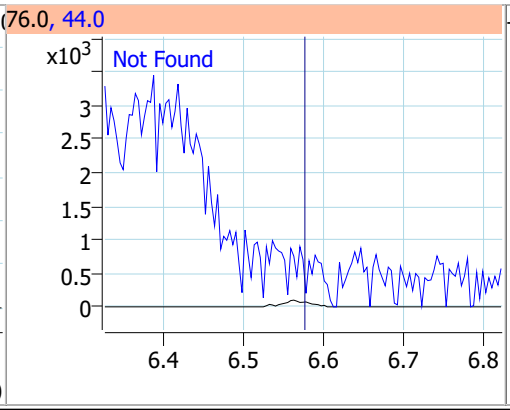
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Freon 113	N.D.	6.50	151.0	81.2	103.0	64.6	153.0	52.1

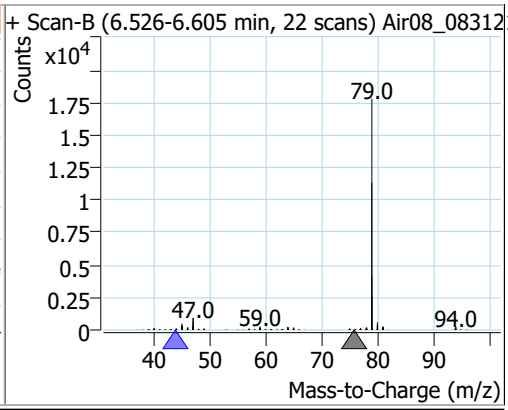




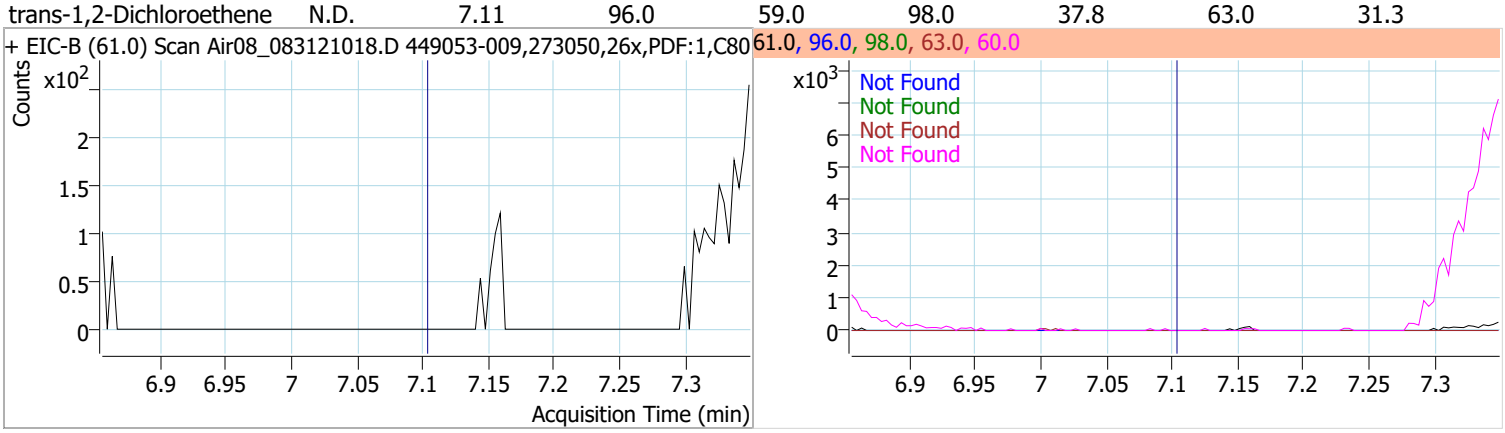
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Carbon Disulfide	0.0607	6.56	-0.02	1133	44.0		15.5	23.2



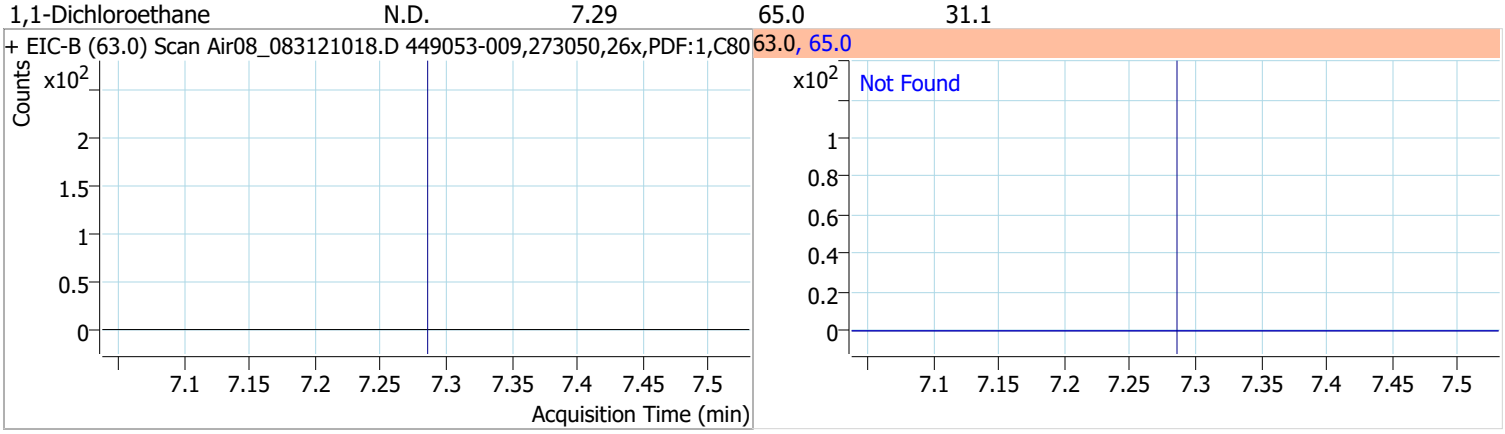




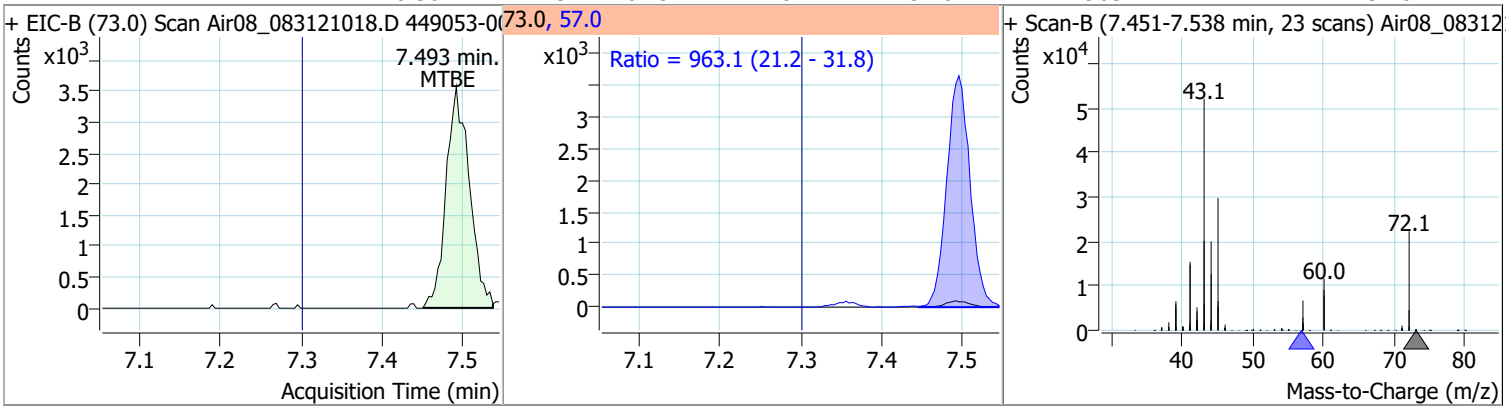
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
trans-1,2-Dichloroethene	N.D.	7.11	96.0	59.0	98.0	37.8	63.0	31.3



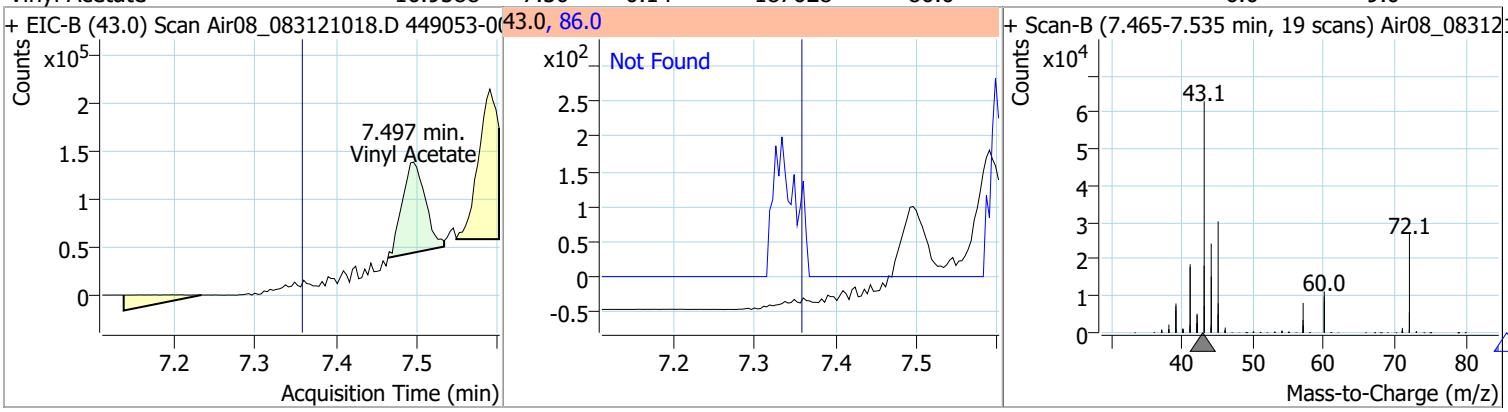
Compound	Conc.	Exp RT	QIon	Exp Ratio
1,1-Dichloroethane	N.D.	7.29	65.0	31.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
MTBE	0.3677	7.49	0.19	7184	57.0	963.1	21.2	31.8

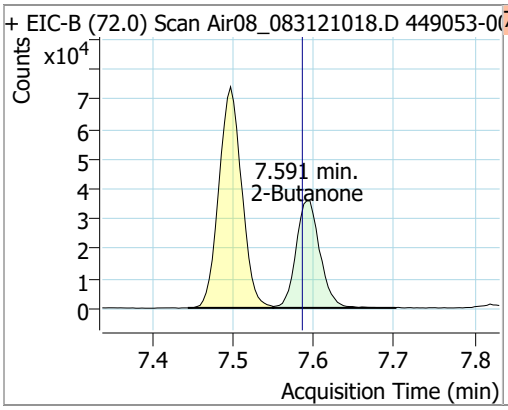


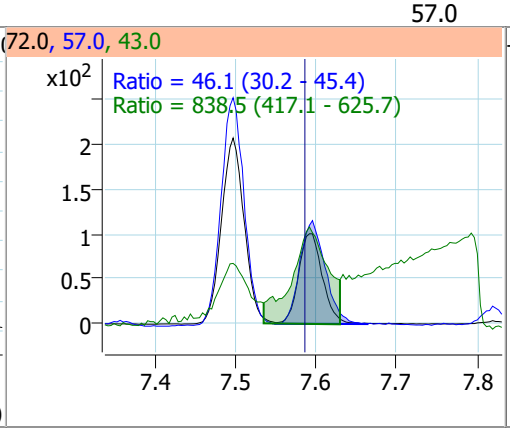
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Vinyl Acetate	16.9588	7.50	0.14	187628	86.0		6.0	9.0

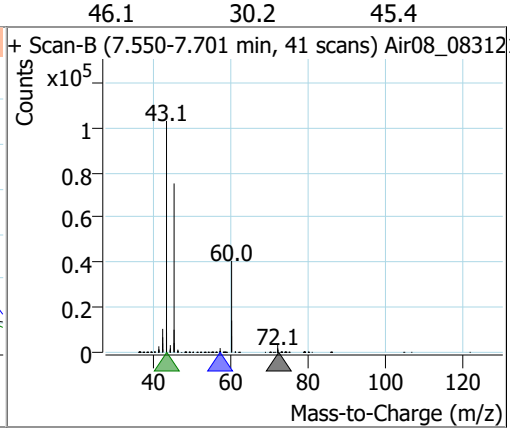


Quantitation Results Report (Not Reviewed)

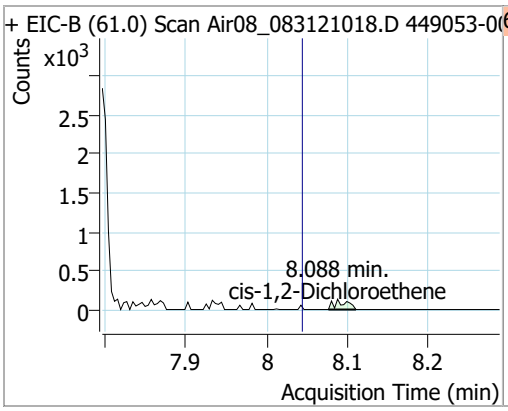
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Butanone	27.2190	7.59	0.00	74225	43.0	838.5	417.1	625.7
					57.0	46.1	30.2	45.4

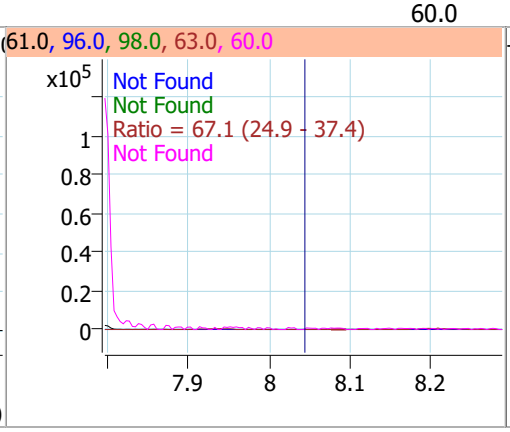


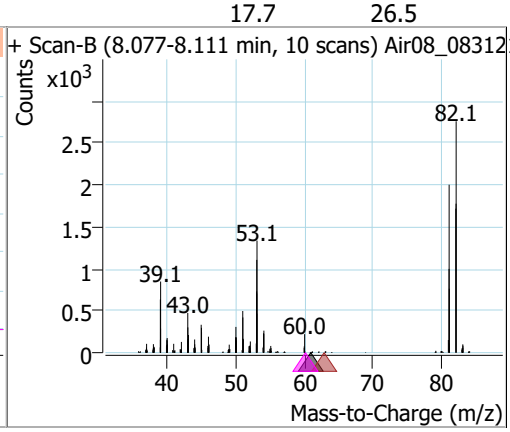




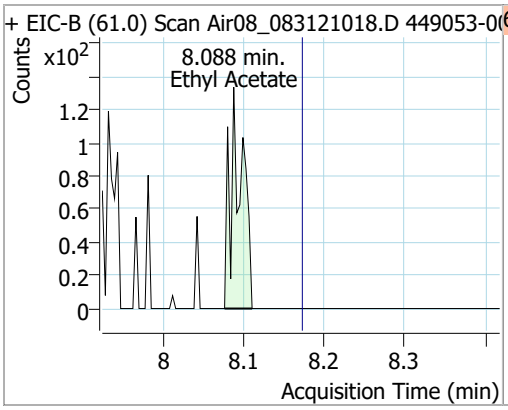
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
cis-1,2-Dichloroethene	0.0147	8.09	0.04	142	96.0		51.6	77.5
					98.0		33.3	49.9
					63.0	67.1	24.9	37.4
					60.0		17.7	26.5

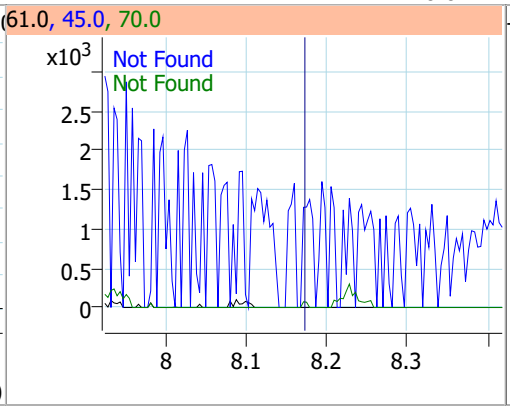


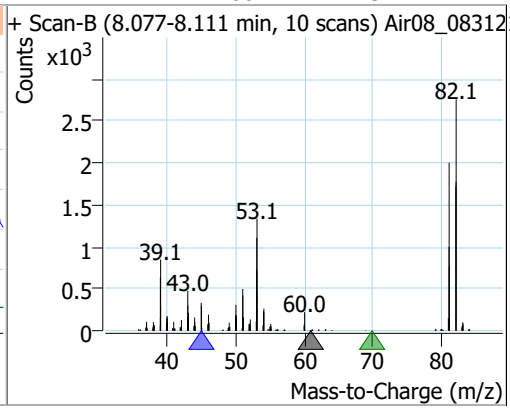




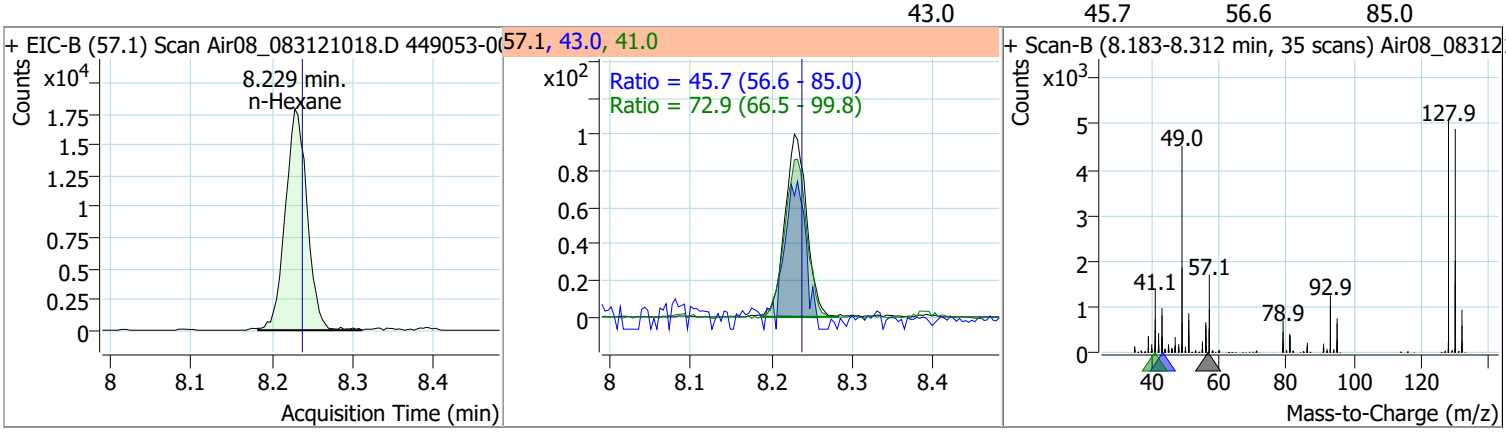
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethyl Acetate	0.0825	8.09	-0.09	142	45.0		96.2	144.3
					70.0		60.7	91.1



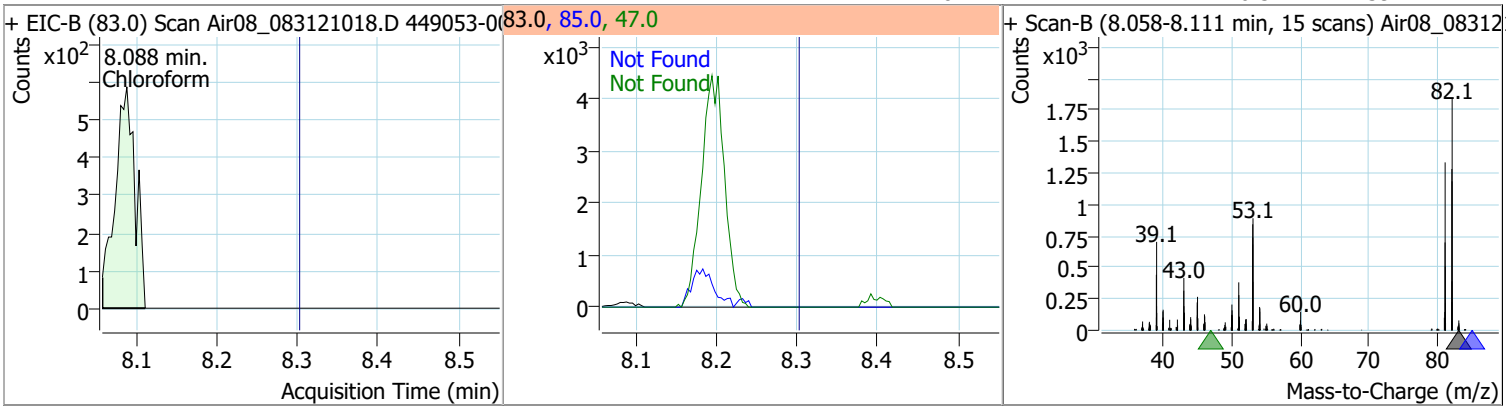




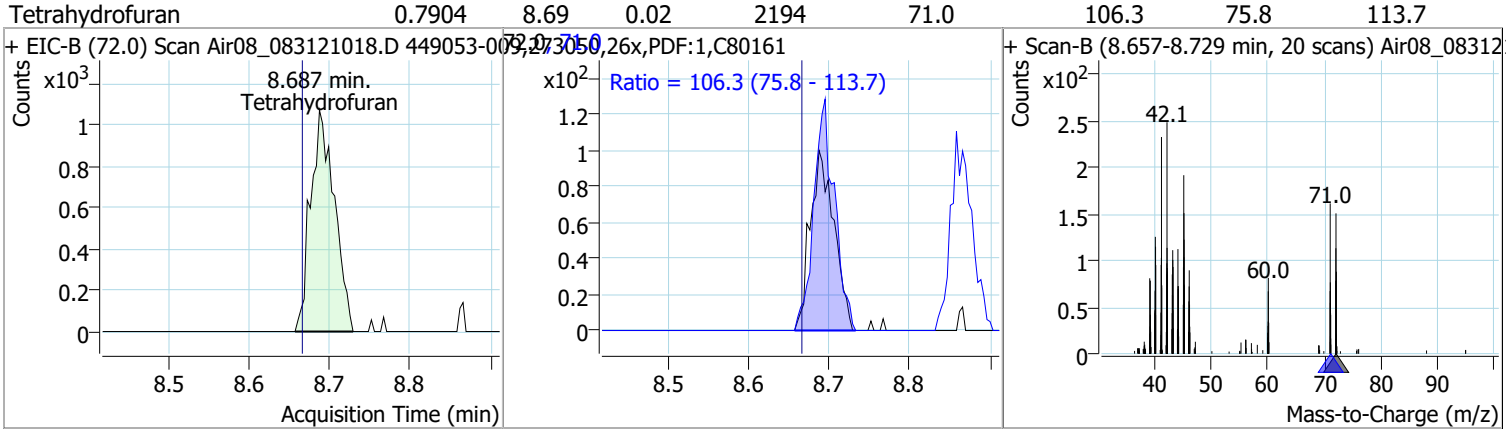
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Hexane	3.5281	8.23	-0.01	33749	41.0	72.9	66.5	99.8
					43.0	45.7	56.6	85.0



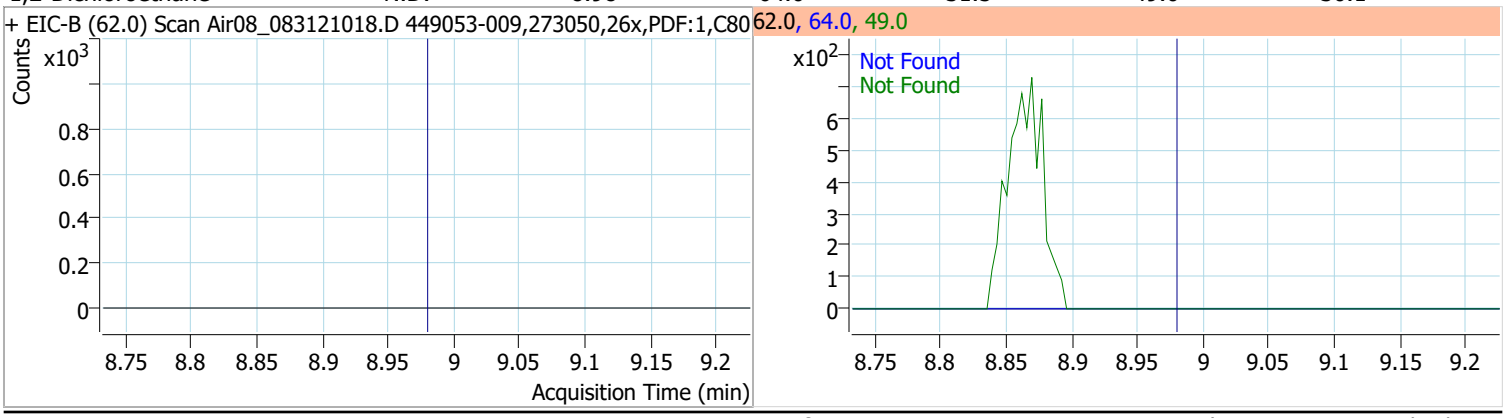
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloroform	0.0595	8.09	-0.22	1023	85.0		51.4	77.1
					47.0		26.5	39.7



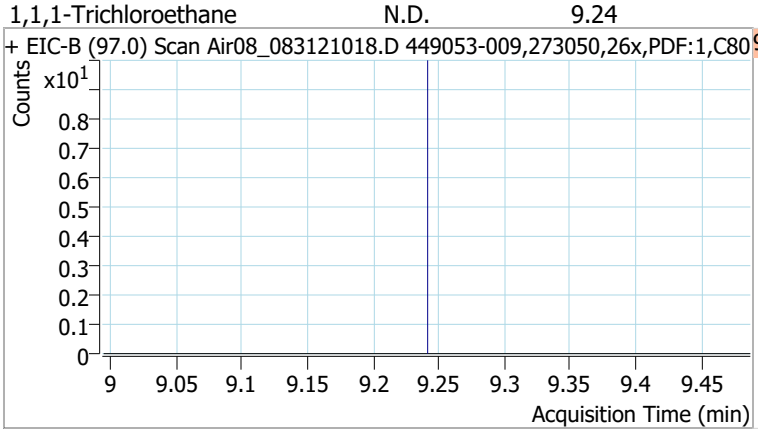
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tetrahydrofuran	0.7904	8.69	0.02	2194	71.0	106.3	75.8	113.7

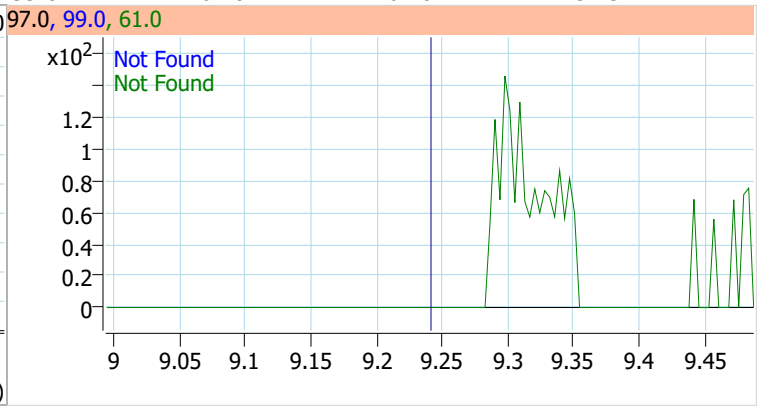


Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,2-Dichloroethane	N.D.	8.98	64.0	31.5	49.0	30.1

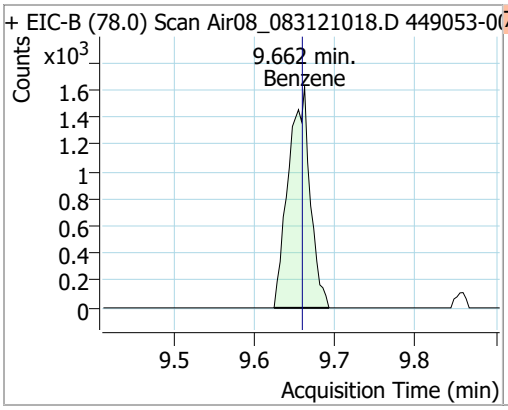


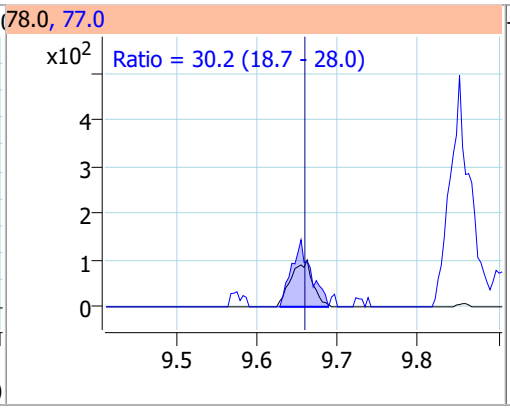
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,1,1-Trichloroethane	N.D.	9.24	99.0	64.0	61.0	51.3

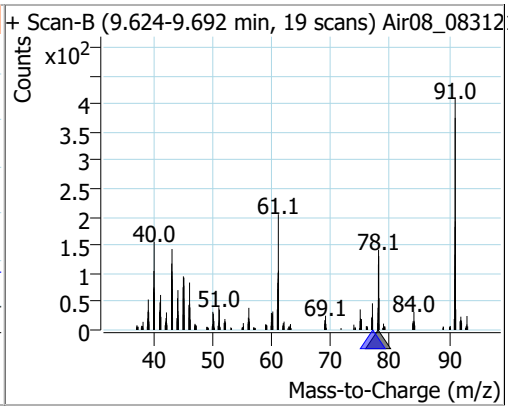




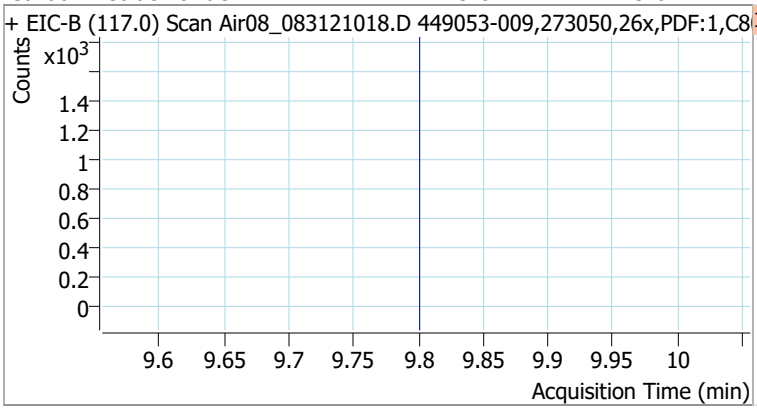
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzene	0.1517	9.66	0.00	3044	77.0	30.2	18.7	28.0

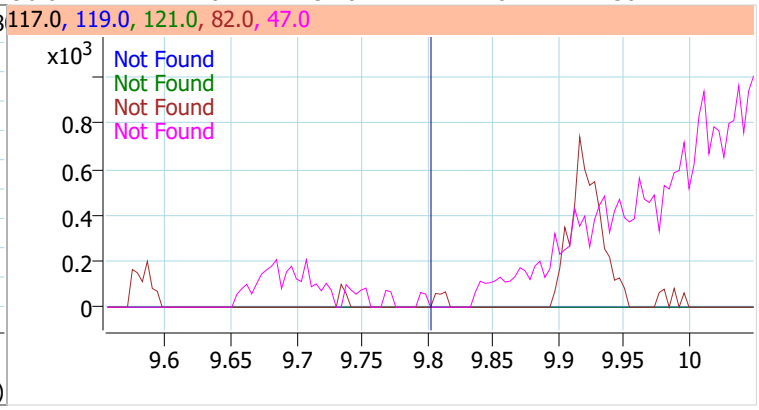




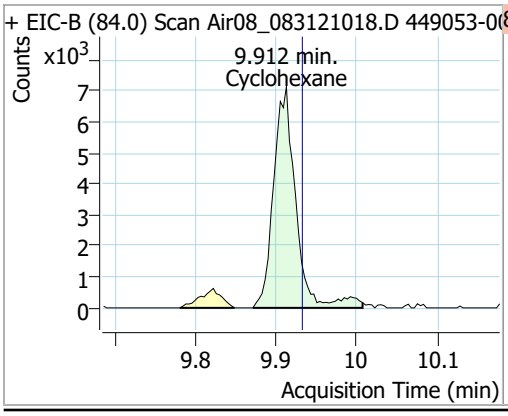


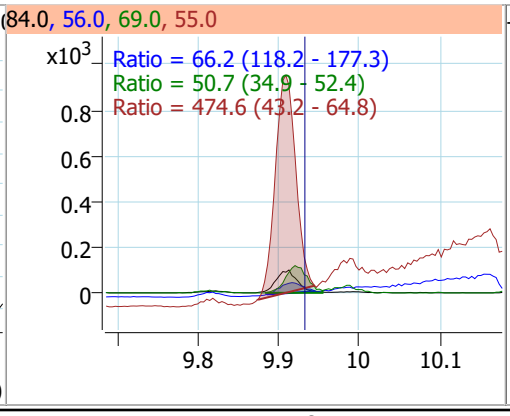
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Carbon Tetrachloride	N.D.	9.81	119.0	96.0	121.0	31.0	47.0	30.2

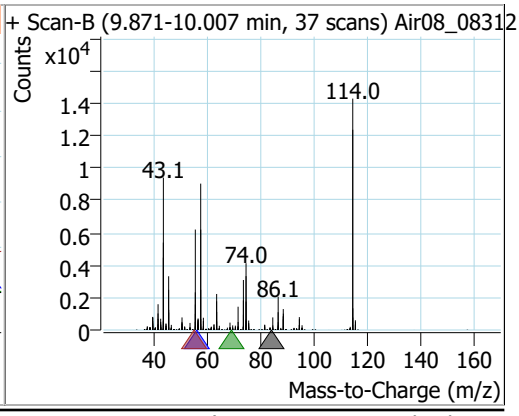




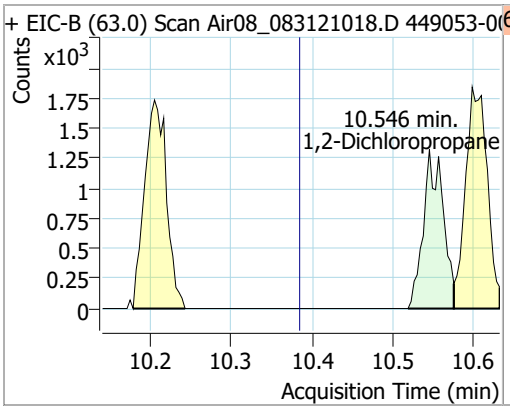
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Cyclohexane	1.4879	9.91	-0.02	13761	56.0	66.2	118.2	177.3
					55.0	474.6	43.2	64.8
					69.0	50.7	34.9	52.4

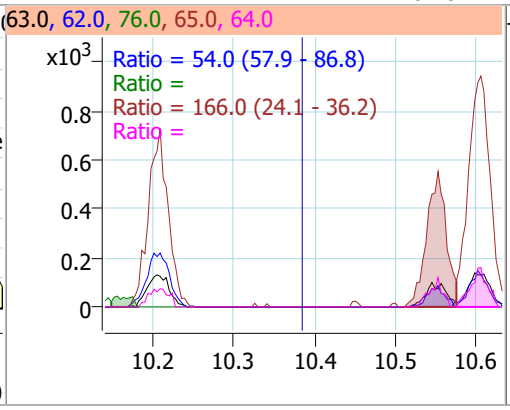


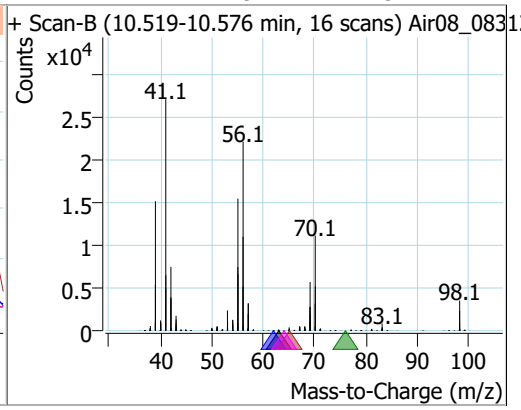




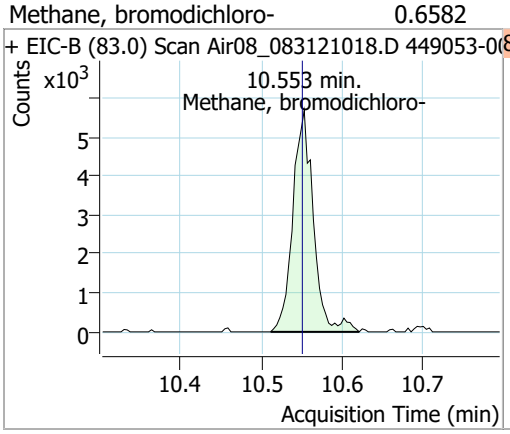
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dichloropropane	0.3598	10.55	0.16	2246	62.0	54.0	57.9	86.8
					76.0		34.8	52.2
					65.0	166.0	24.1	36.2
					64.0		19.4	29.1

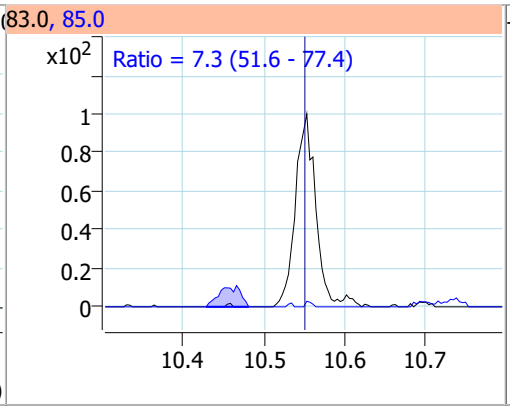


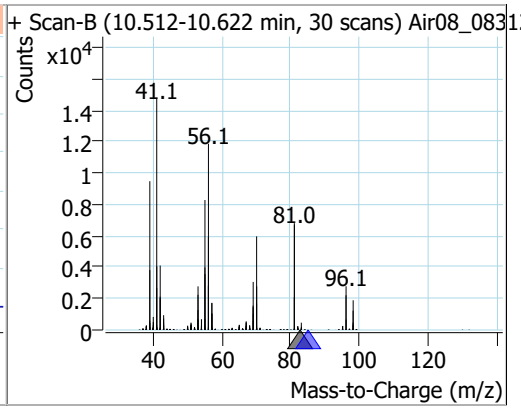




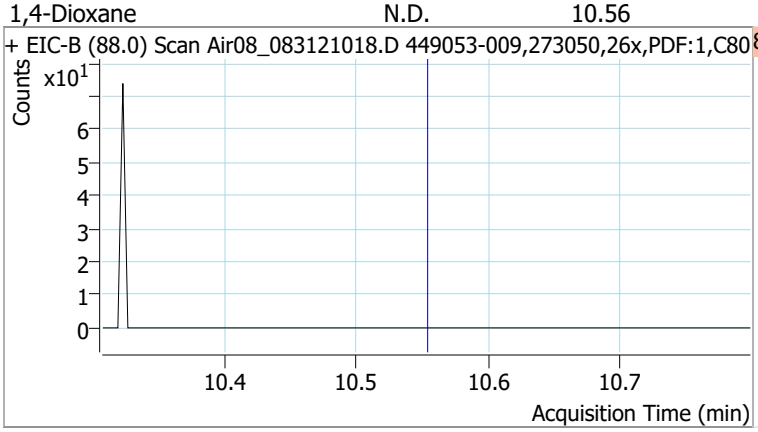
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methane, bromodichloro-	0.6582	10.55	0.00	10073	85.0	7.3	51.6	77.4

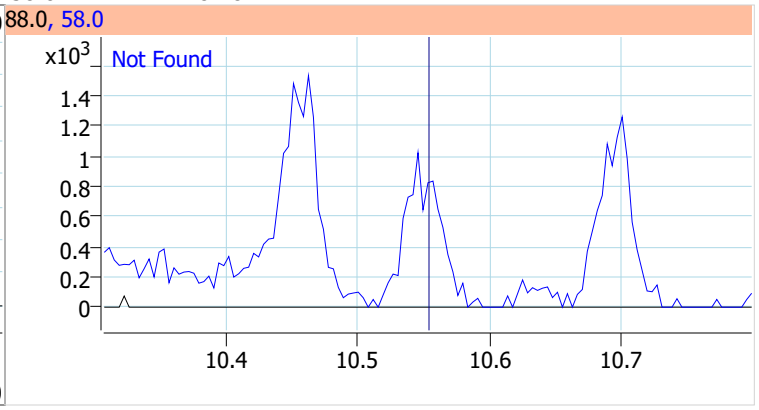






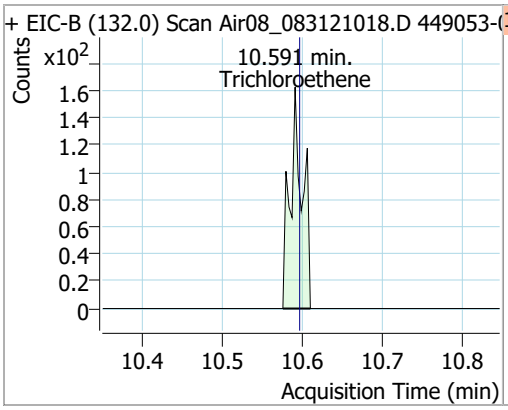
Compound	Conc.	Exp RT	QIon	Exp Ratio
1,4-Dioxane	N.D.	10.56	58.0	81.8

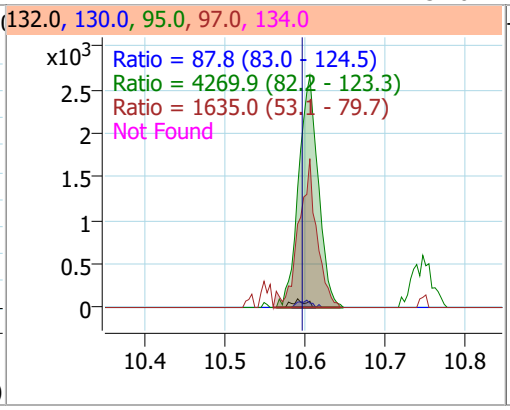


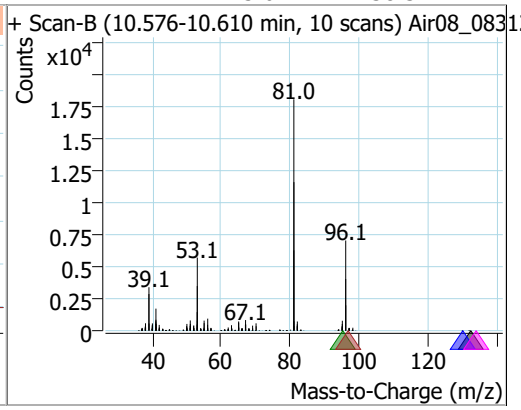


Quantitation Results Report (Not Reviewed)

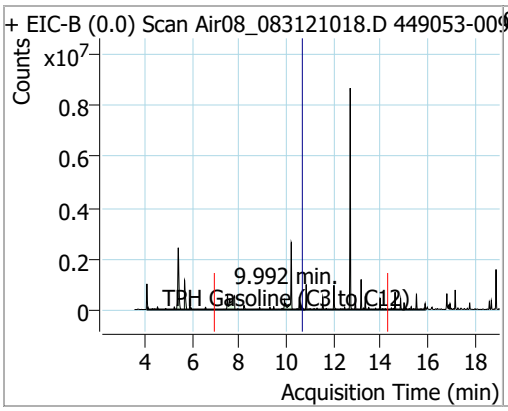
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Trichloroethene	0.0170	10.59	-0.01	177	130.0	87.8	83.0	124.5
					95.0	4269.9	82.2	123.3
					97.0	1635.0	53.1	79.7
					134.0		25.6	38.3

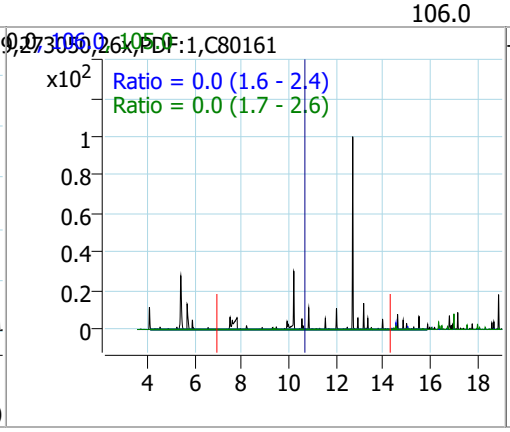


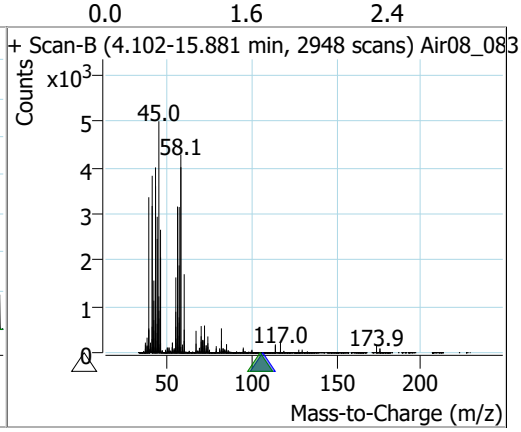




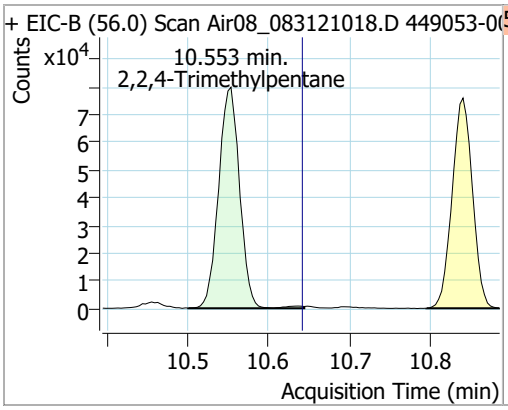
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
TPH Gasoline (C3 to C12)	21.0498	9.99	-0.63	57213705	105.0	0.0	1.7	2.6
					106.0	0.0	1.6	2.4

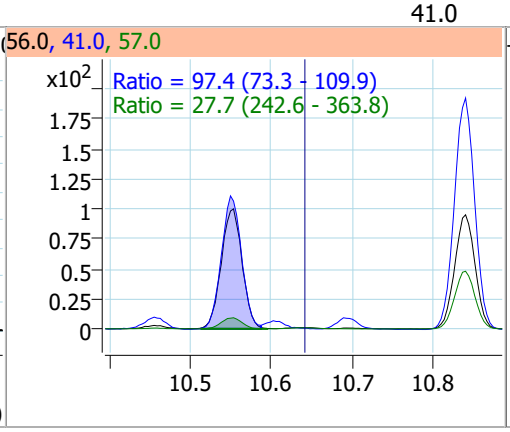


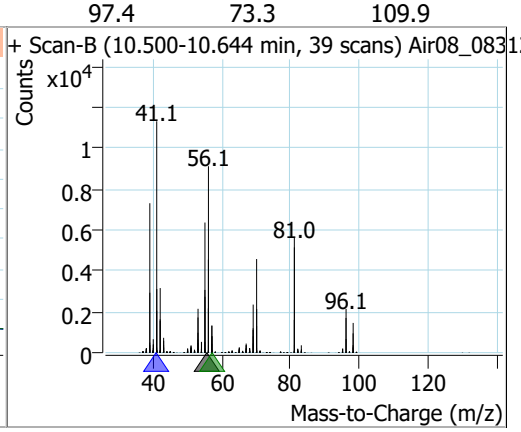




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2,2,4-Trimethylpentane	16.4093	10.55	-0.09	145182	57.0	27.7	242.6	363.8
					41.0	97.4	73.3	109.9

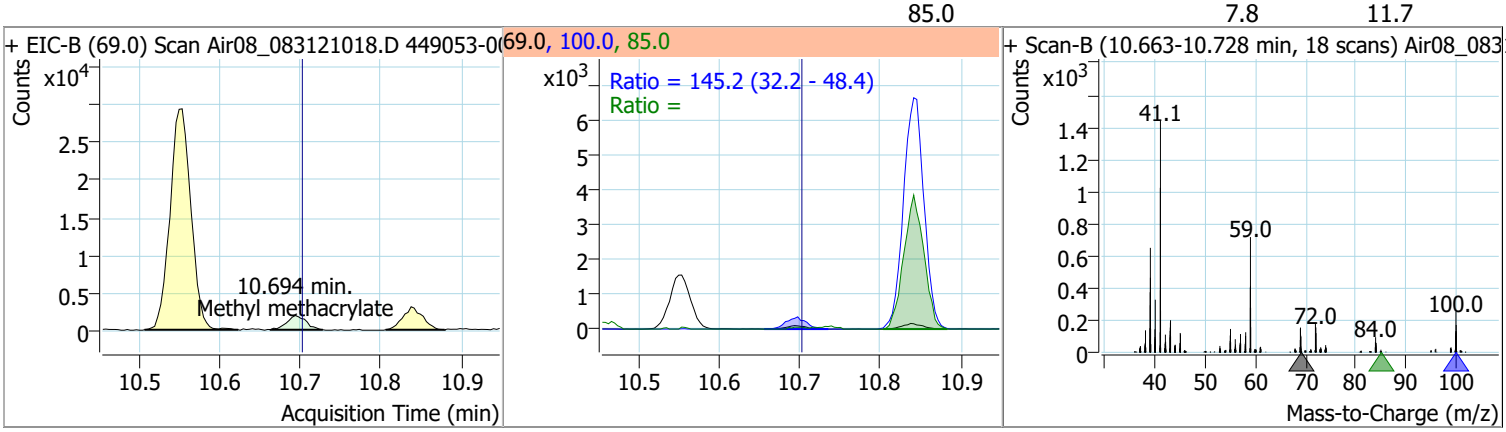




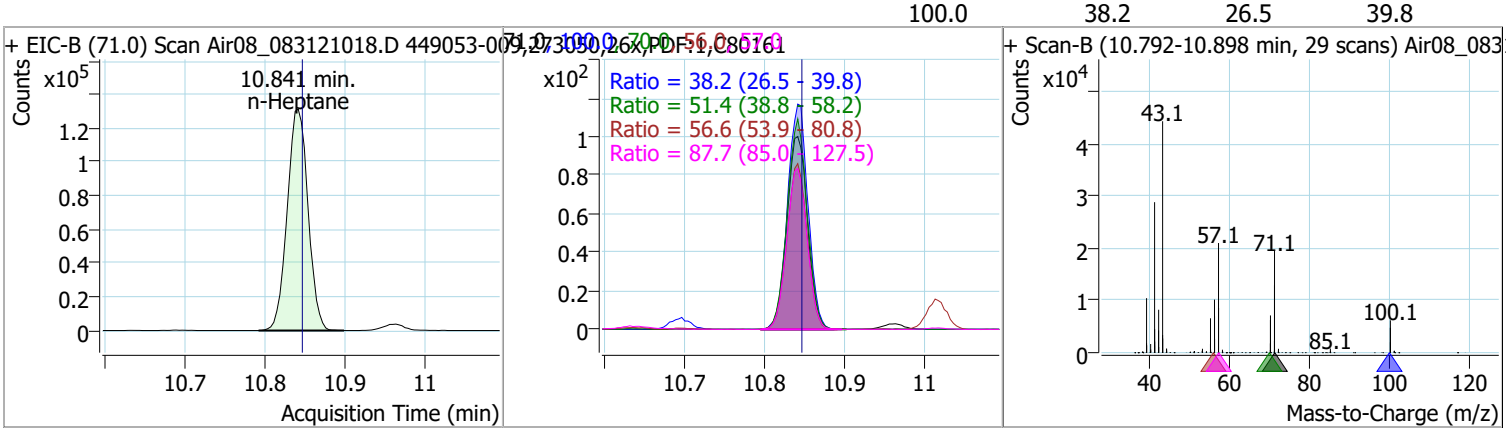


Quantitation Results Report (Not Reviewed)

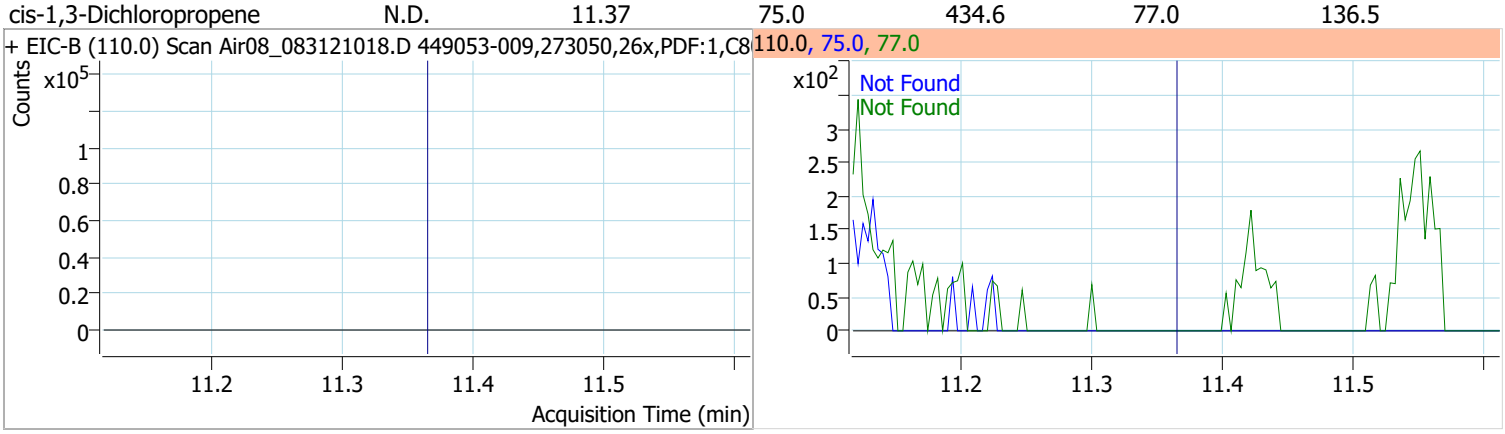
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methyl methacrylate	0.5395	10.69	-0.01	3140	100.0	145.2	32.2	48.4
					85.0		7.8	11.7



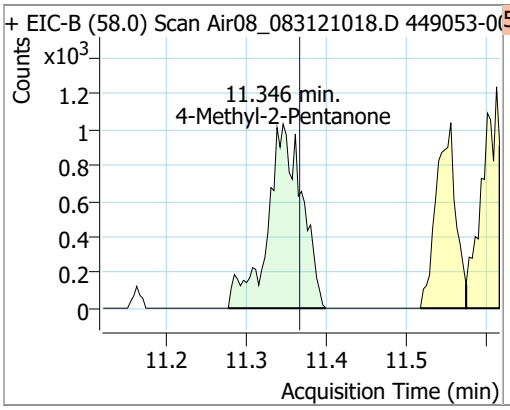
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Heptane	38.0308	10.84	-0.01	235712	57.0	87.7	85.0	127.5
					56.0	56.6	53.9	80.8
					70.0	51.4	38.8	58.2
					100.0	38.2	26.5	39.8

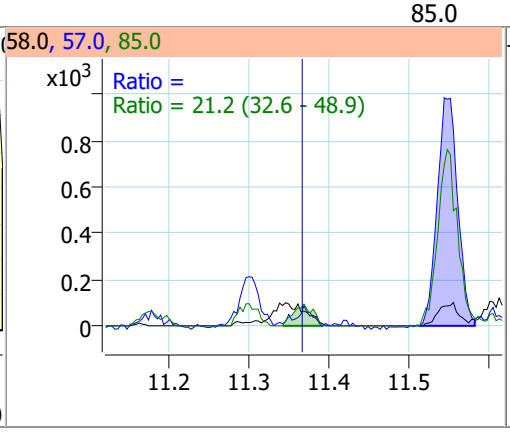


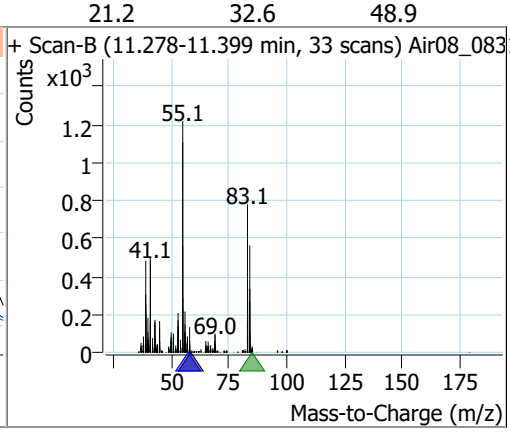
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
cis-1,3-Dichloropropene	N.D.	11.37	75.0	434.6	77.0	136.5



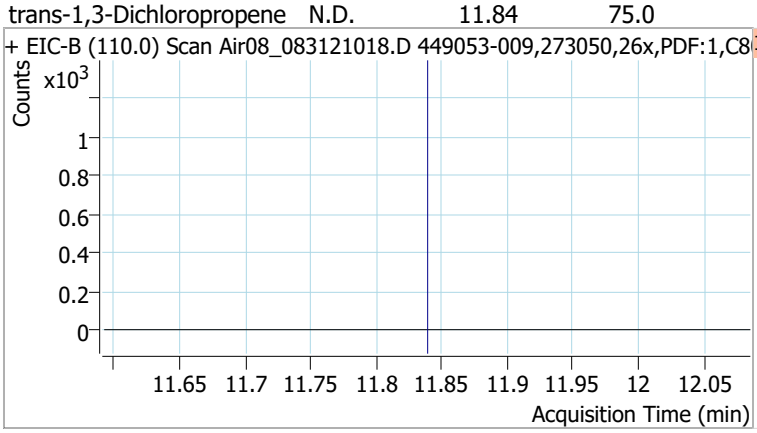
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
4-Methyl-2-Pentanone	0.6732	11.35	-0.03	3107	57.0		53.8	80.8
					85.0	21.2	32.6	48.9

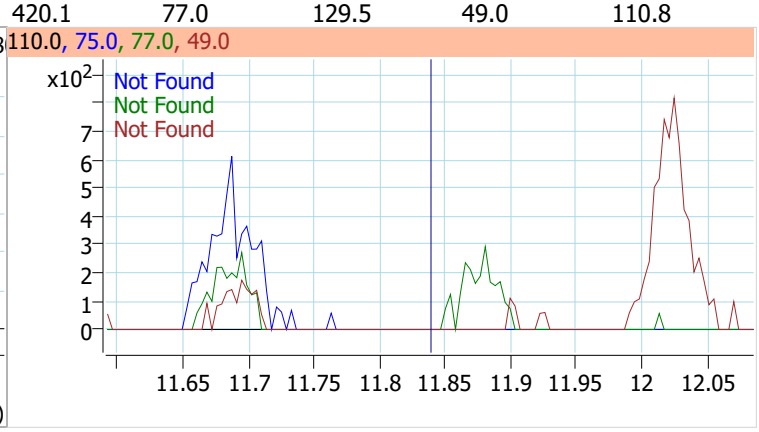




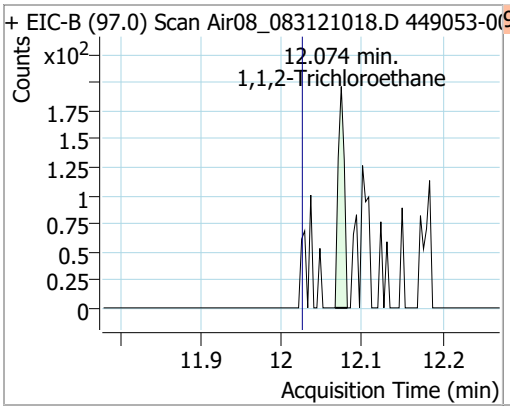


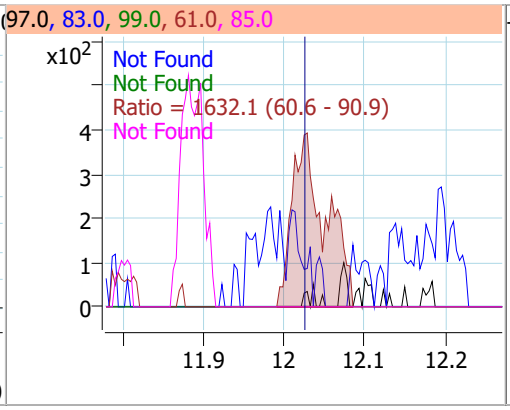
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
trans-1,3-Dichloropropene	N.D.	11.84	75.0	420.1	77.0	129.5	49.0	110.8

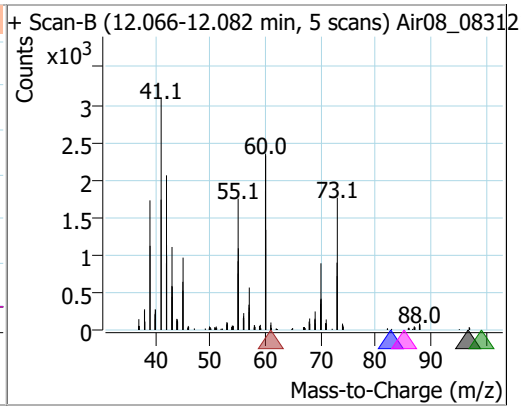




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1,2-Trichloroethane	0.0123	12.07	0.05	105	83.0		68.8	103.3
					61.0	1632.1	60.6	90.9
					99.0		50.3	75.5
					85.0		44.1	66.2

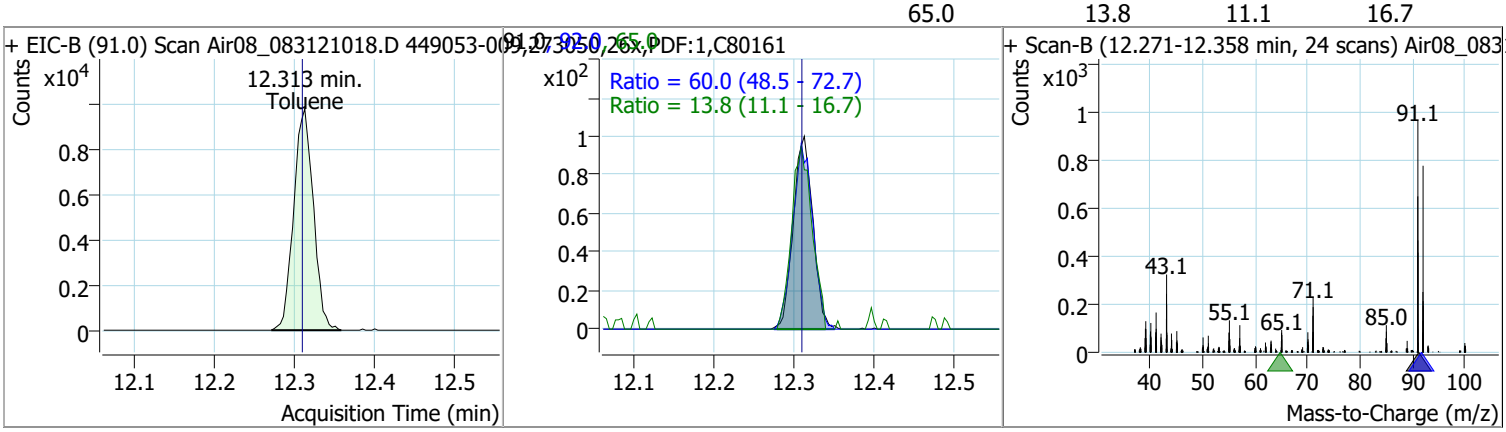




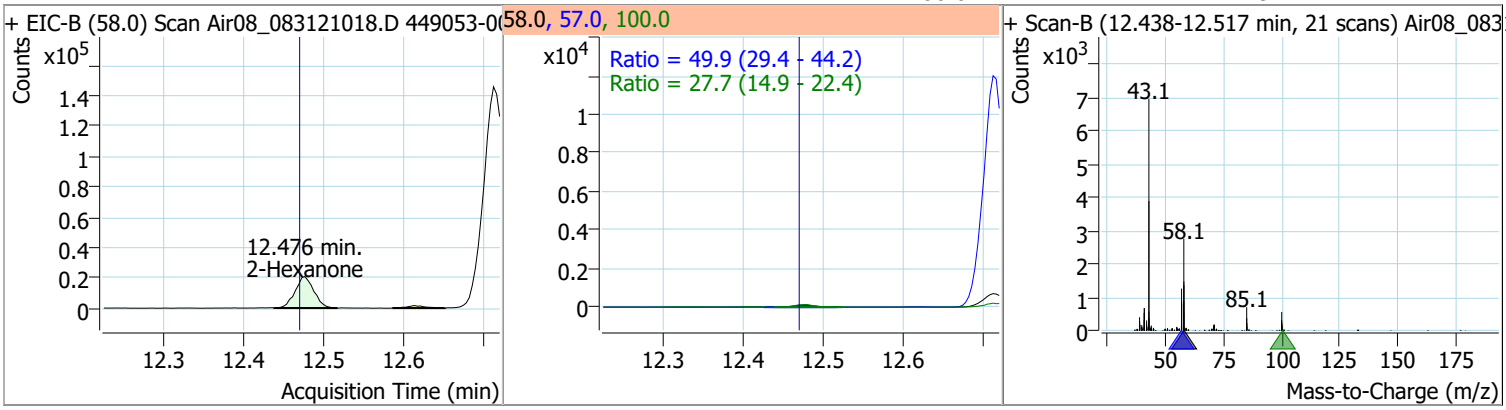


Quantitation Results Report (Not Reviewed)

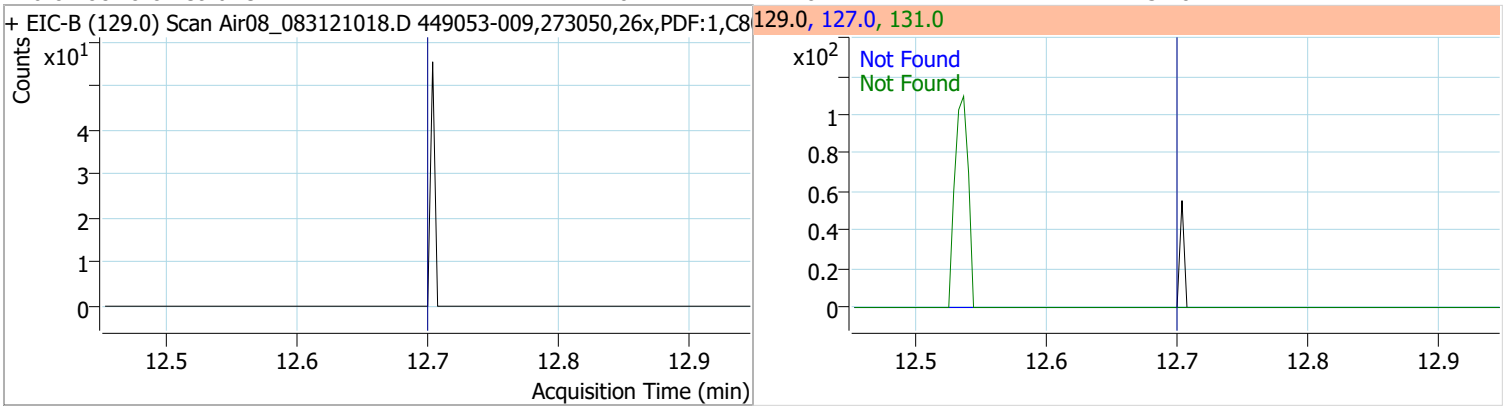
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Toluene	0.6622	12.31	0.00	16653	92.0	60.0	48.5	72.7
					65.0	13.8	11.1	16.7



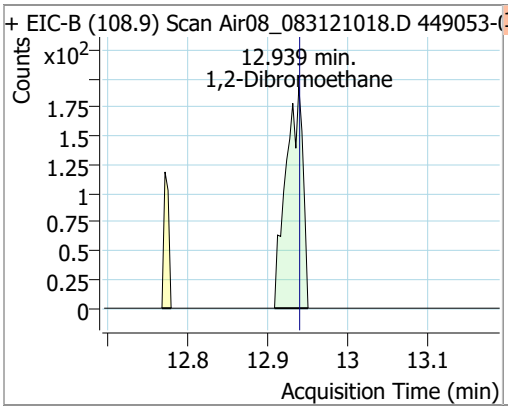
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Hexanone	5.8824	12.48	0.00	33479	57.0	49.9	29.4	44.2
					100.0	27.7	14.9	22.4

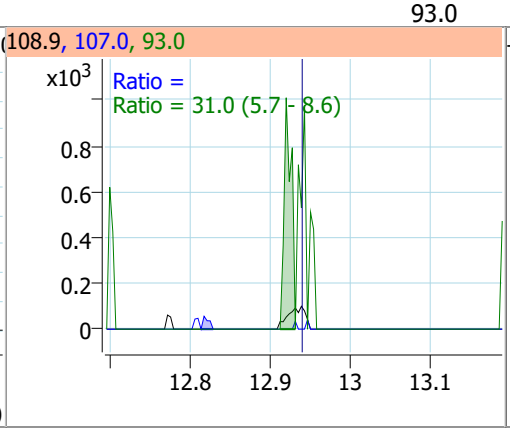


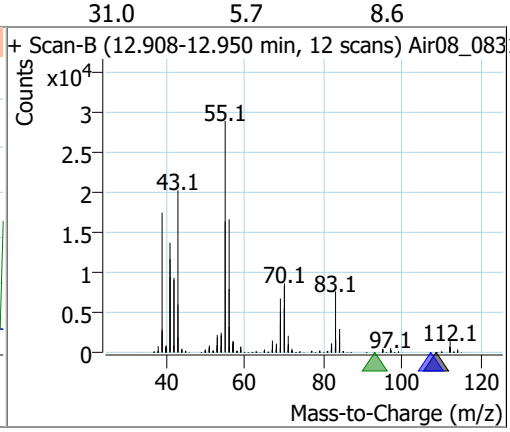
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
Dibromochloromethane	N.D.	12.70	127.0	77.2	131.0	24.1



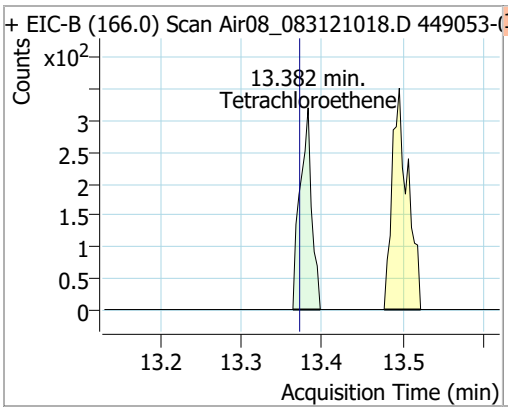
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dibromoethane	0.0209	12.94	-0.01	285	107.0		85.3	127.9
					93.0	31.0	5.7	8.6

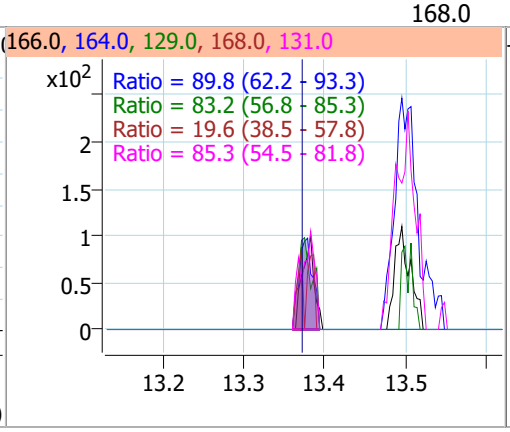


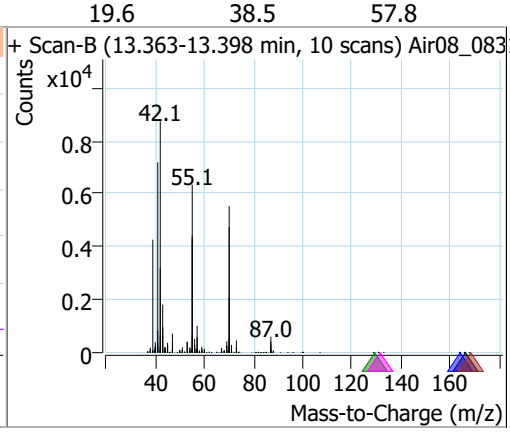




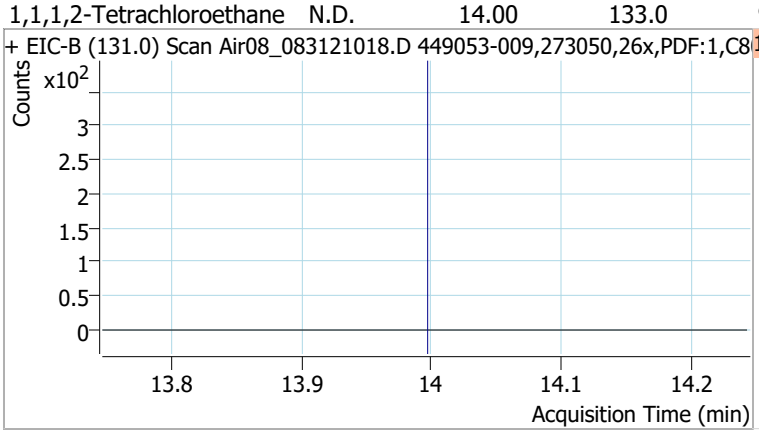
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tetrachloroethene	0.0201	13.38	0.00	326	164.0	89.8	62.2	93.3
					129.0	83.2	56.8	85.3
					131.0	85.3	54.5	81.8
					168.0	19.6	38.5	57.8

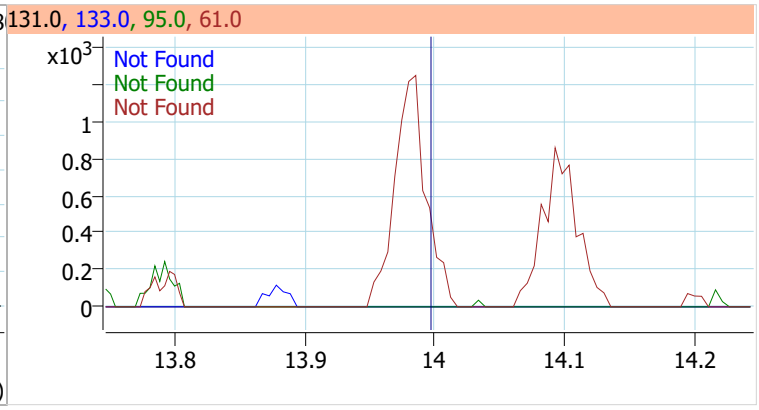




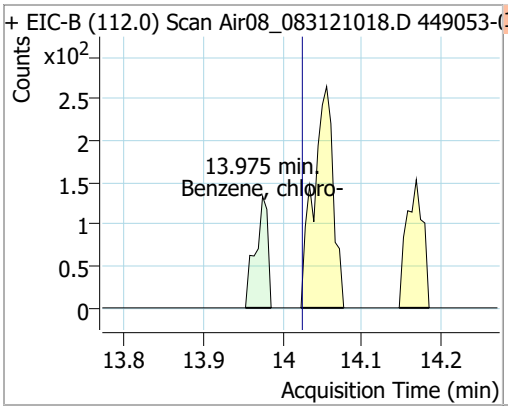


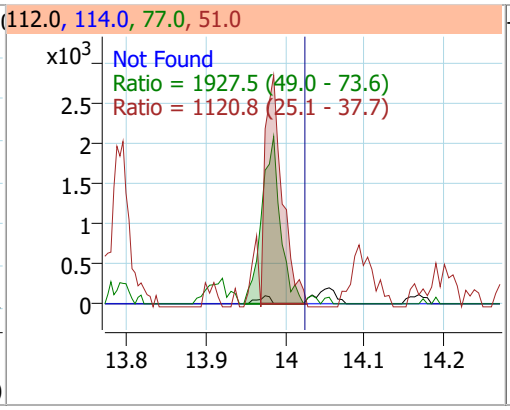
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
1,1,1,2-Tetrachloroethane	N.D.	14.00	133.0	96.2	95.0	40.2	61.0	39.7

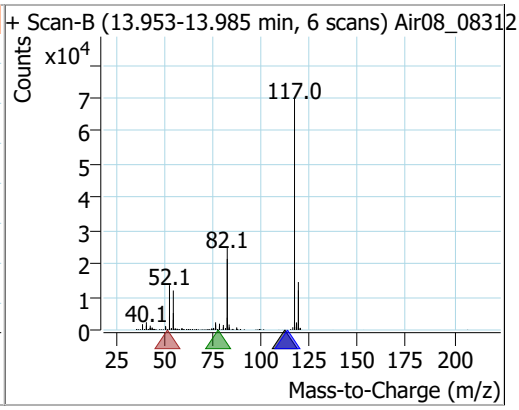




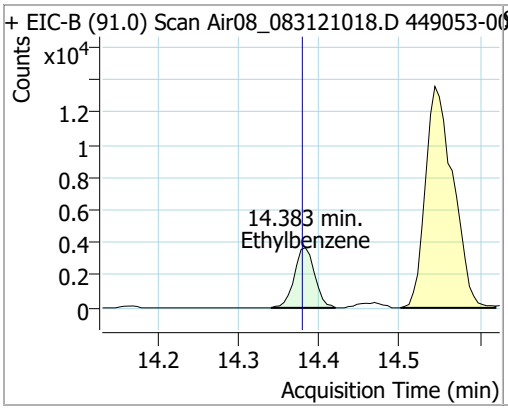
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzene, chloro-	0.0061	13.97	-0.05	144	77.0	1927.5	49.0	73.6
					114.0		26.1	39.1
					51.0	1120.8	25.1	37.7

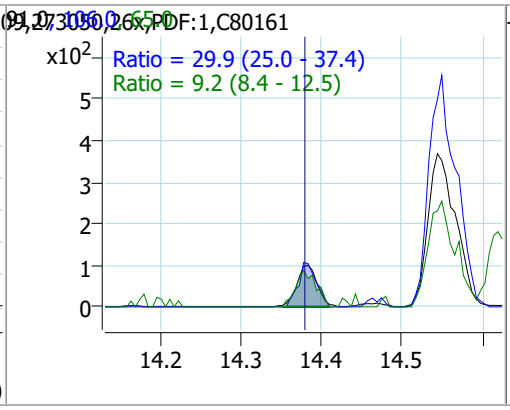


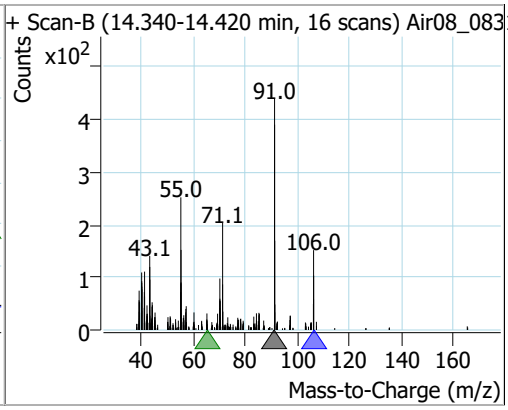




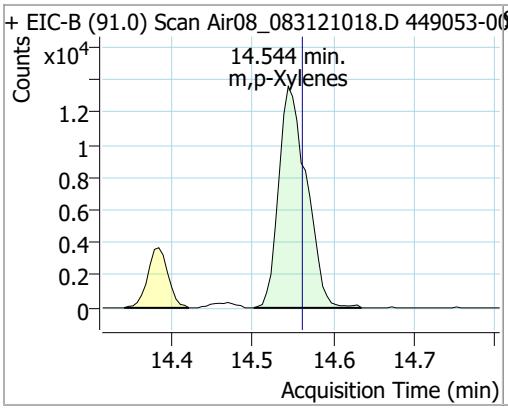
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethylbenzene	0.1819	14.38	0.00	6545	106.0	29.9	25.0	37.4
					65.0	9.2	8.4	12.5

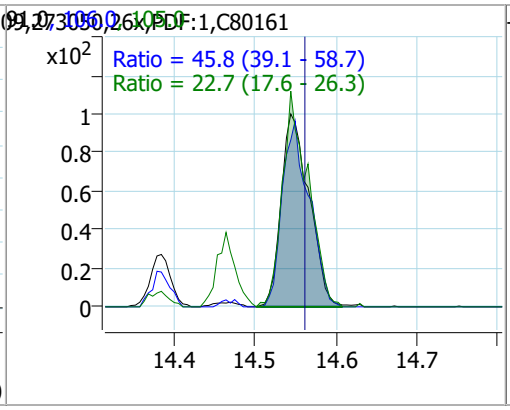


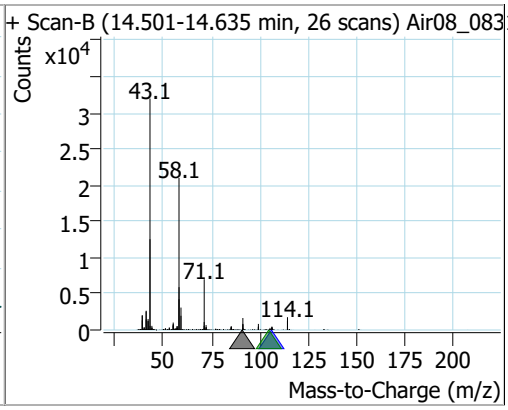




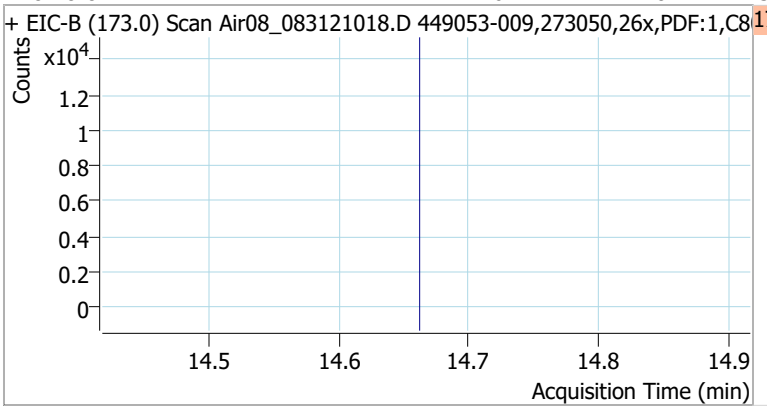
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
m,p-Xylenes	1.1099	14.54	-0.02	32931	106.0	45.8	39.1	58.7
					105.0	22.7	17.6	26.3

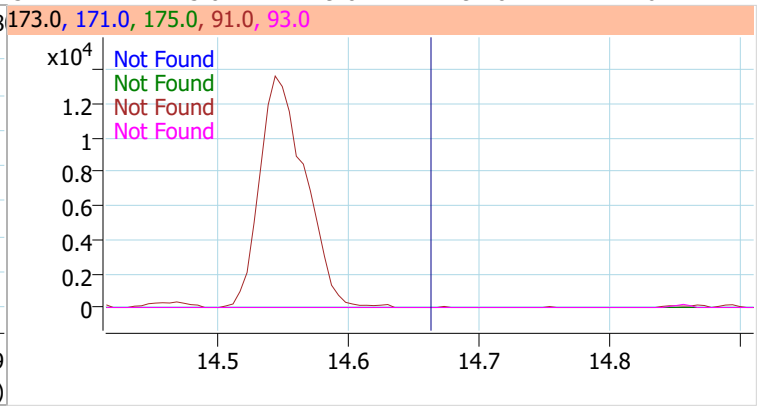




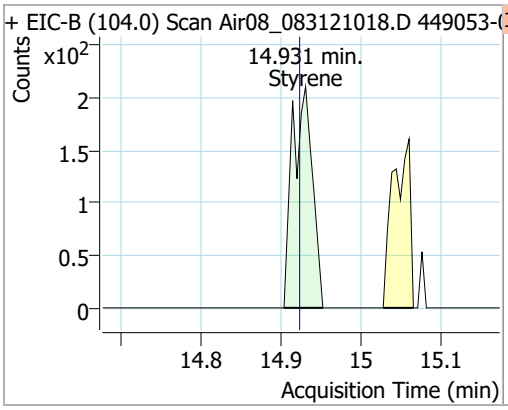


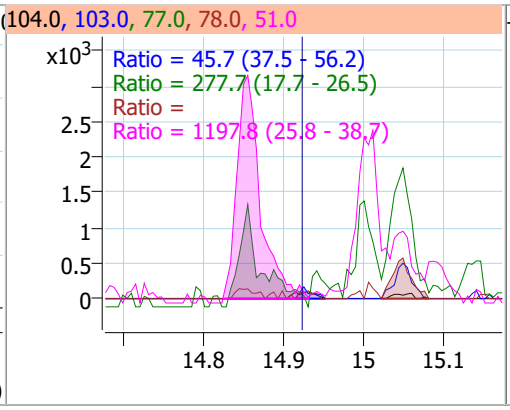
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Bromoform	N.D.	14.67	171.0	51.7	175.0	49.0	91.0	22.6

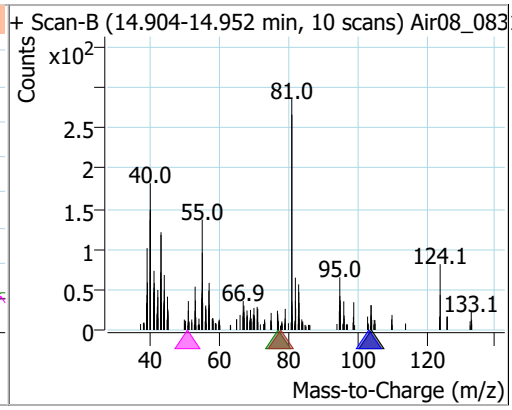




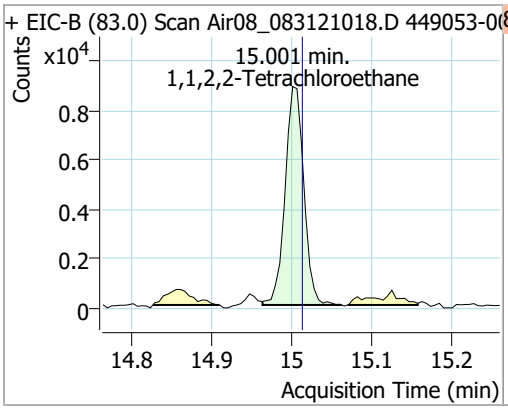
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Styrene	0.0175	14.93	0.00	364	103.0	45.7	37.5	56.2
					78.0		36.6	55.0
					51.0	1197.8	25.8	38.7
					77.0	277.7	17.7	26.5

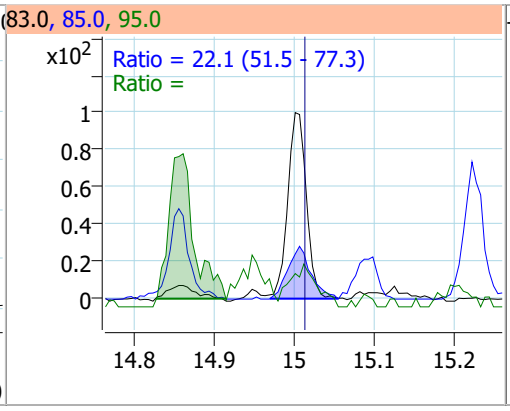


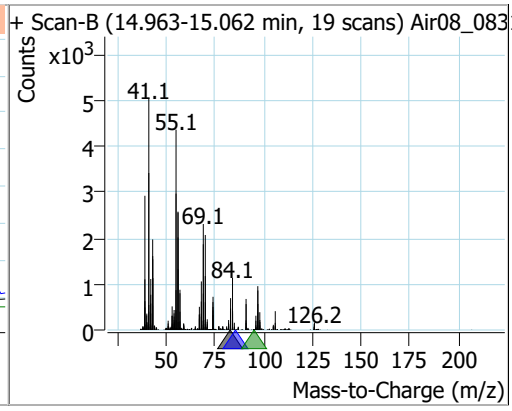




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1,2,2-Tetrachloroethane	0.7329	15.00	-0.02	14381	85.0	22.1	51.5	77.3
					95.0		13.8	20.7

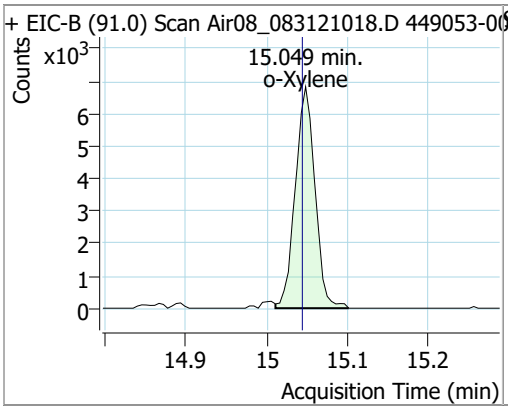


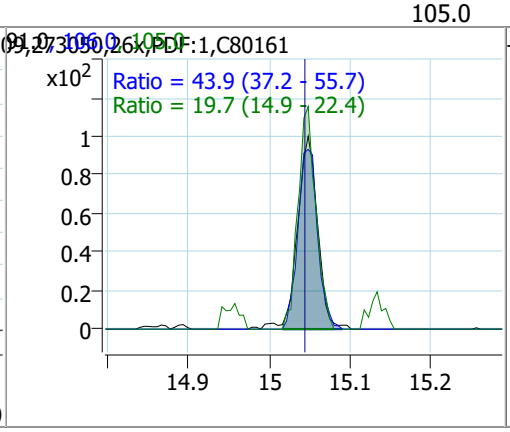


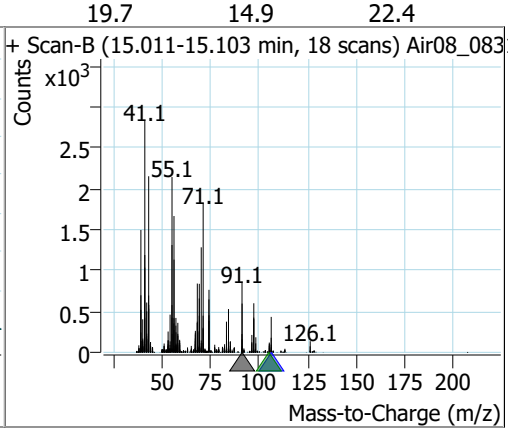


Quantitation Results Report (Not Reviewed)

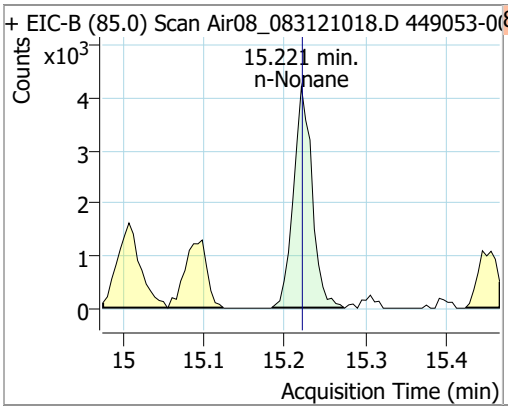
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
o-Xylene	0.3658	15.05	0.00	11638	106.0	43.9	37.2	55.7
					105.0	19.7	14.9	22.4

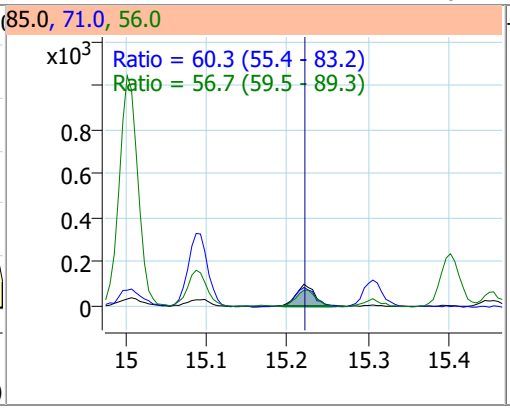


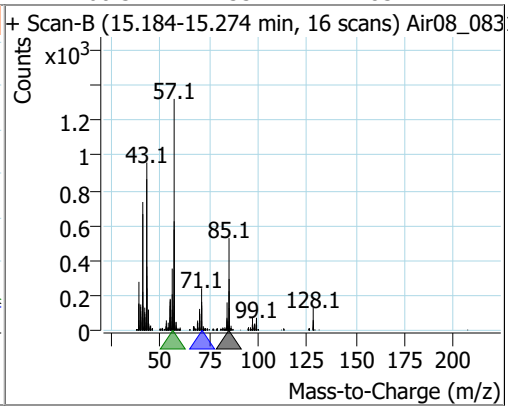




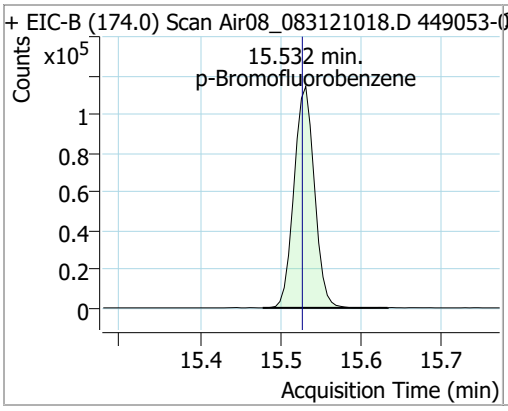
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Nonane	1.0666	15.22	-0.01	6763	56.0	56.7	59.5	89.3
					71.0	60.3	55.4	83.2

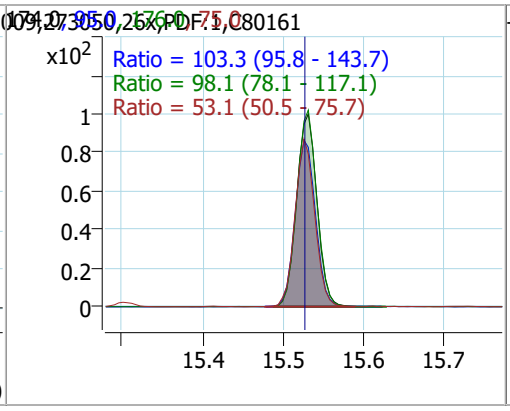


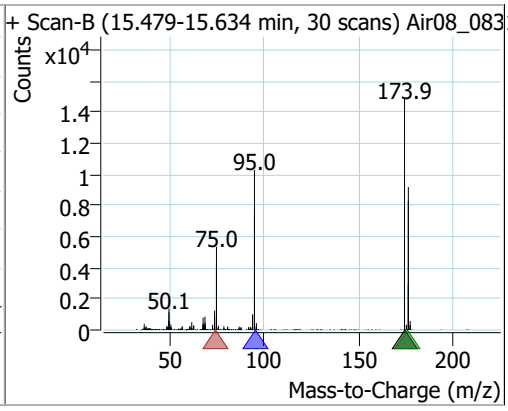




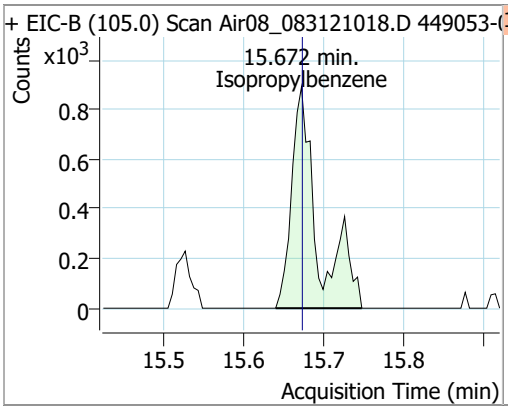
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
p-Bromofluorobenzene	10.3048	15.53	0.00	202743	95.0	103.3	95.8	143.7
					176.0	98.1	78.1	117.1
					75.0	53.1	50.5	75.7

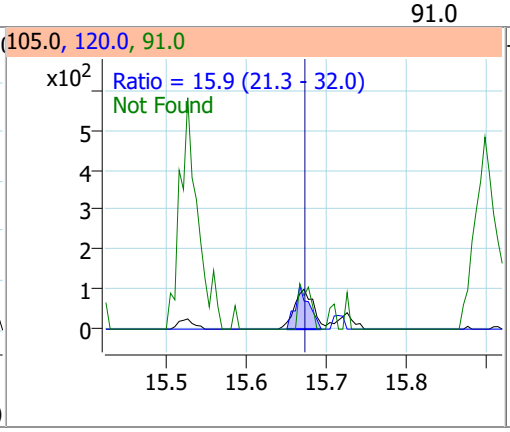


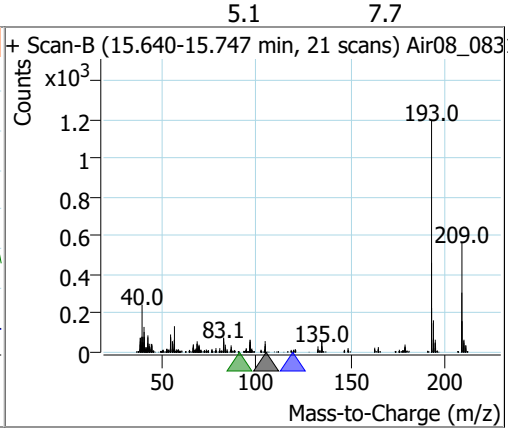




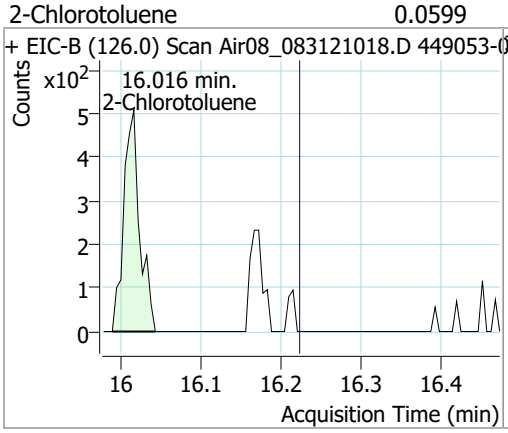
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Isopropylbenzene	0.0423	15.67	-0.01	1975	120.0	15.9	21.3	32.0
					91.0		5.1	7.7

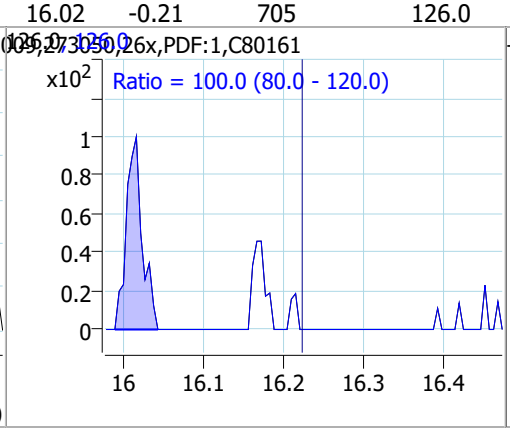


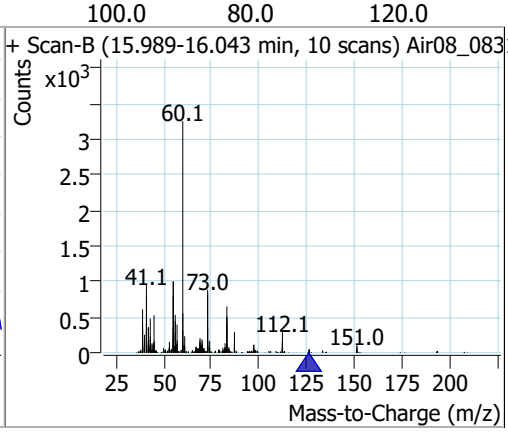




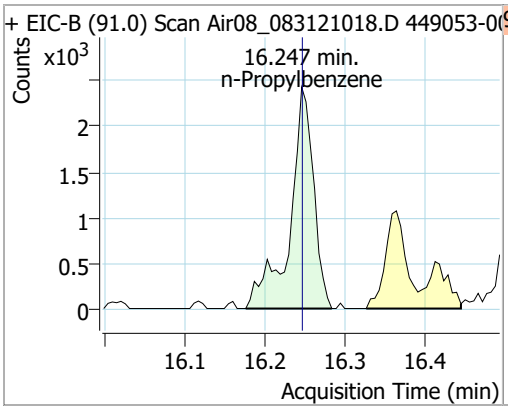
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Chlorotoluene	0.0599	16.02	-0.21	705	126.0	100.0	80.0	120.0

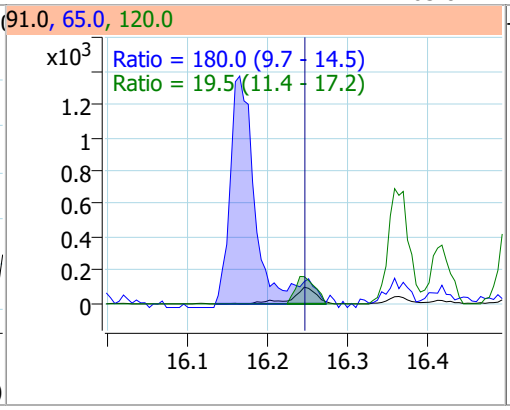


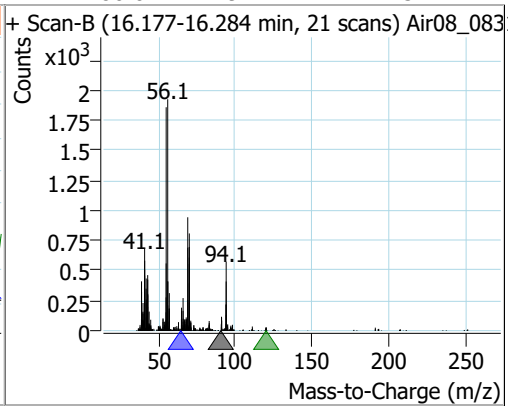




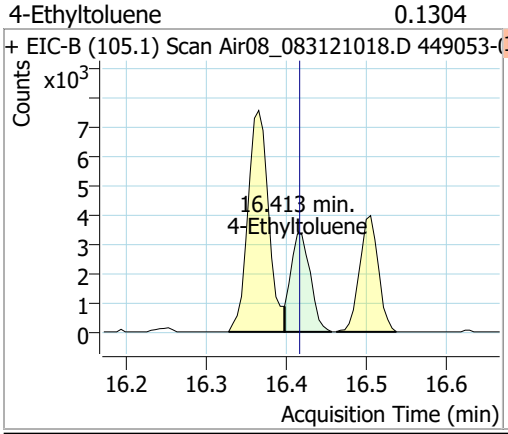
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Propylbenzene	0.0589	16.25	-0.01	5001	120.0	19.5	11.4	17.2
					65.0	180.0	9.7	14.5

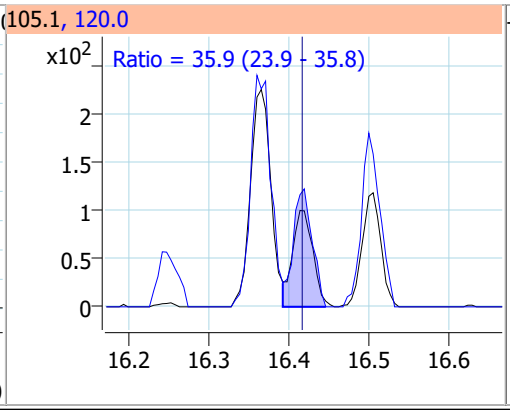


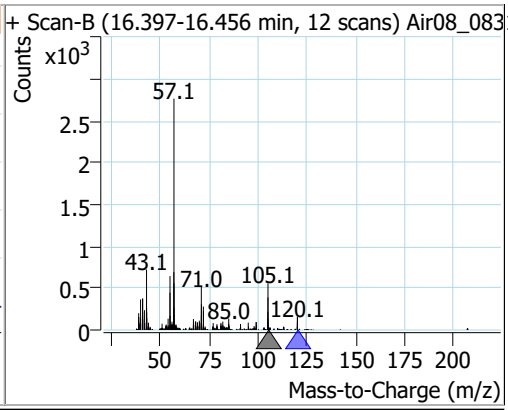




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
4-Ethyltoluene	0.1304	16.41	-0.01	5751	120.0	35.9	23.9	35.8

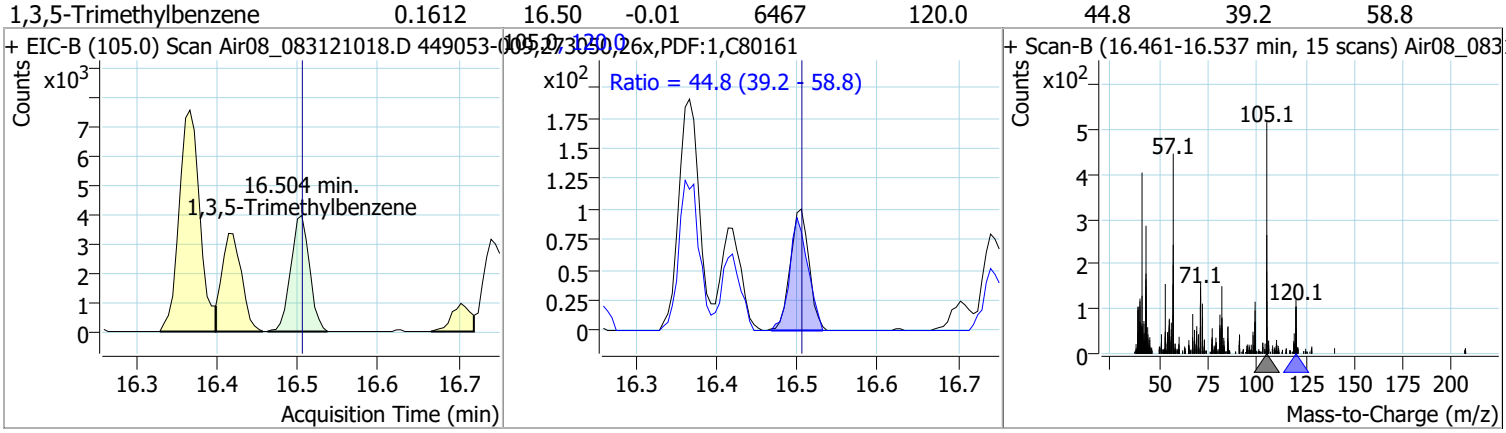




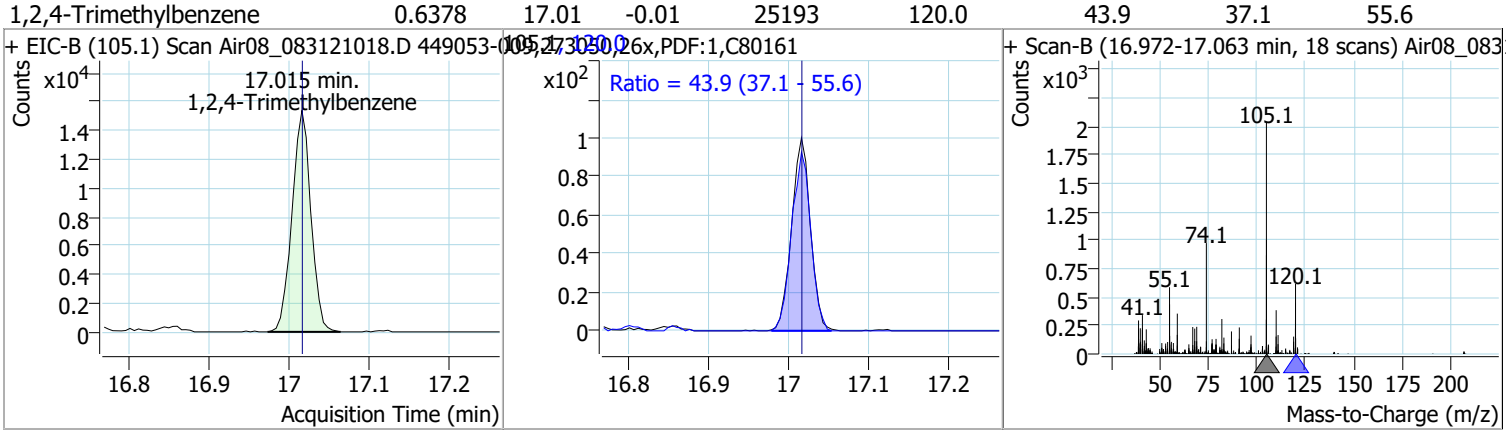


Quantitation Results Report (Not Reviewed)

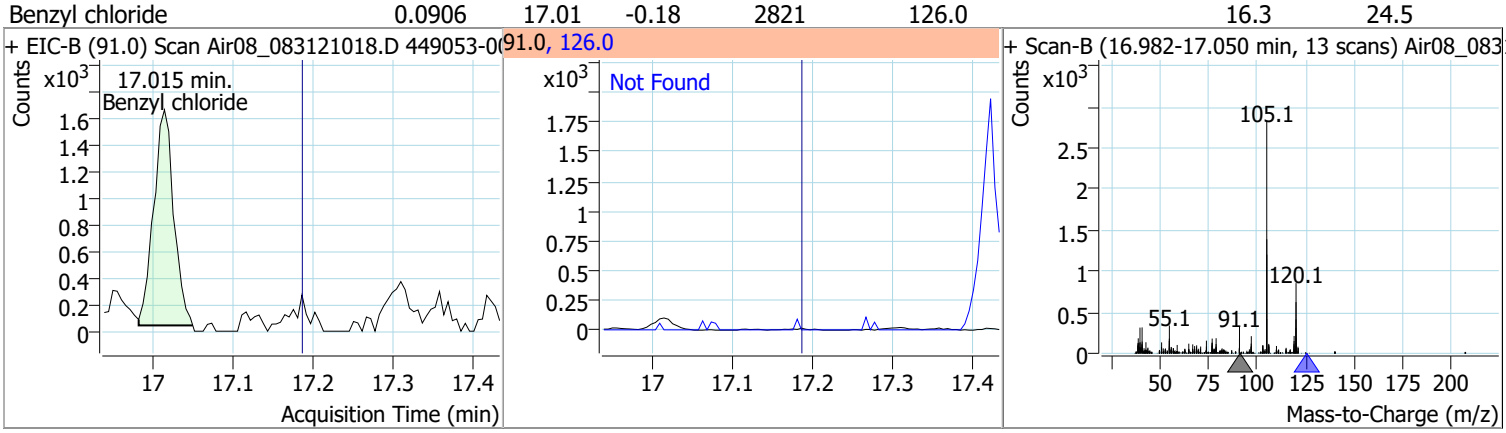
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3,5-Trimethylbenzene	0.1612	16.50	-0.01	6467	120.0	44.8	39.2	58.8



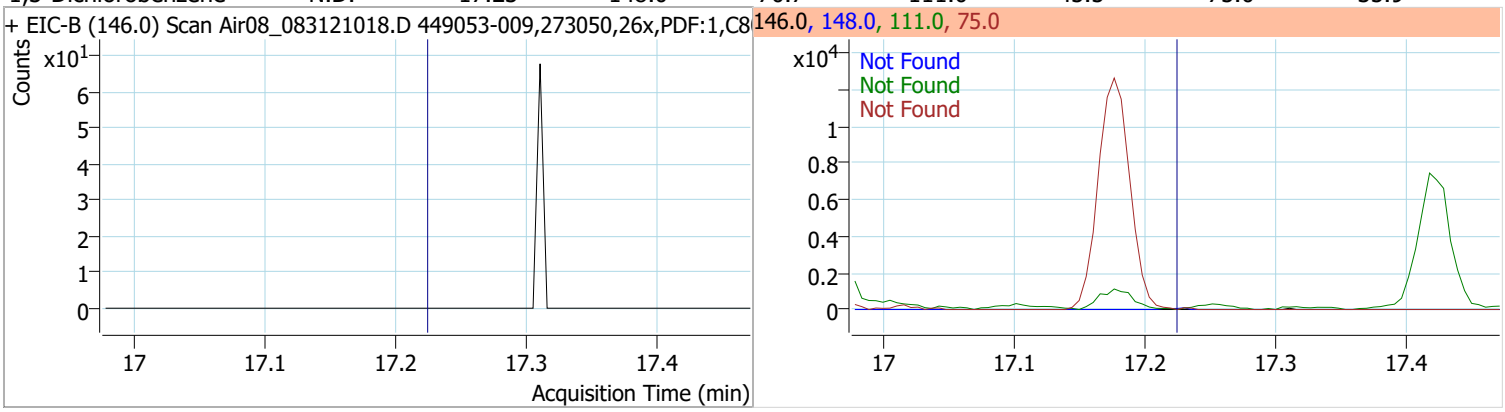
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2,4-Trimethylbenzene	0.6378	17.01	-0.01	25193	120.0	43.9	37.1	55.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzyl chloride	0.0906	17.01	-0.18	2821	126.0		16.3	24.5

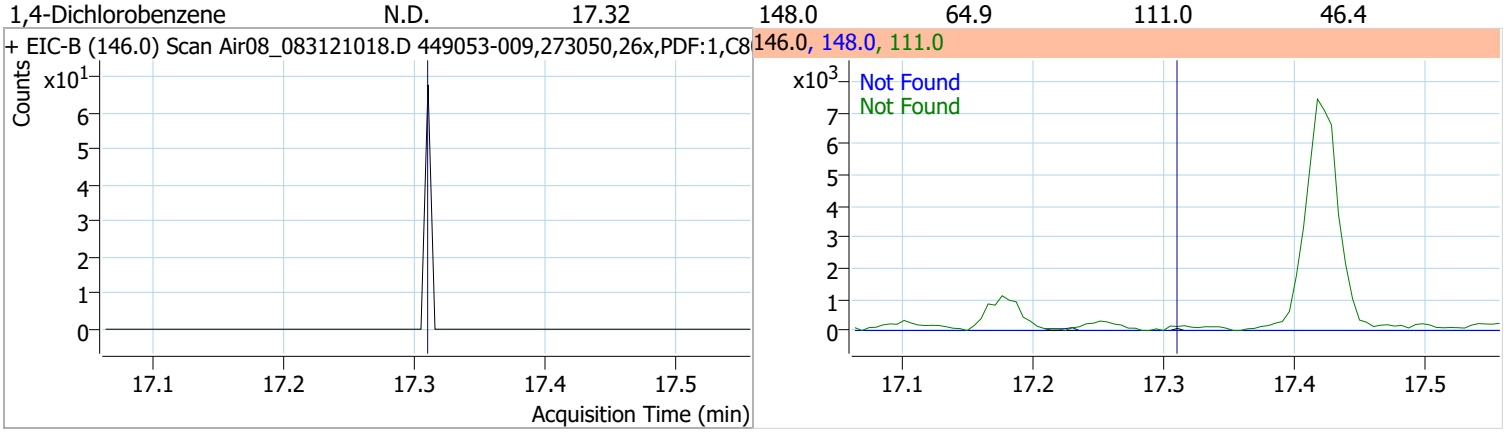


Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
1,3-Dichlorobenzene	N.D.	17.23	148.0	70.7	111.0	45.5	75.0	35.9

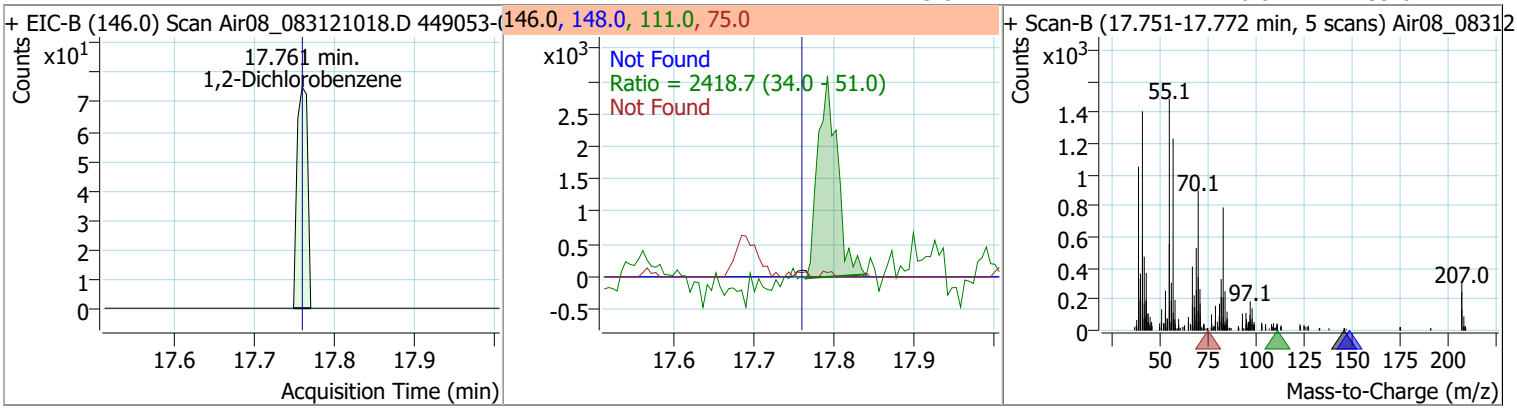


Quantitation Results Report (Not Reviewed)

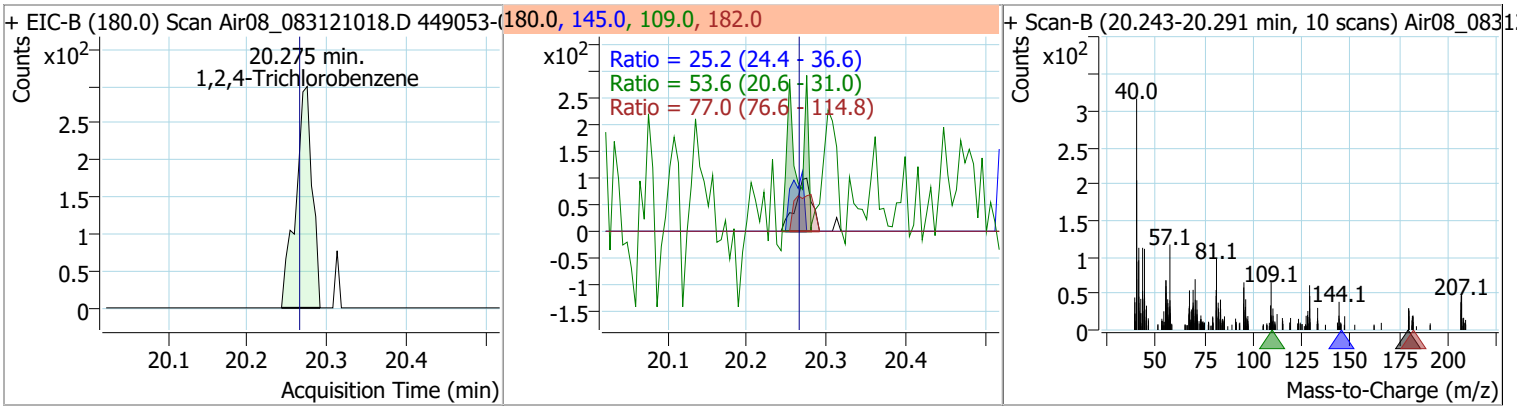
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,4-Dichlorobenzene	N.D.	17.32	148.0	64.9	111.0	46.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dichlorobenzene	0.0024	17.76	-0.01	69	148.0		51.1	76.7
					111.0	2418.7	34.0	51.0
					75.0		26.0	39.0

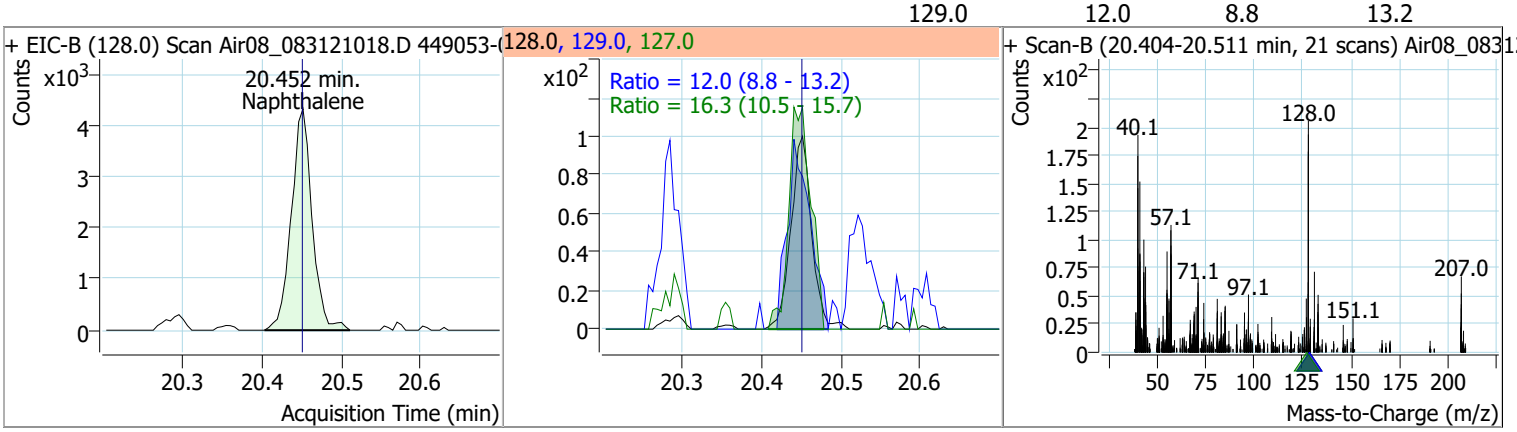


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2,4-Trichlorobenzene	0.0223	20.27	0.00	432	182.0	77.0	76.6	114.8
					145.0	25.2	24.4	36.6
					109.0	53.6	20.6	31.0

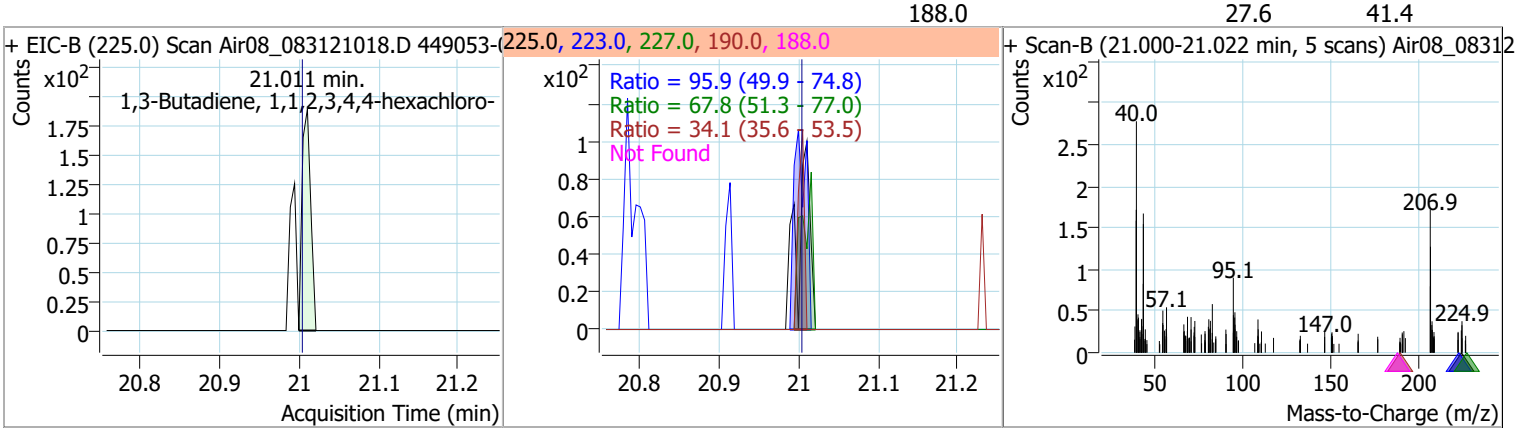


Quantitation Results Report (Not Reviewed)

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Naphthalene	0.2221	20.45	-0.01	7829	127.0	16.3	10.5	15.7
					129.0	12.0	8.8	13.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	0.0053	21.01	0.00	142	227.0	67.8	51.3	77.0
					223.0	95.9	49.9	74.8
					190.0	34.1	35.6	53.5
					188.0		27.6	41.4



Attachment 3

From: Richard Villafania <richard.villafania@enthalpy.com>
Sent: Wednesday, September 1, 2021 5:01 PM
To: Kevin Crosby <kcrosby@montrose-env.com>; Kris Huckabay <khuckabay@montrose-env.com>
Subject: RE: FW: FW: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Kevin,

Propanal/ Propionaldehyde - is used in the manufacture of plastics, in the synthesis of rubber chemicals, and as a disinfectant and preservative.

Formic Acid - is used preservative and antibacterial agent in livestock feed, leather tanning and dyeing, and in various cleaning products.

Oxalic Acid – is used in cleaning products, especially in the removal of rust. Also used in wood bleaching products.

Regards,

Richard Villafania
O: 714.771.9917
Richard.Villafania@enthalpy.com

From: Gabriel Guillen <gabriel.guillen@enthalpy.com>
Sent: Wednesday, September 1, 2021 3:14 PM
To: Richard Villafania <richard.villafania@enthalpy.com>
Cc: Marcus Hueppe <marcus.hueppe@enthalpy.com>
Subject: Re: FW: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

There are some really high peaks for non-target analytes. I reviewed the various runs (TO12 and To15) and the large peaks are not acetone/IPA. One appears to be propanal and the other is possibly formic acid/oxalic acid/fluoroethene/etc (about 8 possible compounds in 80% match range).

Thank you,
Gabe

On Wed, Sep 1, 2021 at 3:00 PM Richard Villafania <richard.villafania@enthalpy.com> wrote:

Hey Gabe,

Please see the MAQS's email below – any unknown peaks/analytes show up in the TO-15 to explain the difference? Report attached for reference. Thanks.

Regards,

Richard Villafania

O: 714.771.9917

Richard.Villafania@enthalpy.com

From: Kris Huckabay <khuckabay@montrose-env.com>
Sent: Wednesday, September 1, 2021 2:40 PM
To: richard.villafania@enthalpy.com
Subject: RE: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Hi Richard,

I had a quick question about the 1-voc-1-DB OFF results. The TO-15 analysis results added up are much lower than 330,000 ppb TNMNEHC result. Can you explain to me why this is? Just trying to figure out how I could get result that high.

Thanks,

Kristopher Huckabay, QSTI

Client Project Manager

Montrose Air Quality Services, LLC

2825 Verne Roberts Circle, Antioch, CA 94509
M: 925.381.2521
khuckabay@montrose-env.com
www.montrose-env.com

From: Richard Villafania <richard.villafania@enthalpy.com>
Sent: Wednesday, September 1, 2021 12:58 PM
To: khuckabay@montrose-env.com
Subject: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Hi Kris,

Supplement to include additional analysis (TO-15).

Data qualifiers and additional information necessary for the interpretation of the test results are contained in the PDF file and may not be included in the EDD.

Please find attached the following files:
- PDF Deliverable
- Standard Pivot Table EDD (449053_standard_excel_pivot.zip)

You may also access this data at https://labline-orange.enthalpy.com/
Email was also sent to: AntiochQA-QC@montrose-env.com, Richard.Villafania@enthalpy.com

Attachment 4

Leach, Taylor

From: Kris Huckabay <khuckabay@montrose-env.com>
Sent: Thursday, September 2, 2021 11:48 AM
To: Leach, Taylor
Subject: MRP Tracy VOC results
Attachments: 1-VOC-1-DBOFF Contamination Email chain.pdf; 449053_level2_rev1.pdf

Hi Taylor,
The MRP TCC report is nearly completed and you will be receiving the draft report this week.
Had a contamination issue with one the VOC canisters. 1-VOC-1-DB OFF sample can back with a super high hit on VOC (330 ppm). The rest of the samples had less than 1 ppm VOC. Had the lab do some further analysis on that sample and it showed that there was contamination with disinfectant/ cleaning type analytes. My guess would be the probe tip got contaminated with a product such as hand sanitizer. See attached lab report and email chain with the lab explaining what the contamination was. Since this was obvious contamination of the sample I am going to make note of this in the report and use runs 2 and 3 to show compliance.

Let me know if you have any questions.

Thanks,

Kristopher Huckabay, QSTI
Client Project Manager
Montrose Air Quality Services, LLC
2825 Verne Roberts Circle, Antioch, CA 94509
M: 925.381.2521
khuckabay@montrose-env.com
www.montrose-env.com

Attachment 5

TABLE 4-1
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	RATA Run 2	RATA Run 3	RATA Run 4	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0800-0832	0845-0915	0924-0954	--
Process Data				
load, MW	137	137	137	137
fuel flow rate, scfh	1,023,550	1,022,240	1,026,930	1,024,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.4	14.4	14.4
CO_2, % volume dry	3.8	3.8	3.8	3.8
volumetric flow rate, dscfm	484,937	482,078	481,323	482,780
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.49	0.49	0.49	0.49
lb/day	11.7	11.7	11.7	11.7
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.8	1.9	1.9	1.9
ppmvd @ 15% O_2	1.7	1.7	1.7	1.7
lb/hr	6.49	6.51	6.57	6.52
lb/day	155.7	156.3	157.7	156.6
lb/MMBtu	0.006	0.006	0.0062	0.006
Carbon Monoxide (CO)				
ppmvd	0.7	0.7	0.5	0.6
ppmvd @ 15% O_2	0.6	0.6	0.5	0.6
lb/hr	1.45	1.43	1.10	1.33
lb/day	34.8	34.3	26.3	31.8
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	1.1	0.2	0.2	0.5
ppmvd @ 15% O_2	1.0	0.1	0.1	0.4
lb/hr	1.35	0.20	0.18	0.58
lb/day	32.5	4.7	4.4	13.9
lb/MMBtu	0.001	< 0.001	< 0.001	0.001

TABLE 4-2
NH_3 EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	1-NH3-1-DB ON	2- NH3-1-DB ON	3- NH3-1-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0800-0832	0845-0915	0924-0954	--
Process Data				
load, MW	137	137	137	137
fuel flow rate, scfh	1,023,550	1,022,240	1,026,930	1,024,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.4	14.4	14.4
CO_2, % volume dry	3.8	3.8	3.8	3.8
moisture content, % volume	8.3	9.4	7.9	8.5
volumetric flow rate, dscfm	484,937	482,078	481,323	482,780
Ammonia (NH_3)				
ppmvd	0.8	1.0	1.0	0.9
ppmvd @ 15% O_2	0.8	0.9	0.9	0.9
lb/hr	1.08	1.26	1.36	1.23
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-3
PM EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	1-PM-1-DB ON	2-PM-1-DB ON	3-PM-1-DB ON	Average
Date	08/05/21	08/05/21	08/05/21	--
Time	0730-0945	1013-1220	1247-1454	--
Process Data				
load, MW	137	137	137	137
CT fuel flow rate, scfh	73,500	96,900	111,400	93,930
DB fuel flow rate, scfh	950,310	936,220	928,390	938,310
total fuel flow rate, scfh	1,023,810	1,033,120	1,039,790	1,032,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.3	14.2	14.3
CO_2, % volume dry	3.8	3.9	4.0	3.9
flue gas temperature, °F	210	210	211	210
moisture content, % volume	8.7	8.8	9.0	8.8
volumetric flow rate, dscfm	497,648	508,548	512,859	506,352
Filterable Particulate Matter (PM)				
gr/dscf	0.0002	0.0001	0.0001	0.0001
gr/dscf @ 12% CO_2	0.0006	0.0003	0.0003	0.0004
lb/hr	0.87	0.45	0.45	0.59
Condensable PM				
gr/dscf	<0.0003	<0.0003	<0.0003	<0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	<0.0008	<0.0009
lb/hr	<1.17	<1.21	<1.23	<1.20
Total PM				
gr/dscf	0.0005	0.0004	0.0004	0.0004
gr/dscf @ 12% CO_2	0.0015	0.0012	0.0011	0.0013
lb/hr	2.04	1.66	1.67	1.79
lb/day	49.0	39.9	40.2	43.0
lb/MMBtu	0.002	0.001	0.001	0.002

TABLE 4-4
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-1-DB OFF	2-1-DB OFF	3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	--
Time	0730-0800	0809-0839	0848-0918	--
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	892,130	894,770	894,060	893,653
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
volumetric flow rate, dscfm	457,389	461,048	460,682	459,706
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.43	0.43	0.43	0.43
lb/day	10.4	10.4	10.4	10.4
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.8	1.8	1.8	1.8
ppmvd @ 15% O_2	1.7	1.8	1.8	1.8
lb/hr	5.84	6.01	6.00	5.95
lb/day	140.2	144.2	144.0	142.8
lb/MMBtu	0.006	0.006	0.006	0.006
Carbon Monoxide (CO)				
ppmvd	1.4	1.4	1.4	1.4
ppmvd @ 15% O_2	1.4	1.4	1.4	1.4
lb/hr	2.89	2.91	2.87	2.89
lb/day	69.5	69.8	68.9	69.4
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	330.0*	0.2	0.2	0.2
ppmvd @ 15% O_2	324.5*	0.2	0.1	0.2
lb/hr	382.77*	0.20	0.18	0.19
lb/day	9186.6*	4.8	4.2	4.5
lb/MMBtu	0.414*	< 0.001	< 0.001	< 0.001

Note: * This result was deleted from calculation of the average result. See section 4.1 for a description of the apparent contamination of this sample.

TABLE 4-5
NH_3 EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-NH3-1-DB OFF	2- NH3-1-DB OFF	3- NH3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	--
Time	0730-0800	0809-0839	0848-0918	--
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	892,130	894,770	894,060	893,653
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
moisture content, % volume	7.5	7.7	8.2	7.8
volumetric flow rate, dscfm	457,389	461,048	460,682	459,706
Ammonia (NH_3)				
ppmvd	0.6	0.5	0.6	0.6
ppmvd @ 15% O_2	0.6	0.5	0.6	0.6
lb/hr	0.77	0.63	0.78	0.73
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-6
PM EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-PM-1-DB OFF	2-PM-1-DB OFF	3-PM-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	
Time	0652-0901	0921-1131	1158-1406	
Process Data				
load, MW	121	121	121	121
fuel flow rate, scfh	892,310	896,790	898,470	895,900
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
flue gas temperature, °F	210	215	217	214
moisture content, % volume	7.6	7.8	8.0	7.8
volumetric flow rate, dscfm	512,006	470,067	466,219	482,764
Filterable Particulate Matter (PM)				
gr/dscf	<0.0001	<0.0001	<0.0001	<0.0001
gr/dscf @ 12% CO_2	<0.0003	<0.0003	<0.0003	<0.0003
lb/hr	<0.36	<0.34	<0.34	<0.35
Condensable PM				
gr/dscf	<0.0003	<0.0003	0.0005	0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	0.0016	0.0011
lb/hr	<1.13	<1.10	1.83	1.35
Total PM				
gr/dscf	<0.0003	<0.0004	0.0005	0.0004
gr/dscf @ 12% CO_2	<0.0012	<0.0012	0.0019	0.0014
lb/hr	<1.49	<1.44	2.17	1.70
lb/day	<35.7	<34.6	52.2	40.8
lb/MMBtu	<0.001	<0.002	0.002	0.002

TABLE 4-7
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	RATA Run 2	RATA Run 3	RATA Run 4	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0816-0846	0854-0924	0935-1005	--
Process Data				
load, MW	137	136	136	136
fuel flow rate, scfh	1,018,900	1,017,020	1,021,420	1,019,113
Flue Gas Parameters				
O_2, % volume dry	14.5	14.5	14.5	14.5
CO_2, % volume dry	3.8	3.8	3.8	3.8
volumetric flow rate, dscfm	488,207	485,786	486,370	486,787
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.49	0.48	0.49	0.49
lb/day	11.7	11.6	11.7	11.7
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.9	1.9	2.0	2.0
ppmvd @ 15% O_2	1.8	1.8	1.8	1.8
lb/hr	6.91	6.87	6.99	6.92
lb/day	165.9	164.8	167.9	166.2
lb/MMBtu	0.007	0.007	0.007	0.007
Carbon Monoxide (CO)				
ppmvd	<0.2	<0.2	<0.2	<0.2
ppmvd @ 15% O_2	<0.2	<0.2	<0.2	<0.2
lb/hr	<0.41	<0.41	<0.41	<0.41
lb/day	<9.8	<9.8	<9.8	<9.8
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	0.1	0.2	0.2	0.1
ppmvd @ 15% O_2	0.1	0.1	0.1	0.1
lb/hr	0.12	0.18	0.19	0.16
lb/day	3.0	4.4	4.4	3.9
lb/MMBtu	< 0.001	< 0.001	< 0.001	< 0.001

TABLE 4-8
NH_3 EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	1-NH3-2-DB ON	2- NH3-2-DB ON	3- NH3-2-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0816-0846	0854-0924	0935-1005	--
Process Data				
load, MW	137	136	136	136
fuel flow rate, scfh	1,018,900	1,017,020	1,021,420	1,019,113
Flue Gas Parameters				
O_2, % volume dry	14.5	14.5	14.5	14.5
CO_2, % volume dry	3.8	3.8	3.8	3.8
moisture content, % volume	5.9	6.5	6.1	6.2
volumetric flow rate, dscfm	488,207	485,786	486,370	486,787
Ammonia (NH_3)				
ppmvd	0.7	0.8	0.8	0.8
ppmvd @ 15% O_2	0.7	0.7	0.7	0.7
lb/hr	0.94	1.02	1.05	1.00
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-9
PM EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	1-PM-2-DB ON	2-PM-2-DB ON	3-PM-2-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	
Time	0714-0920	0937-1143	1204-1409	
Process Data				
load, MW	137	136	136	136
CT fuel flow rate, scfh	947,310	932,450	922,110	933,960
DB fuel flow rate, scfh	71,500	92,400	107,400	90,430
total fuel flow rate, scfh	1,018,810	1,024,850	1,029,510	1,024,390
Flue Gas Parameters				
O_2, % volume dry	14.5	14.4	14.3	14.4
CO_2, % volume dry	3.8	3.9	3.9	3.9
flue gas temperature, °F	208	208	211	209
moisture content, % volume	7.3	7.9	8.3	7.9
volumetric flow rate, dscfm	546,491	543,135	537,890	542,505
Filterable Particulate Matter (PM)				
gr/dscf	0.0001	<0.0001	0.0001	0.0001
gr/dscf @ 12% CO_2	0.0003	<0.0002	0.0003	0.0003
lb/hr	0.39	<0.37	0.40	0.39
Condensable PM				
gr/dscf	0.0003	0.0003	<0.0003	0.0003
gr/dscf @ 12% CO_2	0.0009	0.0008	<0.0008	0.0008
lb/hr	1.27	1.21	<1.20	1.23
Total PM				
gr/dscf	0.0004	0.0003	0.0003	0.0003
gr/dscf @ 12% CO_2	0.0011	0.0010	0.0011	0.0011
lb/hr	1.66	1.58	1.60	1.62
lb/day	39.9	38.0	38.4	38.8
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-10
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 2-DUCT BURNERS OFF

Run Number	1-2-DB OFF	2-2-DB OFF	3-2-DB OFF	Average
Date	8/6/21	8/6/21	8/6/21	
Time	0731-0803	0808-0838	0848-0918	
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	891,090	893,830	894,400	893,107
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.1	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
volumetric flow rate, dscfm	463,029	464,453	470,310	465,931
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.43	0.43	0.43	0.43
lb/day	10.3	10.4	10.4	10.4
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.9	1.8	1.8	1.8
ppmvd @ 15% O_2	1.9	1.8	1.8	1.8
lb/hr	6.29	6.01	6.13	6.15
lb/day	151.0	144.3	147.1	147.5
lb/MMBtu	0.007	0.006	0.007	0.007
Carbon Monoxide (CO)				
ppmvd	0.4	0.4	0.3	0.3
ppmvd @ 15% O_2	0.4	0.4	0.3	0.3
lb/hr	0.74	0.75	0.55	0.68
lb/day	17.8	18.1	13.2	16.4
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	0.1	0.4	0.2	0.2
ppmvd @ 15% O_2	0.1	0.4	0.2	0.2
lb/hr	0.10	0.51	0.20	0.27
lb/day	2.5	12.2	4.9	6.5
lb/MMBtu	< 0.001	< 0.001	< 0.001	< 0.001

TABLE 4-11
NH_3 EMISSIONS RESULTS -
UNIT 2- DUCT BURNERS OFF

Run Number	1-NH3-2	2- NH3-2	3- NH3-2	Average
Date	8/6/21	8/6/21	8/6/21	
Time	0731-0803	0808-0838	0848-0918	
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	891,090	893,830	894,400	893,107
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.1	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
moisture content, % volume	7.2	8.6	8.1	8.0
volumetric flow rate, dscfm	463,029	464,453	470,310	465,931
Ammonia (NH_3)				
ppmvd	0.4	0.4	0.4	0.4
ppmvd @ 15% O_2	0.4	0.4	0.4	0.4
lb/hr	0.47	0.50	0.49	0.49
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-12
PM EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS OFF

Run Number	1-PM-2-DB OFF	2-PM-2-DB OFF	3-PM-2-DB OFF	Average
Date	8/6/21	8/6/21	8/6/21	--
Time	0651-0856	0915-1121	1139-1347	--
Process Data				
load, MW	121	121	121	121
fuel flow rate, scfh	891,620	896,740	901,720	896,690
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.0	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
flue gas temperature, °F	213	219	222	218
moisture content, % volume	7.6	7.6	7.7	7.6
volumetric flow rate, dscfm	505,600	505,057	507,763	506,140
Filterable Particulate Matter (PM)				
gr/dscf	<0.0001	0.0001	<0.0001	0.0001
gr/dscf @ 12% CO_2	<0.0003	0.0004	<0.0003	0.0003
lb/hr	<0.36	0.44	<0.37	0.39
Condensable PM				
gr/dscf	<0.0003	<0.0003	<0.0003	<0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	<0.0009	<0.0009
lb/hr	<1.16	<1.17	<1.18	<1.17
Total PM				
gr/dscf	<0.0004	0.0004	0.0004	0.0004
gr/dscf @ 12% CO_2	<0.0012	0.0013	0.0012	0.0012
lb/hr	<1.52	1.61	1.55	1.56
lb/day	<36.6	38.7	37.2	37.5
lb/MMBtu	<0.002	0.002	0.002	0.002

San Joaquin Energy, LLC

October 4, 2021

Mr. James Sanders
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto, California 95356

Subject: NOV 5026974 – MRP San Joaquin Energy, LLC – Tracy Combined Cycle Power Plant – Source Test indicated that the VOC Emissions Limits were Exceeded
Facility ID No. N-4597

Dear Mr. James Sanders:

MRP San Joaquin Energy, LLC – Tracy Combined Cycle Power Plant (SJE) is in receipt of Notice of Violation (NOV) #5026974 issued September 28, 2021 for the source test conducted on 8/6/2021 that indicated that the VOC emissions limits of 1.13 lb/hr and 1.5 ppm @ 15% O2 were exceeded. Based on the following information, TCCPP respectfully requests the district rescind the NOV.

Background

On 8/6/2021, Unit 1 (N-4597-1-11) VOC source test with the duct burners off (DB-OFF) was conducted at SJE's Tracy facility with the expectation that there would be no issues due to the facilities consistent historical results well below the permitted limit. On 9/2/2021, SJE was contacted by Montrose Air Quality Services, LLC (Montrose) via telephone and email explaining that VOC Run 1 DB-OFF source test conducted on 8/6/2021 had contamination issues with one of the sampling canisters. It was explained that the VOC results showed a "super high" hit of 330 ppm while the rest of the samples had less than 1 ppm VOC. Further analysis showed that the sample was contaminated with a "product such as disinfectant or a cleaning type agent". Montrose believed that some part of the sampling mechanism (canister, flow controller, probe) was contaminated with hand sanitizer during sampling or analysis. A final source test report was created by Montrose stating that they believed that the erroneous results were due contamination and included supporting documentation in the report.

SJE then notified the SJVAPCD of the deviation and SJE was told that a decision on the results could not be made until the certified source test report had been submitted to the District, but it was likely the District would issue a NOV, regardless of contamination because the district did not have a policy explaining how to handle sample contamination. The District requested a deviation report with a discovery date of 9/2/2021.

Out of extreme caution and an effort to be proactive, SJE scheduled a VOC retest at the facilities expense during the source testers earliest availability on 9/10/2021 to avoid the possibility of an extended period of excess emissions if a violation was assessed. Results show that no VOC emissions were detected during testing. A final report was submitted to the SJVAPCD on 10/4/2021.

SJE then conducted a thorough internal investigation of the potential causes of the deviation and determined that the erroneous results were not due equipment malfunction, but rather a result of sample contamination outside of the facilities control. Therefore, the SJE made no adjustments to the equipment before the VOC retest. A deviation report was then compiled with supporting evidence clearly showing that the erroneous VOC result was due to contamination. The deviation report was submitted to the SJVAPCD on 9/13/2021 along with the final, certified source test report. A copy of the deviation report is included as Attachment C.

The SJVAPCD then issued NOV #5026974 on 9/28/2021 for the source test conducted on 8/6/2021 that indicated that the VOC emissions limits of 1.13 lb/hr and 1.5 ppm @ 15% O2 were exceeded. See attachment A.

Basis Of The Request To Rescind The NOV

SJE believes that the results are erroneous and should be discarded for the following reasons:

- SJE staff also operates Malaga Power, LLC (C-4305). During the 2020 source test, Malaga also experienced similar sample contamination. Although the root cause of the contamination was never determined, SJVAPCD staff agreed to exclude the contaminated sample and use a two-run average for source test compliance determination. This was on the basis that VOC GC results showed that the contaminated sample had small, unexpected peaks that were not present in the uncontaminated samples. The contaminated sample was ruled as an outlier by SJVAPCD staff and determined that there was no departure from Malaga's permit requirements which regulate VOC emissions. See attachment B.

  SJE's analysis of the 2021 contaminated sample at Tracy Combined Cycle Power Plant also shows that there were unexpected peaks VOC GC results only present on the contaminated sample. Consistency in compliance determinations by the SJVAPCD is expected as this is how SJE makes certain decisions at the plant level.

- When Montrose reviewed the results from lab analysis, it was discovered that Unit 1 (N-4597-1-11) Run 1, DB-Off had a result of 330 ppm VOC. The lab explained that there were very high peaks for non-target analytes (see Attachment 1 of the deviation report included in Attachment C). Therefore, further analysis was conducted to pinpoint the cause for the erroneous results (see Attachment 2 of the deviation report included in Attachment C). Further analysis showed that the cause for the erroneous result was contamination of the sample from Propanol and/or Oxalic Acid which is not expected to be found in NG turbine exhaust. Montrose stated that they believe that some part of the sampling mechanism (canister, flow controller, probe) was contaminated with a cleaning product such as hand sanitizer and that the contamination was obvious (see Attachment 4 of the deviation report included in Attachment C). Hand sanitizer contamination would be logical as this test was conducted during the global COVID-19 health pandemic.

- The three test runs were conducted in succession with less than 10 minutes between the end of one run and the beginning of the next. There was no change in operation of the turbine across all three runs. Test results show that there was consistency in operating parameters such as MW's, fuel flow, and flue gas, while also showing consistency in emissions of SO2, NOx, CO, NH3, PM, and VOC excluding the one contaminated sample (see Attachment 5 of the deviation report included in Attachment C).

- The only emissions control equipment regulating VOC on the turbine exhaust is the oxidation catalyst, which has no moving parts and was replaced in November 2019. Since then, there have been four VOC source tests with the duct burners off. All of which have demonstrated passing results well below the limit excluding the single erroneous sample result that occurred on 8/6/2021. After the erroneous result that occurred on 8/6/2021, the two following runs demonstrated passing results on the same day. As stated previously, results of the follow-up source test conducted on 9/10/2021 show that no VOC emissions were detected during testing. A final report was submitted to the SJVAPCD on 10/4/2021. Between 8/6/2021 and 9/10/2021 there were no equipment adjustments made, further supporting the high VOC result was a result of contamination.
- The oxidation catalyst is an emissions control system for CO and VOC. If there was a performance issue with the oxidation catalyst to cause VOC emissions to fluctuate to 330 ppm, the results for the CO would also fluctuate. CO is more likely to show issues with the emission control system than VOC. CO concentrations remained stable throughout the entire test (see Attachment 5 of the deviation report included in Attachment C).
- The SJVAPCD combined cycle conversion engineering evaluation (SJVAPCD Project N1113502) states that the maximum daily VOC potential-to-emit with the duct burners off is 1.5 ppm @ 15% O2 and 1.13 lbs/hr. The catalyst manufacture guarantees a control efficiency of at least 93.5% (SJVAPCD Project N1193598). Uncontrolled emissions assuming 93.5% control efficiency is 17.28 lbs-VOC/hr, which is far less than the 382.77 lbs-VOC/hr test result for Run 1. This supports the fact that it is not possible to emit 382.77 lbs/hr VOC even without emissions controls such as an oxidation catalyst in place.
- Montrose Air Quality Services, LLC has stated multiple times that they believe that this sample is erroneous due to contamination. Montrose stated in the final, certified source test report submitted to the SJVAPCD that they believe that the test run should be thrown out because of, “apparent contamination” and included supporting documentation from the lab analysis company. See pages 10 and 439-465 of the Source Test Report dated 9/13/2021 that was submitted to the District on 9/13/2021 for more information.

Corrective Measures

When SJE was notified of the results, SJE took a proactive and cautious approach to schedule a retest to demonstrate compliance with the VOC permitted emission limits. A VOC retest was scheduled at the facilities expense for the first date that the source tester was available on 9/10/2021. SJE reasoning was to prevent an extended period of excess VOC emissions in the event that the District determined that a violation was warranted. To prevent recurrence of this violation, SJE has also started receiving bids from multiple CARB certified source test contractors for the 2022 testing across all SJE plants. It is SJE belief that the facility is limited in its efforts to prevent recurrence of this situation because of the nature of the deviation and the requirements for using independent contractors to perform all source testing and analysis.

SJE respectfully requests that NOV 5026974 be rescinded as this deviation is clearly due to sample contamination as explained in previous sections.

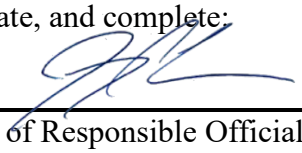
If you have any questions regarding the enclosed information, please feel free to contact Taylor Leach at (209) 505-5918 or e-mail: Taylor.Leach@naes.com.

Respectfully,

Claude Couvillion
Vice President of Operations

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that, based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and complete:



Signature of Responsible Official

10/4/2021

Date:

Claude Couvillion

Name of Responsible Official (please print)

Vice President of Operations

Title of Responsible Official (please print)

Attachment A

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

☒ Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400

☐ Central Region Office
1990 E Gettysburg Ave
Fresno, CA 93726-0244
(559) 230-5950

☐ Southern Region Office
34946 Flyover Court
Bakersfield, CA 93308
(661) 392-5500

NOTICE OF VIOLATION NO. 5026974

ISSUED TO:

NAME: Mrp San Joaquin Energy, Llc
PERMIT/FACILITY: N-4597
ADDRESS: 14950 W Schulte Rd / Tracy Combined Cycle Power Plant
PERMITS: -1-11
CITY: Tracy **STATE:** CA **ZIP:** 95377
PHONE: 312-766-8716

OCCURRENCE LOCATION:

NAME: Mrp San Joaquin Energy, Llc
ADDRESS: 14950 W Schulte Rd / Tracy Combined Cycle Power Plant ☐ Same as Above
CITY: Tracy **STATE:** CA **ZIP:** 95377
DATE: August 06, 2021 **TIME:** 12:00 am

THIS NOTICE HAS BEEN ISSUED AS A RESULT OF A VIOLATION OF:

☒ San Joaquin Valley Unified Air Pollution Control District Rules and Regulation
☐ California Health and Safety Code / California Code of Regulations

Rule(s)/Section(s): 2201 - New and Modified Stationary Source Review Rule, 2520 - Federally Mandated Operating Permits, 4703 - Stationary Gas Turbines

Equipment Type (If Applicable): Combined-Cycle Power Generating System

Description: Source test results indicate the facility exceeded their VOC emission limits of 1.13 lb/hr and 1.5 ppm @ 15 % O2.

RECIPIENT NAME: Claude Couvillion **TITLE:** Vice President of Operations

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT x _____
SIGNATURE

RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT A CONTINUED OR RECURRENT VIOLATION.

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY, YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: James Sanders
DATE: Tue September 28, 2021 TIME: 7:34 am ☐ MAILED/EMAILED

Continued

INSTRUCTIONS

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY, AND YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

A VARIANCE SHOULD BE SOUGHT IF IT IS NECESSARY TO CONTINUE TO OPERATE IN VIOLATION OF DISTRICT REGULATIONS. A VARIANCE CANNOT BE GRANTED FOR OPERATING WITHOUT A PERMIT OR FOR ACTIVITIES WHICH CREATE A NUISANCE

FOR FURTHER INFORMATION ON ELIGIBILITY FOR, OR THE FILING OF A VARIANCE PETITION, CALL THE COMPLIANCE DIVISION AT THE INDICATED REGIONAL OFFICE

OPERATION WITHOUT A PERMIT

A permit application must be submitted immediately to the District's Permit Services Division. The permit application must reference the Notice of Violation number: 5026974.

If there are any questions regarding the submission of a permit application, contact the Permit Services Division at the indicated Regional office.

All OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation.

If you have any questions or require additional information, contact the Compliance Division at the indicated Regional Office for assistance.

Attachment B

From: John Copp
To: Nevarez, Neftali
Cc: Lupe Jauregui
Subject: RE: MRP MALAGIA High VOC result on 3rd run: More questions
Date: Wednesday, August 05, 2020 1:13:13 PM
Attachments: image002.png
image004.png

Neftali –

The information that you have provided to the District regarding the VOC analyses performed on samples collected from the exhaust of Unit 1 at Malaga Power clearly shows that the reported VOC concentration for Run 3 is an outlier with no relation to the Unit 1 emissions. Therefore, the deviation report that you submitted on 7/27/20 is not required because there has been no departure from the Malaga Power permit requirements which regulate the VOC emissions from Unit 1. Thank you for the explanations that you have provided in response to my questions.

Regards,

John Copp
Air Quality Inspector
Compliance Division – Central Region
Phone 559-230-5977
Cell 559-269-1644
Fax 559-230-6062

San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave | Fresno, CA 93726

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From: Nevarez, Neftali <Neftali.Nevarez@naes.com>
Sent: Monday, August 3, 2020 1:59 PM
To: John Copp <John.Copp@valleyair.org>
Subject: RE: MRP MALAGIA High VOC result on 3rd run: More questions

John,
Malaga VOC GC plots. If you look at the third run, you can see all the contamination as a bunch of small peaks as well as some of the large peaks that don't show in the other two samples.

From: John Copp <John.Copp@valleyair.org>
Sent: Monday, August 03, 2020 1:08 PM
To: Nevarez, Neftali <Neftali.Nevarez@naes.com>
Subject: MRP MALAGIA High VOC result on 3rd run: More questions

Neftali –

I still have a some additional questions about this topic before dismissing the 3rd sample from Unit 1 as an outlier. I looked at the speciation report for the -9149 Run 3 sample to see what specific compounds were responsible for the high VOC values. Relative to the other speciation report that you submitted, nothing really stands out except for the large number of species that were above the detection level.

Questions:

1. In the speciation reports, are the Run 3 concentrations being reported with or without the dilution factor of 5?
2. Why are some concentration units reported as ppbC and others ppbV?
3. My impression from the speciation is that the high VOC total for Run 3 was the results of multiple hydrocarbon species being reported at higher-than-normal concentrations. Do you agree or is there a compound or group of related compounds that stand out as responsible for the high total for Run 3?

Thank you,

John Copp
Air Quality Inspector
Compliance Division – Central Region
Phone 559-230-5977
Cell 559-269-1644
Fax 559-230-6062

San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave | Fresno, CA 93726

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HEALTHY AIR LIVING
www.healthyairliving.com
Make one change for clean air!

From: Nevarez, Neftali <Neftali.Nevarez@naes.com>
Sent: Tuesday, July 21, 2020 8:45 AM
To: John Copp <John.Copp@valleyair.org>
Subject: FW: MRP MALAGIA High VOC result on 3rd run

John,
Attached are the VOC results from Malaga Unit 1 that Kris (Montrose) forwarded to me last Friday. The file ending in 1542 has the speciation for the third run. I am also attaching the file for the speciation of the first run (File ending in 0716). I am stil trying to get more information from Avogadro as you suggested.

From: Kris Huckabay <khuckabay@montrose-env.com>
Sent: Friday, July 17, 2020 10:56 AM
To: Nevarez, Neftali <Neftali.Nevarez@naes.com>
Subject: MRP MALAGIA High VOC result on 3rd run

Hi Nef,
Attached are the VOC results and the lab report for unit 1. Eric attached the raw data from the 3-VOC-1 run. As you can see it had a lot of hydrocarbons in it. I can't explain the results and suspect some sort of contamination, It did not have any PM recovery solvents like Acetone or Hexane. Maybe the lab provided a dirty canister? The first 2 runs were good but had a random 12ppm hit on the last canister on unit 1.

I can come out next week if I need to pull 3 new VOC samples if needed.

Please follow instructions to the right.
(This arrow will not print)

RE ATIVE ACCURACY TEST AUDIT DETERM

MRP

Malaga Peaking Plant Unit 1 Outlet

Test No.	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Date	6/16/20	6/16/20	6/16/20	6/16/20	6/16/20	6/16/20
Start Time	1427-1500	1506-1536	1545-1615	1622-1652	1700-1730	1738-1808
VOC, ppb volume dry		235	307	12100		
VOC, ppm volume dry		0.235	0.31	12.10		
VOC, ppm @ 15% O2		0.210	0.28	10.95		
VOC, lb/hr as CH4		0.113	0.15	5.86		
VOC, lb/day as CH4		2.70	3.54	140.71		
VOC, lb/MMBtu as CH4		0.00027	0.00035	0.01396		

Thanks,

Kristopher Huckabay, QSTI
Client Project Manager
Montrose Air Quality Services, LLC
2825 Verne Roberts Circle, Antioch, CA 94509
M: 925.381.2521
khuckabay@montrose-env.com
www.montrose-env.com

From: egrosjean aaclab.com <egrosjean@aaclab.com>
Sent: Friday, July 17, 2020 10:19 AM
To: Kris Huckabay <khuckabay@montrose-env.com>
Cc: Patrick Switzer <pswitzer@montrose-env.com>
Subject: RE: Data Results for Project Project MRP MALAGIA(Project # 005AS-733078)

Hi Kris
I've attached the raw report and as you can see this sample is loaded with lots of hydrocarbons!
Regards
Eric

From: Kris Huckabay
Sent: Friday, July 17, 2020 10:07 AM

To: egrosjean aaclab.com <egrosjean@aaclab.com>
Cc: Patrick Switzer <pswitzer@montrose-env.com>
Subject: FW: Data Results for Project Project MRP MALAGIA(Project # 005AS-733078)

Hi Eric,
I got a super high result for sample 3-VOC-1 (AAC Sample ID: 201062-9149). It was 12.1 ppm when the other samples were 0.2 and 0.3 ppm. Can you run a speciated analysis on this sample to tell me what gave the high result? I suspect the sample was contaminated somehow.

Thanks,

Kristopher Huckabay, QSTI
Client Project Manager
Montrose Air Quality Services, LLC
2825 Verne Roberts Circle, Antioch, CA 94509
M: 925.381.2521
khuckabay@montrose-env.com
www.montrose-env.com

From: shodge aaclab.com <shodge@aaclab.com>
Sent: Tuesday, June 30, 2020 10:08 AM
To: khuckabay@montrose-env.com; antiochqa-qc@montrose-env.com
Cc: info aaclab.com <info@aaclab.com>
Subject: Data Results for Project Project MRP MALAGIA(Project # 005AS-733078)

Hello,

Attached are the Data Results for Project MRP MALAGIA(Project # 005AS-733078) samples received 06/19/2020 (AAC Project # 201062).

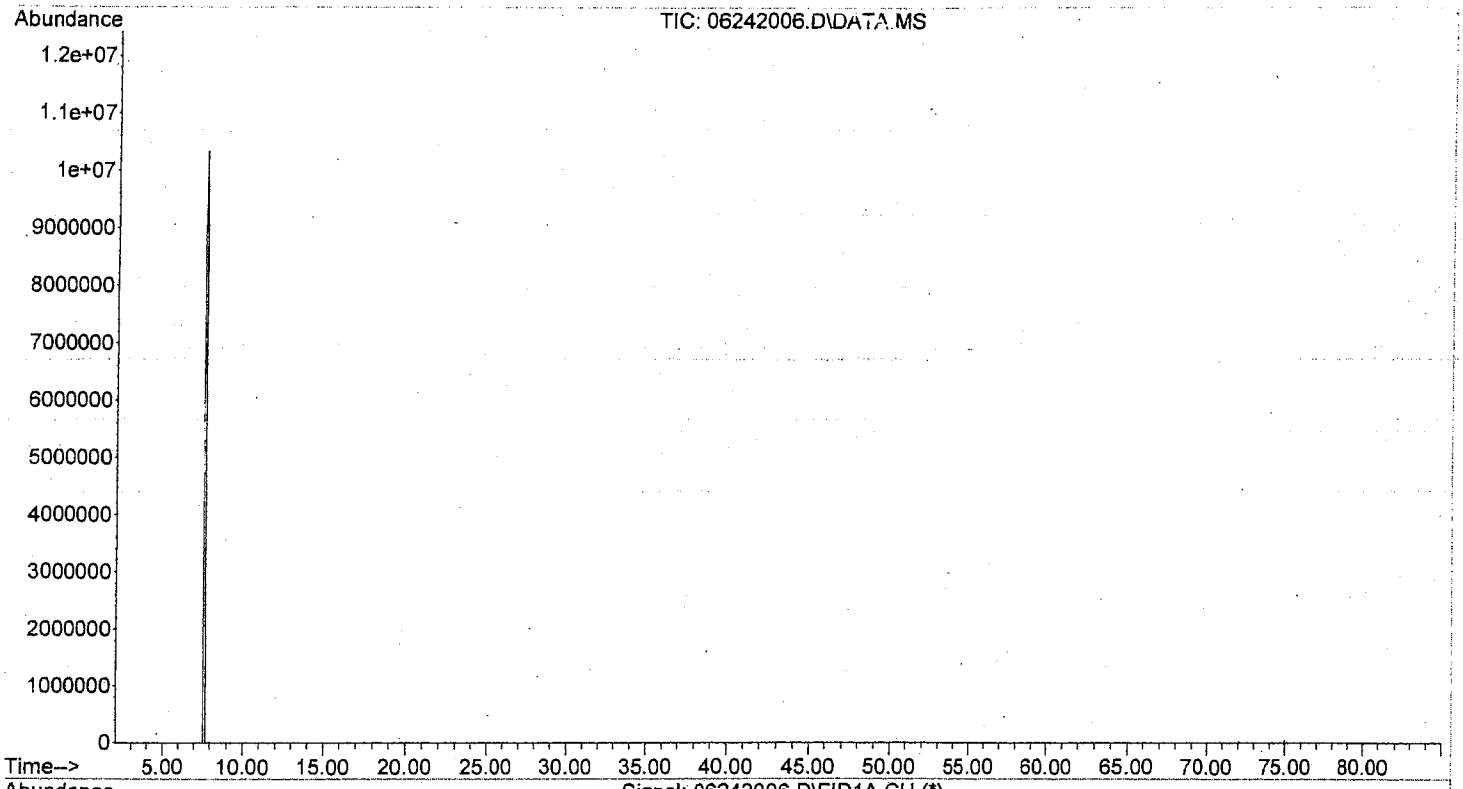
Please let me know if you require a hard copy or if you do not receive the attached in good condition.

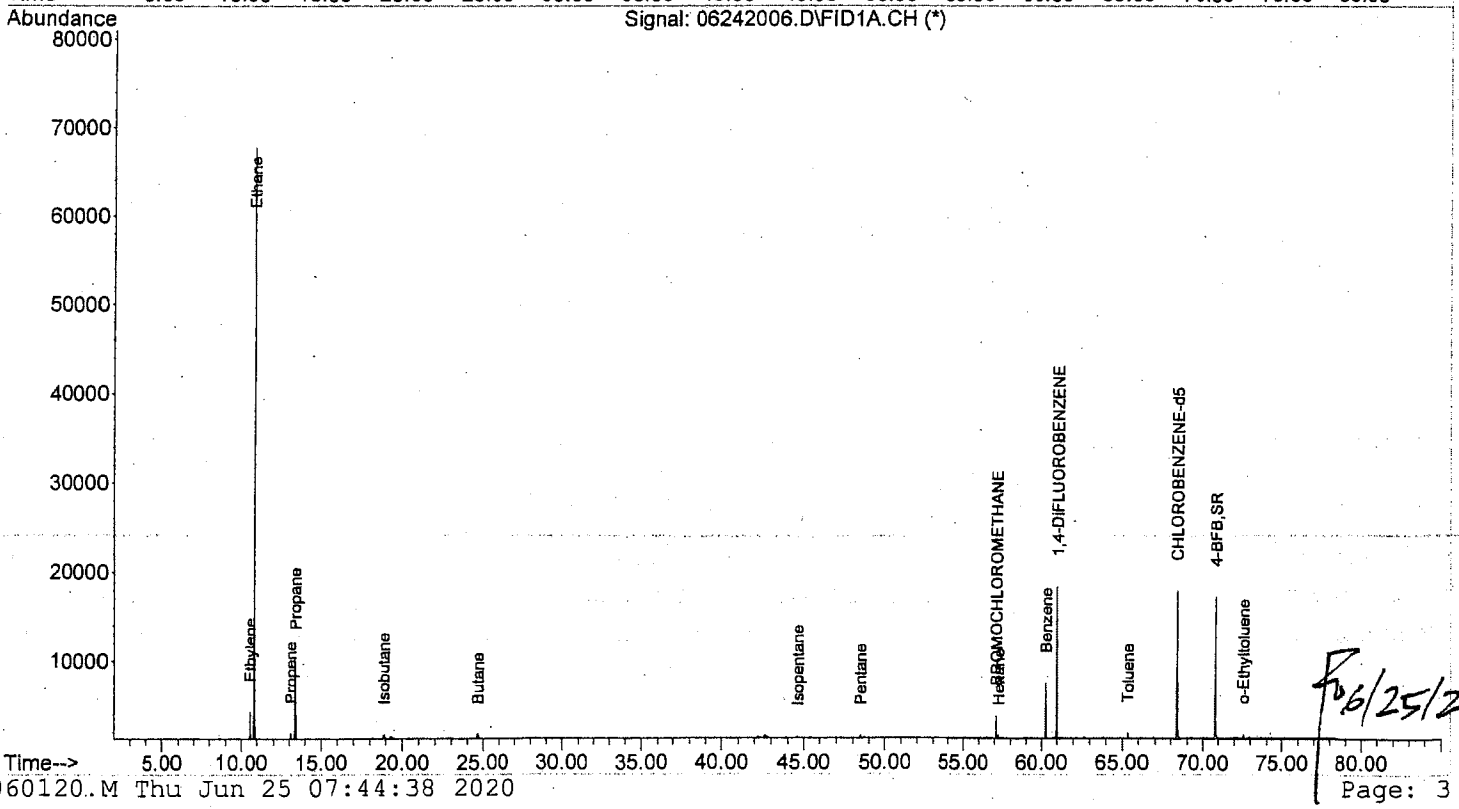
Kind regards,
Sabrina Hodge
Data Management
Atmospheric Analysis & Consulting Inc.
1534 Eastman Ave. Ventura CA 93003
805-650-1642 | www.aaclab.com

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS01\2020\062420\
Data File : 06242006.D
Acq On : 24 Jun 2020 16:30
Operator : RB
Sample : 201062-9147
Misc : IS/Surr: PS022820-01 + 500mL (Sig #1); (Sig #2)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 25 07:43:17 2020
Quant Method : C:\msdchem\1\METHODS\2020\P060120.M
Quant Title : PAMS
QLast Update : Fri Jun 05 08:36:08 2020
Response via : Initial Calibration



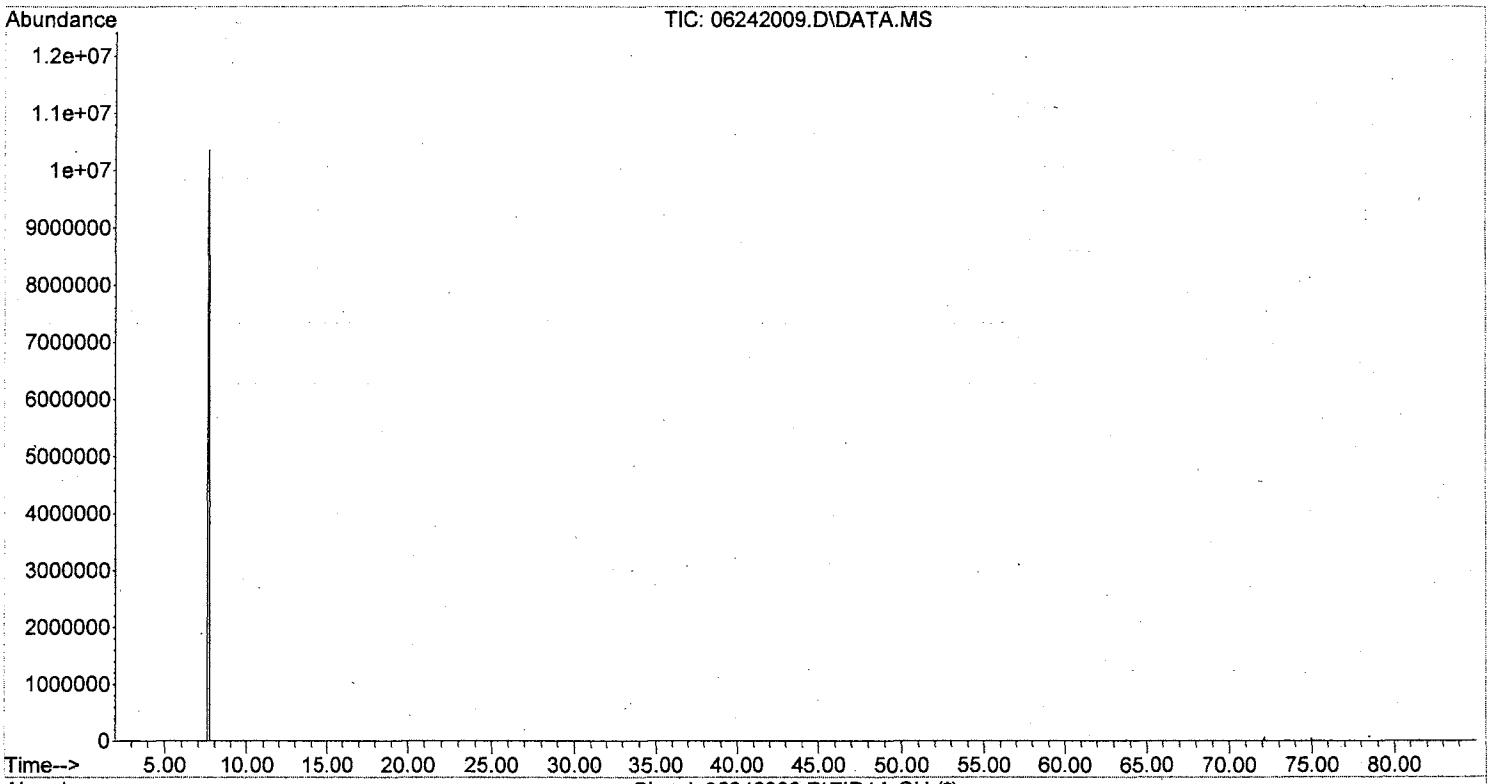


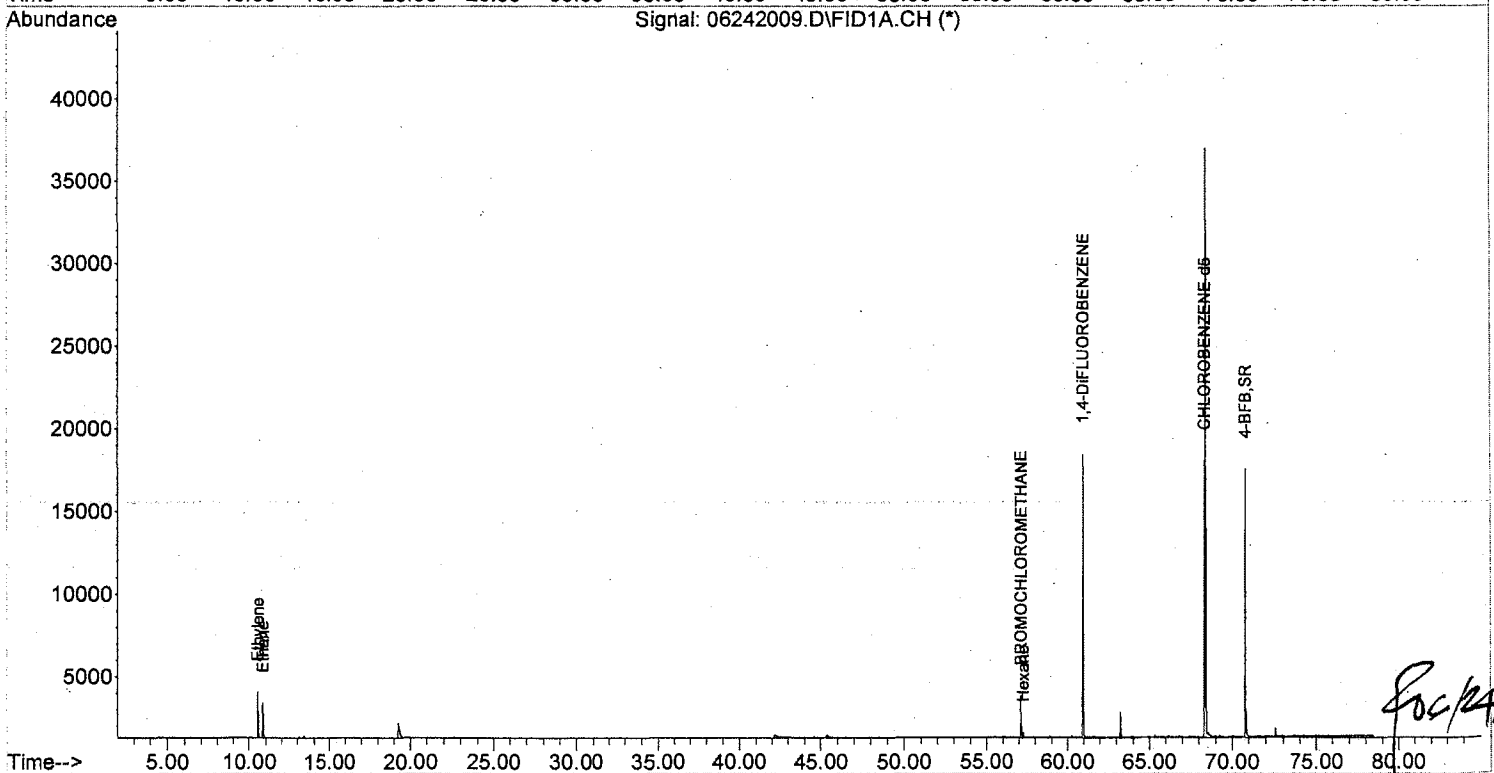
6/25/20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS01\2020\062420\
Data File : 06242009.D
Acq On : 24 Jun 2020 21:16
Operator : RB
Sample : 201062-9148
Misc : IS/Surr: PS022820-01 + 500mL (Sig #1); (Sig #2)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 25 11:40:37 2020
Quant Method : C:\msdchem\1\METHODS\2020\P060120.M
Quant Title : PAMS
QLast Update : Fri Jun 05 08:36:08 2020
Response via : Initial Calibration



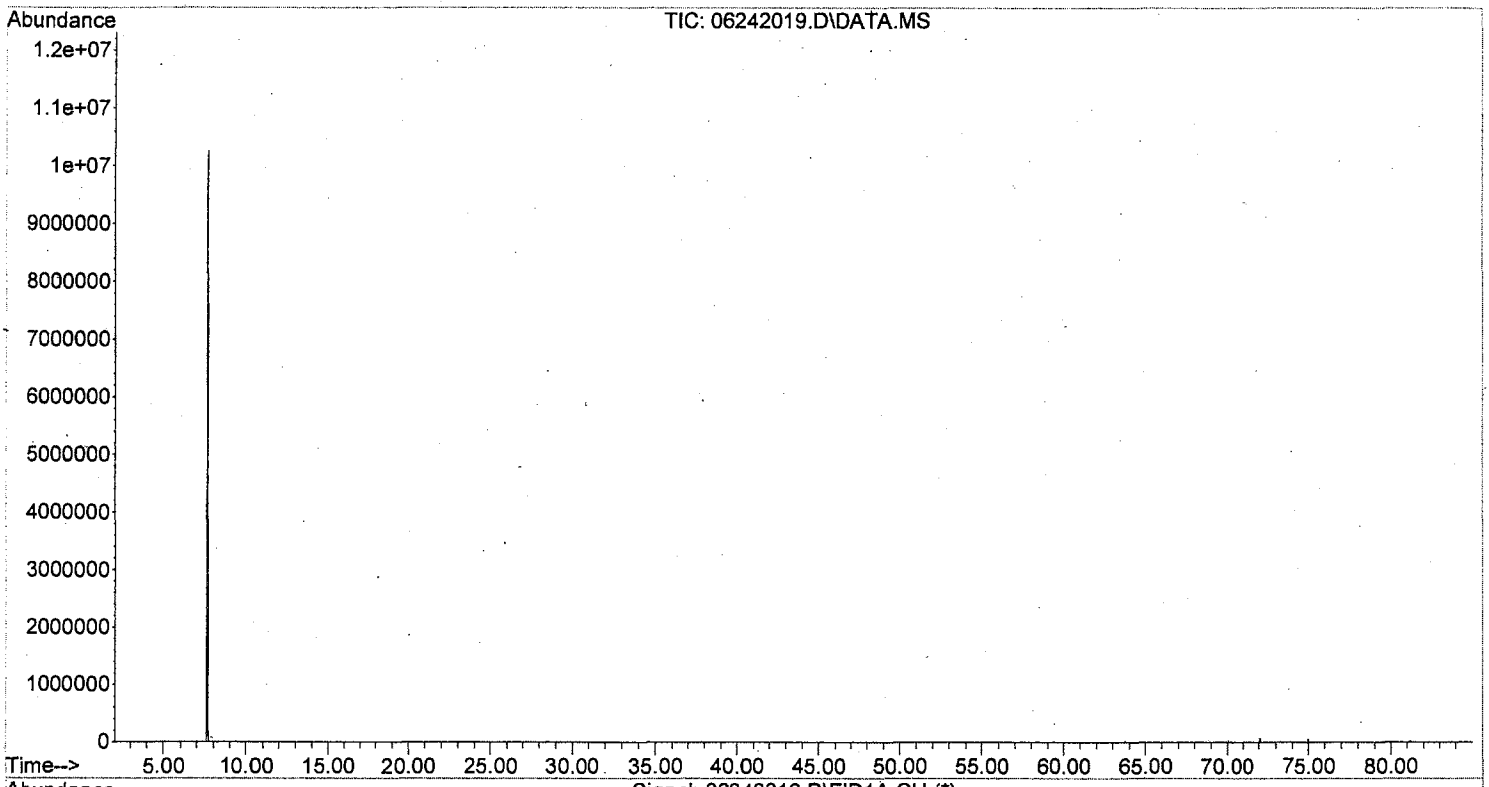


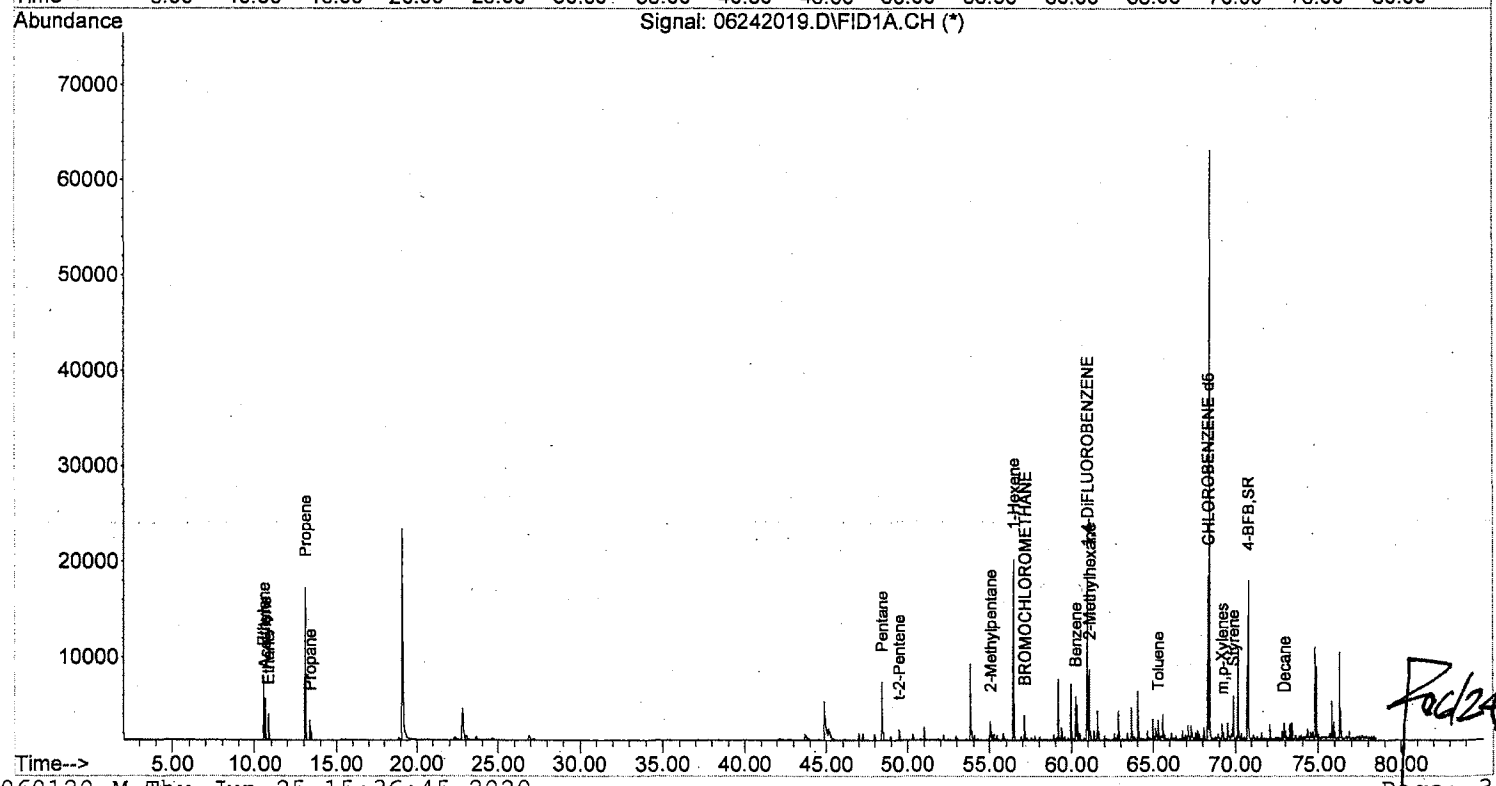
6/24/20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\MS01\2020\062420\
Data File : 06242019.D
Acq On : 25 Jun 2020 13:25
Operator : RB
Sample : 201062-9149 x5
Misc : IS/Surr: PS022820-01 + 100mL (Sig #1); (Sig #2)
ALS Vial : 4 Sample Multiplier: 5

Quant Time: Jun 25 15:35:50 2020
Quant Method : C:\msdchem\1\METHODS\2020\P060120.M
Quant Title : PAMS
QLast Update : Fri Jun 05 08:36:08 2020
Response via : Initial Calibration





Pad 24/20

Attachment C

(Deviation Report Submitted 9/13/2021)

MRP San Joaquin Energy, LLC

September 13, 2021

San Joaquin Valley Air Pollution Control District
Ms. Lisa Middleton
Air Compliance Source Test Division
4800 Enterprise Way
Modesto, CA 95356
Phone No.: (209) 557-6400

Subject: Title V Deviation Follow-up Report
MRP San Joaquin Energy, LLC – Tracy Combined Cycle Power Plant
Facility ID N-4597

Dear Ms. Middleton:

In accordance with Condition 2 of Facility Wide Requirements of the Title V Permit for Facility ID N-4597, please find enclosed the Title V Deviation Follow-up Report. This deviation was first discovered on September 2, 2021 and promptly reported to the district upon discovery.

Please call Taylor Leach at (209) 275-7079 or e-mail (Taylor.Leach@naes.com) if you require additional information or if you have any questions regarding this report.

Respectfully,

Claude Couvillion
Vice President of Operation
MRP San Joaquin Energy, LLC

CC: Mr. Matt Salazar
Air and TRI Enforcement Office
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Anwar Ali
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

BREAKDOWN / TITLE V - DEVIATION REPORTING FORM

Check the appropriate box if using this form to submit/report a:

☐ Breakdown Notification (must be reported within 1 hour)

☒ Title V Deviation

☐ Breakdown Follow-up Report

☐ Title V Deviation/Breakdown Follow-up Report

This form can be used to file the initial report of an equipment breakdown, and as the follow-up report for both a breakdown and/or deviation from a Federal Title V permit condition. The required reports must be submitted to the nearest District regional office as follows:

- Breakdown follow-up reports no later than 10 days after returning to compliance
- Deviation reports no later than 10 days after discovery

Company Name: MRP San Joaquin Energy, LLC - Tracy Combined Cycle Power Plant Facility ID: **N-4597**

Breakdown - Initial Notification:

Reported by: NA Date: NA

Reported to: NA Time: NA

BREAKDOWN / DEVIATION INFORMATION

1.	Permit unit and condition number(s): N-4597-0-4 Condition #5; N-4597-1-11 Condition #11
2.	Equipment involved: Turbine Generator 1
3.	Location of operation: 14950 W Schulte Rd, Tracy, CA 95377
4.	Description of permit condition: N-4597-0-4 Condition #5: The permittee must comply with all conditions of the permit… N-4597-1-11 Condition #11: Emissiosn rates from this CTG without the duct burner firing, except during startup and shutdown periods, shall not exceed any of the following limits:… VOC (as methane) – 1.13 lb/hr and 1.5ppmvd @ 15% O2…

5. Date, time, and duration of breakdown/deviation:

Start of Deviation: 8/6/2021, 0800 PST (date/time corresponding to the end of the first run of the source test with duct burners off)

End of Deviation: Pending. Deviation period will end upon completion of a successful retest, or upon agency approval to discard the result of the first test run due to invalid/erroneous data, in which case no deviation has occurred. See below.

6. Description of breakdown/deviation (include excess and visible emissions, if applicable):

The annual VOC source test performed on 8/6/2021 failed to demonstrate compliance. The first run was an extreme outlier at 324.5 ppm @ 15% O2, while the following runs were well below the limit at 0.2 (second run) and 0.1 (third run) ppm @ 15% O2, which drove the three-run average to 108.9 ppm @ 15% O2. This exceeded the permitted limit of 1.5 ppm @ 15% O2.

The test also did not demonstrate compliance with the lb/hr limit. The first run was an extreme outlier at 382.77 lb/hr, while the following runs were well below the limit at 0.20 (second run) and 0.18 (third run) lb/hr, which drove the three-run average to 127.7 lb/hr. This exceeded the permitted limit of 1.13 lb/hr. Here is a table from the source test report demonstrating the extreme differences between run 1 and runs 2 and 3 in another format.

Run Number	1-1-DB OFF	2-1-DB OFF	3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	–
Time	0730-0800	0809-0839	0848-0918	–
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	330.0*	0.2	0.2	0.2
ppmvd @ 15% O_2	324.5*	0.2	0.1	0.2
lb/hr	382.77*	0.20	0.18	0.19
lb/day	9186.6*	4.8	4.2	4.5
lb/MMBtu	0.414*	< 0.001	< 0.001	< 0.001

Note: * This result was deleted from calculation of the average result. See section 4.1 for a description of the apparent contamination of this sample.

7. Date and time when breakdown/deviation was discovered:

09/2/2021 at 11:48 am PDT when a phone call was received from the source test company.

8. Date and time compliance was achieved:

Pending agency concurrence that the cause of the high VOCs measured in the first run sample was due to contamination of the sample, and not due to the performance of the gas turbine emission control systems. San Joaquin Energy (SJE) believes the results are erroneous and requests approval to eliminate the first run result from the source test average calculation to demonstrate compliance with the limit, or to invalidate the test all together. If the agency concurs, a deviation has not occurred. Otherwise, SJE believes a valid retest is warranted to demonstrate ongoing compliance with the VOC limits,

avoiding a deviation. SJE proactively performed a retest on 9/10/2021 and is awaiting results from the source test company.

9. Probable cause of breakdown/deviation:

Montrose (the source testing company) stated that they used the sampling canisters and tubing straight out of the sample bag in succession provided by the analytical laboratory. Enthalpy Analytical lab Managers stated that the canisters are batch cleaned and certified. There is no way to prove this statement. The lab also reviewed the usage history of the canister, and the previous sample did not have the same identified erroneous contaminants.

When Montrose reviewed the results from lab analysis, it was discovered that Unit 1, Run1, DB-OFF, had a result of 330 ppm VOC. The lab explained that there were very high peaks for non-target analytes. See attached GC results (Attachment 1). Therefore, further analysis was conducted to pinpoint the cause for the erroneous results. See attached analysis (Attachment 2). It was discovered that the cause for the erroneous result was contamination of the sample from Propanol and/or Oxalic Acid/Formic Acid which is not expected to be found in NG turbine exhaust. See attached analysis and statements (Attachment 1, 2, 3).

SJE was notified of the contaminated sample on 9/2/2021, and Montrose explained that the probe tip was contaminated with a cleaning product such as hand sanitizer and that the contamination was obvious. See attached statement (Attachment 4).

SJE believes the results are erroneous and should be discarded for the following reasons:

- Speciation testing was conducted on the sample from the erroneous first test run, which showed obvious contamination from a cleaning product. Since the certified source test company identified a source of contamination, they eliminated the run from the test average in the final, certified test report.
- The three test runs were conducted in succession with less than 10 minutes apart. There was no change in the operation of the turbine across all three runs. Relevant tables from the Source Test Report are included in Attachment 5. Summary tables for testing conducted on both Unit 1 and 2 are included to illustrate the consistency in emissions measurements throughout the test, except for the VOC results for Run 1 on Unit 1 with Duct Burners Off (Table 4-4).
- The only emission control equipment regulating VOC on the turbine exhaust is the oxidation catalyst, which has no moving parts and was replaced in November 2018.
- The SJVAPCD combined cycle conversion engineering evaluation (N-1113502) states that the maximum daily VOC potential to emit with the DB off is 1.5 ppm @ 15% O2 and 1.13 lbs/hr. The catalyst manufacturer guarantees a control efficiency of 93.5%. Pre-controlled emissions assuming a 93.5% control efficiency is 17 lbs/hour, which is far less than the 382.77 test result for Run 1. This is one data source to support the fact that it is not possible to emit 382.77 lbs/hour VOC with even a partially functioning catalyst in place.
- There have been no emissions exceedances before or after the erroneous result that occurred on 8/6/2021, indicating that the oxidation catalyst is operating properly.
- The oxidation catalyst is a control system for CO and VOC. If there was a performance issue with the oxidation catalyst to cause VOC emissions to fluctuate to 330 ppm, the results for CO would also fluctuate. CO is more likely to be show issues with the control system than VOC. CO concentrations remained stable throughout the entire test.

10. Measures taken to correct this occurrence and prevent recurrence:

Measures taken to correct and prevent this occurrence are undetermined at this point since the cause of higher emissions during Run 1 was not within SJE's control. As stated in Section 9, the source test company eliminated the results of Run 1 from the test average based on a known source of contamination on their part. SJE also believes the result from Run 1 of the source test is erroneous. SJE is requesting approval from the SJVAPCD to use the average from the second two runs of the source test to demonstrate compliance with the emission limits, or to concur that the test is inconclusive.

SJE performed a VOC retest on Unit 1, DB-OFF on 9/9/2021, to prevent an extended period of excess emissions if a violation is assessed. Results will be provided as soon as the source test company issues a certified test report.

- Attach photographs of defective equipment.
- Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction; Rule 1100 – *Equipment Breakdown* assigns the burden of proof to the source owner/operator seeking relief.

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and addresses all deviations that resulted from this event:

Signature of Responsible Official *(Responsible Official only required for Title V Permit Holders)*	9/13/2021 Date
Claude Couvillion Name of Responsible Official	312.766.8716 Telephone
Vice President of Operations Title of Responsible Official	jcouvillion@mrpgenco.com Email

Attachment 1

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321017.D
Acq On : 24 Aug 2021 10:36 am
Operator : GSG
Sample : 449053-009,272666,26x,PDF:1
Misc : I1 IS:S15707, 1.3x20mL
ALS Vial : 8 Sample Multiplier: 26

1-VOC-1-DB OFF

Quant Time: Aug 24 15:45:43 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	35.610	14059925	10.864 ppbv
Spiked Amount	10.000		Recovery =	108.64%
2) S	Bromochloromethane	23.853	2207602	10.237 ppbv
3) S	1,4-Difluorobenzene	27.363	17387743	12.811 ppbv
4) S	Chlorobenzene-d5	33.627	13320674	9.945 ppbv
	Target Compounds			
5) T	Propane	8.250f	1411137	176.379 ppbC
6) H	Total TNMNEHC	26.650	2171382791	330183.762 ppbC

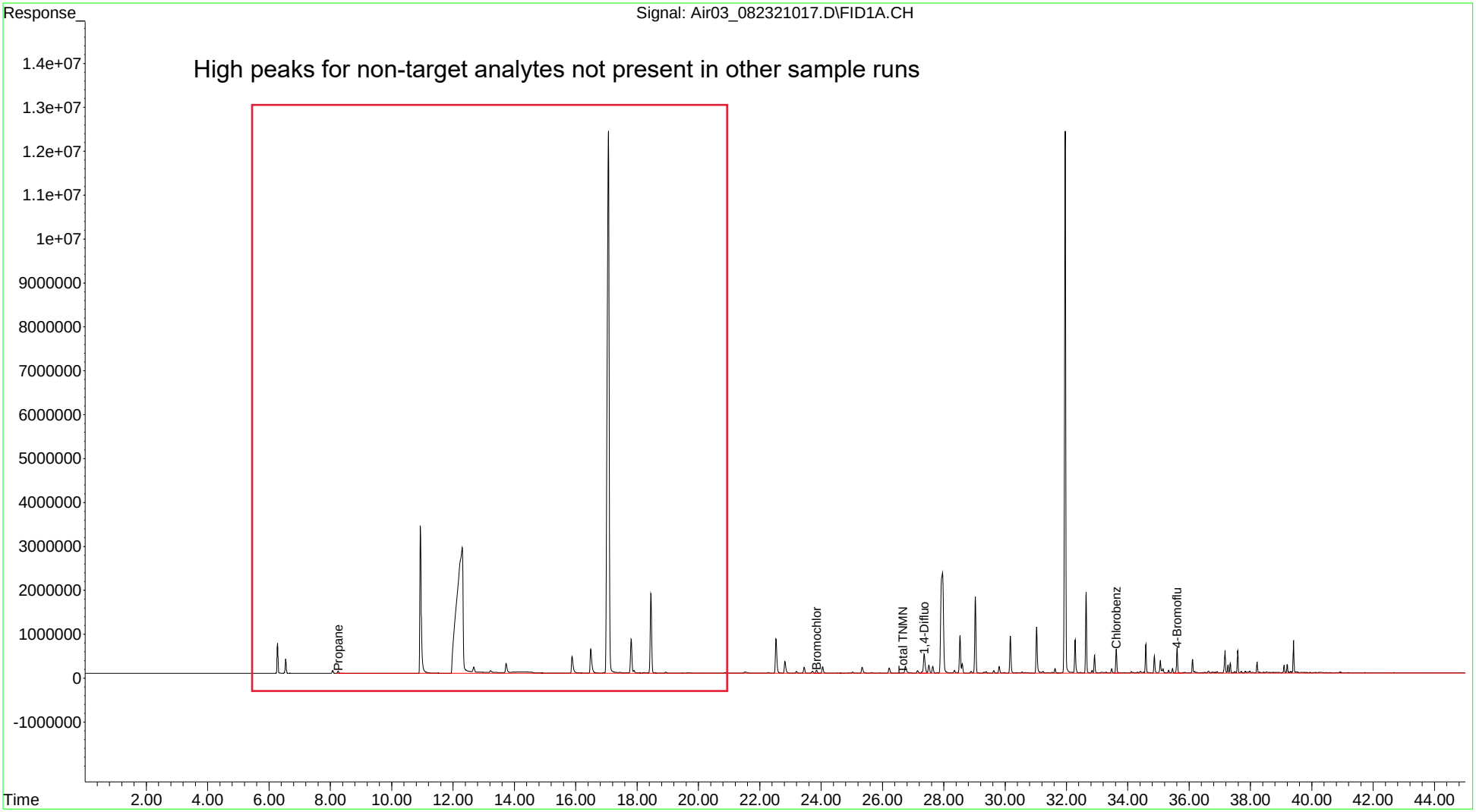
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321017.D
Acq On : 24 Aug 2021 10:36 am
Operator : GSG
Sample : 449053-009,272666,26x,PDF:1
Misc : I1 IS:S15707, 1.3x20mL
ALS Vial : 8 Sample Multiplier: 26

1-VOC-1-DB OFF

Quant Time: Aug 24 15:45:43 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321016.D
Acq On : 24 Aug 2021 9:43 am
Operator : GSG
Sample : 449053-010,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 9 Sample Multiplier: 1.2

2-VOC-1-DB OFF

Quant Time: Aug 24 15:45:10 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	35.610	14409152	11.134	ppbv
Spiked Amount	10.000		Recovery =	111.34%	
2) S	Bromochloromethane	23.830	2570998	11.922	ppbv
3) S	1,4-Difluorobenzene	27.347	15395611	11.344	ppbv
4) S	Chlorobenzene-d5	33.625	15038856	11.227	ppbv
	Target Compounds				
5) T	Propane	0.000	0	N.D.	ppbC
6) H	Total TNMNEHC	26.650	24777682	172.151	ppbC

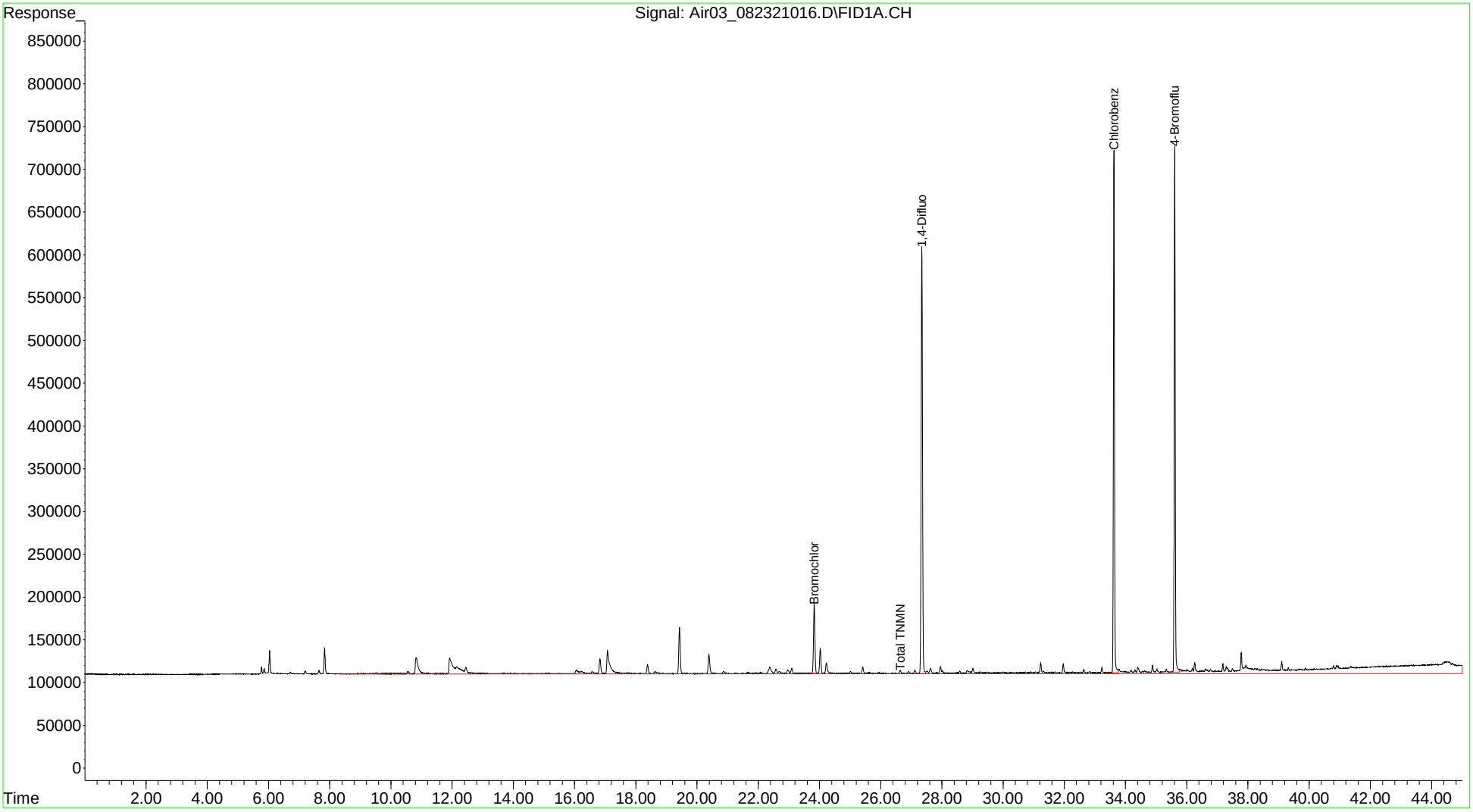
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321016.D
Acq On : 24 Aug 2021 9:43 am
Operator : GSG
Sample : 449053-010,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 9 Sample Multiplier: 1.2

2-VOC-1-DB OFF

Quant Time: Aug 24 15:45:10 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321012.D
Acq On : 23 Aug 2021 10:10 pm
Operator : GSG
Sample : 449053-011,272666,1.2x,PDF:1
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 10 Sample Multiplier: 1.2

3-VOC-1-DB OFF

Quant Time: Aug 24 15:43:35 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH

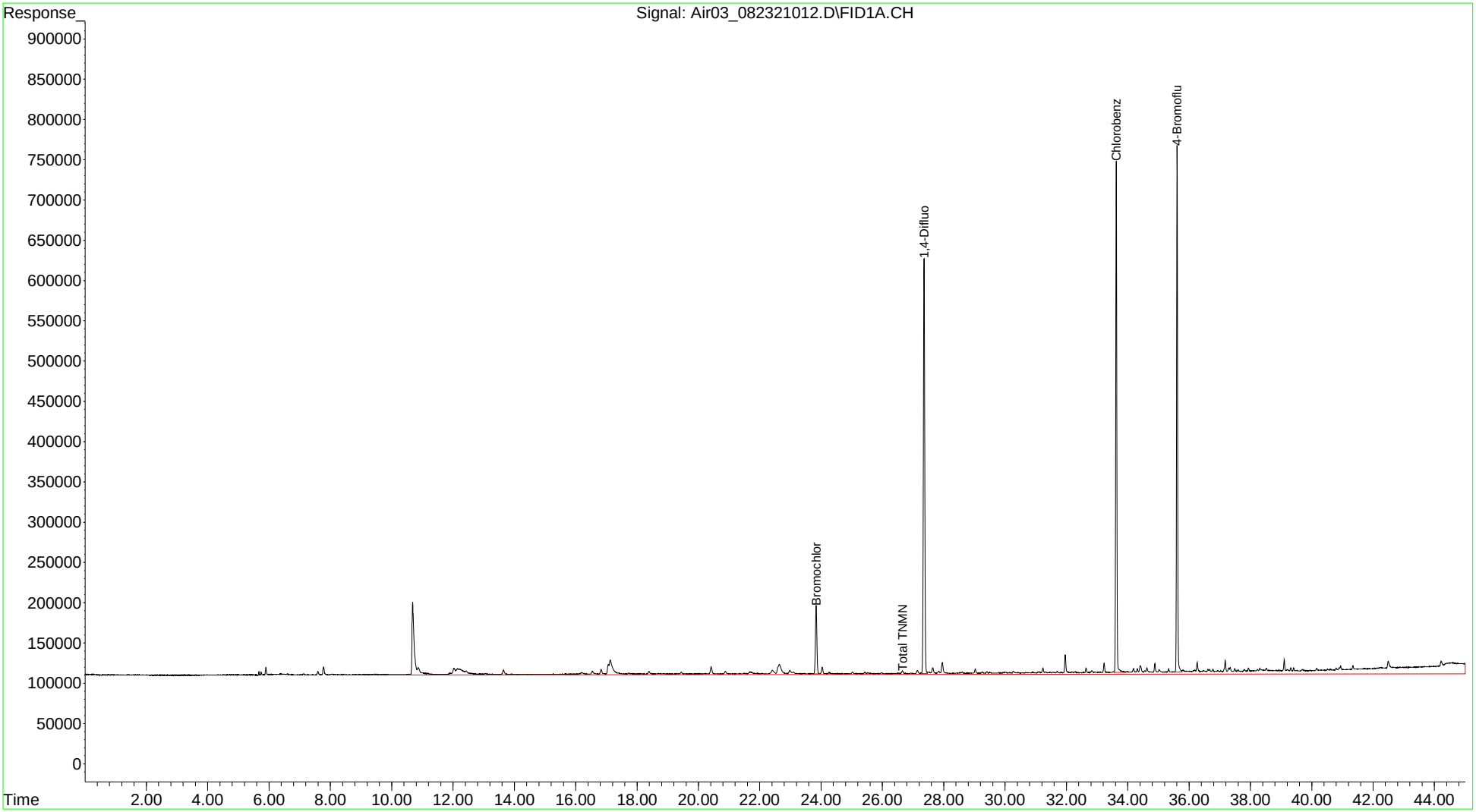
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	35.610	15102420	11.670	ppbv
Spiked Amount	10.000		Recovery =	116.70%	
2) S	Bromochloromethane	23.839	2777563	12.879	ppbv
3) S	1,4-Difluorobenzene	27.358	16064430	11.836	ppbv
4) S	Chlorobenzene-d5	33.627	15579243	11.631	ppbv
	Target Compounds				
5) T	Propane	0.000	0	N.D.	ppbC
6) H	Total TNMNEHC	26.650	21124977	146.513	ppbC

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\210823_PAMS\
Data File : Air03_082321012.D
Acq On : 23 Aug 2021 10:10 pm
Operator : GSG
Sample : 449053-011,272666,1.2x,PDF:1 3-VOC-1-DB OFF
Misc : I1 IS:S15707, 1.2x400mL
ALS Vial : 10 Sample Multiplier: 1.2

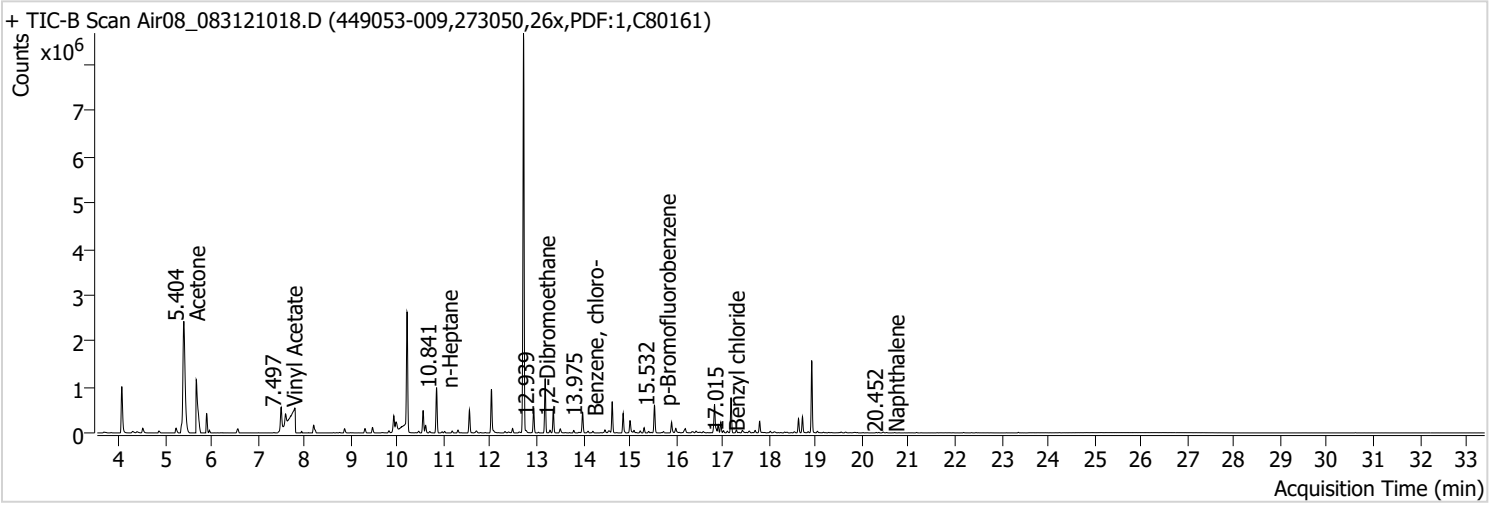
Quant Time: Aug 24 15:43:35 2021
Quant Method : C:\MSDChem\1\METHODS\Quant Methods\TO12-PAMS_210820_1_NMOC.m
Quant Title : AIR-MS-03 PAMS
QLast Update : Mon Aug 23 17:44:10 2021
Response via : Initial Calibration
Signal(s) : FID1A.CH



Attachment 2

Quantitation Results Report (Not Reviewed)

Data File	Air08_083121018.D	Operator	GSG
Acq. Method	TO15_Acq_111920	Acq. Date-Time	8/31/2021 11:03:03 PM
Sample Name	449053-009,273050,26x,PDF:1,C80161	Instrument	Air-MS-08
Vial	8	Multiplier	1.00
DA Method File	TO15_081321.m	Comment	1.3x10mL
Tune File	bfb.u	Tune Date	5/29/2021 9:21:42 AM
Batch Name	2021 Aug 31 1607 TO15_081321.m.batch.bin	Last Calib Update	8/16/2021 12:11:02 PM
Ref Library			



Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
Internal Standards							
M Bromochloromethane	8.198	130.0	76735	10.0000	nL/L	#	-0.004
M 1,4-Difluorobenzene	9.924	114.0	246615	10.0000	nL/L		-0.004
M Chlorobenzene-d5	13.980	82.0	140697	10.0000	nL/L	#	-0.005
System Monitoring Compounds							
S p-Bromofluorobenzene	15.532	174.0	202743	10.3048	nL/L		0.000
Spiked Amount: 10.000	Range: 60.0 - 140.0%			Recovery = 103.05%			
Target Compounds							QValue
T Propylene	3.685	41.0	11282	3.4259	nL/L	#	85
T Freon 12	0.000		0	N.D.			
T Chloromethane	3.970	50.0	478	0.1032	nL/L		50
T Freon 114	0.000		0	N.D.			
T Vinyl Chloride	0.000		0	N.D.			
T 1,3-Butadiene	4.319	54.0	1178	0.3076	nL/L	#	1
T Butane	4.391	43.0	32801	5.2842	nL/L	#	80
T Bromomethane	0.000		0	N.D.			
T Chloroethane	4.808	64.0	365	0.1112	nL/L	#	50
T Ethanol	4.865	45.0	96984	81.3725	nL/L		97
T Vinyl bromide	0.000		0	N.D.			
T Acrolein	5.236	56.0	134293	75.1199	nL/L		100
T Acetone	5.404	58.0	4516772	1698.6237	nL/L	#	58
T Isopropanol (IPA)	5.691	45.0	1508409	223.4251	nL/L	#	58
T Trichloromonofluoromethane	0.000		0	N.D.			
T n-Pentane	5.892	43.0	478498	62.6461	nL/L	#	88
T Tert-butyl alcohol (TBA)	6.139	59.0	6296	0.5417	nL/L		61
T 1,1-Dichloroethene	6.150	61.0	371	0.0316	nL/L		36
T Methylene Chloride	6.272	51.0	484	0.2120	nL/L	#	35
T 3-Chloropropene	6.564	76.0	1133	0.4101	nL/L	#	1
T Freon 113	0.000		0	N.D.			
T Carbon Disulfide	6.564	76.0	1133	0.0607	nL/L		57

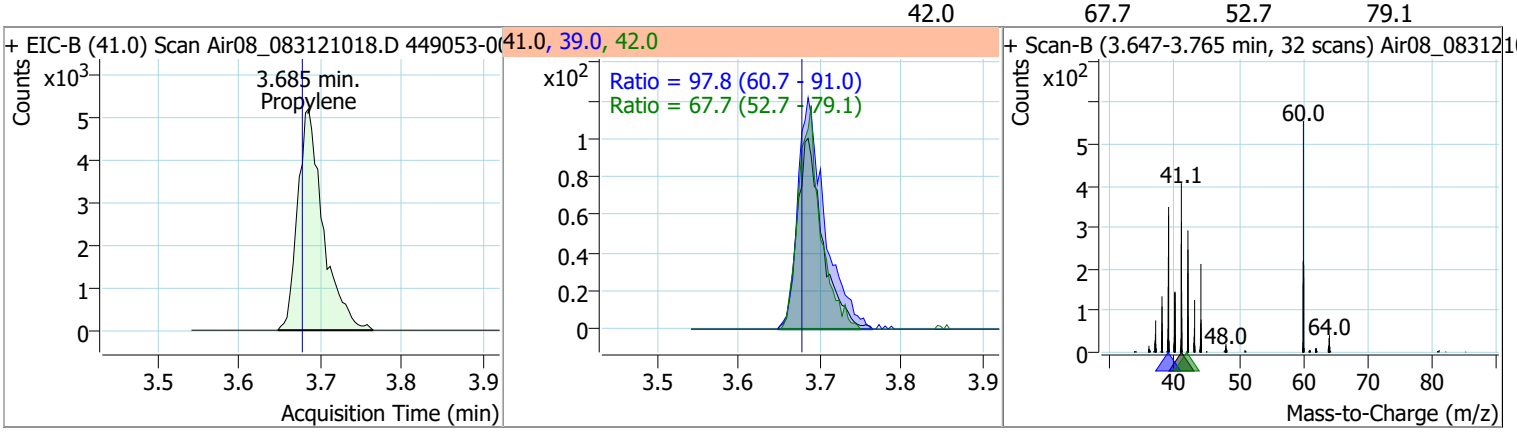
Compound	RT	QIon	Resp.	Conc.	Units		Dev(Min)
T trans-1,2-Dichloroethene	0.000		0	N.D.			
T 1,1-Dichloroethane	0.000		0	N.D.			
T MTBE	7.493	73.0	7184	0.3677	nL/L	#	1
T Vinyl Acetate	7.497	43.0	187628	16.9588	nL/L		78
T 2-Butanone	7.591	72.0	74225	27.2190	nL/L	#	1
T cis-1,2-Dichloroethene	8.088	61.0	142	0.0147	nL/L	#	30
T Ethyl Acetate	8.088	61.0	142	0.0825	nL/L		1
T n-Hexane	8.229	57.1	33749	3.5281	nL/L	#	80
T Chloroform	8.088	83.0	1023	0.0595	nL/L		26
T Tetrahydrofuran	8.687	72.0	2194	0.7904	nL/L		88
T 1,2-Dichloroethane	0.000		0	N.D.			
T 1,1,1-Trichloroethane	0.000		0	N.D.			
T Benzene	9.662	78.0	3044	0.1517	nL/L	#	86
T Carbon Tetrachloride	0.000		0	N.D.			
T Cyclohexane	9.912	84.0	13761	1.4879	nL/L	#	1
T 1,2-Dichloropropane	10.546	63.0	2246	0.3598	nL/L	#	22
T Methane, bromodichloro-	10.553	83.0	10073	0.6582	nL/L	#	27
T 1,4-Dioxane	0.000		0	N.D.			
T Trichloroethene	10.591	132.0	177	0.0170	nL/L	#	1
T TPH Gasoline (C3 to C12)	9.992	0.0	57213705	21.0498	nL/L		94
T 2,2,4-Trimethylpentane	10.553	56.0	145182	16.4093	nL/L	#	1
T Methyl methacrylate	10.694	69.0	3140	0.5395	nL/L	#	1
T n-Heptane	10.841	71.0	235712	38.0308	nL/L		87
T cis-1,3-Dichloropropene	0.000		0	N.D.			
T 4-Methyl-2-Pentanone	11.346	58.0	3107	0.6732	nL/L	#	36
T trans-1,3-Dichloropropene	0.000		0	N.D.			
T 1,1,2-Trichloroethane	12.074	97.0	105	0.0123	nL/L	#	1
T Toluene	12.313	91.0	16653	0.6622	nL/L		99
T 2-Hexanone	12.476	58.0	33479	5.8824	nL/L	#	79
T Dibromochloromethane	0.000		0	N.D.			
T 1,2-Dibromoethane	12.939	108.9	285	0.0209	nL/L	#	1
T Tetrachloroethene	13.382	166.0	326	0.0201	nL/L	#	79
T 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
T Benzene, chloro-	13.975	112.0	144	0.0061	nL/L	#	1
T Ethylbenzene	14.383	91.0	6545	0.1819	nL/L		97
T m,p-Xylenes	14.544	91.0	32931	1.1099	nL/L		96
T Bromoform	0.000		0	N.D.			
T Styrene	14.931	104.0	364	0.0175	nL/L	#	1
T 1,1,2,2-Tetrachloroethane	15.001	83.0	14381	0.7329	nL/L	#	49
T o-Xylene	15.049	91.0	11638	0.3658	nL/L		97
T n-Nonane	15.221	85.0	6763	1.0666	nL/L	#	84
T Isopropylbenzene	15.672	105.0	1975	0.0423	nL/L	#	79
T 2-Chlorotoluene	16.016	126.0	705	0.0599	nL/L		100
T n-Propylbenzene	16.247	91.0	5001	0.0589	nL/L	#	1
T 4-Ethyltoluene	16.413	105.1	5751	0.1304	nL/L	#	89
T 1,3,5-Trimethylbenzene	16.504	105.0	6467	0.1612	nL/L		94
T 1,2,4-Trimethylbenzene	17.015	105.1	25193	0.6378	nL/L		96
T Benzyl chloride	17.015	91.0	2821	0.0906	nL/L		56
T 1,3-Dichlorobenzene	0.000		0	N.D.			
T 1,4-Dichlorobenzene	0.000		0	N.D.			
T 1,2-Dichlorobenzene	17.761	146.0	69	0.0024	nL/L	#	1
T 1,2,4-Trichlorobenzene	20.275	180.0	432	0.0223	nL/L	#	77
T Naphthalene	20.452	128.0	7829	0.2221	nL/L	#	94
T 1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	21.011	225.0	142	0.0053	nL/L	#	72

Compound	RT	QIon	Resp.	Conc.	Units	Dev(Min)

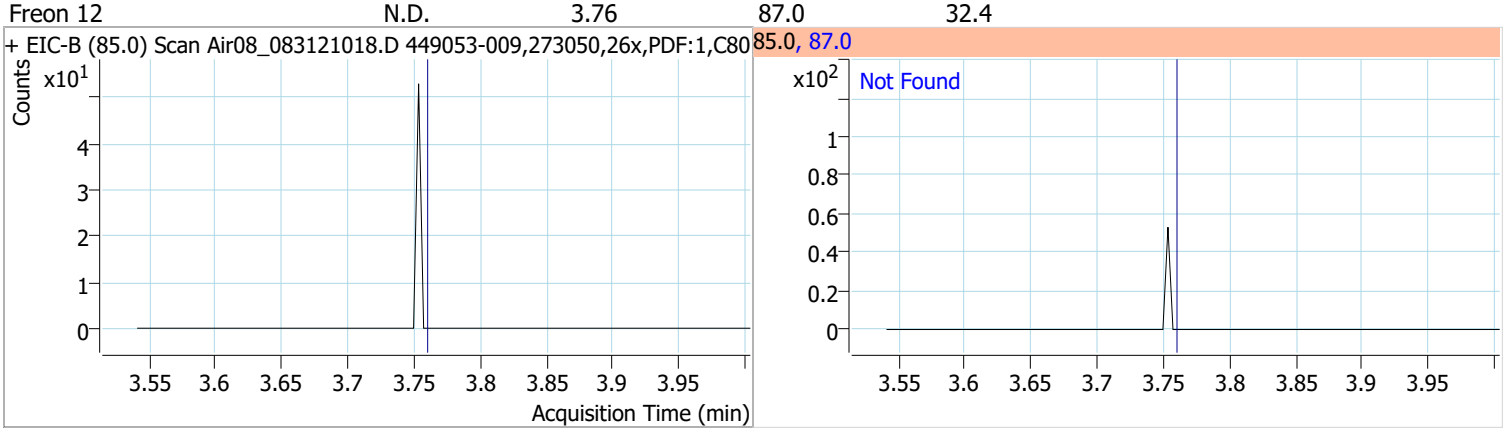
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

Quantitation Results Report (Not Reviewed)

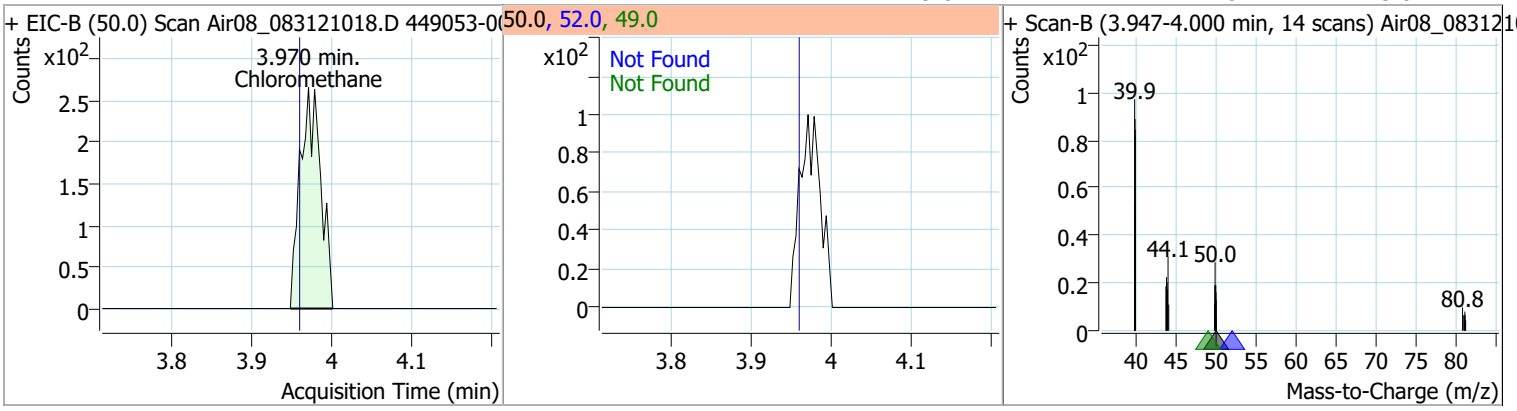
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Propylene	3.4259	3.69	0.01	11282	39.0	97.8	60.7	91.0
					42.0	67.7	52.7	79.1



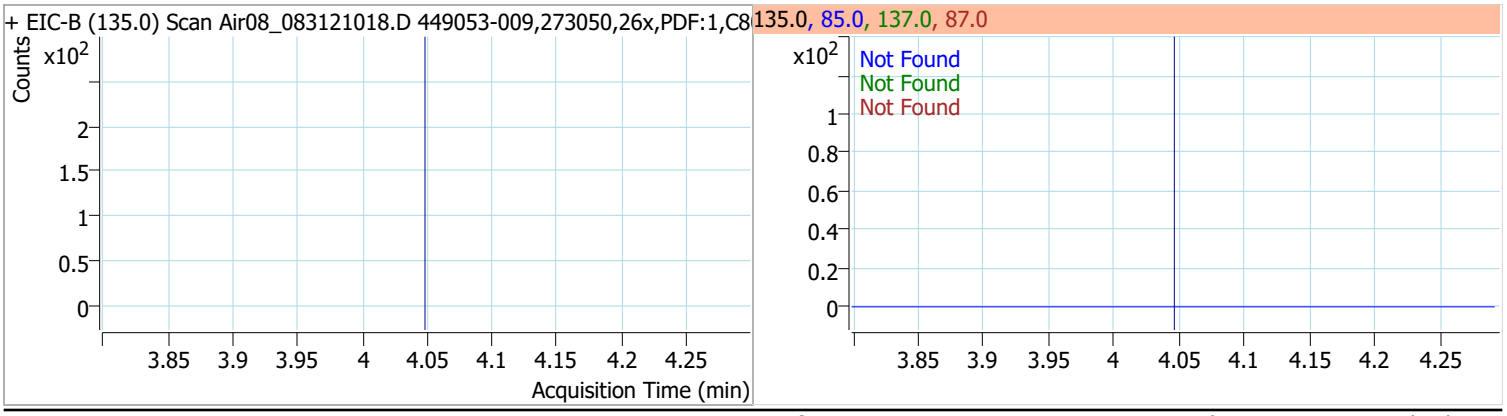
Compound	Conc.	Exp RT	QIon	Exp Ratio
Freon 12	N.D.	3.76	87.0	32.4



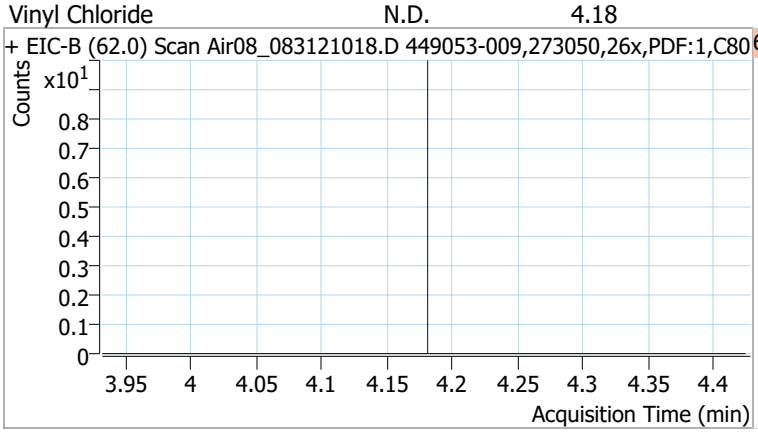
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloromethane	0.1032	3.97	0.01	478	52.0		25.9	38.8
					49.0		8.7	13.0

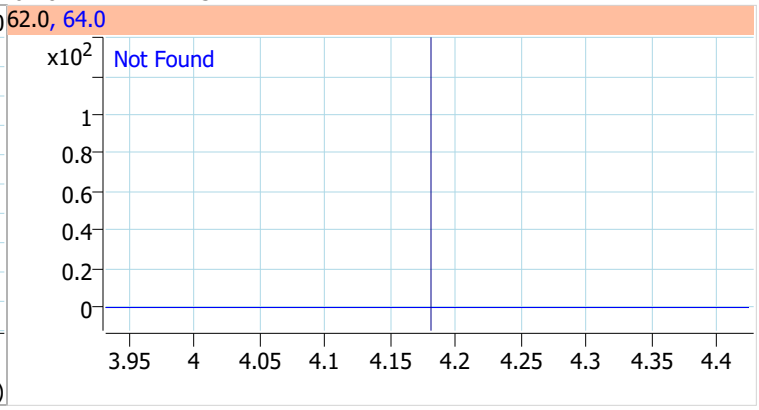


Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Freon 114	N.D.	4.05	85.0	154.7	87.0	50.2	137.0	32.3

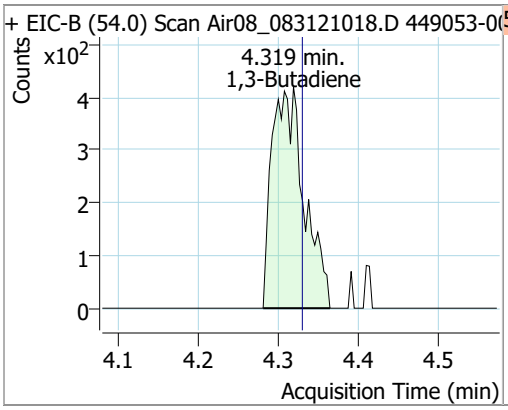


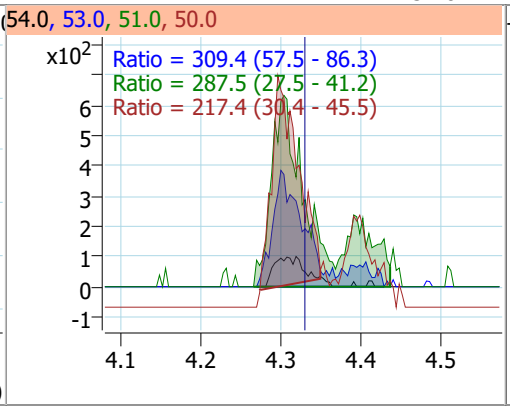
Compound	Conc.	Exp RT	QIon	Exp Ratio
Vinyl Chloride	N.D.	4.18	64.0	31.1

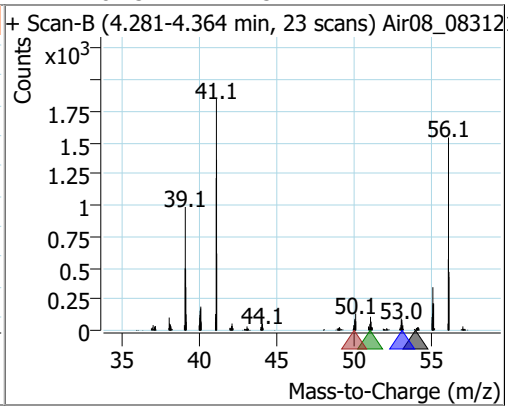




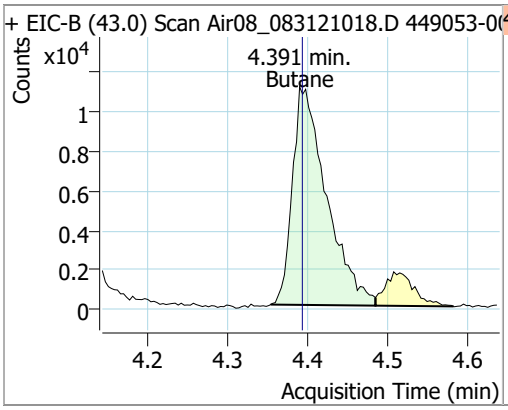
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3-Butadiene	0.3076	4.32	-0.01	1178	53.0	309.4	57.5	86.3
					50.0	217.4	30.4	45.5
					51.0	287.5	27.5	41.2

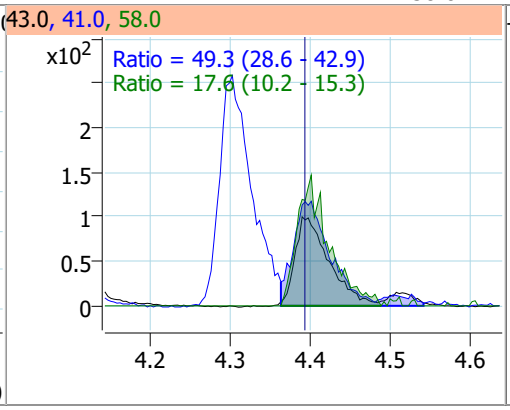


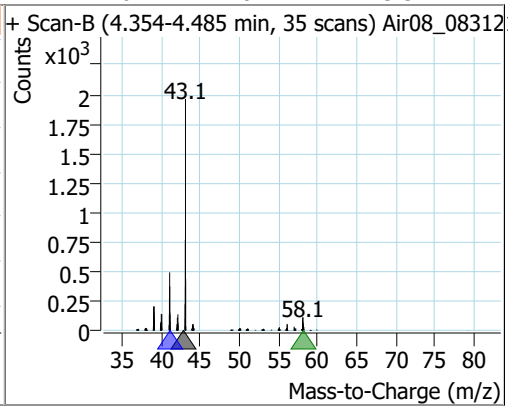




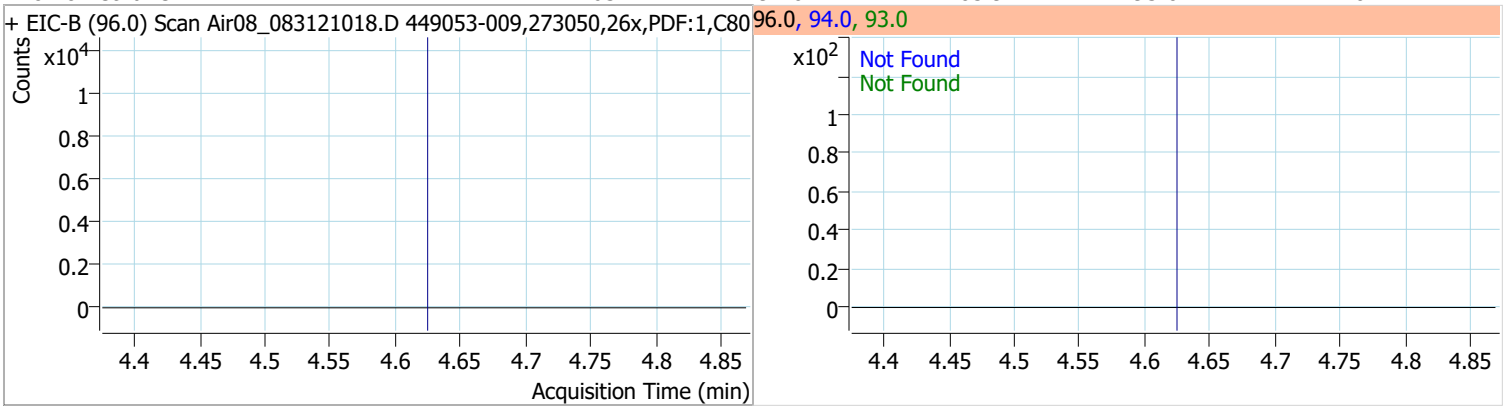
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Butane	5.2842	4.39	0.00	32801	41.0	49.3	28.6	42.9
					58.0	17.6	10.2	15.3



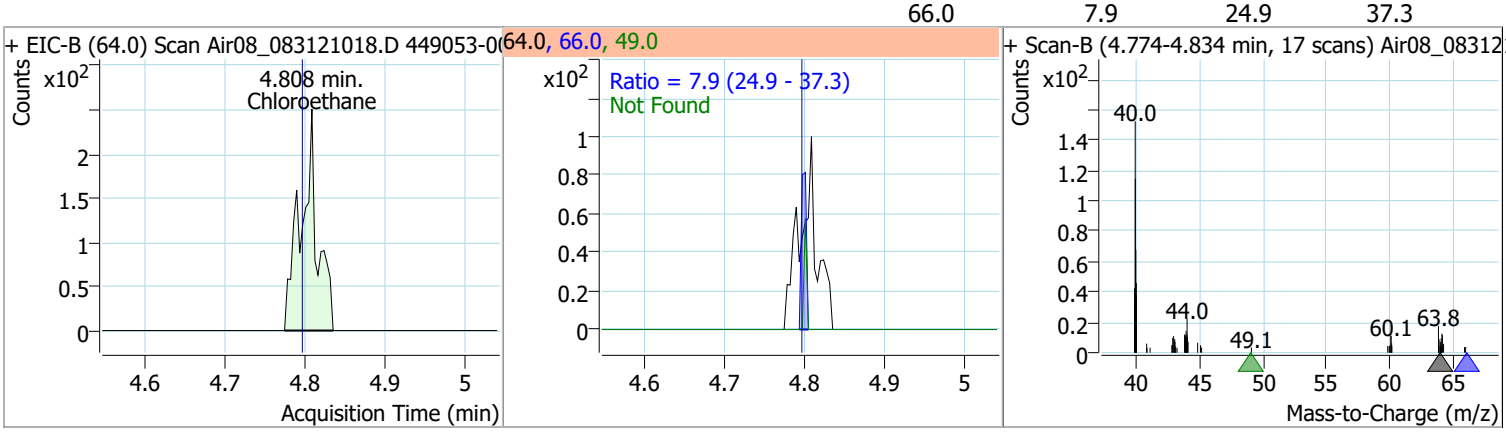




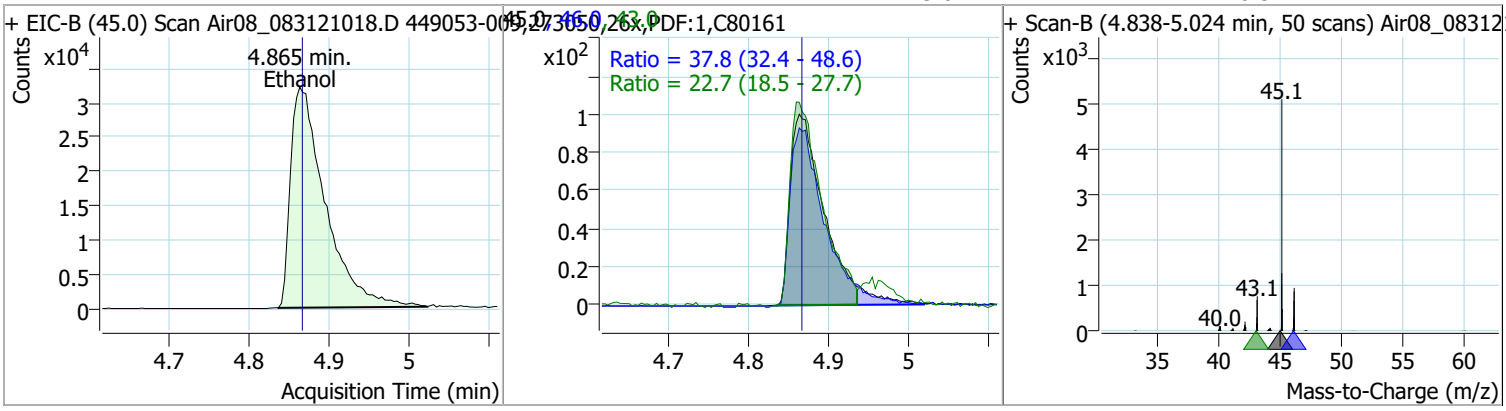
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
Bromomethane	N.D.	4.63	94.0	105.9	93.0	22.0



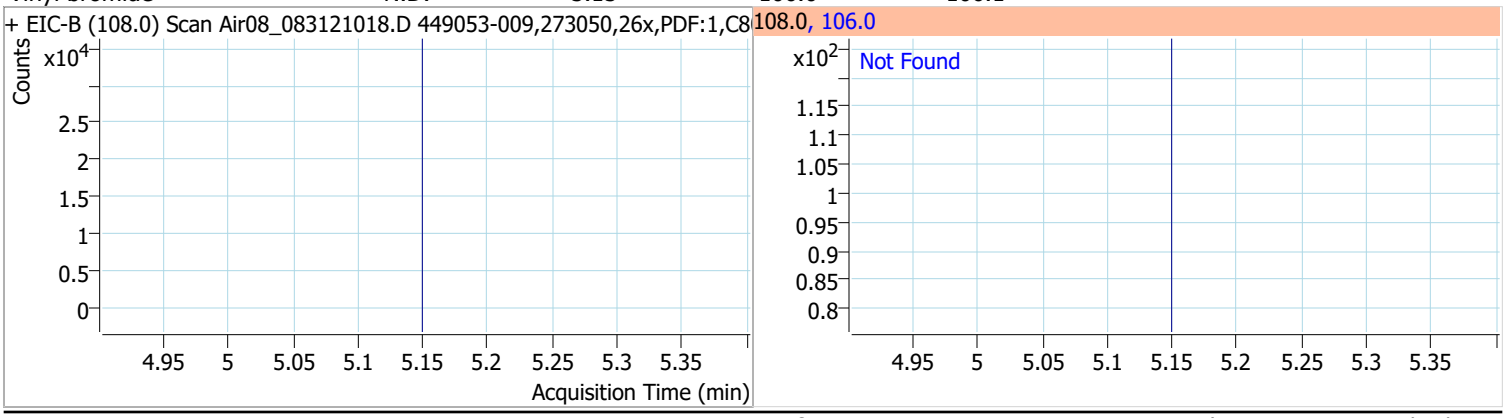
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloroethane	0.1112	4.81	0.01	365	49.0		25.1	37.7
					66.0	7.9	24.9	37.3



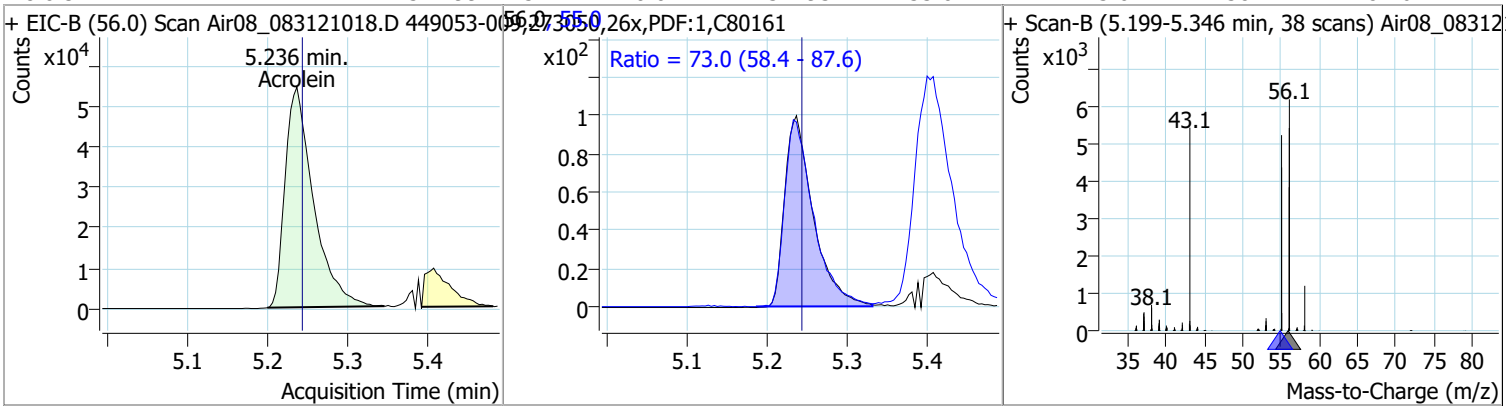
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethanol	81.3725	4.86	0.00	96984	46.0	37.8	32.4	48.6
					43.0	22.7	18.5	27.7



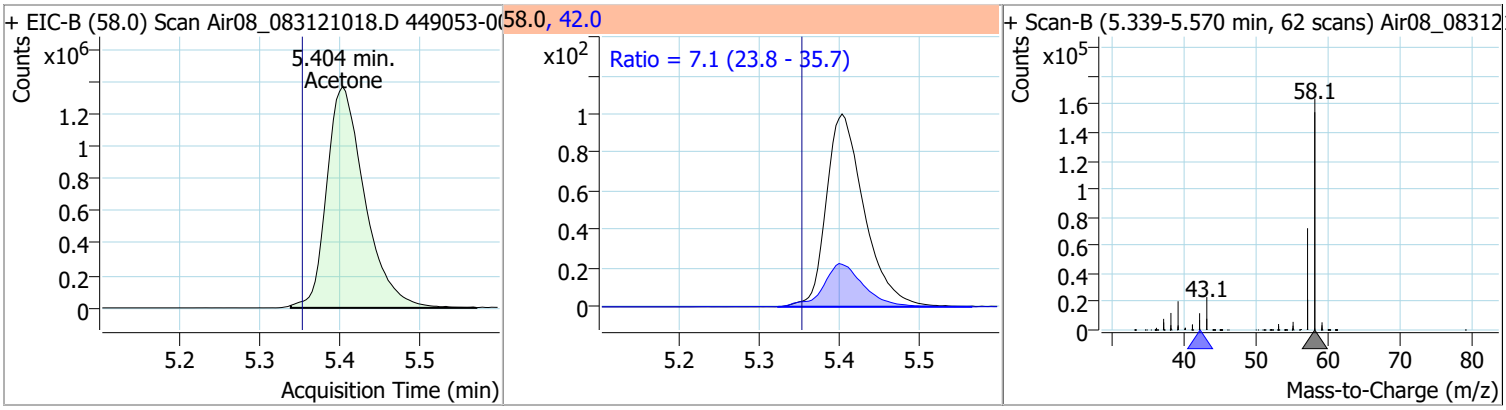
Compound	Conc.	Exp RT	QIon	Exp Ratio
Vinyl bromide	N.D.	5.15	106.0	106.1



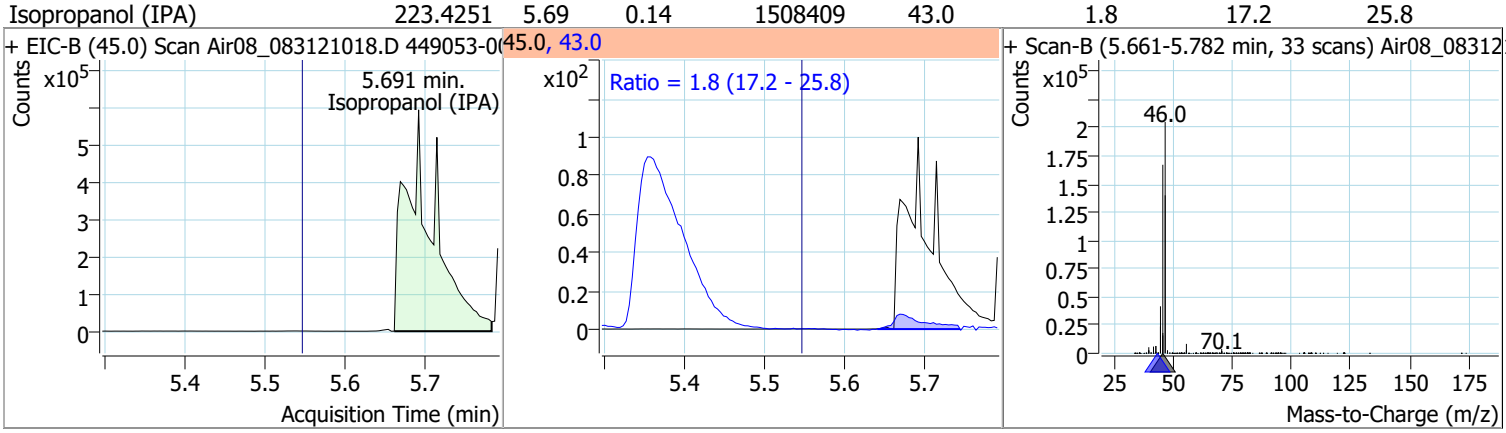
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Acrolein	75.1199	5.24	-0.01	134293	55.0	73.0	58.4	87.6



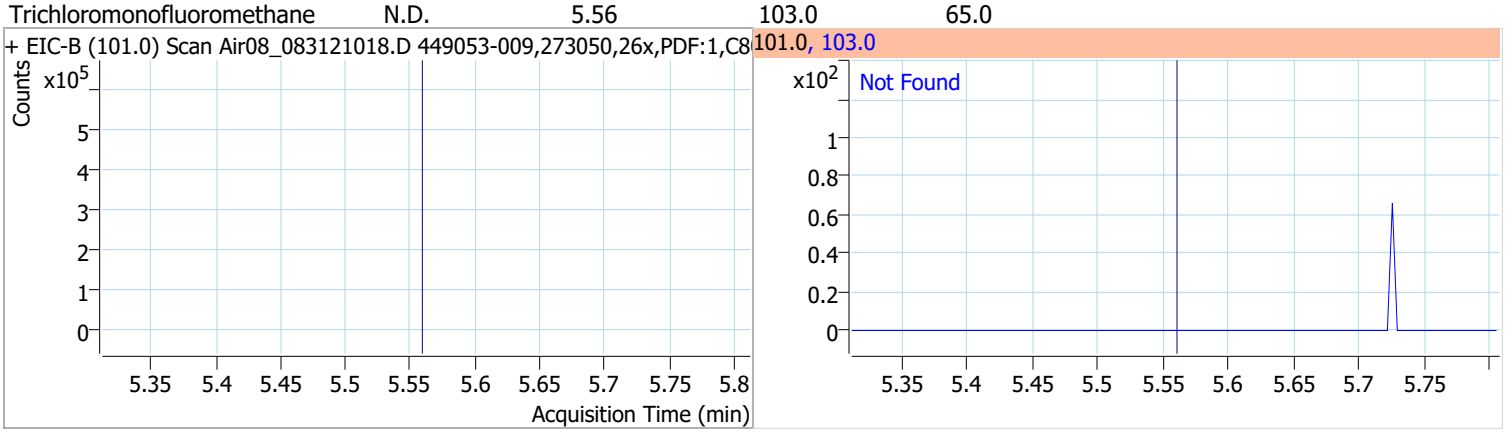
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Acetone	1698.6237	5.40	0.05	4516772	42.0	7.1	23.8	35.7



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Isopropanol (IPA)	223.4251	5.69	0.14	1508409	43.0	1.8	17.2	25.8

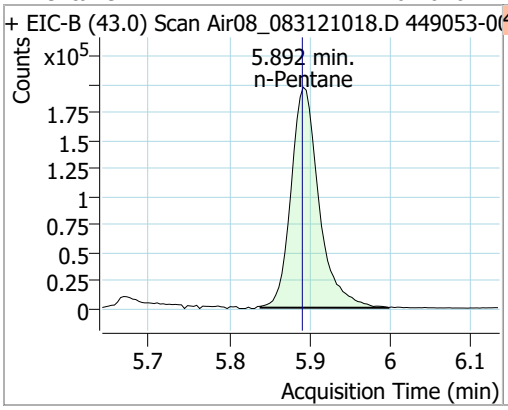


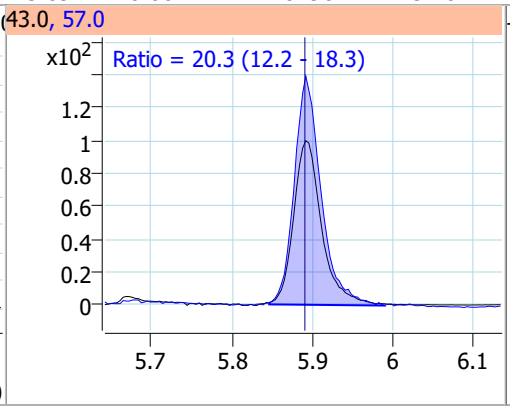
Compound	Conc.	Exp RT	QIon	Exp Ratio
Trichloromonofluoromethane	N.D.	5.56	103.0	65.0

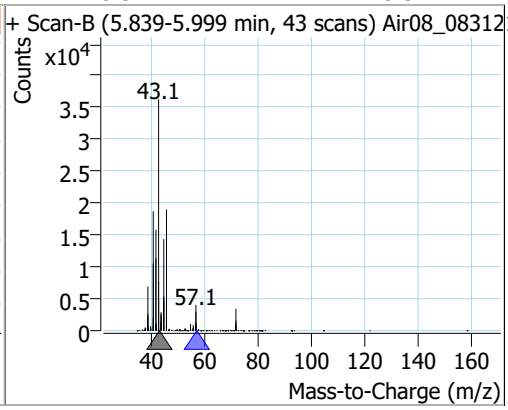


Quantitation Results Report (Not Reviewed)

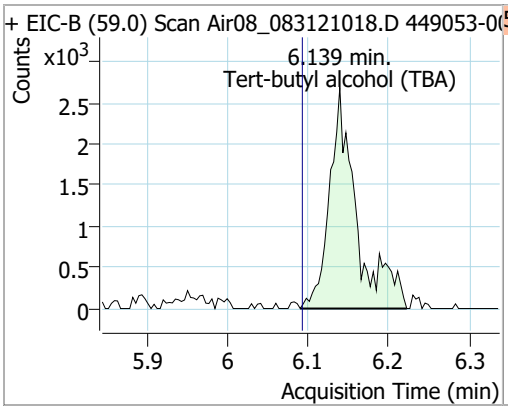
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Pentane	62.6461	5.89	0.00	478498	57.0	20.3	12.2	18.3

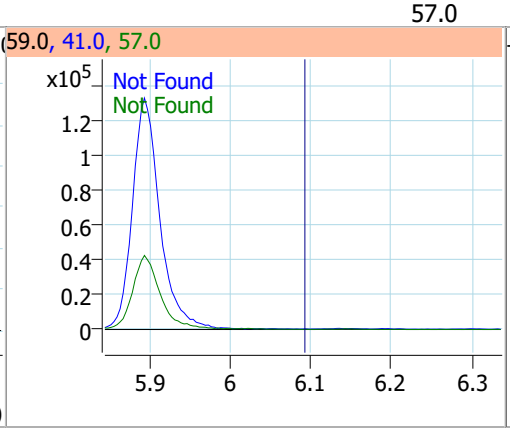


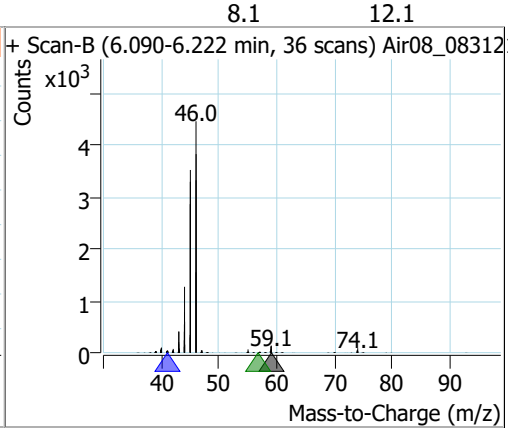




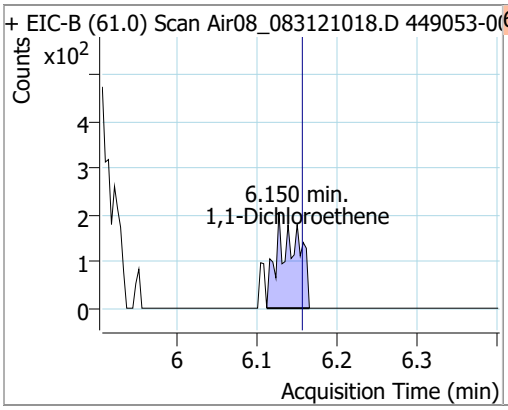
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tert-butyl alcohol (TBA)	0.5417	6.14	0.05	6296	41.0		16.8	25.2
					57.0		8.1	12.1

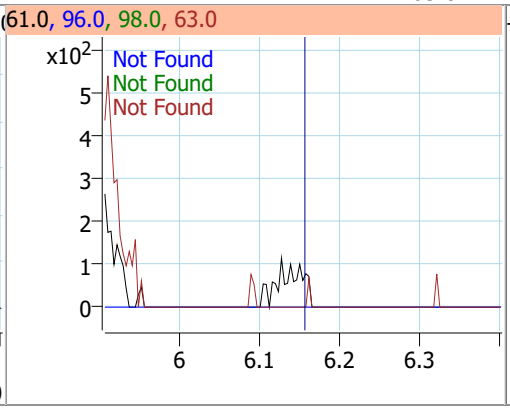


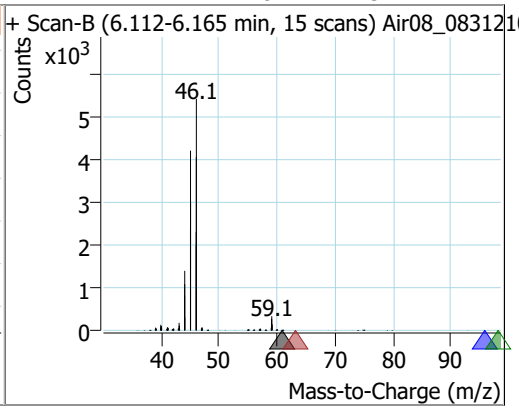




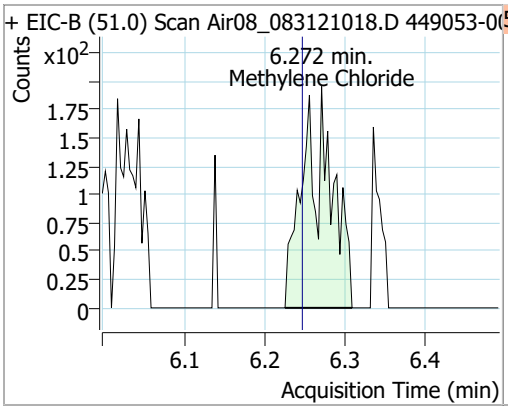
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1-Dichloroethene	0.0316	6.15	-0.01	371	96.0		40.1	60.2
					98.0		25.8	38.7
					63.0		24.8	37.2

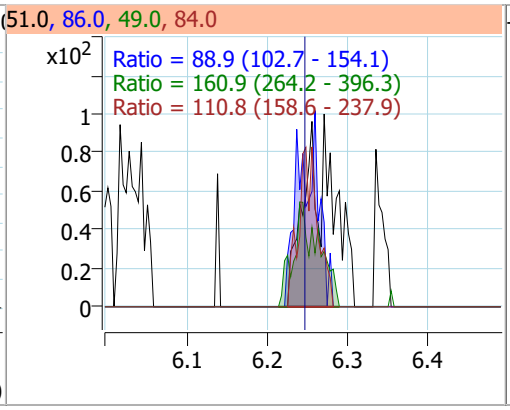


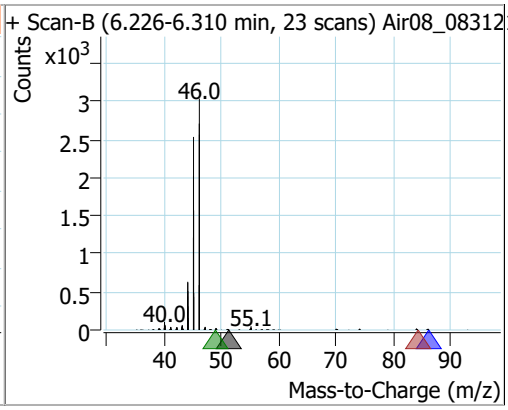




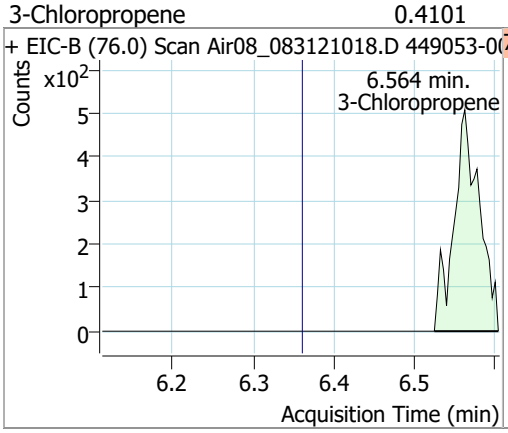
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methylene Chloride	0.2120	6.27	0.02	484	49.0	160.9	264.2	396.3
					84.0	110.8	158.6	237.9
					86.0	88.9	102.7	154.1

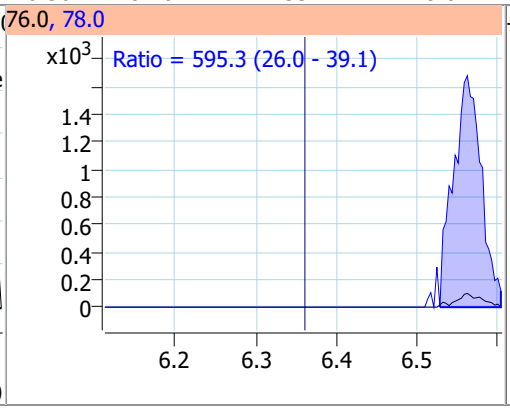


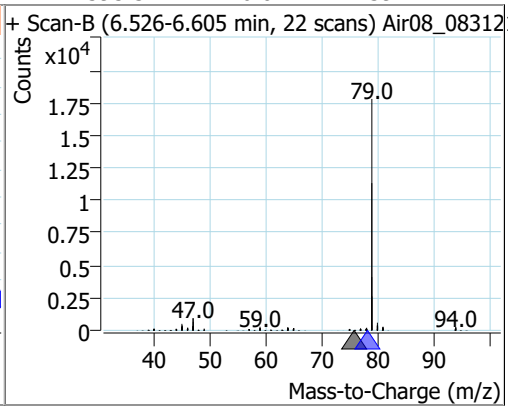




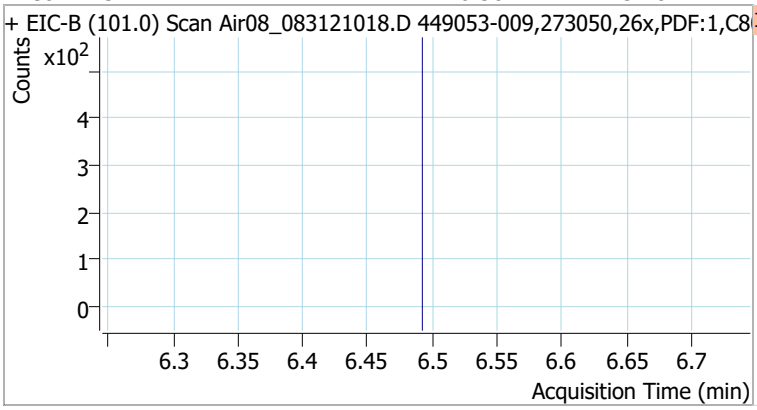
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
3-Chloropropene	0.4101	6.56	0.20	1133	78.0	595.3	26.0	39.1

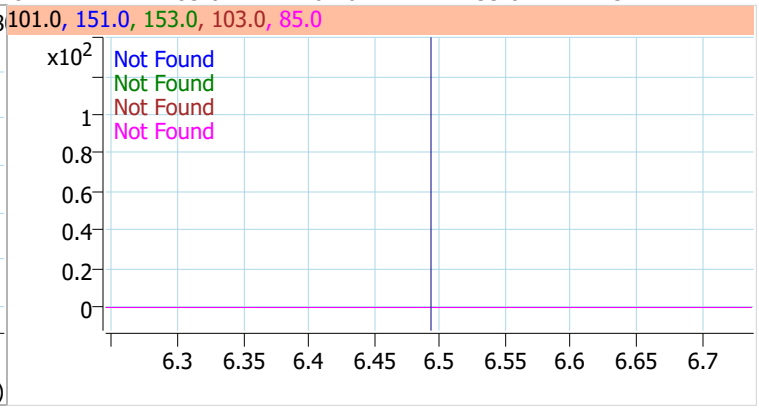




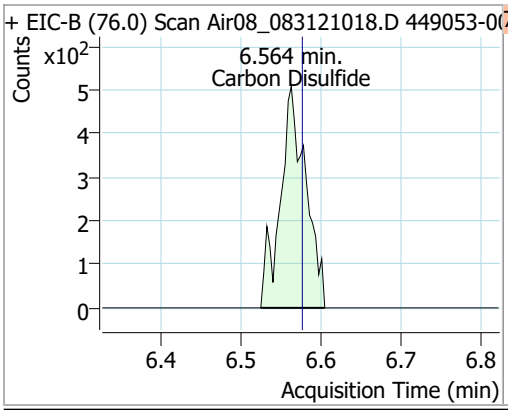


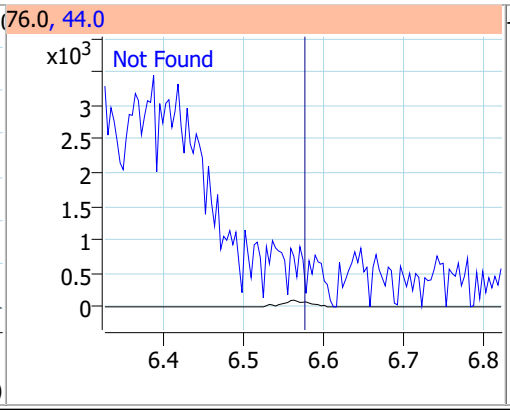
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Freon 113	N.D.	6.50	151.0	81.2	103.0	64.6	153.0	52.1

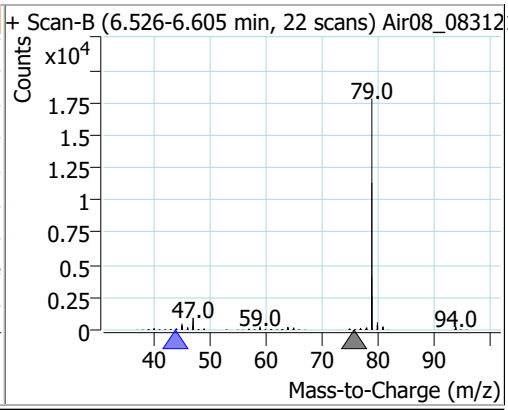




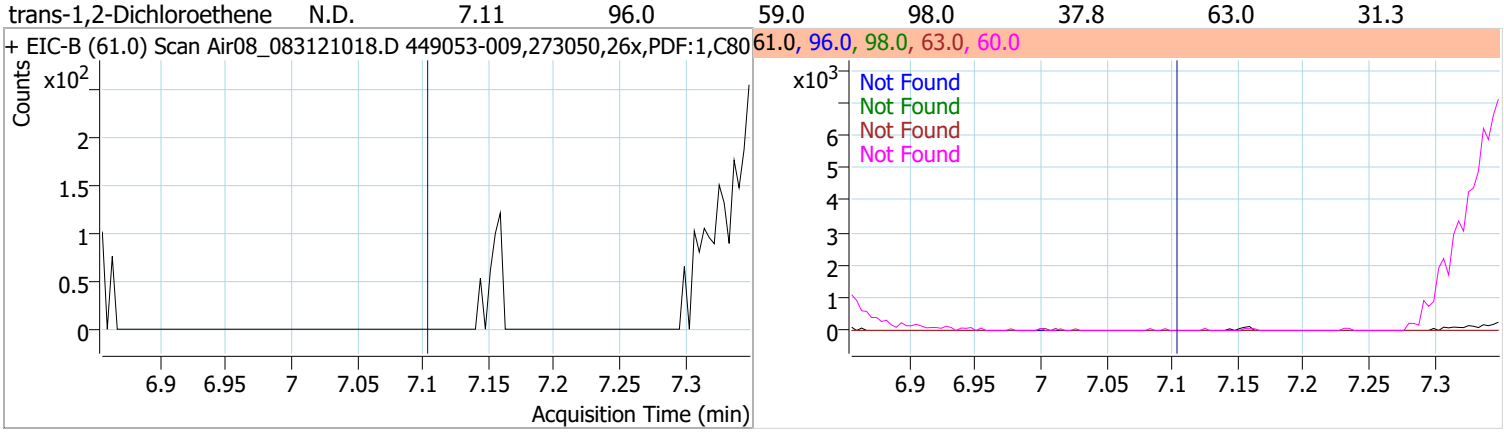
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Carbon Disulfide	0.0607	6.56	-0.02	1133	44.0		15.5	23.2



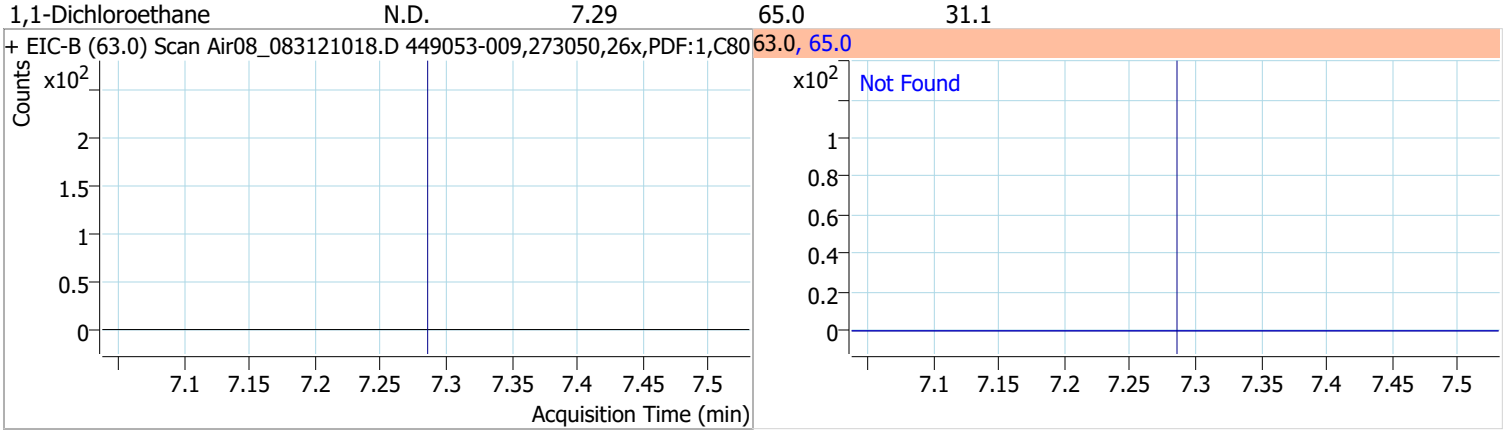




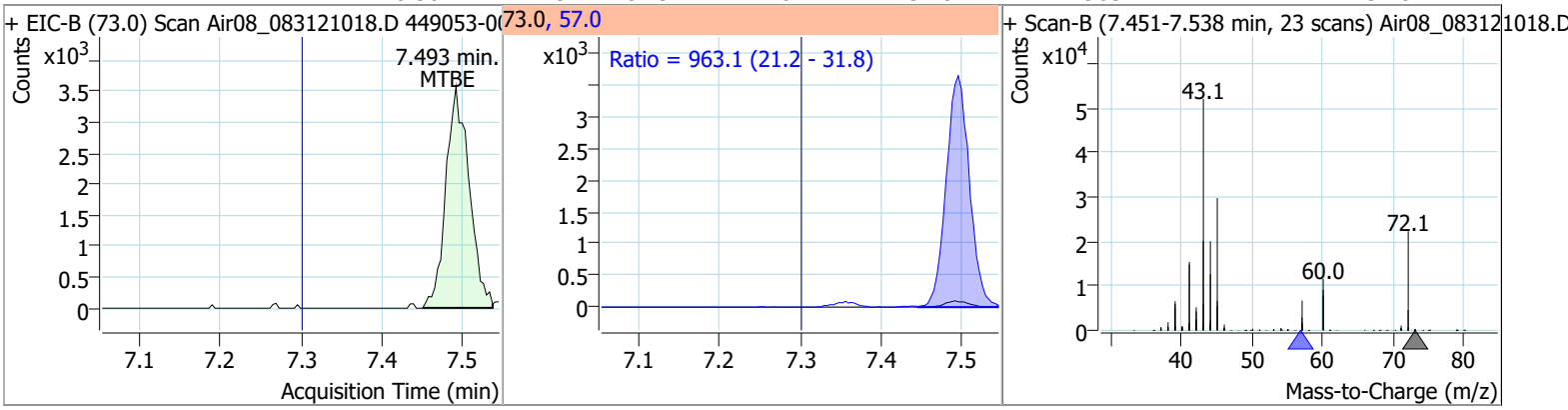
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
trans-1,2-Dichloroethene	N.D.	7.11	96.0	59.0	98.0	37.8	63.0	31.3



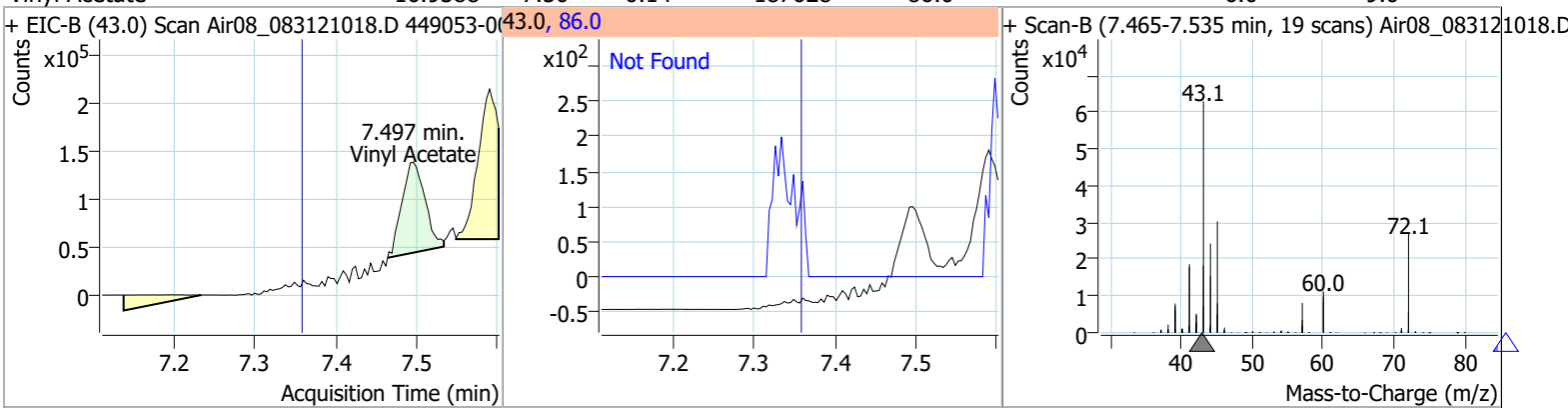
Compound	Conc.	Exp RT	QIon	Exp Ratio
1,1-Dichloroethane	N.D.	7.29	65.0	31.1



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
MTBE	0.3677	7.49	0.19	7184	57.0	963.1	21.2	31.8

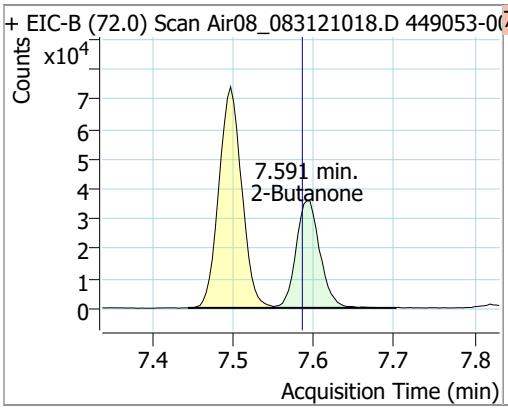


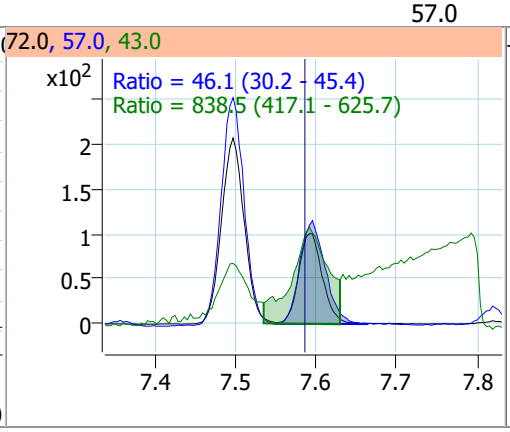
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Vinyl Acetate	16.9588	7.50	0.14	187628	86.0		6.0	9.0

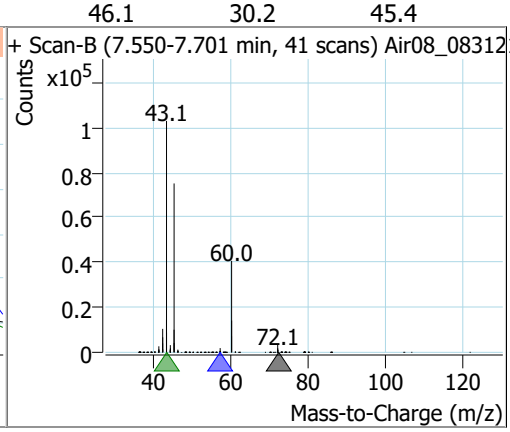


Quantitation Results Report (Not Reviewed)

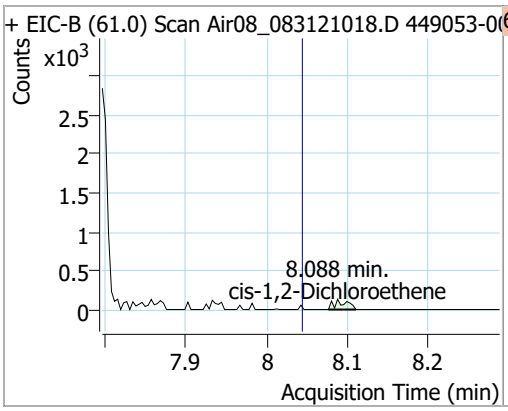
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Butanone	27.2190	7.59	0.00	74225	43.0	838.5	417.1	625.7
					57.0	46.1	30.2	45.4

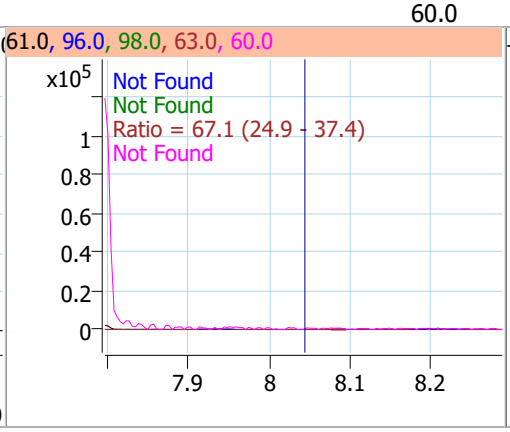


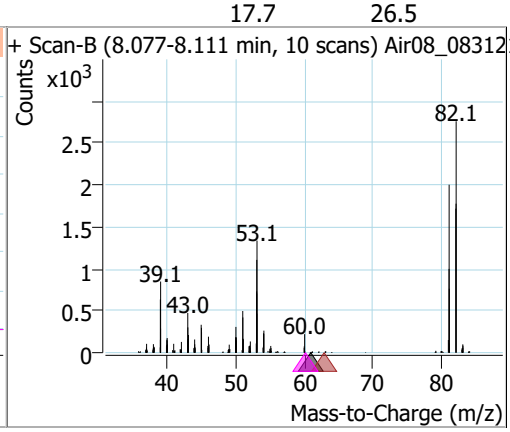




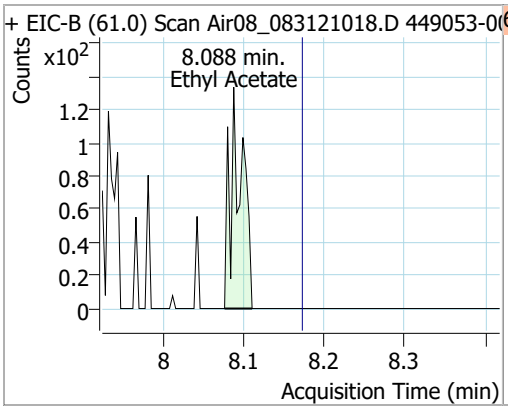
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
cis-1,2-Dichloroethene	0.0147	8.09	0.04	142	96.0		51.6	77.5
					98.0		33.3	49.9
					63.0	67.1	24.9	37.4
					60.0		17.7	26.5

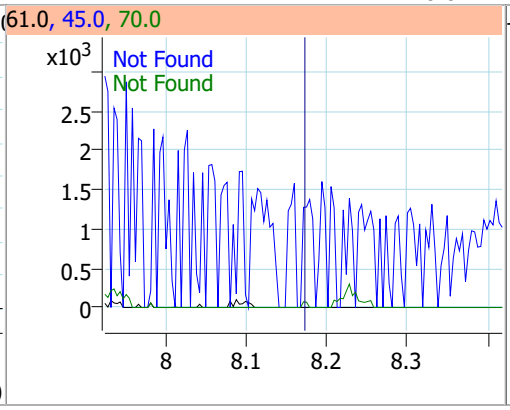


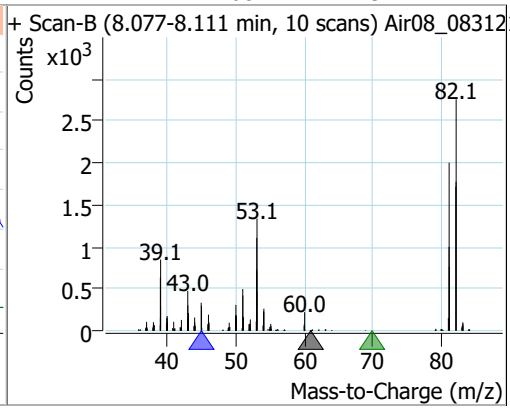




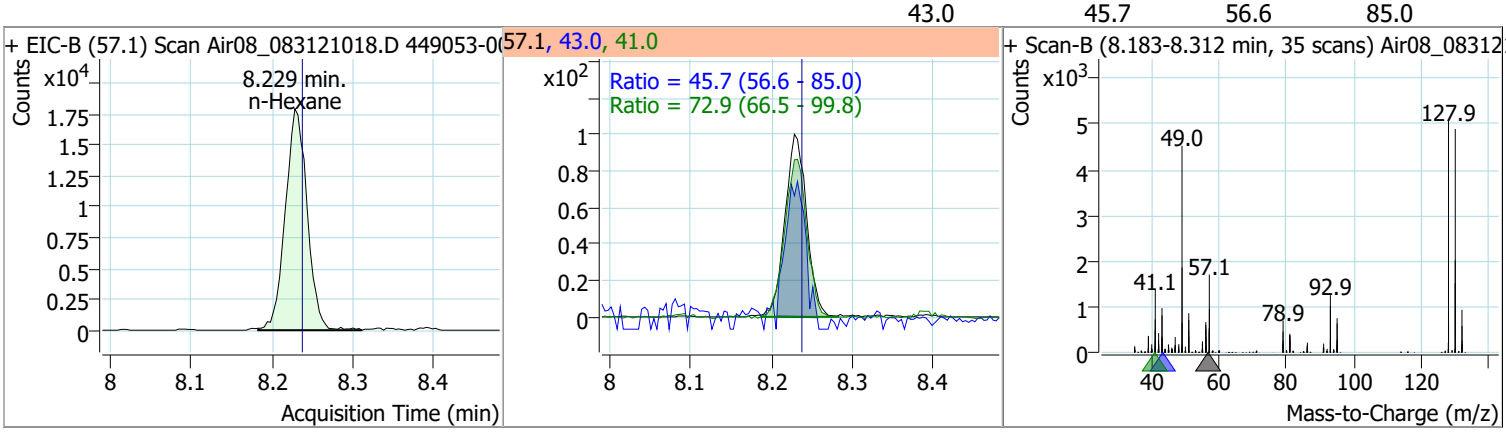
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethyl Acetate	0.0825	8.09	-0.09	142	45.0		96.2	144.3
					70.0		60.7	91.1



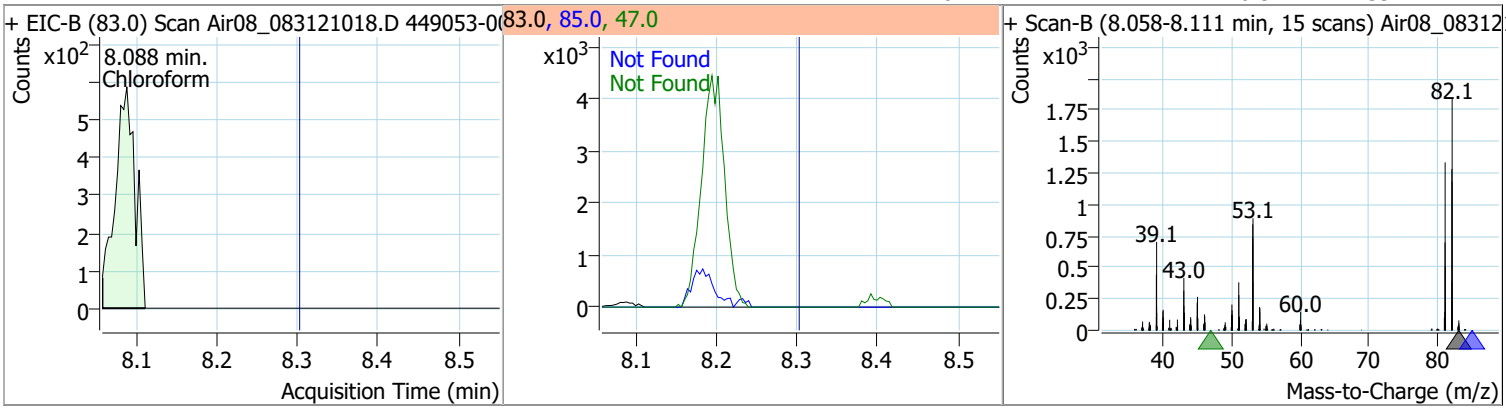




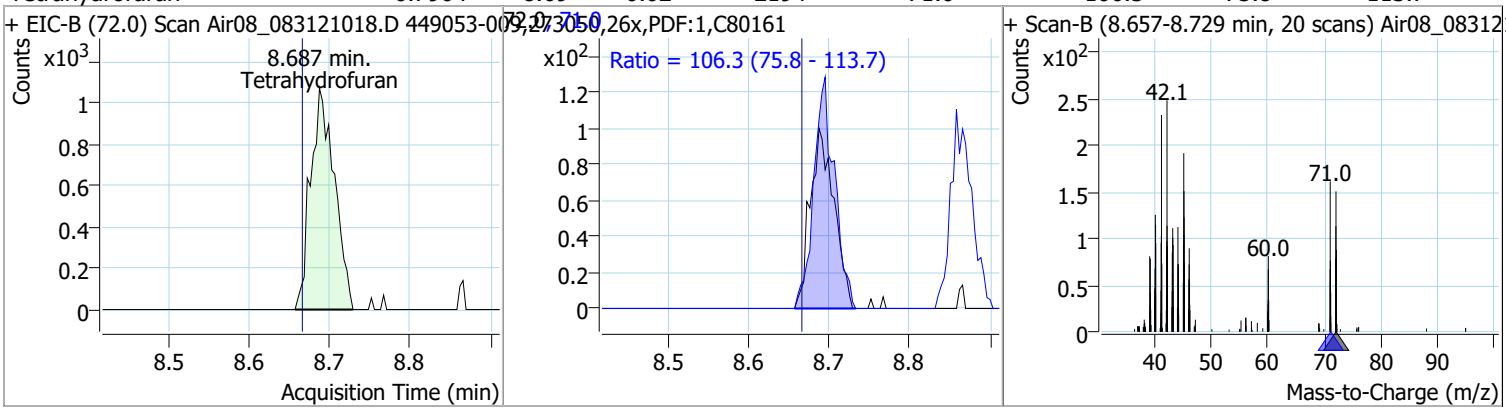
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Hexane	3.5281	8.23	-0.01	33749	41.0	72.9	66.5	99.8
					43.0	45.7	56.6	85.0



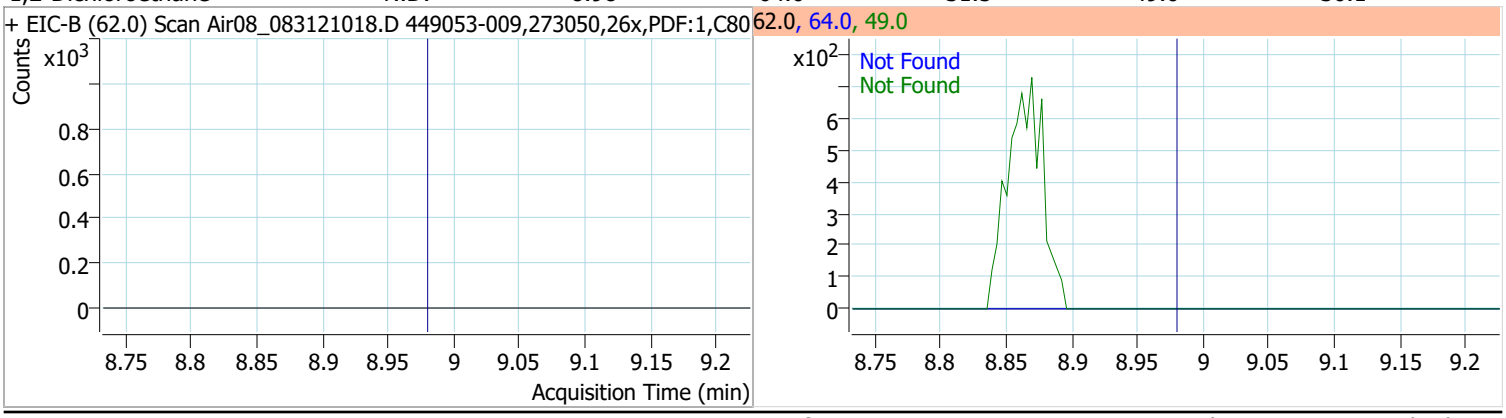
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Chloroform	0.0595	8.09	-0.22	1023	85.0		51.4	77.1
					47.0		26.5	39.7



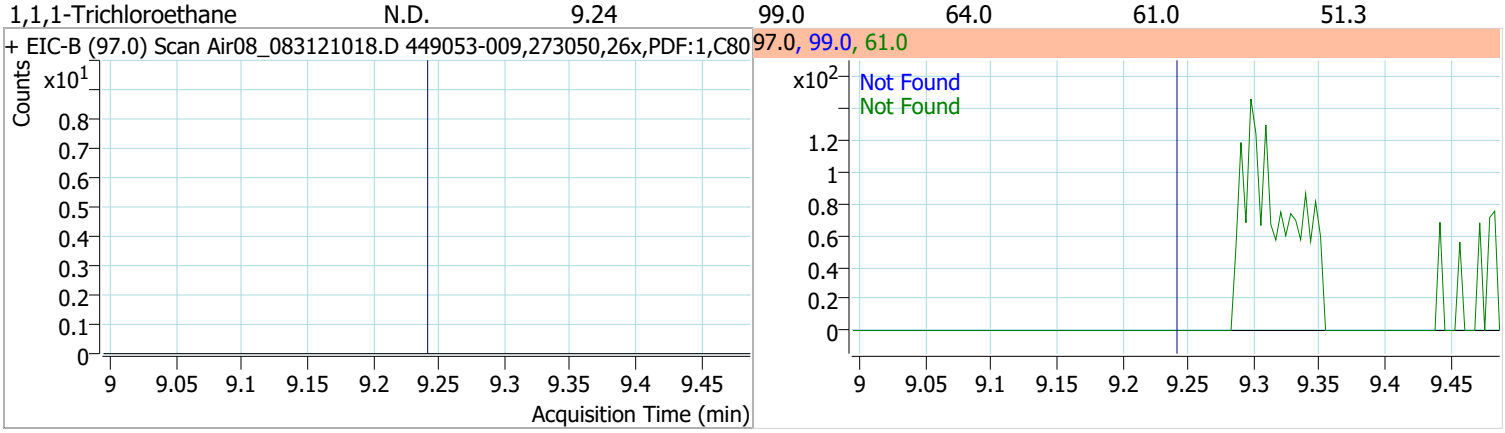
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tetrahydrofuran	0.7904	8.69	0.02	2194	71.0	106.3	75.8	113.7



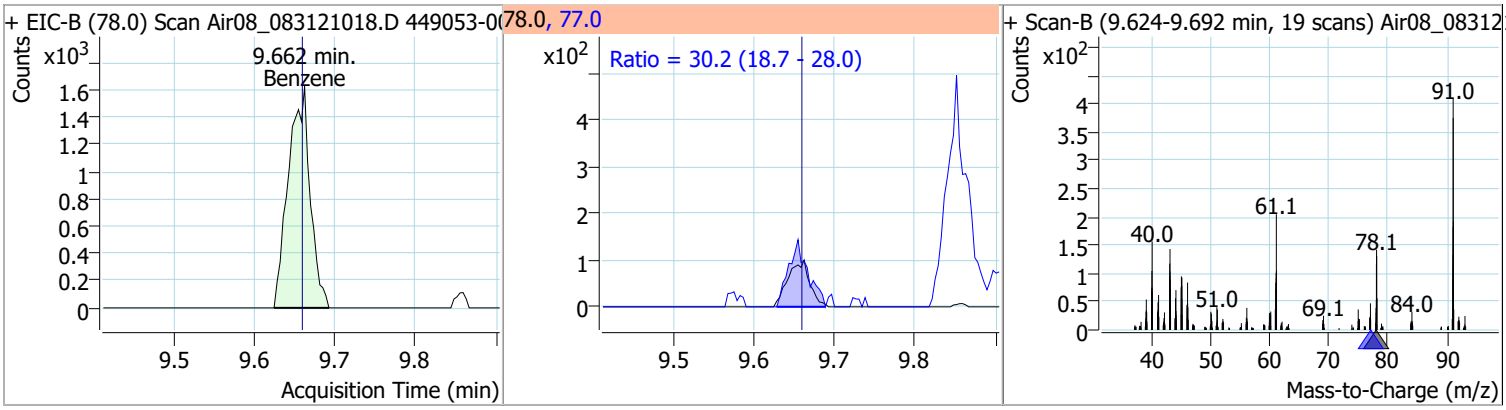
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,2-Dichloroethane	N.D.	8.98	64.0	31.5	49.0	30.1



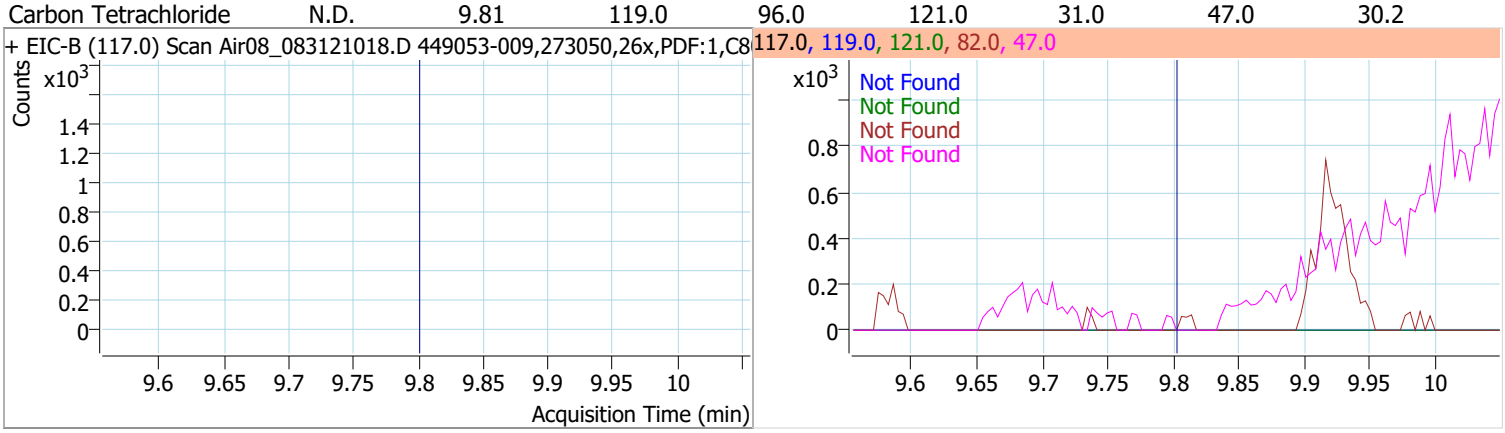
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,1,1-Trichloroethane	N.D.	9.24	99.0	64.0	61.0	51.3



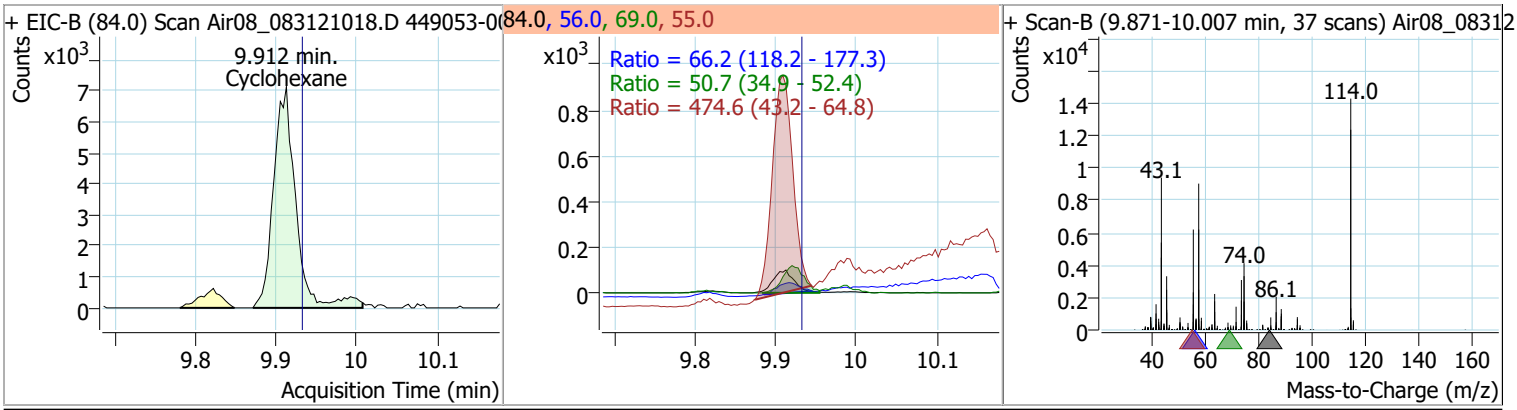
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzene	0.1517	9.66	0.00	3044	77.0	30.2	18.7	28.0



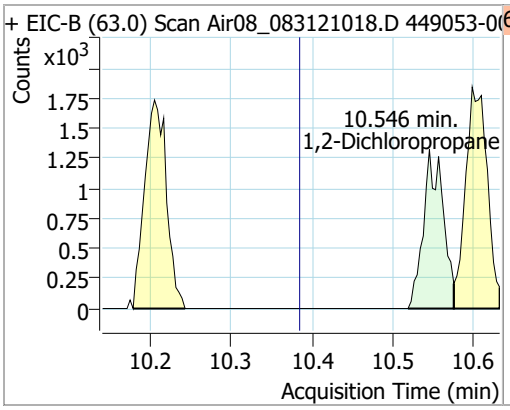
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Carbon Tetrachloride	N.D.	9.81	119.0	96.0	121.0	31.0	47.0	30.2

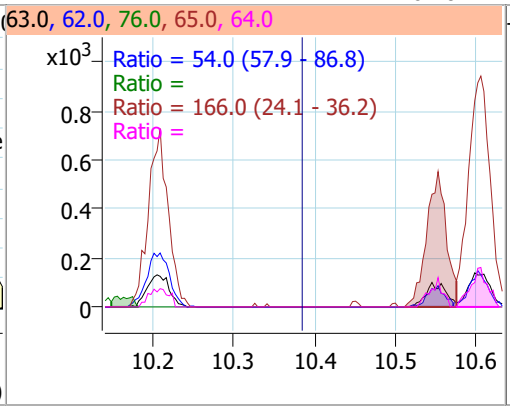


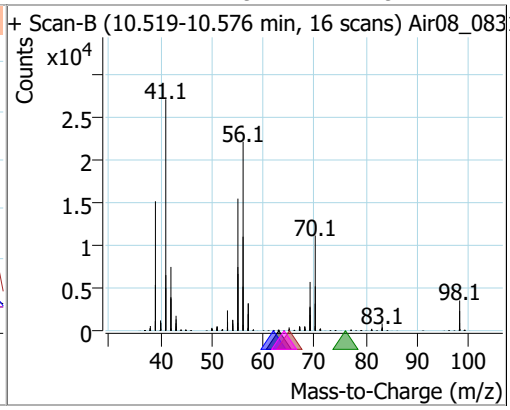
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Cyclohexane	1.4879	9.91	-0.02	13761	56.0	66.2	118.2	177.3
					55.0	474.6	43.2	64.8
					69.0	50.7	34.9	52.4



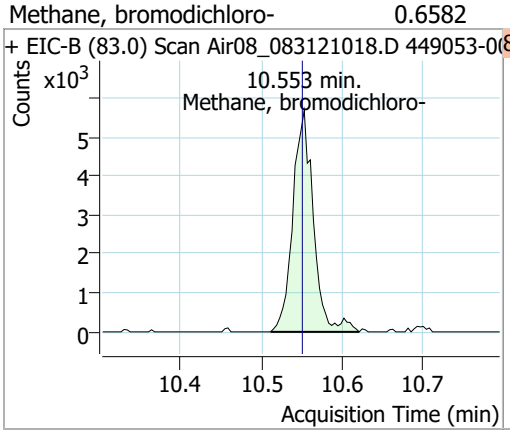
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dichloropropane	0.3598	10.55	0.16	2246	62.0	54.0	57.9	86.8
					76.0		34.8	52.2
					65.0	166.0	24.1	36.2
					64.0		19.4	29.1

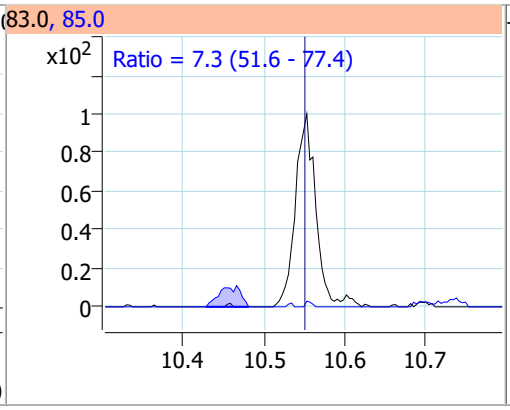


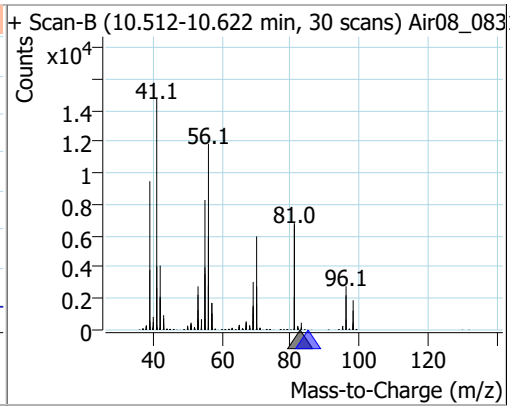




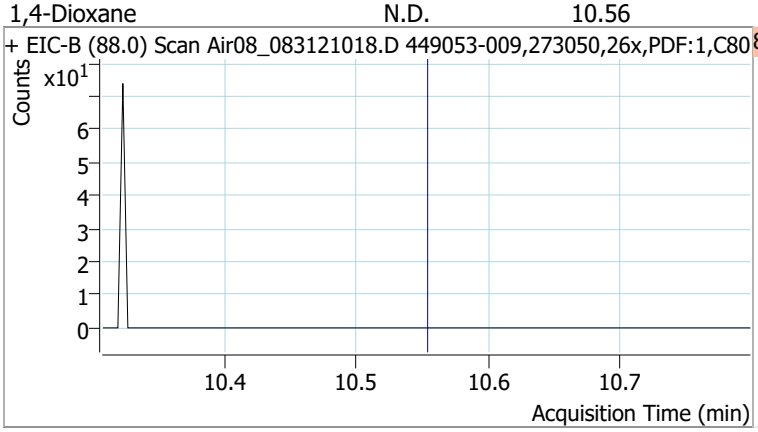
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methane, bromodichloro-	0.6582	10.55	0.00	10073	85.0	7.3	51.6	77.4

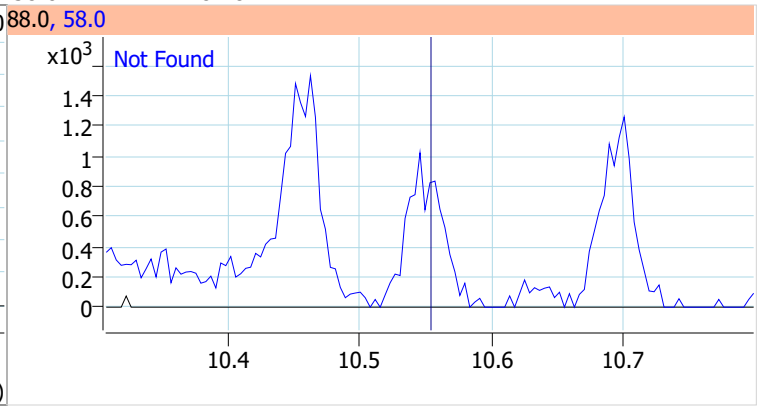






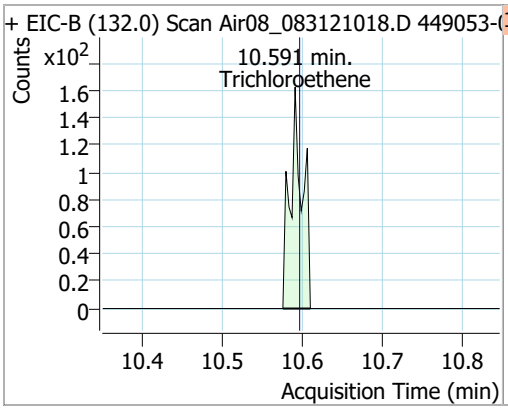
Compound	Conc.	Exp RT	QIon	Exp Ratio
1,4-Dioxane	N.D.	10.56	58.0	81.8

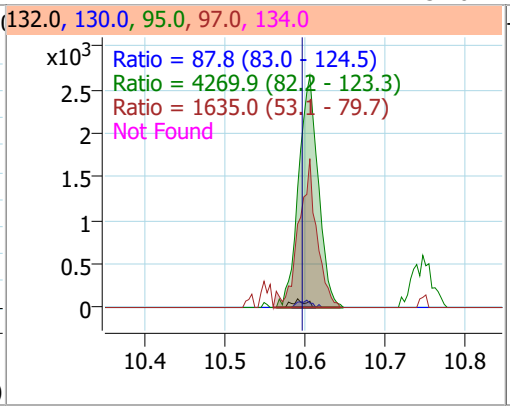


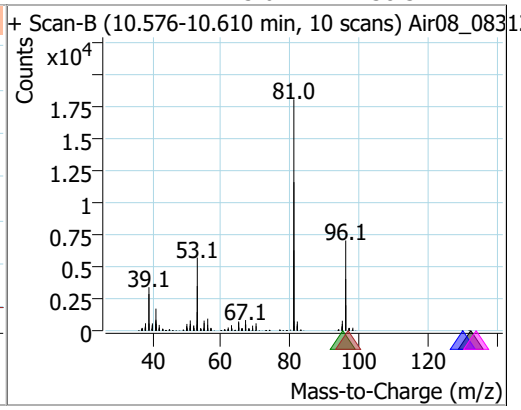


Quantitation Results Report (Not Reviewed)

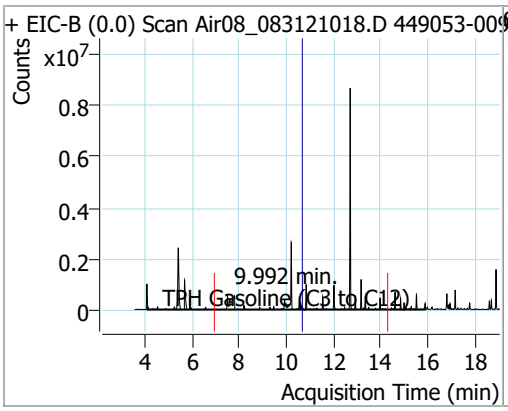
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Trichloroethene	0.0170	10.59	-0.01	177	130.0	87.8	83.0	124.5
					95.0	4269.9	82.2	123.3
					97.0	1635.0	53.1	79.7
					134.0		25.6	38.3

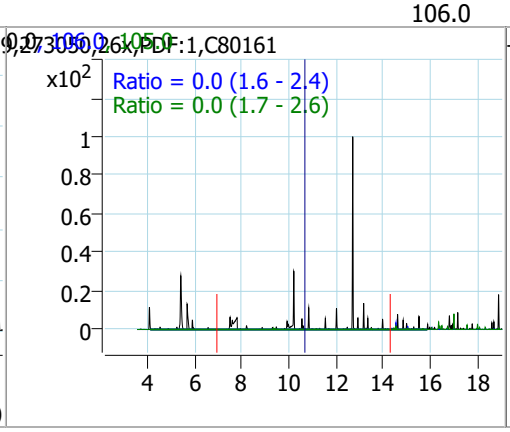


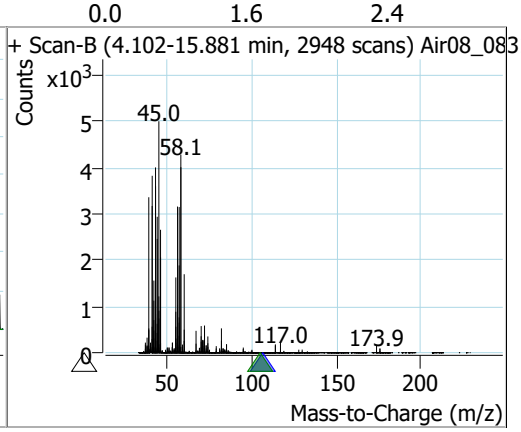




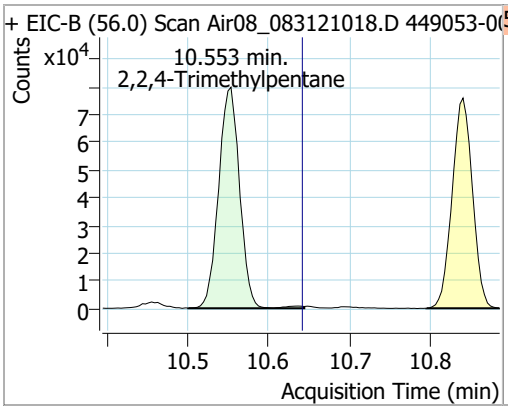
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
TPH Gasoline (C3 to C12)	21.0498	9.99	-0.63	57213705	105.0	0.0	1.7	2.6
					106.0	0.0	1.6	2.4

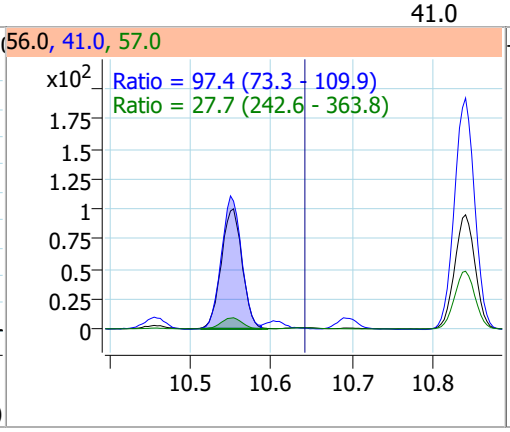


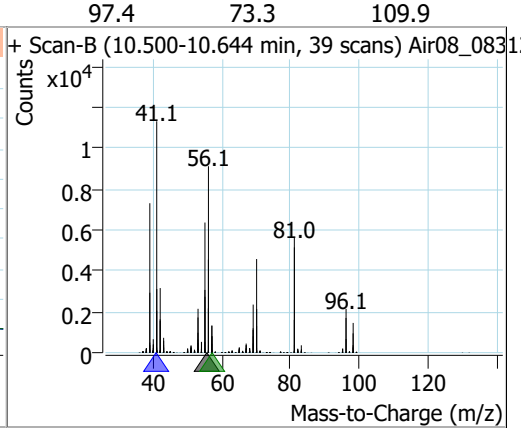




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2,2,4-Trimethylpentane	16.4093	10.55	-0.09	145182	57.0	27.7	242.6	363.8
					41.0	97.4	73.3	109.9

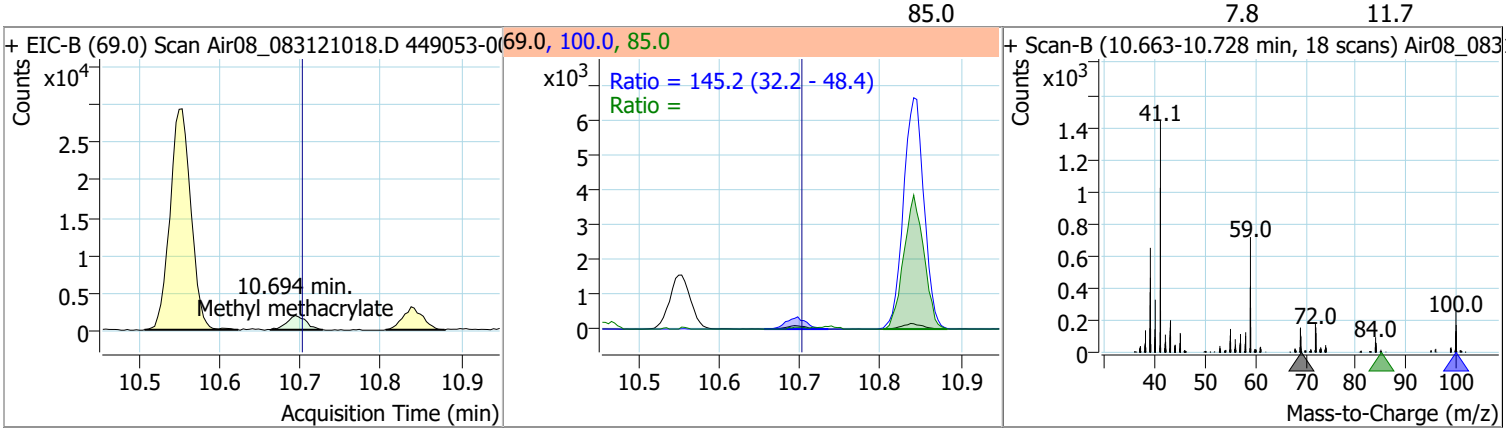




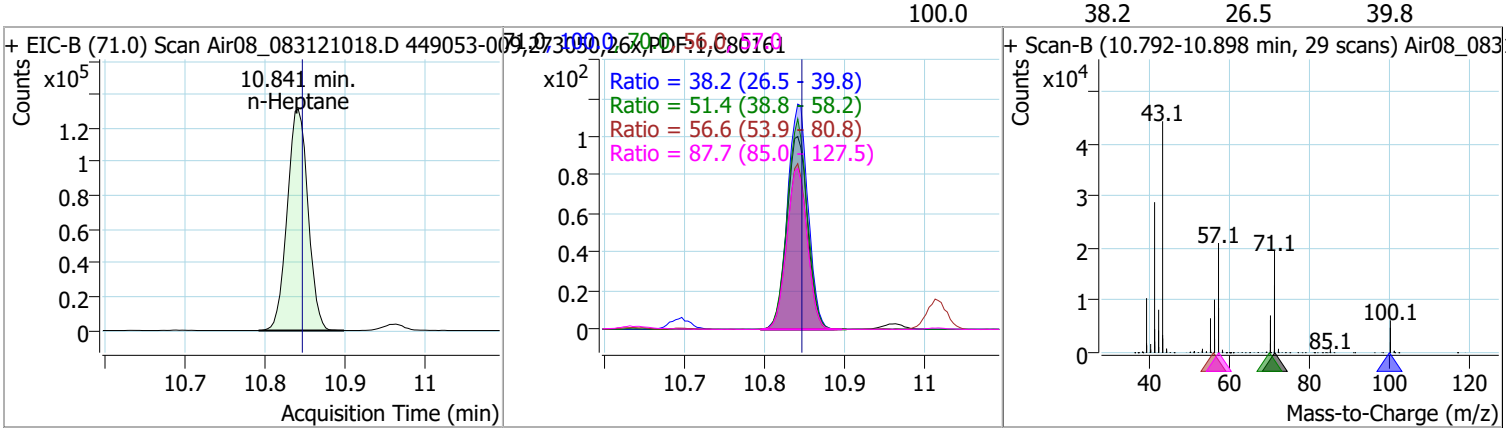


Quantitation Results Report (Not Reviewed)

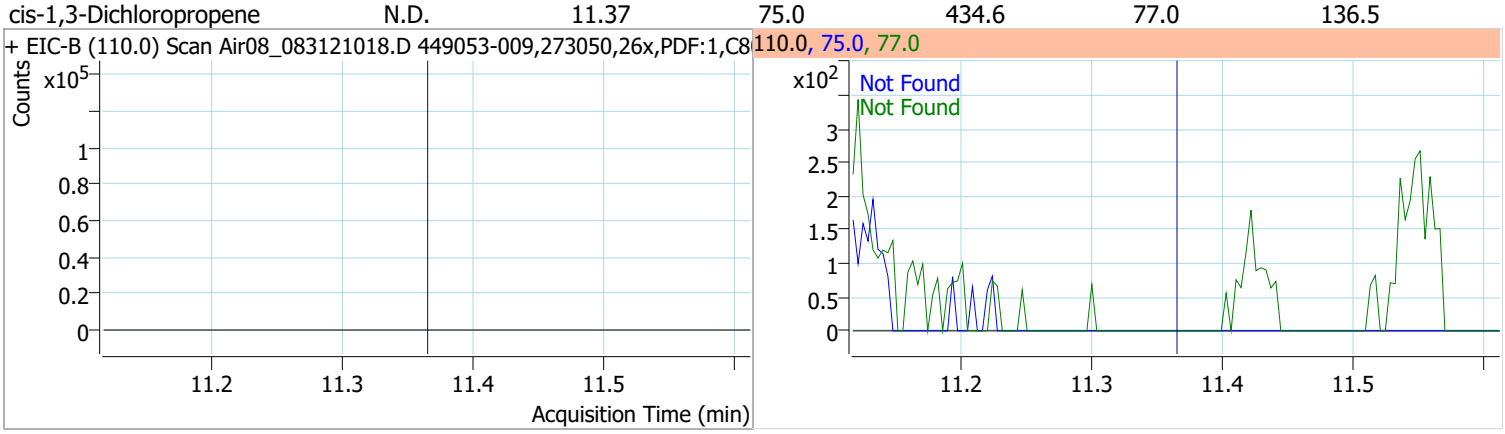
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Methyl methacrylate	0.5395	10.69	-0.01	3140	100.0	145.2	32.2	48.4
					85.0		7.8	11.7



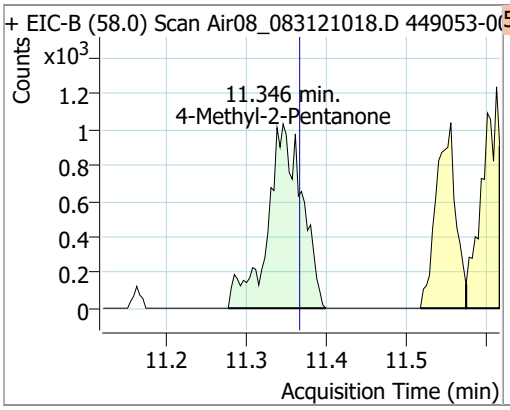
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Heptane	38.0308	10.84	-0.01	235712	57.0	87.7	85.0	127.5
					56.0	56.6	53.9	80.8
					70.0	51.4	38.8	58.2
					100.0	38.2	26.5	39.8

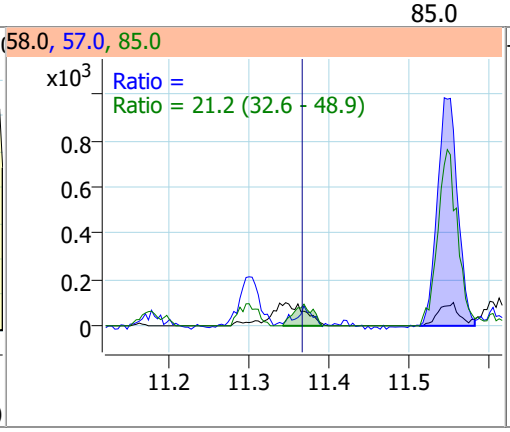


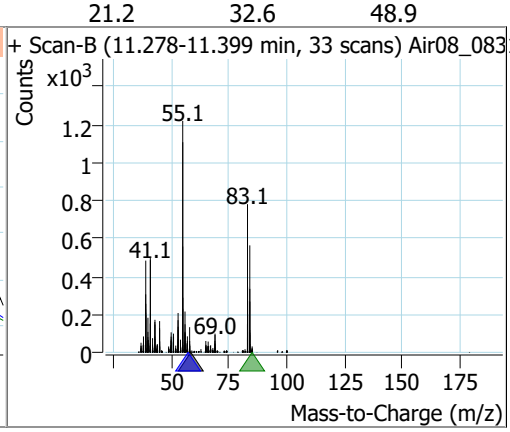
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
cis-1,3-Dichloropropene	N.D.	11.37	75.0	434.6	77.0	136.5



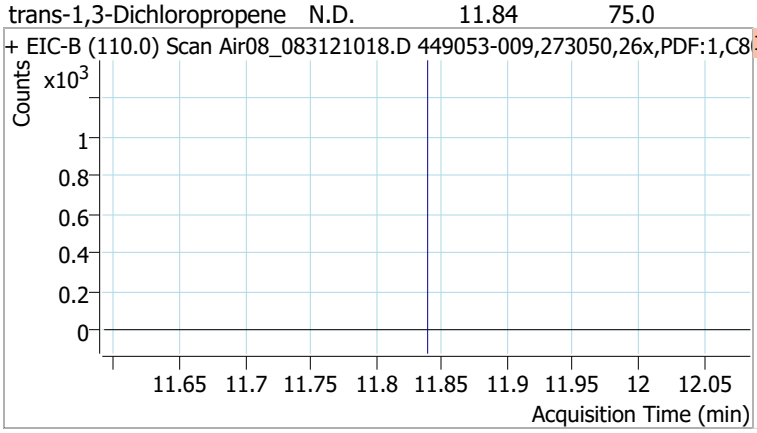
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
4-Methyl-2-Pentanone	0.6732	11.35	-0.03	3107	57.0		53.8	80.8
					85.0	21.2	32.6	48.9

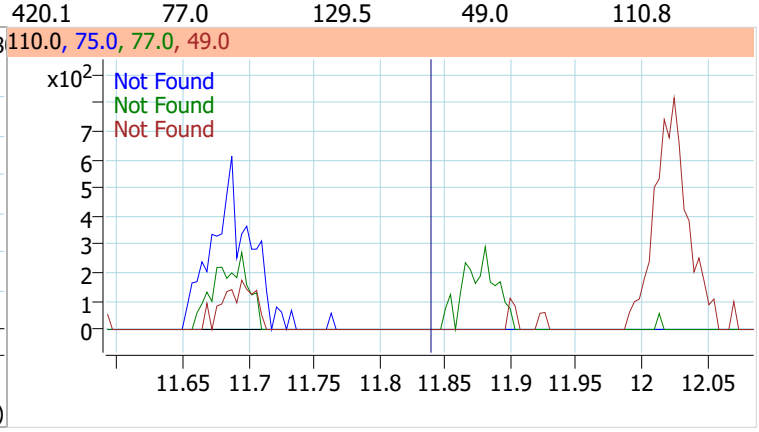




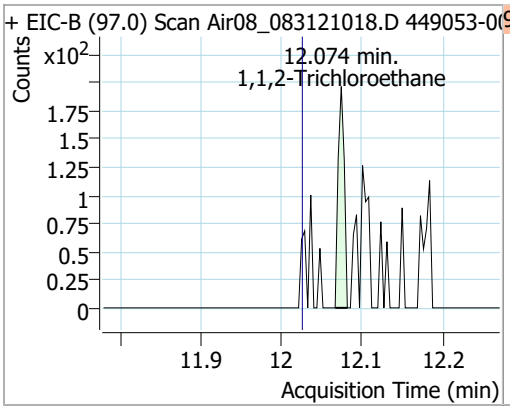


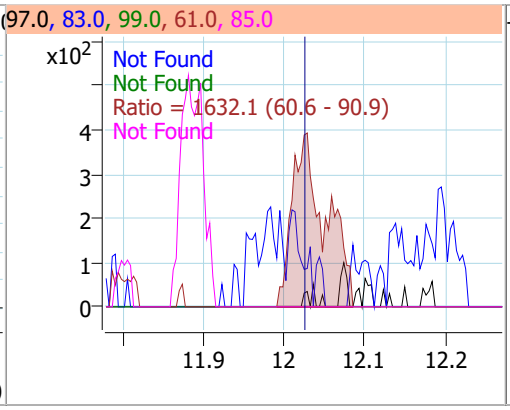
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
trans-1,3-Dichloropropene	N.D.	11.84	75.0	420.1	77.0	129.5	49.0	110.8

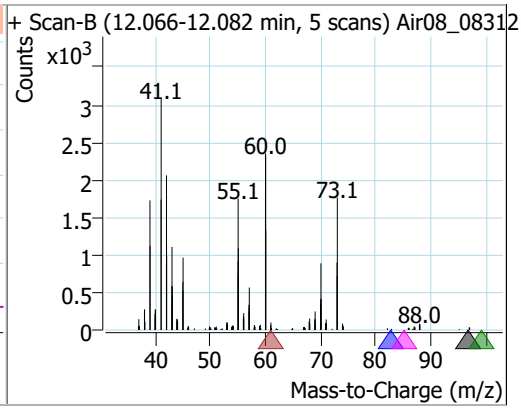




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1,2-Trichloroethane	0.0123	12.07	0.05	105	83.0		68.8	103.3
					61.0	1632.1	60.6	90.9
					99.0		50.3	75.5
					85.0		44.1	66.2

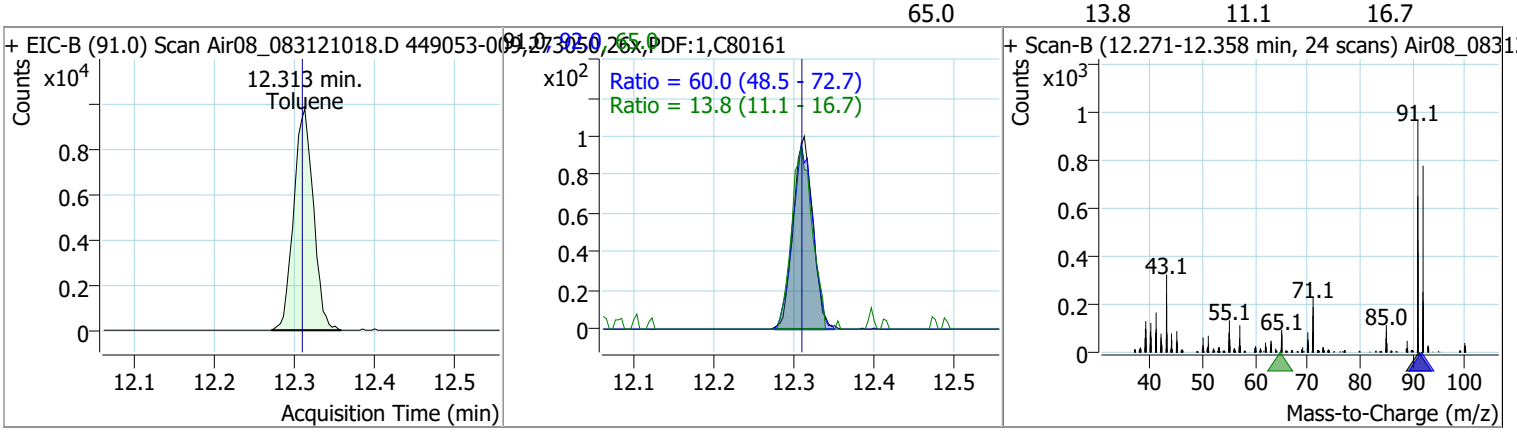




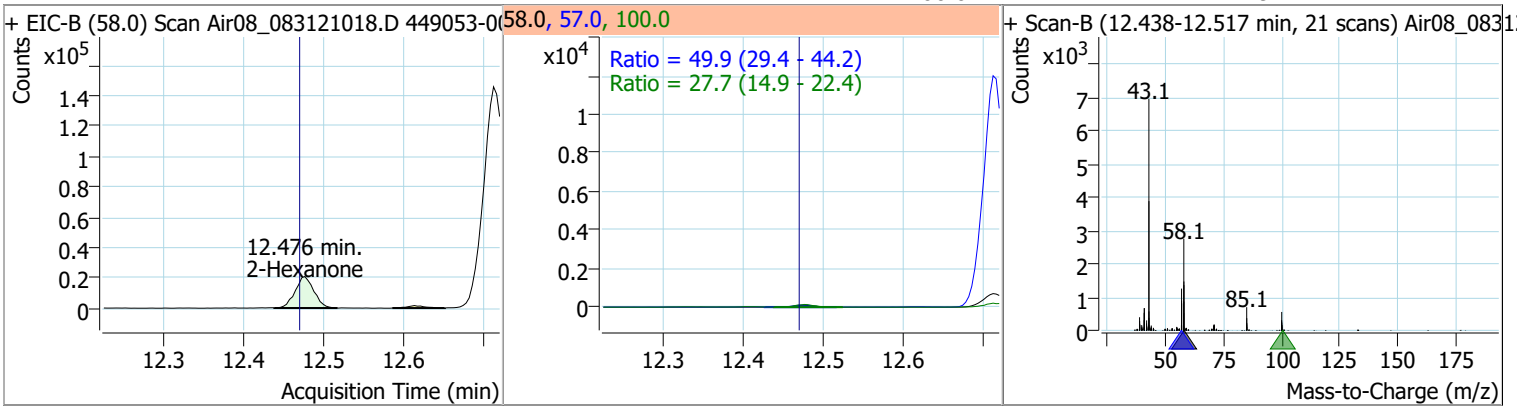


Quantitation Results Report (Not Reviewed)

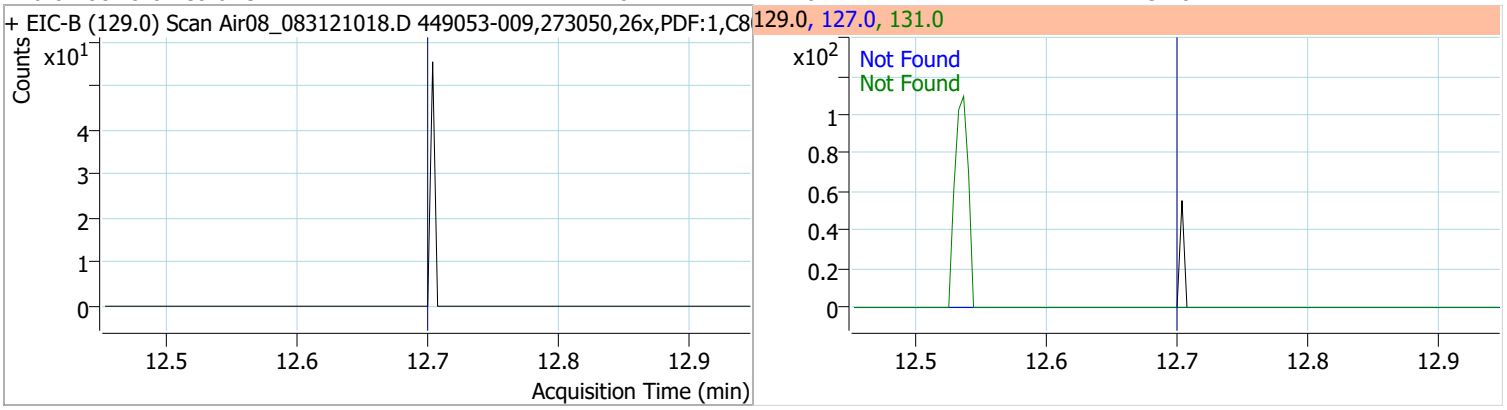
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Toluene	0.6622	12.31	0.00	16653	92.0	60.0	48.5	72.7
					65.0	13.8	11.1	16.7



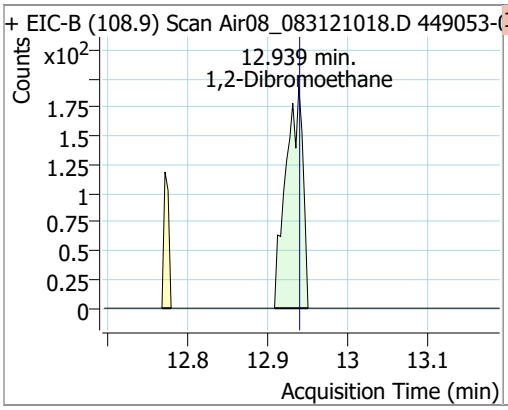
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Hexanone	5.8824	12.48	0.00	33479	57.0	49.9	29.4	44.2
					100.0	27.7	14.9	22.4

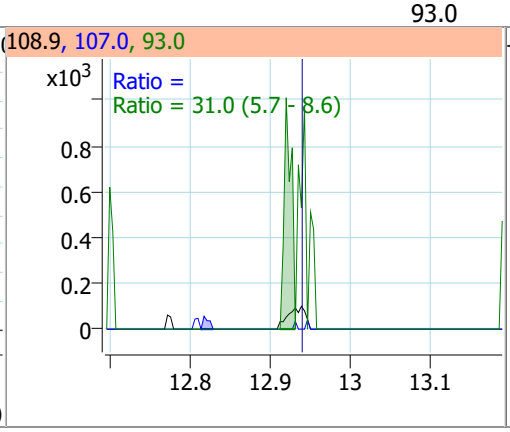


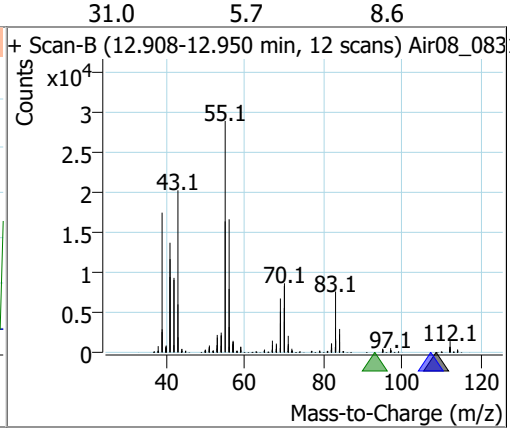
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
Dibromochloromethane	N.D.	12.70	127.0	77.2	131.0	24.1



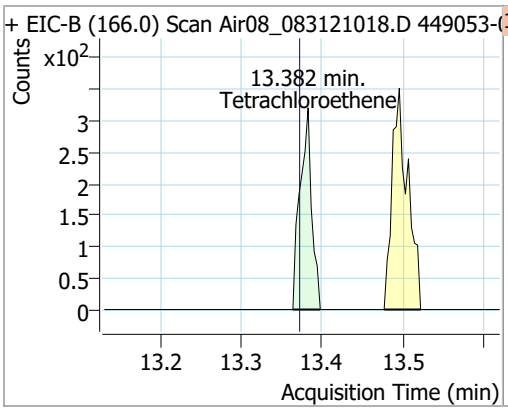
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dibromoethane	0.0209	12.94	-0.01	285	107.0		85.3	127.9
					93.0	31.0	5.7	8.6

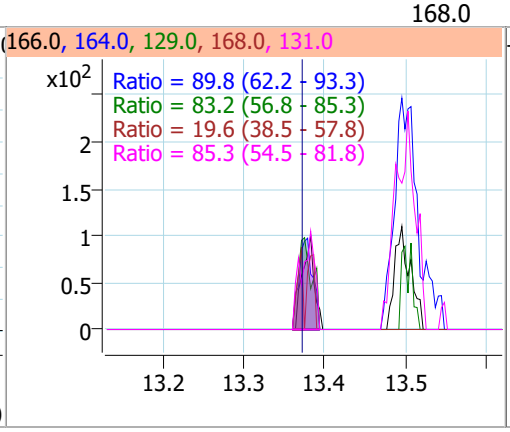


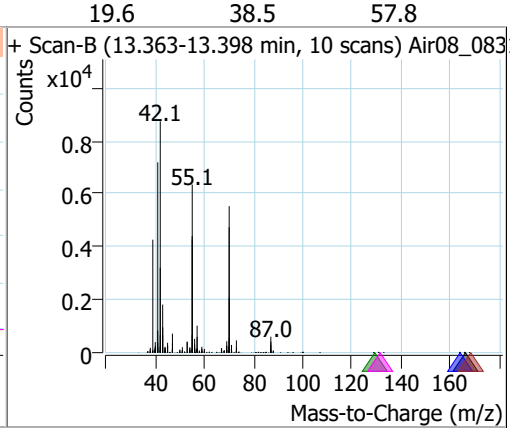




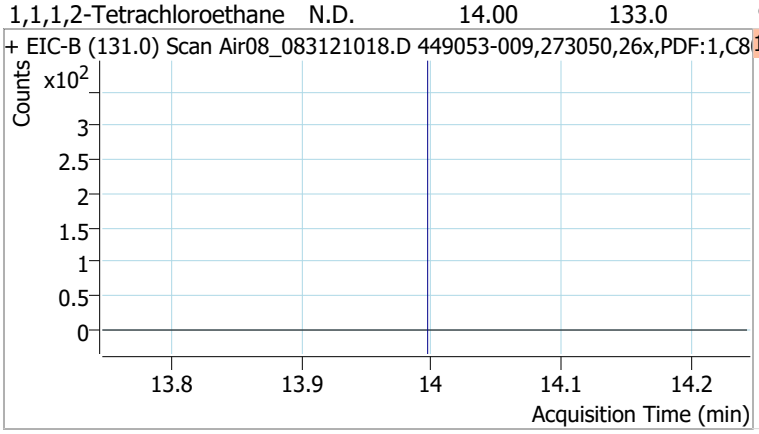
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Tetrachloroethene	0.0201	13.38	0.00	326	164.0	89.8	62.2	93.3
					129.0	83.2	56.8	85.3
					131.0	85.3	54.5	81.8
					168.0	19.6	38.5	57.8

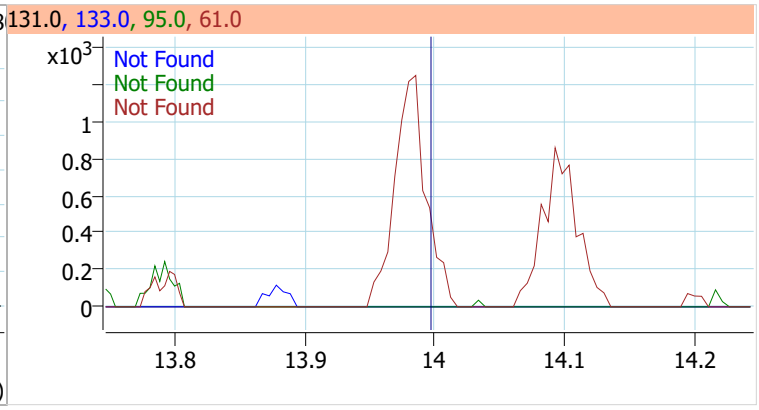






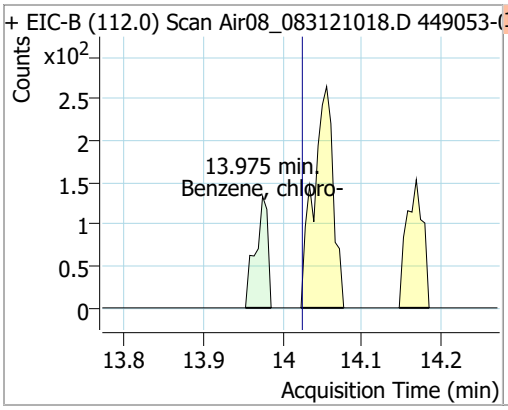
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
1,1,1,2-Tetrachloroethane	N.D.	14.00	133.0	96.2	95.0	40.2	61.0	39.7

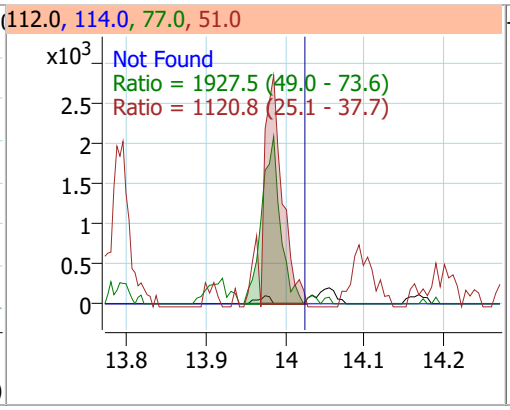


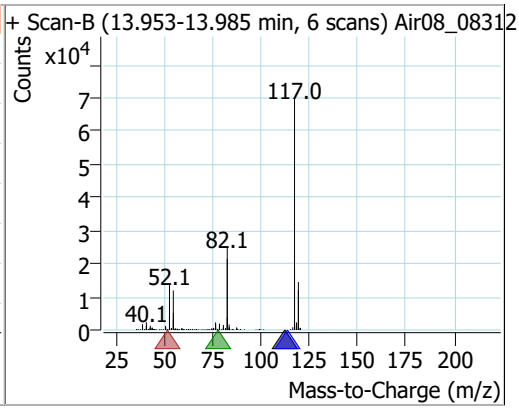


Quantitation Results Report (Not Reviewed)

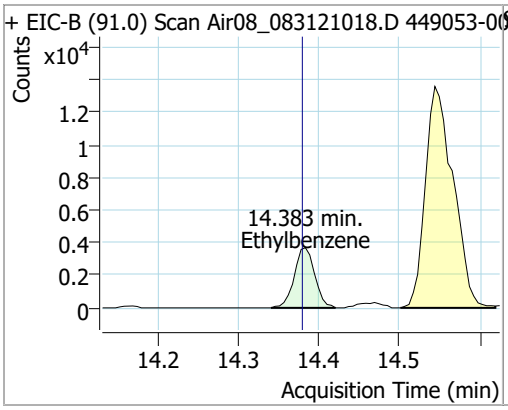
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzene, chloro-	0.0061	13.97	-0.05	144	77.0	1927.5	49.0	73.6
					114.0		26.1	39.1
					51.0	1120.8	25.1	37.7

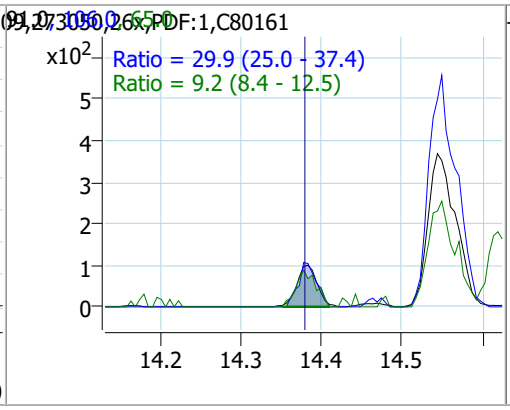


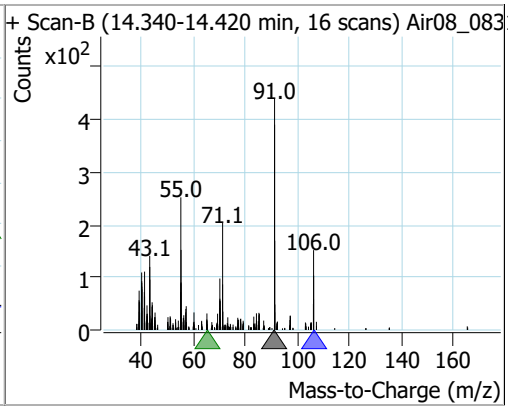




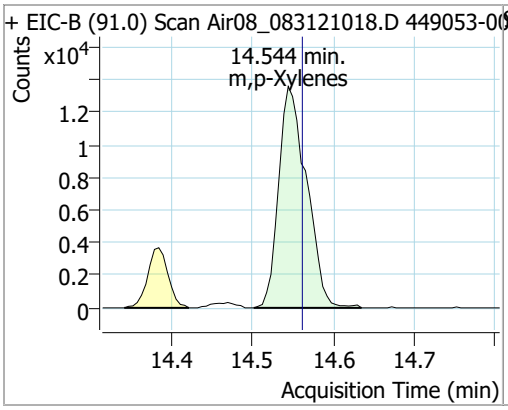
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Ethylbenzene	0.1819	14.38	0.00	6545	106.0	29.9	25.0	37.4
					65.0	9.2	8.4	12.5

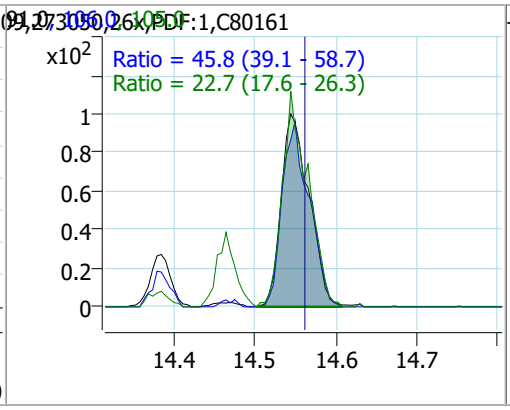


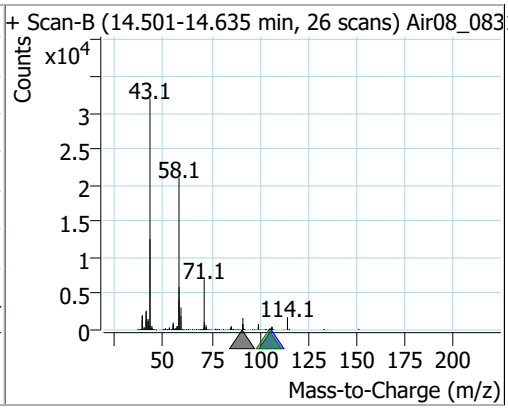




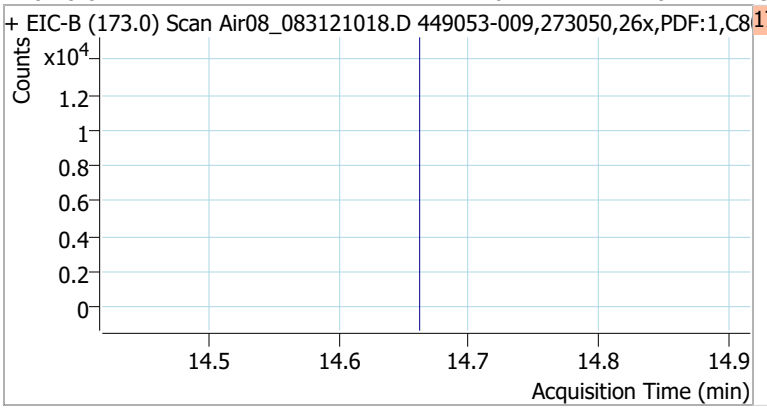
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
m,p-Xylenes	1.1099	14.54	-0.02	32931	106.0	45.8	39.1	58.7
					105.0	22.7	17.6	26.3

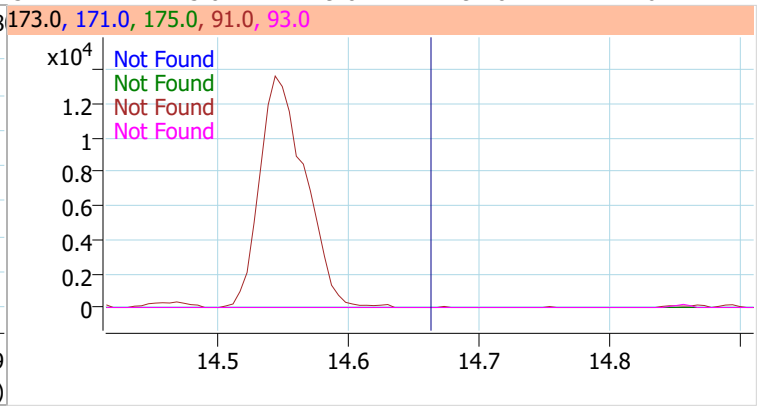




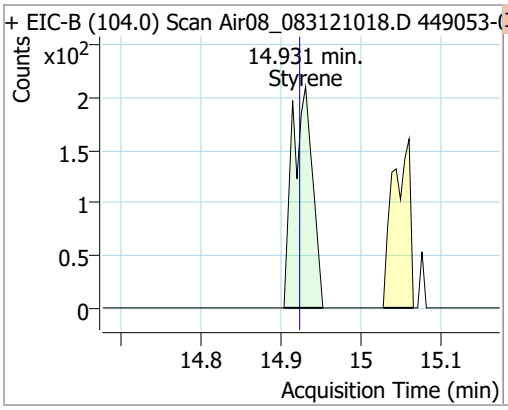


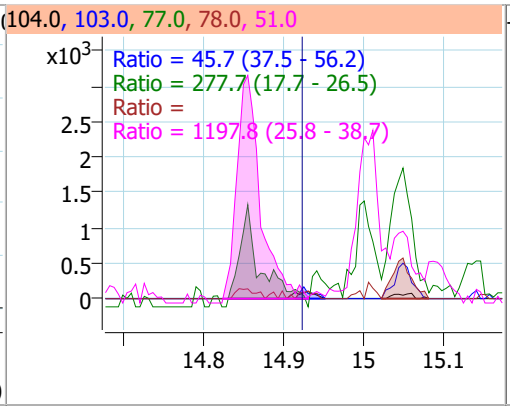
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
Bromoform	N.D.	14.67	171.0	51.7	175.0	49.0	91.0	22.6

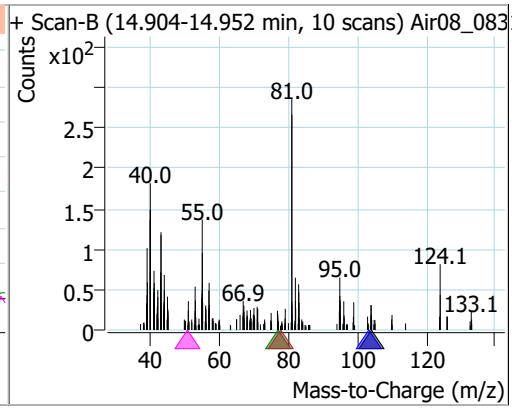




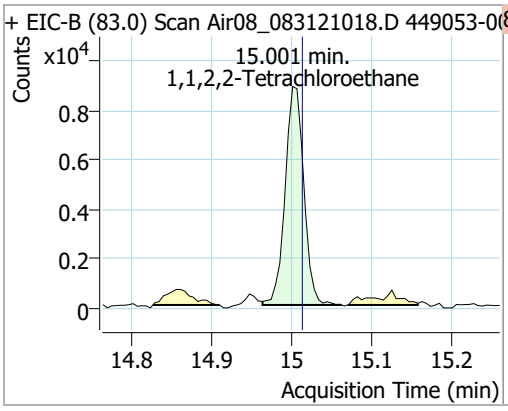
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Styrene	0.0175	14.93	0.00	364	103.0	45.7	37.5	56.2
					78.0		36.6	55.0
					51.0	1197.8	25.8	38.7
					77.0	277.7	17.7	26.5

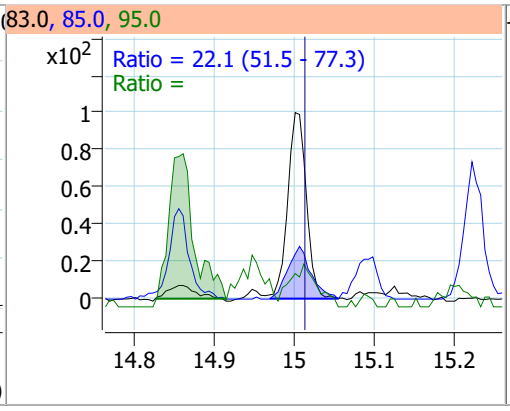


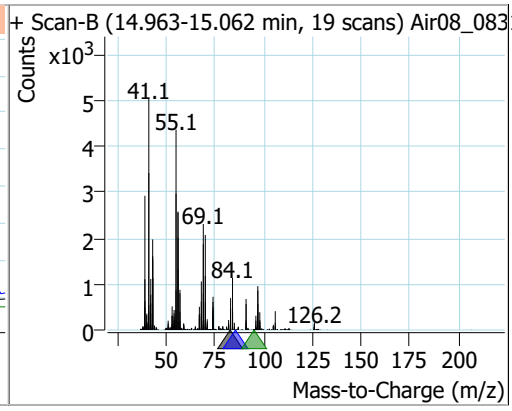




Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,1,2,2-Tetrachloroethane	0.7329	15.00	-0.02	14381	85.0	22.1	51.5	77.3
					95.0		13.8	20.7

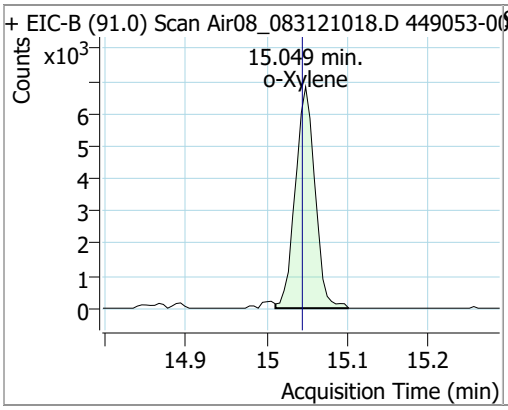


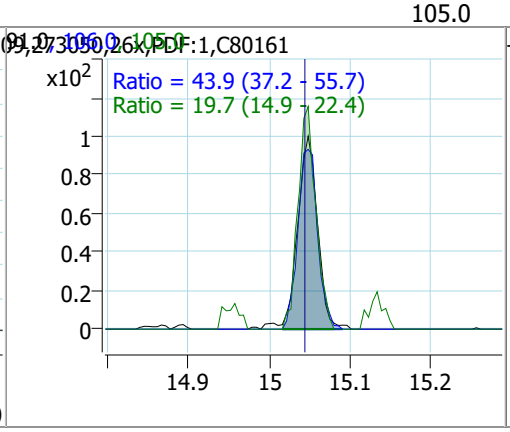


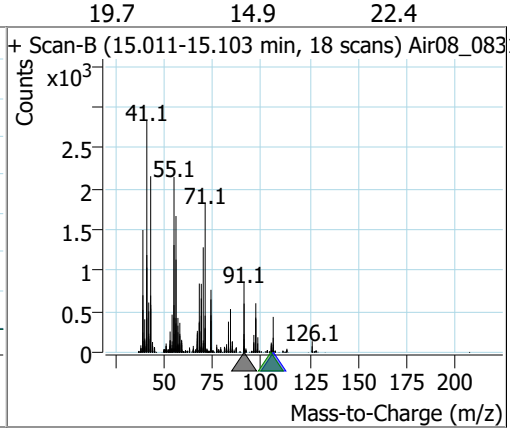


Quantitation Results Report (Not Reviewed)

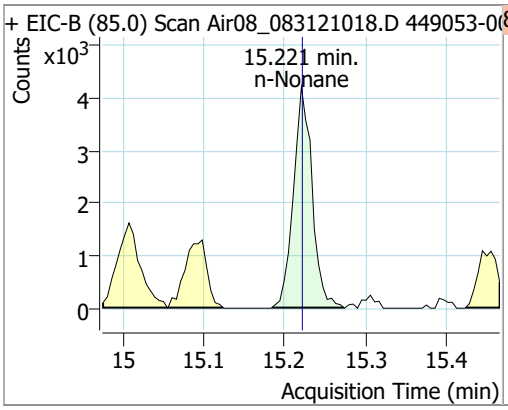
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
o-Xylene	0.3658	15.05	0.00	11638	106.0	43.9	37.2	55.7
					105.0	19.7	14.9	22.4

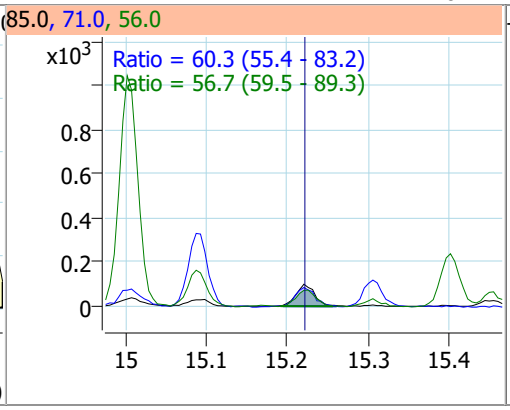


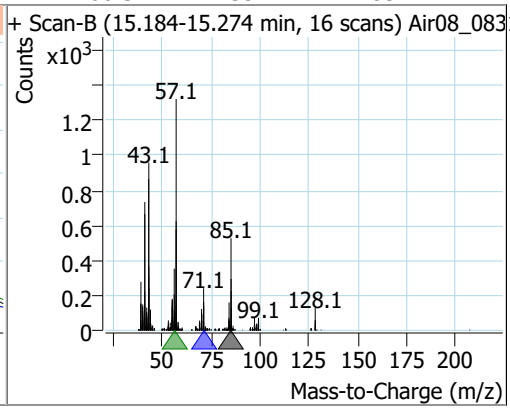




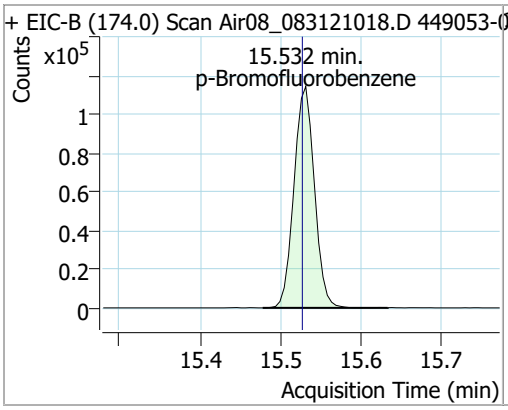
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Nonane	1.0666	15.22	-0.01	6763	56.0	56.7	59.5	89.3
					71.0	60.3	55.4	83.2

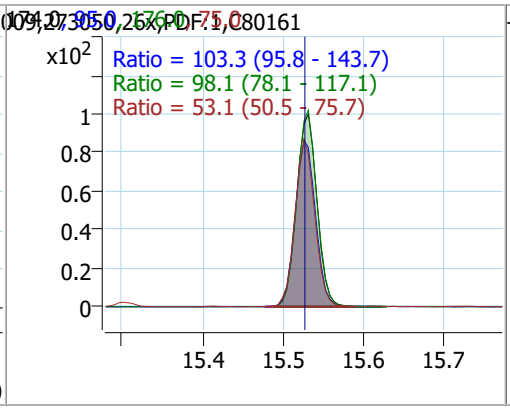


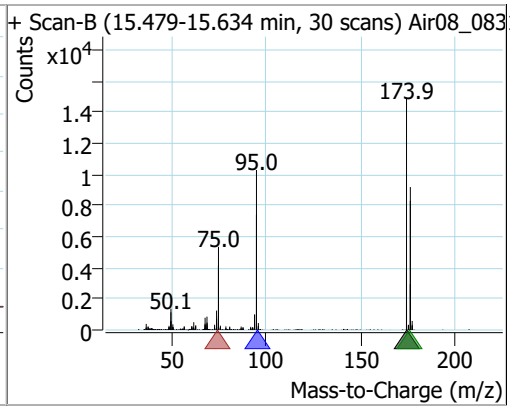




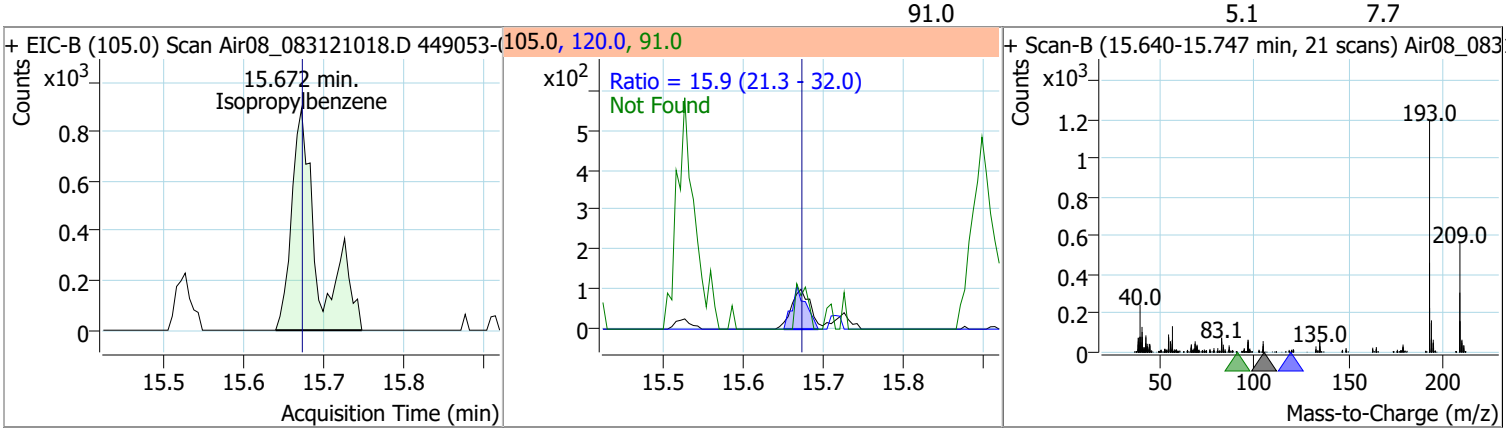
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
p-Bromofluorobenzene	10.3048	15.53	0.00	202743	95.0	103.3	95.8	143.7
					176.0	98.1	78.1	117.1
					75.0	53.1	50.5	75.7



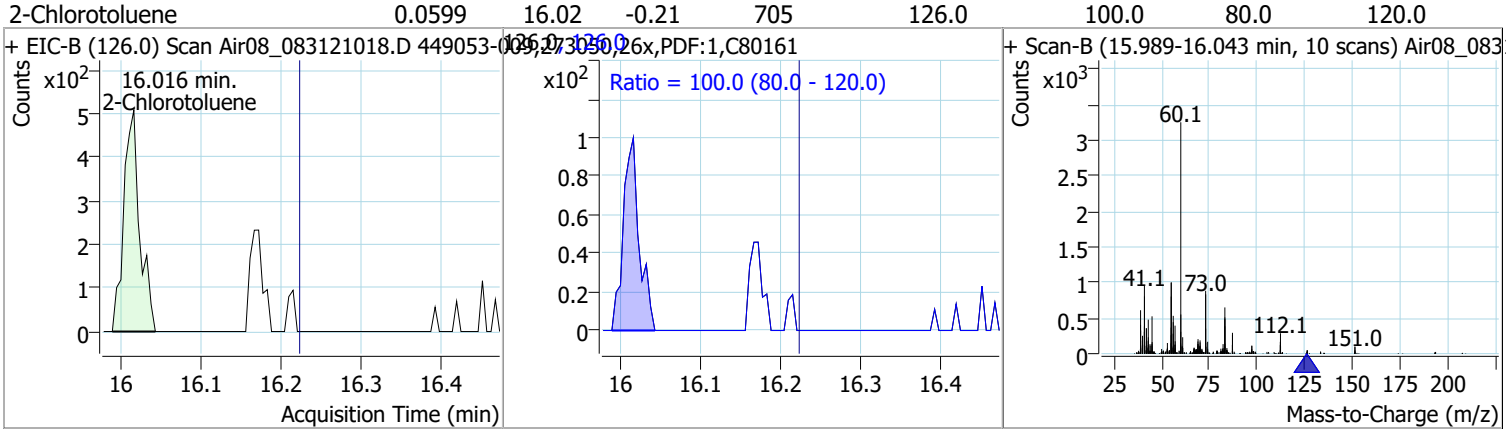




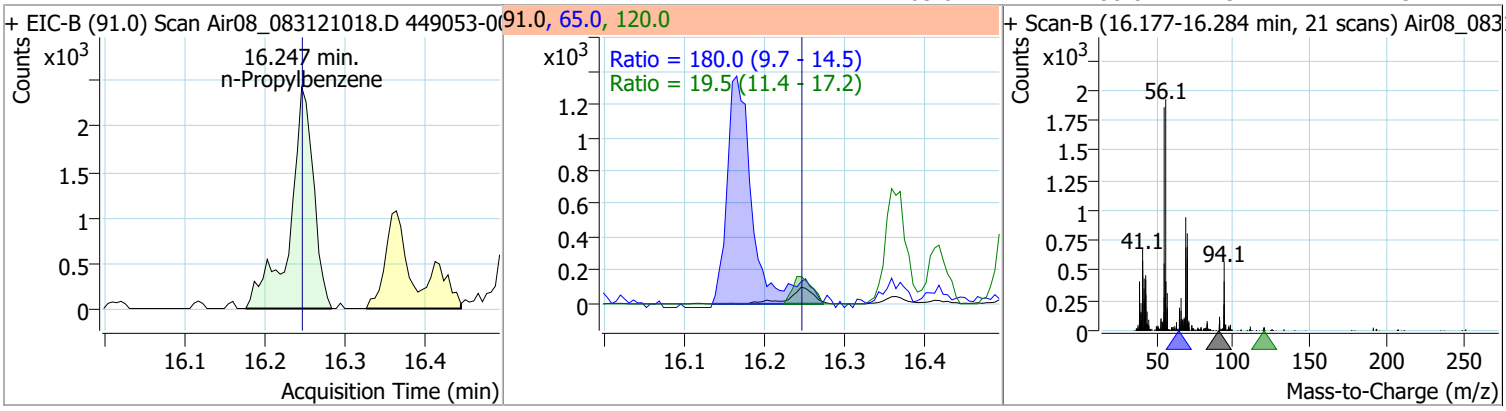
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Isopropylbenzene	0.0423	15.67	-0.01	1975	120.0	15.9	21.3	32.0
					91.0		5.1	7.7



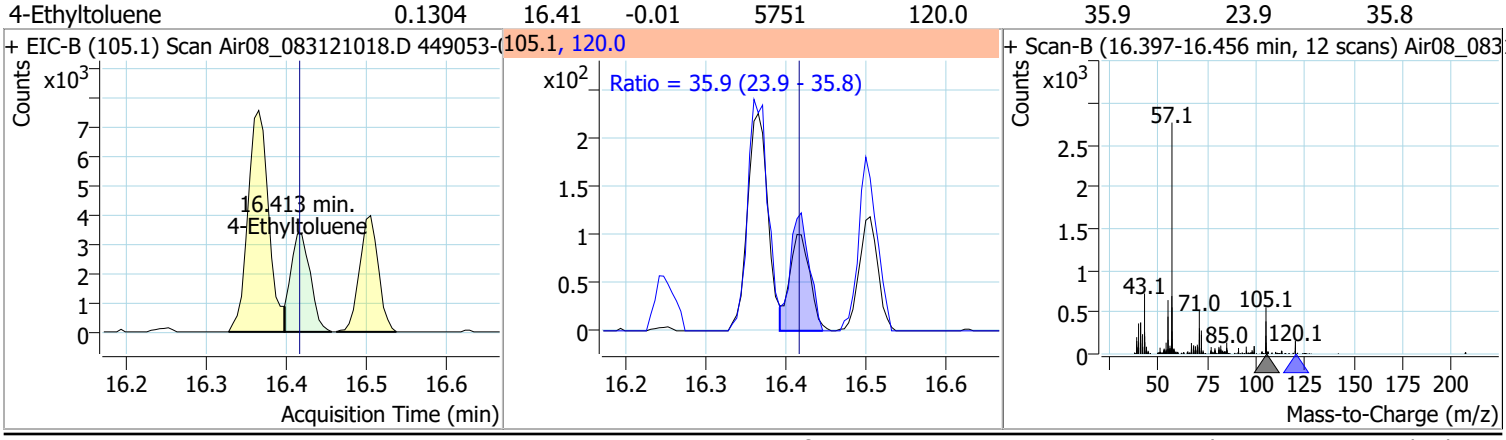
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
2-Chlorotoluene	0.0599	16.02	-0.21	705	126.0	100.0	80.0	120.0



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
n-Propylbenzene	0.0589	16.25	-0.01	5001	120.0	19.5	11.4	17.2
					65.0	180.0	9.7	14.5

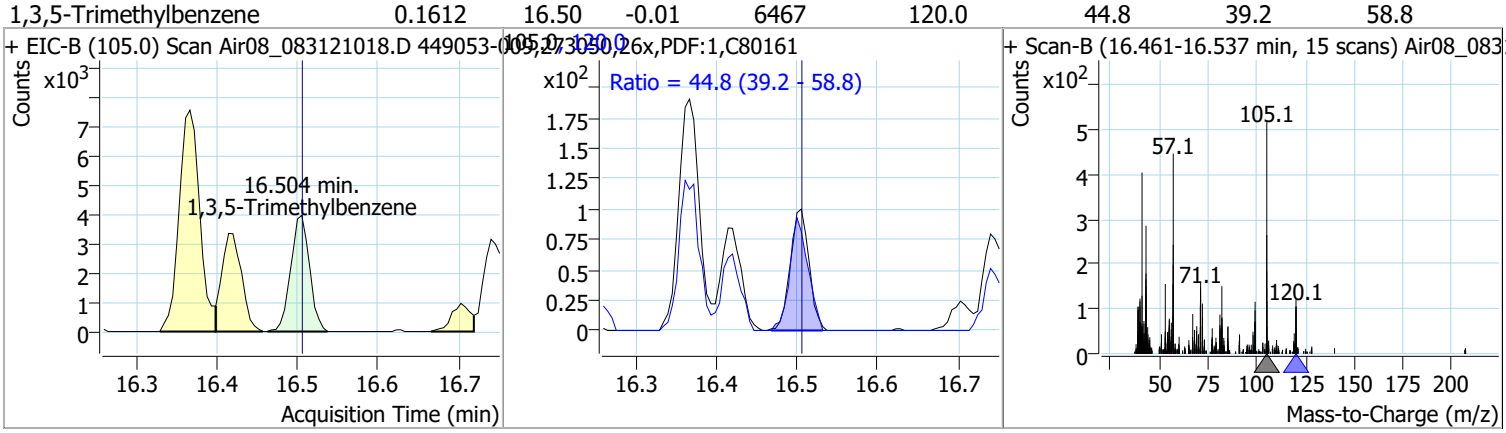


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
4-Ethyltoluene	0.1304	16.41	-0.01	5751	120.0	35.9	23.9	35.8

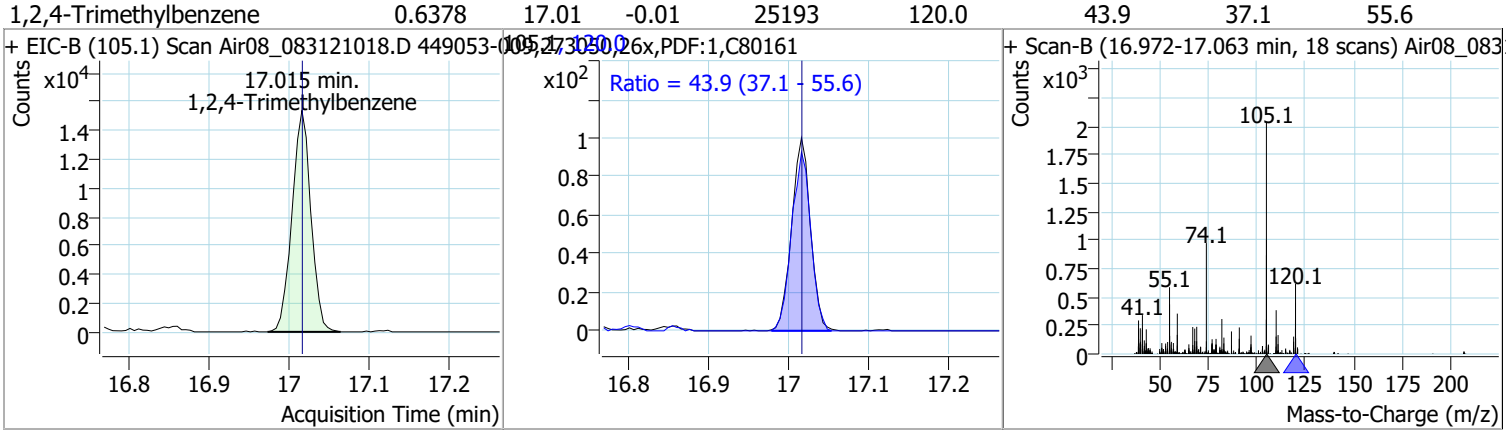


Quantitation Results Report (Not Reviewed)

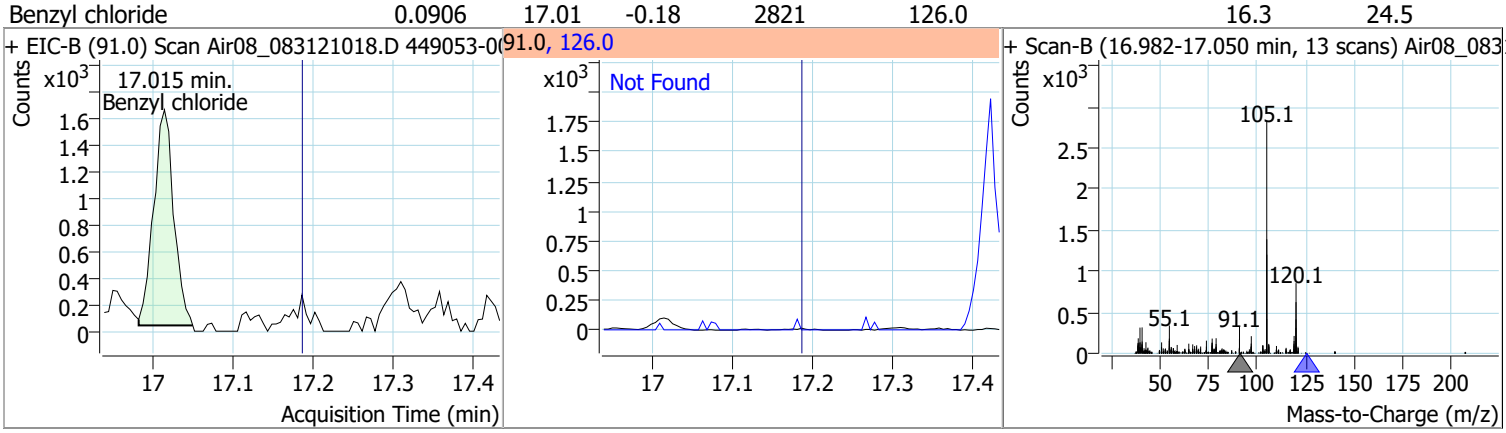
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3,5-Trimethylbenzene	0.1612	16.50	-0.01	6467	120.0	44.8	39.2	58.8



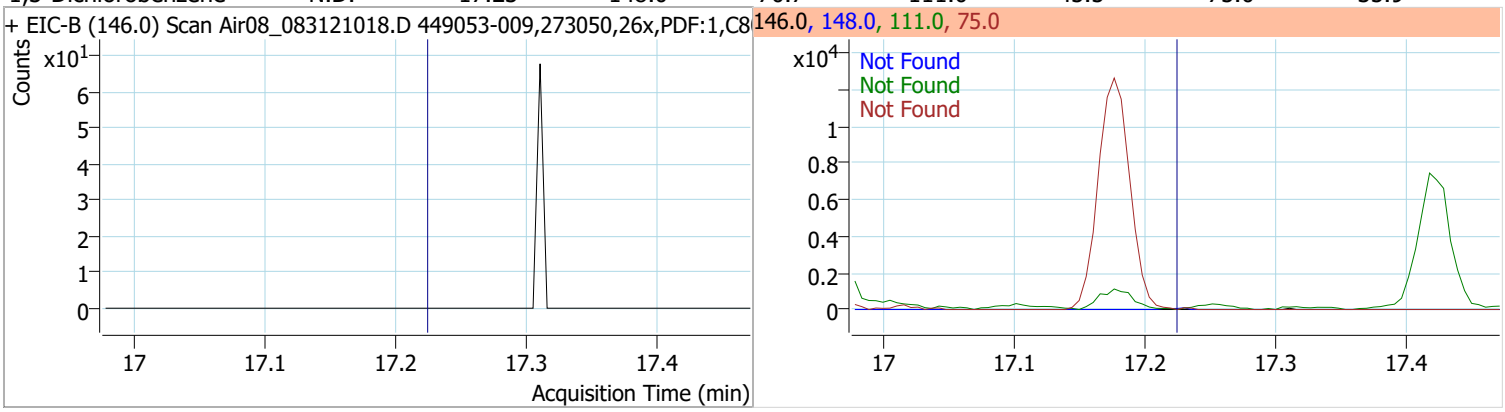
Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2,4-Trimethylbenzene	0.6378	17.01	-0.01	25193	120.0	43.9	37.1	55.6



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Benzyl chloride	0.0906	17.01	-0.18	2821	126.0		16.3	24.5

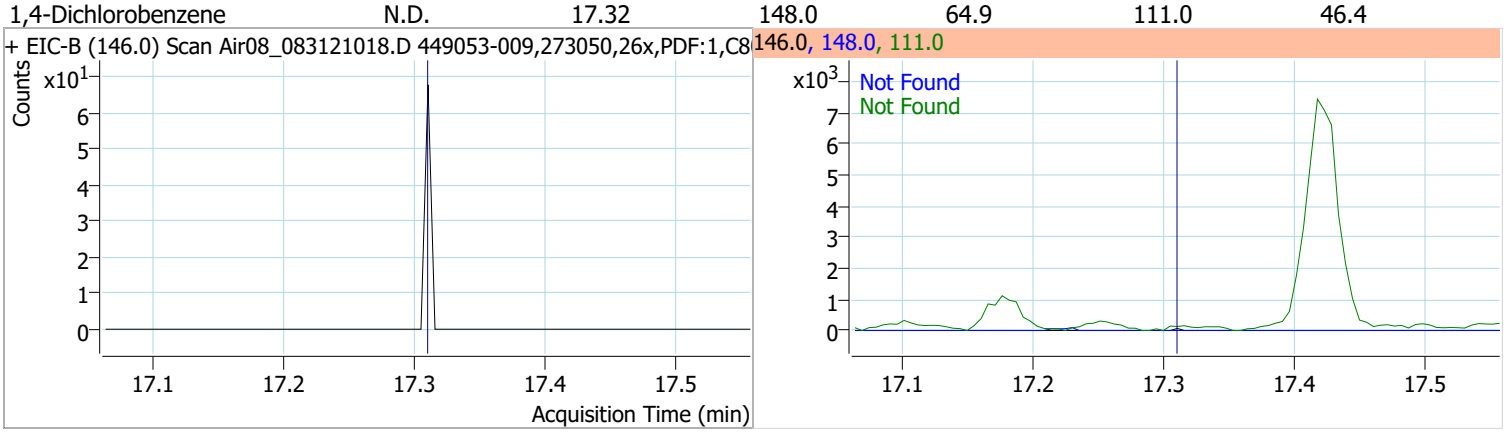


Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio	QIon	Exp Ratio
1,3-Dichlorobenzene	N.D.	17.23	148.0	70.7	111.0	45.5	75.0	35.9

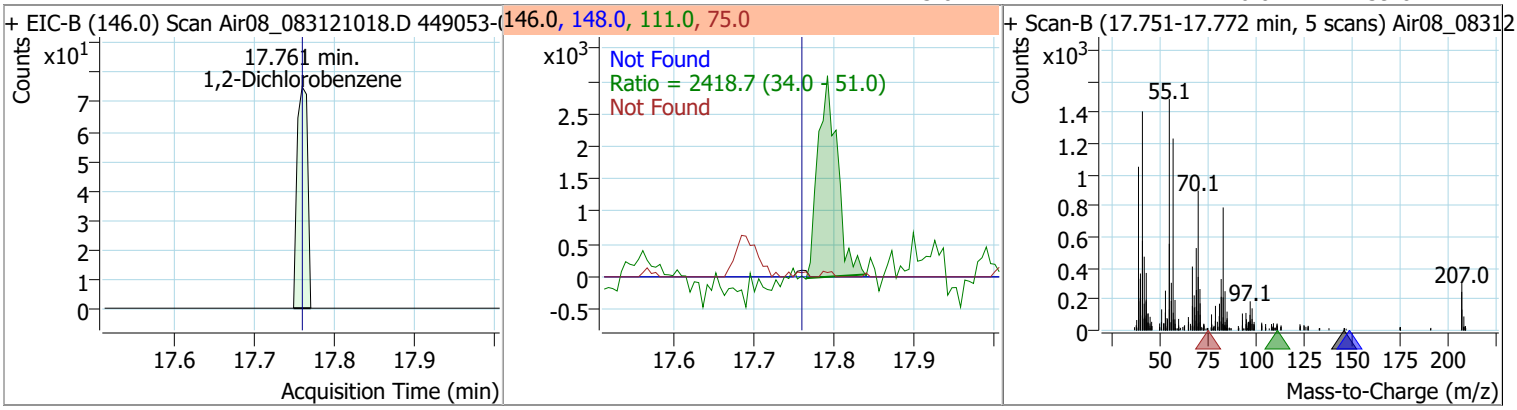


Quantitation Results Report (Not Reviewed)

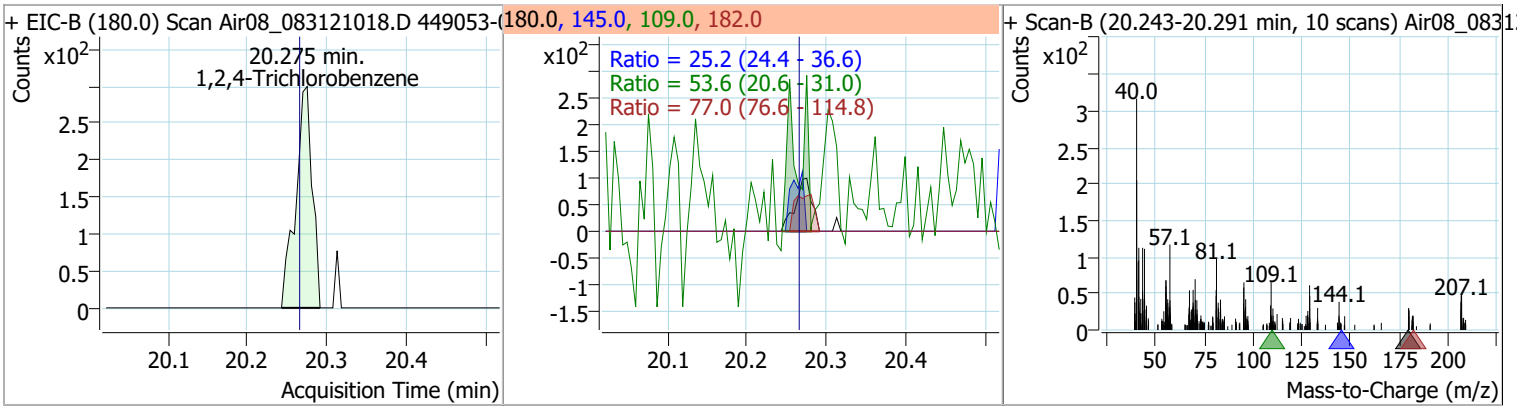
Compound	Conc.	Exp RT	QIon	Exp Ratio	QIon	Exp Ratio
1,4-Dichlorobenzene	N.D.	17.32	148.0	64.9	111.0	46.4



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2-Dichlorobenzene	0.0024	17.76	-0.01	69	148.0		51.1	76.7
					111.0	2418.7	34.0	51.0
					75.0		26.0	39.0

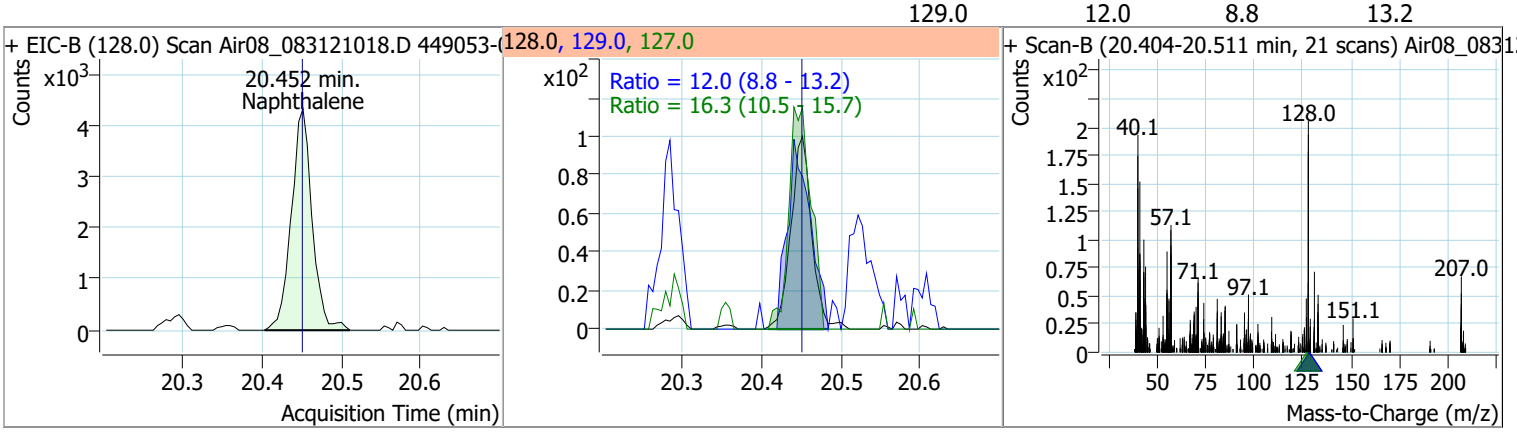


Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,2,4-Trichlorobenzene	0.0223	20.27	0.00	432	182.0	77.0	76.6	114.8
					145.0	25.2	24.4	36.6
					109.0	53.6	20.6	31.0

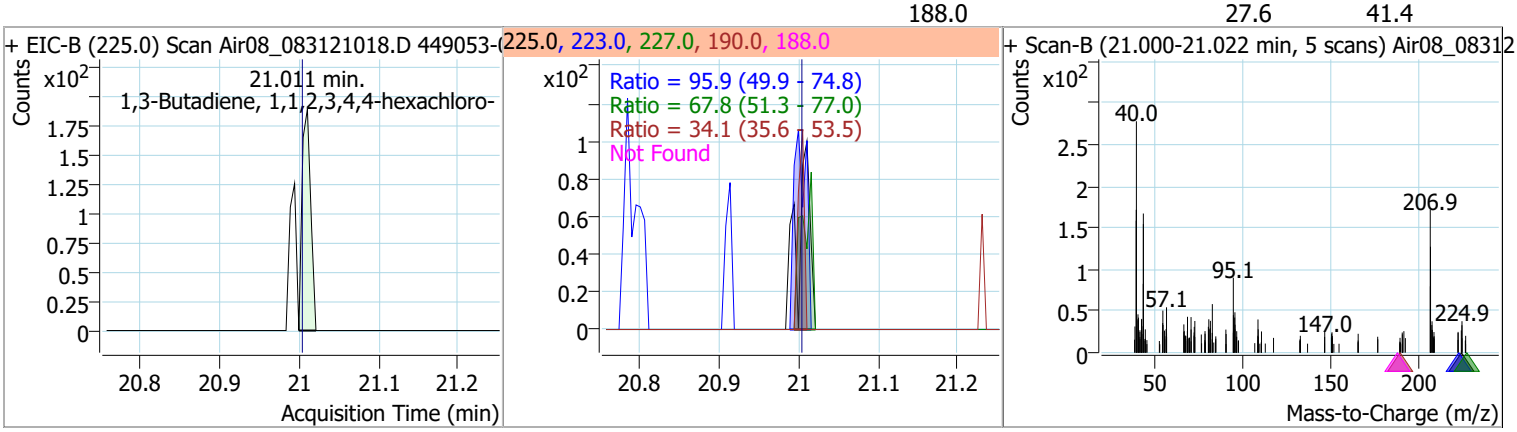


Quantitation Results Report (Not Reviewed)

Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
Naphthalene	0.2221	20.45	-0.01	7829	127.0	16.3	10.5	15.7
					129.0	12.0	8.8	13.2



Compound	Conc.	RT	Dev(Min)	Resp.	QIon	QRatio	Lower	Upper
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	0.0053	21.01	0.00	142	227.0	67.8	51.3	77.0
					223.0	95.9	49.9	74.8
					190.0	34.1	35.6	53.5
					188.0		27.6	41.4



Attachment 3

From: Richard Villafania <richard.villafania@enthalpy.com>
Sent: Wednesday, September 1, 2021 5:01 PM
To: Kevin Crosby <kcrosby@montrose-env.com>; Kris Huckabay <khuckabay@montrose-env.com>
Subject: RE: FW: FW: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Kevin,

Propanal/ Propionaldehyde - is used in the manufacture of plastics, in the synthesis of rubber chemicals, and as a disinfectant and preservative.

Formic Acid - is used preservative and antibacterial agent in livestock feed, leather tanning and dyeing, and in various cleaning products.

Oxalic Acid – is used in cleaning products, especially in the removal of rust. Also used in wood bleaching products.

Regards,

Richard Villafania
O: 714.771.9917
Richard.Villafania@enthalpy.com

From: Gabriel Guillen <gabriel.guillen@enthalpy.com>
Sent: Wednesday, September 1, 2021 3:14 PM
To: Richard Villafania <richard.villafania@enthalpy.com>
Cc: Marcus Hueppe <marcus.hueppe@enthalpy.com>
Subject: Re: FW: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

There are some really high peaks for non-target analytes. I reviewed the various runs (TO12 and To15) and the large peaks are not acetone/IPA. One appears to be propanal and the other is possibly formic acid/oxalic acid/fluoroethene/etc (about 8 possible compounds in 80% match range).

Thank you,
Gabe

On Wed, Sep 1, 2021 at 3:00 PM Richard Villafania <richard.villafania@enthalpy.com> wrote:

Hey Gabe,

Please see the MAQS's email below – any unknown peaks/analytes show up in the TO-15 to explain the difference? Report attached for reference. Thanks.

Regards,

Richard Villafania

O: 714.771.9917

Richard.Villafania@enthalpy.com

From: Kris Huckabay <khuckabay@montrose-env.com>
Sent: Wednesday, September 1, 2021 2:40 PM
To: richard.villafania@enthalpy.com
Subject: RE: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Hi Richard,

I had a quick question about the 1-voc-1-DB OFF results. The TO-15 analysis results added up are much lower than 330,000 ppb TNMNEHC result. Can you explain to me why this is? Just trying to figure out how I could get result that high.

Thanks,

Kristopher Huckabay, QSTI

Client Project Manager

Montrose Air Quality Services, LLC

2825 Verne Roberts Circle, Antioch, CA 94509
M: 925.381.2521
khuckabay@montrose-env.com
www.montrose-env.com

From: Richard Villafania <richard.villafania@enthalpy.com>
Sent: Wednesday, September 1, 2021 12:58 PM
To: khuckabay@montrose-env.com
Subject: Supplement for PROJ-007725 - MRP San Joaquin Energy TCC Units 1, 2 - Enthalpy Data (449053)

Hi Kris,

Supplement to include additional analysis (TO-15).

Data qualifiers and additional information necessary for the interpretation of the test results are contained in the PDF file and may not be included in the EDD.

Please find attached the following files:
- PDF Deliverable
- Standard Pivot Table EDD (449053_standard_excel_pivot.zip)

You may also access this data at https://labline-orange.enthalpy.com/
Email was also sent to: AntiochQA-QC@montrose-env.com, Richard.Villafania@enthalpy.com

Attachment 4

Leach, Taylor

From: Kris Huckabay <khuckabay@montrose-env.com>
Sent: Thursday, September 2, 2021 11:48 AM
To: Leach, Taylor
Subject: MRP Tracy VOC results
Attachments: 1-VOC-1-DBOFF Contamination Email chain.pdf; 449053_level2_rev1.pdf

Hi Taylor,
The MRP TCC report is nearly completed and you will be receiving the draft report this week.
Had a contamination issue with one the VOC canisters. 1-VOC-1-DB OFF sample can back with a super high hit on VOC (330 ppm). The rest of the samples had less than 1 ppm VOC. Had the lab do some further analysis on that sample and it showed that there was contamination with disinfectant/ cleaning type analytes. My guess would be the probe tip got contaminated with a product such as hand sanitizer. See attached lab report and email chain with the lab explaining what the contamination was. Since this was obvious contamination of the sample I am going to make note of this in the report and use runs 2 and 3 to show compliance.

Let me know if you have any questions.

Thanks,

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Attachment 5

TABLE 4-1
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	RATA Run 2	RATA Run 3	RATA Run 4	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0800-0832	0845-0915	0924-0954	--
Process Data				
load, MW	137	137	137	137
fuel flow rate, scfh	1,023,550	1,022,240	1,026,930	1,024,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.4	14.4	14.4
CO_2, % volume dry	3.8	3.8	3.8	3.8
volumetric flow rate, dscfm	484,937	482,078	481,323	482,780
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.49	0.49	0.49	0.49
lb/day	11.7	11.7	11.7	11.7
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.8	1.9	1.9	1.9
ppmvd @ 15% O_2	1.7	1.7	1.7	1.7
lb/hr	6.49	6.51	6.57	6.52
lb/day	155.7	156.3	157.7	156.6
lb/MMBtu	0.006	0.006	0.0062	0.006
Carbon Monoxide (CO)				
ppmvd	0.7	0.7	0.5	0.6
ppmvd @ 15% O_2	0.6	0.6	0.5	0.6
lb/hr	1.45	1.43	1.10	1.33
lb/day	34.8	34.3	26.3	31.8
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	1.1	0.2	0.2	0.5
ppmvd @ 15% O_2	1.0	0.1	0.1	0.4
lb/hr	1.35	0.20	0.18	0.58
lb/day	32.5	4.7	4.4	13.9
lb/MMBtu	0.001	< 0.001	< 0.001	0.001

TABLE 4-2
NH_3 EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	1-NH3-1-DB ON	2- NH3-1-DB ON	3- NH3-1-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0800-0832	0845-0915	0924-0954	--
Process Data				
load, MW	137	137	137	137
fuel flow rate, scfh	1,023,550	1,022,240	1,026,930	1,024,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.4	14.4	14.4
CO_2, % volume dry	3.8	3.8	3.8	3.8
moisture content, % volume	8.3	9.4	7.9	8.5
volumetric flow rate, dscfm	484,937	482,078	481,323	482,780
Ammonia (NH_3)				
ppmvd	0.8	1.0	1.0	0.9
ppmvd @ 15% O_2	0.8	0.9	0.9	0.9
lb/hr	1.08	1.26	1.36	1.23
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-3
PM EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS ON

Run Number	1-PM-1-DB ON	2-PM-1-DB ON	3-PM-1-DB ON	Average
Date	08/05/21	08/05/21	08/05/21	--
Time	0730-0945	1013-1220	1247-1454	--
Process Data				
load, MW	137	137	137	137
CT fuel flow rate, scfh	73,500	96,900	111,400	93,930
DB fuel flow rate, scfh	950,310	936,220	928,390	938,310
total fuel flow rate, scfh	1,023,810	1,033,120	1,039,790	1,032,240
Flue Gas Parameters				
O_2, % volume dry	14.4	14.3	14.2	14.3
CO_2, % volume dry	3.8	3.9	4.0	3.9
flue gas temperature, °F	210	210	211	210
moisture content, % volume	8.7	8.8	9.0	8.8
volumetric flow rate, dscfm	497,648	508,548	512,859	506,352
Filterable Particulate Matter (PM)				
gr/dscf	0.0002	0.0001	0.0001	0.0001
gr/dscf @ 12% CO_2	0.0006	0.0003	0.0003	0.0004
lb/hr	0.87	0.45	0.45	0.59
Condensable PM				
gr/dscf	<0.0003	<0.0003	<0.0003	<0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	<0.0008	<0.0009
lb/hr	<1.17	<1.21	<1.23	<1.20
Total PM				
gr/dscf	0.0005	0.0004	0.0004	0.0004
gr/dscf @ 12% CO_2	0.0015	0.0012	0.0011	0.0013
lb/hr	2.04	1.66	1.67	1.79
lb/day	49.0	39.9	40.2	43.0
lb/MMBtu	0.002	0.001	0.001	0.002

TABLE 4-4
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-1-DB OFF	2-1-DB OFF	3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	--
Time	0730-0800	0809-0839	0848-0918	--
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	892,130	894,770	894,060	893,653
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
volumetric flow rate, dscfm	457,389	461,048	460,682	459,706
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.43	0.43	0.43	0.43
lb/day	10.4	10.4	10.4	10.4
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.8	1.8	1.8	1.8
ppmvd @ 15% O_2	1.7	1.8	1.8	1.8
lb/hr	5.84	6.01	6.00	5.95
lb/day	140.2	144.2	144.0	142.8
lb/MMBtu	0.006	0.006	0.006	0.006
Carbon Monoxide (CO)				
ppmvd	1.4	1.4	1.4	1.4
ppmvd @ 15% O_2	1.4	1.4	1.4	1.4
lb/hr	2.89	2.91	2.87	2.89
lb/day	69.5	69.8	68.9	69.4
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	330.0*	0.2	0.2	0.2
ppmvd @ 15% O_2	324.5*	0.2	0.1	0.2
lb/hr	382.77*	0.20	0.18	0.19
lb/day	9186.6*	4.8	4.2	4.5
lb/MMBtu	0.414*	< 0.001	< 0.001	< 0.001

Note: * This result was deleted from calculation of the average result. See section 4.1 for a description of the apparent contamination of this sample.

TABLE 4-5
NH_3 EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-NH3-1-DB OFF	2- NH3-1-DB OFF	3- NH3-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	--
Time	0730-0800	0809-0839	0848-0918	--
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	892,130	894,770	894,060	893,653
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
moisture content, % volume	7.5	7.7	8.2	7.8
volumetric flow rate, dscfm	457,389	461,048	460,682	459,706
Ammonia (NH_3)				
ppmvd	0.6	0.5	0.6	0.6
ppmvd @ 15% O_2	0.6	0.5	0.6	0.6
lb/hr	0.77	0.63	0.78	0.73
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-6
PM EMISSIONS RESULTS -
UNIT 1 – DUCT BURNERS OFF

Run Number	1-PM-1-DB OFF	2-PM-1-DB OFF	3-PM-1-DB OFF	Average
Date	08/06/21	08/06/21	08/06/21	
Time	0652-0901	0921-1131	1158-1406	
Process Data				
load, MW	121	121	121	121
fuel flow rate, scfh	892,310	896,790	898,470	895,900
Flue Gas Parameters				
O_2, % volume dry	14.9	14.9	14.9	14.9
CO_2, % volume dry	3.5	3.5	3.5	3.5
flue gas temperature, °F	210	215	217	214
moisture content, % volume	7.6	7.8	8.0	7.8
volumetric flow rate, dscfm	512,006	470,067	466,219	482,764
Filterable Particulate Matter (PM)				
gr/dscf	<0.0001	<0.0001	<0.0001	<0.0001
gr/dscf @ 12% CO_2	<0.0003	<0.0003	<0.0003	<0.0003
lb/hr	<0.36	<0.34	<0.34	<0.35
Condensable PM				
gr/dscf	<0.0003	<0.0003	0.0005	0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	0.0016	0.0011
lb/hr	<1.13	<1.10	1.83	1.35
Total PM				
gr/dscf	<0.0003	<0.0004	0.0005	0.0004
gr/dscf @ 12% CO_2	<0.0012	<0.0012	0.0019	0.0014
lb/hr	<1.49	<1.44	2.17	1.70
lb/day	<35.7	<34.6	52.2	40.8
lb/MMBtu	<0.001	<0.002	0.002	0.002

TABLE 4-7
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	RATA Run 2	RATA Run 3	RATA Run 4	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0816-0846	0854-0924	0935-1005	--
Process Data				
load, MW	137	136	136	136
fuel flow rate, scfh	1,018,900	1,017,020	1,021,420	1,019,113
Flue Gas Parameters				
O_2, % volume dry	14.5	14.5	14.5	14.5
CO_2, % volume dry	3.8	3.8	3.8	3.8
volumetric flow rate, dscfm	488,207	485,786	486,370	486,787
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.49	0.48	0.49	0.49
lb/day	11.7	11.6	11.7	11.7
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.9	1.9	2.0	2.0
ppmvd @ 15% O_2	1.8	1.8	1.8	1.8
lb/hr	6.91	6.87	6.99	6.92
lb/day	165.9	164.8	167.9	166.2
lb/MMBtu	0.007	0.007	0.007	0.007
Carbon Monoxide (CO)				
ppmvd	<0.2	<0.2	<0.2	<0.2
ppmvd @ 15% O_2	<0.2	<0.2	<0.2	<0.2
lb/hr	<0.41	<0.41	<0.41	<0.41
lb/day	<9.8	<9.8	<9.8	<9.8
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	0.1	0.2	0.2	0.1
ppmvd @ 15% O_2	0.1	0.1	0.1	0.1
lb/hr	0.12	0.18	0.19	0.16
lb/day	3.0	4.4	4.4	3.9
lb/MMBtu	< 0.001	< 0.001	< 0.001	< 0.001

TABLE 4-8
NH_3 EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	1-NH3-2-DB ON	2- NH3-2-DB ON	3- NH3-2-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	--
Time	0816-0846	0854-0924	0935-1005	--
Process Data				
load, MW	137	136	136	136
fuel flow rate, scfh	1,018,900	1,017,020	1,021,420	1,019,113
Flue Gas Parameters				
O_2, % volume dry	14.5	14.5	14.5	14.5
CO_2, % volume dry	3.8	3.8	3.8	3.8
moisture content, % volume	5.9	6.5	6.1	6.2
volumetric flow rate, dscfm	488,207	485,786	486,370	486,787
Ammonia (NH_3)				
ppmvd	0.7	0.8	0.8	0.8
ppmvd @ 15% O_2	0.7	0.7	0.7	0.7
lb/hr	0.94	1.02	1.05	1.00
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-9
PM EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS ON

Run Number	1-PM-2-DB ON	2-PM-2-DB ON	3-PM-2-DB ON	Average
Date	8/5/21	8/5/21	8/5/21	
Time	0714-0920	0937-1143	1204-1409	
Process Data				
load, MW	137	136	136	136
CT fuel flow rate, scfh	947,310	932,450	922,110	933,960
DB fuel flow rate, scfh	71,500	92,400	107,400	90,430
total fuel flow rate, scfh	1,018,810	1,024,850	1,029,510	1,024,390
Flue Gas Parameters				
O_2, % volume dry	14.5	14.4	14.3	14.4
CO_2, % volume dry	3.8	3.9	3.9	3.9
flue gas temperature, °F	208	208	211	209
moisture content, % volume	7.3	7.9	8.3	7.9
volumetric flow rate, dscfm	546,491	543,135	537,890	542,505
Filterable Particulate Matter (PM)				
gr/dscf	0.0001	<0.0001	0.0001	0.0001
gr/dscf @ 12% CO_2	0.0003	<0.0002	0.0003	0.0003
lb/hr	0.39	<0.37	0.40	0.39
Condensable PM				
gr/dscf	0.0003	0.0003	<0.0003	0.0003
gr/dscf @ 12% CO_2	0.0009	0.0008	<0.0008	0.0008
lb/hr	1.27	1.21	<1.20	1.23
Total PM				
gr/dscf	0.0004	0.0003	0.0003	0.0003
gr/dscf @ 12% CO_2	0.0011	0.0010	0.0011	0.0011
lb/hr	1.66	1.58	1.60	1.62
lb/day	39.9	38.0	38.4	38.8
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-10
SO_2, NO_X, CO, AND VOC EMISSIONS RESULTS -
UNIT 2-DUCT BURNERS OFF

Run Number	1-2-DB OFF	2-2-DB OFF	3-2-DB OFF	Average
Date	8/6/21	8/6/21	8/6/21	
Time	0731-0803	0808-0838	0848-0918	
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	891,090	893,830	894,400	893,107
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.1	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
volumetric flow rate, dscfm	463,029	464,453	470,310	465,931
Sulfur Dioxide (SO_2)				
ppmvd	0.1	0.1	0.1	0.1
lb/hr	0.43	0.43	0.43	0.43
lb/day	10.3	10.4	10.4	10.4
lb/MMBtu	0.001	0.001	0.001	0.001
Nitrogen Oxides (NO_x as NO_2)				
ppmvd	1.9	1.8	1.8	1.8
ppmvd @ 15% O_2	1.9	1.8	1.8	1.8
lb/hr	6.29	6.01	6.13	6.15
lb/day	151.0	144.3	147.1	147.5
lb/MMBtu	0.007	0.006	0.007	0.007
Carbon Monoxide (CO)				
ppmvd	0.4	0.4	0.3	0.3
ppmvd @ 15% O_2	0.4	0.4	0.3	0.3
lb/hr	0.74	0.75	0.55	0.68
lb/day	17.8	18.1	13.2	16.4
Volatile Organic Compounds, as Methane (VOC)				
ppmvd	0.1	0.4	0.2	0.2
ppmvd @ 15% O_2	0.1	0.4	0.2	0.2
lb/hr	0.10	0.51	0.20	0.27
lb/day	2.5	12.2	4.9	6.5
lb/MMBtu	< 0.001	< 0.001	< 0.001	< 0.001

TABLE 4-11
NH_3 EMISSIONS RESULTS -
UNIT 2- DUCT BURNERS OFF

Run Number	1-NH3-2	2- NH3-2	3- NH3-2	Average
Date	8/6/21	8/6/21	8/6/21	
Time	0731-0803	0808-0838	0848-0918	
Process Data				
load, MW	121	122	121	121
fuel flow rate, scfh	891,090	893,830	894,400	893,107
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.1	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
moisture content, % volume	7.2	8.6	8.1	8.0
volumetric flow rate, dscfm	463,029	464,453	470,310	465,931
Ammonia (NH_3)				
ppmvd	0.4	0.4	0.4	0.4
ppmvd @ 15% O_2	0.4	0.4	0.4	0.4
lb/hr	0.47	0.50	0.49	0.49
lb/MMBtu	0.001	0.001	0.001	0.001

TABLE 4-12
PM EMISSIONS RESULTS -
UNIT 2 – DUCT BURNERS OFF

Run Number	1-PM-2-DB OFF	2-PM-2-DB OFF	3-PM-2-DB OFF	Average
Date	8/6/21	8/6/21	8/6/21	--
Time	0651-0856	0915-1121	1139-1347	--
Process Data				
load, MW	121	121	121	121
fuel flow rate, scfh	891,620	896,740	901,720	896,690
Flue Gas Parameters				
O_2, % volume dry	15.0	15.0	15.0	15.0
CO_2, % volume dry	3.5	3.5	3.5	3.5
flue gas temperature, °F	213	219	222	218
moisture content, % volume	7.6	7.6	7.7	7.6
volumetric flow rate, dscfm	505,600	505,057	507,763	506,140
Filterable Particulate Matter (PM)				
gr/dscf	<0.0001	0.0001	<0.0001	0.0001
gr/dscf @ 12% CO_2	<0.0003	0.0004	<0.0003	0.0003
lb/hr	<0.36	0.44	<0.37	0.39
Condensable PM				
gr/dscf	<0.0003	<0.0003	<0.0003	<0.0003
gr/dscf @ 12% CO_2	<0.0009	<0.0009	<0.0009	<0.0009
lb/hr	<1.16	<1.17	<1.18	<1.17
Total PM				
gr/dscf	<0.0004	0.0004	0.0004	0.0004
gr/dscf @ 12% CO_2	<0.0012	0.0013	0.0012	0.0012
lb/hr	<1.52	1.61	1.55	1.56
lb/day	<36.6	38.7	37.2	37.5
lb/MMBtu	<0.002	0.002	0.002	0.002

Appendix E

Wet Surface Air Cooler PM10 Emissions
AQ-SC9

WET SURFACE AIR COOLER (WSAC)

PM10 ANNUAL CALCULATION

		TDS (ppm):	314		
Start Date	9/1/2020	Design Drift Ratio:	0.001%		
End Date	9/1/2021	PM10 limit:	110	lb/yr	
Hours in Year	8760	Sample date:	8/10/2021		

		Hours Online WSAC				WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
9/1/2020	9/2/2020	2.66	43497.9	2.65	43429.6	2.39	39220.9	273	314	126148.4	1050816	0.00330
9/2/2020	9/3/2020	2.09	34193.3	1.90	31076.6	2.04	33465.4	273	314	98735.3	822465	0.00258
9/3/2020	9/4/2020	7.79	127673.0	7.60	124533.5	1.39	22750.0	273	314	274956.5	2290388	0.00719
9/4/2020	9/5/2020	9.53	156133.3	3.07	50323.0	12.05	197401.7	273	314	403857.9	3364137	0.01056
9/5/2020	9/6/2020	0.55	9054.5	14.21	232736.9	13.93	228186.8	273	314	469978.2	3914918	0.01229
9/6/2020	9/7/2020	17.23	282286.2	4.25	69565.1	20.51	336017.4	273	314	687868.7	5729946	0.01799
9/7/2020	9/8/2020	16.95	277663.6	1.64	26822.2	16.77	274683.4	273	314	579169.2	4824480	0.01515
9/8/2020	9/9/2020	19.04	311943.7	14.44	236513.3	7.53	123305.0	273	314	671762.0	5595778	0.01757
9/9/2020	9/10/2020	1.72	28164.7	1.71	27955.6	1.76	28774.6	273	314	84894.8	707174	0.00222
9/10/2020	9/11/2020	0.59	9668.7	0.56	9191.1	0.55	9031.8	273	314	27891.5	232337	0.00073
9/11/2020	9/12/2020	0.80	13126.8	0.80	13172.2	0.88	14469.0	273	314	40768.0	339597	0.00107
9/12/2020	9/13/2020	0.85	13854.9	0.85	13900.3	0.74	12057.5	273	314	39812.7	331640	0.00104
9/13/2020	9/14/2020	1.34	21885.4	1.44	23591.7	1.37	22408.6	273	314	67885.8	565489	0.00178
9/14/2020	9/15/2020	1.15	18791.6	1.25	20475.1	1.24	20293.1	273	314	59559.8	496133	0.00156
9/15/2020	9/16/2020	3.90	63818.2	2.34	38406.3	4.16	68136.3	273	314	170360.8	1419105	0.00446
9/16/2020	9/17/2020	1.31	21426.0	5.31	86946.0	5.34	87541.8	273	314	195913.8	1631962	0.00512
9/17/2020	9/18/2020	1.05	17153.5	3.30	53985.8	3.38	55350.8	273	314	126490.1	1053663	0.00331
9/18/2020	9/19/2020	0.63	10351.2	0.56	9100.1	0.64	10442.2	273	314	29893.5	249013	0.00078
9/19/2020	9/20/2020	0.49	7985.2	0.45	7371.0	0.50	8121.8	273	314	23478.1	195572	0.00061
9/20/2020	9/21/2020	1.98	32396.2	1.92	31486.0	1.77	28983.4	273	314	92865.6	773570	0.00243
9/21/2020	9/22/2020	2.94	48161.9	1.81	29688.8	2.92	47866.2	273	314	125716.9	1047222	0.00329
9/22/2020	9/23/2020	0.26	4231.4	0.34	5642.0	0.26	4231.4	273	314	14104.8	117493	0.00037
9/23/2020	9/24/2020	2.71	44362.4	2.60	42633.6	1.25	20520.5	273	314	107516.6	895613	0.00281
9/24/2020	9/25/2020	0.77	12603.3	0.77	12535.2	0.76	12398.5	273	314	37537.0	312683	0.00098
9/25/2020	9/26/2020	0.36	5960.5	0.44	7211.8	0.45	7302.8	273	314	20475.1	170557	0.00054
9/26/2020	9/27/2020	0.70	11397.6	0.63	10374.0	0.76	12398.7	273	314	34170.3	284639	0.00089
9/27/2020	9/28/2020	5.84	95595.5	1.24	20315.8	5.70	93343.3	273	314	209254.6	1743091	0.00547
9/28/2020	9/29/2020	0.66	10760.7	11.26	184502.5	11.15	182705.3	273	314	377968.5	3148478	0.00989
9/29/2020	9/30/2020	1.17	19132.9	8.34	136591.2	8.30	135931.4	273	314	291655.4	2429490	0.00763
9/30/2020	10/1/2020	13.40	219519.1	0.61	10032.8	13.48	220815.9	273	314	450367.7	3751563	0.01178
10/1/2020	10/2/2020	12.86	210592.5	2.70	44230.4	12.48	204408.8	273	314	459231.7	3825400	0.01201
10/2/2020	10/3/2020	8.41	137819.5	8.64	141500.8	2.46	40217.8	273	314	319538.0	2661752	0.00836
10/3/2020	10/4/2020	7.75	126990.3	1.69	27755.0	7.75	126944.9	273	314	281690.3	2346480	0.00737
10/4/2020	10/5/2020	6.32	103466.9	1.33	21776.0	6.29	103084.6	273	314	228327.6	1901969	0.00597
10/5/2020	10/6/2020	2.68	43952.9	7.41	121412.3	7.07	115815.6	273	314	281180.9	2342237	0.00735
10/6/2020	10/7/2020	5.59	91568.8	2.26	36946.1	5.50	90021.8	273	314	218536.6	1820410	0.00572
10/7/2020	10/8/2020	1.37	22454.4	1.45	23728.3	1.51	24706.5	273	314	70889.2	590507	0.00185
10/8/2020	10/9/2020	0.25	4140.5	0.34	5642.0	0.25	4140.6	273	314	13923.2	115980	0.00036
10/9/2020	10/10/2020	0.25	4095.0	0.18	2889.3	0.25	4163.3	273	314	11147.6	92860	0.00029
10/10/2020	10/11/2020	0.08	1342.2	0.08	1342.2	0.00	0.0	273	314	2684.4	22361	0.00007
10/11/2020	10/12/2020	0.08	1342.3	0.08	1342.2	0.16	2684.5	273	314	5369.0	44724	0.00014
10/12/2020	10/13/2020	0.57	9350.3	0.55	8963.5	0.44	7257.3	273	314	25571.0	213007	0.00067
10/13/2020	10/14/2020	1.86	30394.0	6.43	105264.3	6.42	105127.7	273	314	240786.1	2005748	0.00630
10/14/2020	10/15/2020	8.88	145395.1	3.06	50050.1	8.50	139298.3	273	314	334743.5	2788413	0.00876
10/15/2020	10/16/2020	5.08	83219.4	3.00	49094.4	5.25	86017.7	273	314	218331.5	1818701	0.00571

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
10/16/2020	10/17/2020	6.64	108813.3	6.47	105928.2	2.75	45117.6	273	314	259859.1	2164626	0.00680
10/17/2020	10/18/2020	8.03	131449.6	1.90	31140.4	8.10	132650.9	273	314	295240.8	2459356	0.00772
10/18/2020	10/19/2020	5.12	83811.2	5.01	82036.6	2.13	34853.0	273	314	200700.8	1671838	0.00525
10/19/2020	10/20/2020	4.95	81058.2	4.97	81444.9	2.65	43429.6	273	314	205932.7	1715419	0.00539
10/20/2020	10/21/2020	5.14	84129.5	5.24	85835.6	1.95	31918.5	273	314	201883.6	1681691	0.00528
10/21/2020	10/22/2020	1.88	30735.4	1.79	29302.1	1.97	32191.6	273	314	92229.0	768267	0.00241
10/22/2020	10/23/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
10/23/2020	10/24/2020	0.15	2411.5	0.14	2343.3	0.17	2707.3	273	314	7462.1	62159	0.00020
10/24/2020	10/25/2020	0.24	3958.4	0.24	3890.2	0.15	2525.2	273	314	10373.8	86414	0.00027
10/25/2020	10/26/2020	0.00	0.0	0.06	1001.1	0.06	1001.1	273	314	2002.1	16677	0.00005
10/26/2020	10/27/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
10/27/2020	10/28/2020	0.13	2115.8	0.16	2548.0	0.14	2297.8	273	314	6961.6	57990	0.00018
10/28/2020	10/29/2020	0.09	1410.5	0.00	0.0	0.09	1410.5	273	314	2821.1	23499	0.00007
10/29/2020	10/30/2020	0.42	6893.3	0.43	7075.3	0.33	5414.6	273	314	19383.2	161462	0.00051
10/30/2020	10/31/2020	0.50	8121.8	0.42	6847.9	0.42	6915.9	273	314	21885.7	182307	0.00057
10/31/2020	11/1/2020	0.25	4140.5	0.25	4072.2	0.33	5482.8	273	314	13695.6	114084	0.00036
11/1/2020	11/2/2020	0.36	5937.8	0.35	5755.8	0.36	5869.5	273	314	17563.2	146301	0.00046
11/2/2020	11/3/2020	0.10	1615.2	0.21	3389.8	0.11	1774.6	273	314	6779.6	56474	0.00018
11/3/2020	11/4/2020	0.16	2684.4	0.18	2980.3	0.17	2707.3	273	314	8372.0	69739	0.00022
11/4/2020	11/5/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/5/2020	11/6/2020	0.22	3549.0	0.24	3958.6	0.22	3549.0	273	314	11056.6	92102	0.00029
11/6/2020	11/7/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/7/2020	11/8/2020	0.32	5209.7	0.23	3821.9	0.19	3116.7	273	314	12148.2	101195	0.00032
11/8/2020	11/9/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/9/2020	11/10/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/10/2020	11/11/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/11/2020	11/12/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/12/2020	11/13/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/13/2020	11/14/2020	0.23	3753.7	0.15	2525.2	0.19	3139.5	273	314	9418.4	78456	0.00025
11/14/2020	11/15/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/15/2020	11/16/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/16/2020	11/17/2020	0.00	0.0	0.06	978.2	0.06	978.2	273	314	1956.5	16297	0.00005
11/17/2020	11/18/2020	0.32	5232.4	0.33	5482.7	0.32	5164.3	273	314	15879.4	132275	0.00042
11/18/2020	11/19/2020	0.36	5892.6	0.34	5619.7	0.35	5687.5	273	314	17199.7	143274	0.00045
11/19/2020	11/20/2020	0.08	1319.5	0.04	728.0	0.12	2047.4	273	314	4094.9	34111	0.00011
11/20/2020	11/21/2020	0.32	5164.3	0.28	4663.8	0.34	5642.0	273	314	15470.1	128866	0.00040
11/21/2020	11/22/2020	0.07	1114.8	0.06	1023.8	0.13	2138.6	273	314	4277.1	35629	0.00011
11/22/2020	11/23/2020	0.16	2616.2	0.22	3617.2	0.19	3185.0	273	314	9418.4	78455	0.00025
11/23/2020	11/24/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/24/2020	11/25/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/25/2020	11/26/2020	0.17	2775.5	0.22	3640.0	0.23	3685.6	273	314	10101.1	84142	0.00026
11/26/2020	11/27/2020	0.15	2456.6	0.08	1319.1	0.07	1137.5	273	314	4913.2	40927	0.00013
11/27/2020	11/28/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/28/2020	11/29/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/29/2020	11/30/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
11/30/2020	12/1/2020	0.25	4163.3	0.24	3935.8	0.33	5323.5	273	314	13422.6	111810	0.00035
12/1/2020	12/2/2020	0.21	3435.3	0.36	5869.5	0.28	4572.8	273	314	13877.7	115601	0.00036
12/2/2020	12/3/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/3/2020	12/4/2020	0.06	1023.7	0.01	113.7	0.06	910.0	273	314	2047.4	17055	0.00005
12/4/2020	12/5/2020	0.06	1001.0	0.06	1001.1	0.12	2002.0	273	314	4004.1	33354	0.00010
12/5/2020	12/6/2020	0.14	2229.5	0.13	2093.0	0.14	2275.0	273	314	6597.5	54957	0.00017

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
12/6/2020	12/7/2020	0.09	1547.0	0.07	1205.8	0.00	0.0	273	314	2752.7	22930	0.00007
12/7/2020	12/8/2020	0.24	3890.3	0.24	3890.3	0.00	0.0	273	314	7780.5	64812	0.00020
12/8/2020	12/9/2020	0.04	664.0	0.04	664.0	0.00	0.0	273	314	1328.1	11063	0.00003
12/9/2020	12/10/2020	0.57	9300.3	0.57	9300.3	0.00	0.0	273	314	18600.7	154944	0.00049
12/10/2020	12/11/2020	0.21	3458.0	0.21	3458.0	0.00	0.0	273	314	6915.9	57610	0.00018
12/11/2020	12/12/2020	0.06	1001.0	0.06	1001.0	0.00	0.0	273	314	2002.0	16676	0.00005
12/12/2020	12/13/2020	0.23	3685.6	0.23	3685.6	0.00	0.0	273	314	7371.1	61402	0.00019
12/13/2020	12/14/2020	0.08	1274.1	0.08	1274.1	0.00	0.0	273	314	2548.1	21226	0.00007
12/14/2020	12/15/2020	0.09	1501.5	0.09	1501.5	0.00	0.0	273	314	3003.0	25015	0.00008
12/15/2020	12/16/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/16/2020	12/17/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/17/2020	12/18/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/18/2020	12/19/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/19/2020	12/20/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/20/2020	12/21/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/21/2020	12/22/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/22/2020	12/23/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/23/2020	12/24/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/24/2020	12/25/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/25/2020	12/26/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/26/2020	12/27/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/27/2020	12/28/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/28/2020	12/29/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/29/2020	12/30/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/30/2020	12/31/2020	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
12/31/2020	1/1/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/1/2021	1/2/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/2/2021	1/3/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/3/2021	1/4/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/4/2021	1/5/2021	0.00	0.0	0.05	864.5	0.05	864.5	273	314	1729.0	14403	0.00005
1/5/2021	1/6/2021	0.09	1478.8	0.00	0.0	0.09	1478.8	273	314	2957.5	24636	0.00008
1/6/2021	1/7/2021	0.06	1046.5	0.06	1046.5	0.00	0.0	273	314	2093.1	17435	0.00005
1/7/2021	1/8/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/8/2021	1/9/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/9/2021	1/10/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/10/2021	1/11/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/11/2021	1/12/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/12/2021	1/13/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/13/2021	1/14/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/14/2021	1/15/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/15/2021	1/16/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/16/2021	1/17/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/17/2021	1/18/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/18/2021	1/19/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/19/2021	1/20/2021	0.10	1638.0	0.09	1478.7	0.19	3116.7	273	314	6233.5	51925	0.00016
1/20/2021	1/21/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/21/2021	1/22/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/22/2021	1/23/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/23/2021	1/24/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/24/2021	1/25/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/25/2021	1/26/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
1/26/2021	1/27/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/27/2021	1/28/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/28/2021	1/29/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/29/2021	1/30/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/30/2021	1/31/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
1/31/2021	2/1/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/1/2021	2/2/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/2/2021	2/3/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/3/2021	2/4/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/4/2021	2/5/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/5/2021	2/6/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/6/2021	2/7/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/7/2021	2/8/2021	0.00	22.7	0.00	0.0	0.00	0.0	273	314	22.7	189	0.00000
2/8/2021	2/9/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/9/2021	2/10/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/10/2021	2/11/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/11/2021	2/12/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/12/2021	2/13/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/13/2021	2/14/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/14/2021	2/15/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/15/2021	2/16/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/16/2021	2/17/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/17/2021	2/18/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/18/2021	2/19/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/19/2021	2/20/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/20/2021	2/21/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/21/2021	2/22/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/22/2021	2/23/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/23/2021	2/24/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/24/2021	2/25/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/25/2021	2/26/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/26/2021	2/27/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/27/2021	2/28/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
2/28/2021	3/1/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/1/2021	3/2/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/2/2021	3/3/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/3/2021	3/4/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/4/2021	3/5/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/5/2021	3/6/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/6/2021	3/7/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/7/2021	3/8/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/8/2021	3/9/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/9/2021	3/10/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/10/2021	3/11/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/11/2021	3/12/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/12/2021	3/13/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/13/2021	3/14/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/14/2021	3/15/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/15/2021	3/16/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/16/2021	3/17/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/17/2021	3/18/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
3/18/2021	3/19/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/19/2021	3/20/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/20/2021	3/21/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/21/2021	3/22/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/22/2021	3/23/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/23/2021	3/24/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/24/2021	3/25/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/25/2021	3/26/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/26/2021	3/27/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/27/2021	3/28/2021	0.05	887.3	0.05	887.3	0.00	0.0	273	314	1774.5	14782	0.00005
3/28/2021	3/29/2021	0.08	1296.7	0.06	1001.0	0.14	2297.7	273	314	4595.4	38280	0.00012
3/29/2021	3/30/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/30/2021	3/31/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
3/31/2021	4/1/2021	0.59	9737.1	0.68	11056.5	0.54	8872.6	273	314	29666.2	247119	0.00078
4/1/2021	4/2/2021	1.03	16812.4	1.04	16994.2	1.02	16653.1	273	314	50459.7	420329	0.00132
4/2/2021	4/3/2021	0.33	5414.6	0.32	5209.9	0.32	5164.3	273	314	15788.8	131521	0.00041
4/3/2021	4/4/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
4/4/2021	4/5/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
4/5/2021	4/6/2021	0.00	0.0	0.06	910.0	0.06	910.0	273	314	1820.0	15161	0.00005
4/6/2021	4/7/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
4/7/2021	4/8/2021	0.12	2024.7	0.15	2434.2	0.14	2229.5	273	314	6688.5	55715	0.00017
4/8/2021	4/9/2021	0.14	2252.2	0.08	1296.7	0.06	955.5	273	314	4504.4	37522	0.00012
4/9/2021	4/10/2021	0.08	1251.2	0.06	978.2	0.14	2229.5	273	314	4458.9	37143	0.00012
4/10/2021	4/11/2021	0.15	2388.8	0.14	2343.3	0.17	2730.1	273	314	7462.1	62159	0.00020
4/11/2021	4/12/2021	0.23	3708.2	0.22	3594.4	0.16	2570.8	273	314	9873.5	82246	0.00026
4/12/2021	4/13/2021	0.38	6165.2	0.47	7734.9	0.46	7530.1	273	314	21430.2	178513	0.00056
4/13/2021	4/14/2021	0.20	3275.9	0.14	2275.0	0.19	3094.0	273	314	8645.0	72013	0.00023
4/14/2021	4/15/2021	0.14	2343.2	0.14	2275.0	0.16	2570.8	273	314	7189.0	59885	0.00019
4/15/2021	4/16/2021	0.23	3731.0	0.31	5027.8	0.24	3981.2	273	314	12740.0	106124	0.00033
4/16/2021	4/17/2021	0.32	5277.9	0.26	4208.7	0.23	3844.6	273	314	13331.2	111049	0.00035
4/17/2021	4/18/2021	0.69	11352.3	0.65	10669.7	0.66	10828.9	273	314	32851.0	273649	0.00086
4/18/2021	4/19/2021	1.22	19997.3	1.28	20907.3	1.27	20884.4	273	314	61788.9	514702	0.00162
4/19/2021	4/20/2021	0.44	7143.6	0.35	5755.8	0.44	7166.3	273	314	20065.6	167147	0.00052
4/20/2021	4/21/2021	0.60	9828.0	0.59	9668.7	0.33	5437.2	273	314	24933.9	207699	0.00065
4/21/2021	4/22/2021	0.67	10965.6	0.68	11193.1	0.48	7917.1	273	314	30075.7	250531	0.00079
4/22/2021	4/23/2021	0.60	9896.3	0.58	9441.2	0.32	5278.0	273	314	24615.6	205048	0.00064
4/23/2021	4/24/2021	0.33	5346.2	0.33	5414.4	0.31	5027.7	273	314	15788.3	131517	0.00041
4/24/2021	4/25/2021	0.16	2616.3	0.34	5619.3	0.33	5460.0	273	314	13695.6	114084	0.00036
4/25/2021	4/26/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
4/26/2021	4/27/2021	0.16	2570.7	0.10	1615.2	0.06	955.5	273	314	5141.4	42828	0.00013
4/27/2021	4/28/2021	0.08	1251.3	0.07	1137.4	0.15	2388.8	273	314	4777.5	39797	0.00012
4/28/2021	4/29/2021	0.35	5755.8	0.35	5664.8	0.26	4186.0	273	314	15606.5	130003	0.00041
4/29/2021	4/30/2021	2.29	37537.5	2.26	37082.5	2.27	37219.0	273	314	111839.0	931619	0.00293
4/30/2021	5/1/2021	1.92	31372.4	1.84	30166.6	1.81	29688.8	273	314	91227.8	759927	0.00239
5/1/2021	5/2/2021	0.17	2843.7	0.25	4094.9	0.25	4117.7	273	314	11056.3	92099	0.00029
5/2/2021	5/3/2021	0.24	3890.2	0.16	2593.5	0.24	3981.2	273	314	10464.8	87172	0.00027
5/3/2021	5/4/2021	0.25	4072.4	0.33	5437.3	0.25	4095.1	273	314	13604.7	113327	0.00036
5/4/2021	5/5/2021	3.43	56147.1	3.25	53166.7	3.60	58945.4	273	314	168259.2	1401599	0.00440
5/5/2021	5/6/2021	6.71	109950.7	6.81	111520.3	1.21	19815.0	273	314	241286.0	2009913	0.00631
5/6/2021	5/7/2021	0.73	11966.3	0.65	10601.4	0.64	10510.2	273	314	33077.9	275539	0.00087
5/7/2021	5/8/2021	0.17	2775.5	0.24	3958.5	0.24	3935.8	273	314	10669.8	88880	0.00028

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
5/8/2021	5/9/2021	0.15	2457.1	0.16	2684.5	0.15	2457.0	273	314	7598.6	63296	0.00020
5/9/2021	5/10/2021	0.42	6915.9	0.34	5528.2	0.42	6802.1	273	314	19246.3	160321	0.00050
5/10/2021	5/11/2021	0.25	4140.5	0.25	4095.0	0.17	2821.1	273	314	11056.5	92100	0.00029
5/11/2021	5/12/2021	0.35	5733.1	0.43	7007.0	0.43	7007.0	273	314	19747.1	164493	0.00052
5/12/2021	5/13/2021	0.44	7166.3	0.36	5869.6	0.44	7166.4	273	314	20202.3	168285	0.00053
5/13/2021	5/14/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
5/14/2021	5/15/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
5/15/2021	5/16/2021	0.34	5619.3	0.42	6893.3	0.27	4368.0	273	314	16880.7	140616	0.00044
5/16/2021	5/17/2021	0.50	8258.4	0.42	6916.1	0.42	6802.3	273	314	21976.8	183066	0.00057
5/17/2021	5/18/2021	0.09	1433.3	0.07	1228.5	0.16	2661.8	273	314	5323.5	44345	0.00014
5/18/2021	5/19/2021	0.41	6779.4	0.39	6324.4	0.32	5232.5	273	314	18336.3	152742	0.00048
5/19/2021	5/20/2021	0.00	0.0	0.06	1023.8	0.06	1023.8	273	314	2047.6	17056	0.00005
5/20/2021	5/21/2021	0.12	1911.0	0.06	978.2	0.06	932.7	273	314	3822.0	31837	0.00010
5/21/2021	5/22/2021	0.08	1365.0	0.06	978.2	0.14	2343.2	273	314	4686.4	39038	0.00012
5/22/2021	5/23/2021	0.24	3958.6	0.23	3708.2	0.15	2525.2	273	314	10192.0	84900	0.00027
5/23/2021	5/24/2021	0.00	0.0	0.07	1092.0	0.07	1092.0	273	314	2184.1	18193	0.00006
5/24/2021	5/25/2021	1.25	20475.0	1.72	28096.4	1.64	26913.2	273	314	75484.6	628787	0.00197
5/25/2021	5/26/2021	0.17	2752.7	0.16	2661.8	0.16	2639.0	273	314	8053.5	67085	0.00021
5/26/2021	5/27/2021	1.50	24638.1	1.51	24774.6	1.58	25843.9	273	314	75256.6	626888	0.00197
5/27/2021	5/28/2021	0.36	5960.5	0.48	7917.0	0.38	6233.5	273	314	20111.0	167525	0.00053
5/28/2021	5/29/2021	0.34	5505.6	0.35	5687.5	0.35	5687.4	273	314	16880.5	140615	0.00044
5/29/2021	5/30/2021	0.35	5664.8	0.34	5551.1	0.34	5573.7	273	314	16789.6	139857	0.00044
5/30/2021	5/31/2021	0.73	12034.9	0.84	13740.9	0.83	13581.6	273	314	39357.4	327847	0.00103
5/31/2021	6/1/2021	10.57	173086.2	10.37	169787.4	0.82	13422.5	273	314	356296.1	2967947	0.00932
6/1/2021	6/2/2021	12.21	200013.9	1.12	18423.4	11.74	192283.0	273	314	410720.3	3421300	0.01074
6/2/2021	6/3/2021	9.66	158203.5	1.92	31372.1	9.58	156997.6	273	314	346573.2	2886955	0.00907
6/3/2021	6/4/2021	11.75	192419.4	11.87	194375.9	1.09	17790.4	273	314	404585.7	3370199	0.01058
6/4/2021	6/5/2021	1.43	23409.7	3.32	54418.0	3.47	56761.3	273	314	134588.9	1121126	0.00352
6/5/2021	6/6/2021	0.98	16107.0	0.96	15720.3	0.87	14309.7	273	314	46137.0	384321	0.00121
6/6/2021	6/7/2021	0.53	8758.7	0.62	10237.4	0.62	10123.6	273	314	29119.7	242567	0.00076
6/7/2021	6/8/2021	0.07	1183.0	0.00	0.0	0.07	1183.0	273	314	2366.0	19709	0.00006
6/8/2021	6/9/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
6/9/2021	6/10/2021	0.00	0.0	0.00	0.0	0.00	0.0	273	314	0.0	0	0.00000
6/10/2021	6/11/2021	0.06	932.7	0.06	932.7	0.00	0.0	273	314	1865.5	15540	0.00005
6/11/2021	6/12/2021	0.41	6756.6	0.40	6574.7	0.47	7735.0	273	314	21066.3	175482	0.00055
6/12/2021	6/13/2021	0.48	7825.9	0.47	7643.9	0.39	6370.0	273	314	21839.9	181926	0.00057
6/13/2021	6/14/2021	0.56	9122.7	0.65	10624.1	0.64	10555.9	273	314	30302.7	252422	0.00079
6/14/2021	6/15/2021	1.67	27345.4	1.60	26207.9	1.73	28301.1	273	314	81854.4	681847	0.00214
6/15/2021	6/16/2021	3.38	55396.4	3.68	60287.6	3.83	62812.7	273	314	178496.7	1486877	0.00467
6/16/2021	6/17/2021	11.12	182186.2	1.82	29779.8	11.42	187123.0	273	314	399089.0	3324412	0.01044
6/17/2021	6/18/2021	17.11	280302.8	17.07	279533.5	0.78	12781.5	273	314	572617.7	4769906	0.01498
6/18/2021	6/19/2021	16.93	277295.7	17.42	285330.6	1.21	19819.4	273	314	582445.7	4851773	0.01523
6/19/2021	6/20/2021	11.06	181090.0	10.47	171485.3	1.41	23109.9	273	314	375685.2	3129458	0.00983
6/20/2021	6/21/2021	9.51	155814.7	9.46	154995.7	0.88	14423.5	273	314	325234.0	2709199	0.00851
6/21/2021	6/22/2021	1.29	21180.3	6.37	104331.5	6.18	101305.7	273	314	226817.4	1889389	0.00593
6/22/2021	6/23/2021	1.06	17335.5	0.97	15947.8	0.93	15265.2	273	314	48548.5	404409	0.00127
6/23/2021	6/24/2021	1.03	16812.2	1.09	17927.0	1.08	17722.2	273	314	52461.3	437003	0.00137
6/24/2021	6/25/2021	0.75	12307.8	0.64	10510.5	0.65	10624.3	273	314	33442.6	278577	0.00087
6/25/2021	6/26/2021	2.33	38197.1	3.48	56965.8	3.55	58217.1	273	314	153380.0	1277655	0.00401
6/26/2021	6/27/2021	10.63	174105.5	0.61	9941.6	10.64	174355.9	273	314	358403.1	2985498	0.00937
6/27/2021	6/28/2021	8.84	144826.4	1.87	30621.4	8.98	147101.5	273	314	322549.2	2686835	0.00844

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
6/28/2021	6/29/2021	9.32	152584.3	9.46	154881.9	2.08	34102.2	273	314	341568.3	2845264	0.00893
6/29/2021	6/30/2021	13.23	216716.5	13.09	214395.9	1.34	21976.5	273	314	453088.9	3774231	0.01185
6/30/2021	7/1/2021	10.36	169650.8	10.20	167148.4	2.29	37491.9	273	314	374291.1	3117845	0.00979
7/1/2021	7/2/2021	1.47	24088.1	5.92	96888.1	5.86	96004.9	273	314	216981.1	1807453	0.00568
7/2/2021	7/3/2021	6.49	106379.0	6.51	106697.3	1.30	21339.3	273	314	234415.6	1952682	0.00613
7/3/2021	7/4/2021	1.32	21657.9	1.24	20365.4	1.24	20365.5	273	314	62388.8	519699	0.00163
7/4/2021	7/5/2021	0.96	15674.7	1.04	17103.7	1.03	16944.7	273	314	49723.1	414194	0.00130
7/5/2021	7/6/2021	0.94	15401.8	0.94	15401.8	0.96	15652.0	273	314	46455.6	386975	0.00122
7/6/2021	7/7/2021	1.92	31531.4	3.48	57034.1	3.48	56943.2	273	314	145508.8	1212088	0.00381
7/7/2021	7/8/2021	6.68	109495.9	7.18	117594.8	3.33	54554.5	273	314	281645.2	2346105	0.00737
7/8/2021	7/9/2021	12.42	203366.4	11.77	192828.9	9.75	159686.4	273	314	555881.8	4630495	0.01454
7/9/2021	7/10/2021	1.23	20084.1	15.86	259786.4	15.68	256847.5	273	314	536718.0	4470861	0.01404
7/10/2021	7/11/2021	14.97	245158.2	16.59	271703.2	2.73	44699.6	273	314	561561.1	4677804	0.01469
7/11/2021	7/12/2021	17.05	279206.6	4.22	69133.1	13.82	226362.6	273	314	574702.3	4787270	0.01503
7/12/2021	7/13/2021	0.27	4413.6	9.70	158908.8	9.70	158908.8	273	314	322231.2	2684186	0.00843
7/13/2021	7/14/2021	6.85	112271.3	6.68	109382.0	0.98	16129.8	273	314	237783.1	1980733	0.00622
7/14/2021	7/15/2021	5.76	94389.9	6.15	100782.4	1.64	26867.7	273	314	222040.0	1849593	0.00581
7/15/2021	7/16/2021	6.57	107562.1	6.43	105241.6	1.45	23751.1	273	314	236554.7	1970501	0.00619
7/16/2021	7/17/2021	6.08	99667.9	1.67	27345.6	5.94	97256.5	273	314	224269.9	1868168	0.00587
7/17/2021	7/18/2021	9.09	148834.6	8.67	142055.1	2.04	33442.5	273	314	324332.2	2701687	0.00848
7/18/2021	7/19/2021	2.01	32892.4	11.18	183133.4	11.87	194421.5	273	314	410447.3	3419026	0.01074
7/19/2021	7/20/2021	12.29	201382.9	12.36	202429.5	2.54	41632.4	273	314	445444.8	3710555	0.01165
7/20/2021	7/21/2021	9.74	159614.0	1.34	22026.2	9.65	158071.1	273	314	339711.3	2829795	0.00889
7/21/2021	7/22/2021	10.28	168350.0	7.34	120184.1	4.94	80917.6	273	314	369451.7	3077532	0.00966
7/22/2021	7/23/2021	9.67	158340.0	9.53	156156.0	1.82	29802.4	273	314	344298.4	2868006	0.00901
7/23/2021	7/24/2021	10.10	165464.9	1.81	29579.1	9.65	158089.7	273	314	353133.7	2941603	0.00924
7/24/2021	7/25/2021	2.23	36577.8	13.52	221448.4	13.07	214013.4	273	314	472039.6	3932090	0.01235
7/25/2021	7/26/2021	13.15	215446.6	13.18	215852.0	0.86	14146.3	273	314	445444.9	3710556	0.01165
7/26/2021	7/27/2021	6.70	109764.5	6.63	108604.4	0.67	10897.3	273	314	229266.2	1909788	0.00600
7/27/2021	7/28/2021	9.31	152561.4	9.30	152265.7	2.17	35467.1	273	314	340294.2	2834651	0.00890
7/28/2021	7/29/2021	15.87	259991.2	15.85	259558.8	1.22	19906.1	273	314	539456.1	4493669	0.01411
7/29/2021	7/30/2021	15.87	259986.9	2.81	46019.1	13.32	218108.5	273	314	524114.5	4365874	0.01371
7/30/2021	7/31/2021	17.48	286240.6	0.90	14764.8	17.72	290312.8	273	314	591318.1	4925680	0.01547
7/31/2021	8/1/2021	11.05	180949.3	1.44	23591.8	10.90	178560.6	273	314	383101.6	3191237	0.01002
8/1/2021	8/2/2021	6.17	101078.3	0.77	12603.5	6.15	100759.8	273	314	214441.6	1786299	0.00561
8/2/2021	8/3/2021	1.38	22613.5	7.84	128355.5	7.98	130675.9	273	314	281645.0	2346102	0.00737
8/3/2021	8/4/2021	11.20	183505.7	10.61	173809.8	2.50	40999.5	273	314	398315.0	3317964	0.01042
8/4/2021	8/5/2021	8.73	143070.7	1.44	23523.5	8.72	142797.7	273	314	309391.9	2577235	0.00809
8/5/2021	8/6/2021	6.13	100441.3	6.06	99281.2	1.83	29893.5	273	314	229616.0	1912701	0.00601
8/6/2021	8/7/2021	10.78	176494.6	1.14	18632.3	10.90	178473.8	273	314	373600.6	3112093	0.00977
8/7/2021	8/8/2021	7.90	129470.2	7.64	125215.9	1.29	21180.3	273	314	275866.5	2297968	0.00722
8/8/2021	8/9/2021	6.27	102738.9	1.63	26663.0	6.32	103603.5	273	314	233005.4	1940935	0.00609
8/9/2021	8/10/2021	5.89	96482.8	18.40	301327.9	18.39	301282.5	273	314	699093.2	5823446	0.01829
8/10/2021	8/11/2021	1.11	18245.6	21.97	359855.4	21.88	358353.8	273	314	736454.8	6134668	0.01926
8/11/2021	8/12/2021	14.89	243948.2	14.55	238306.3	0.64	10555.9	273	314	492810.5	4105111	0.01289
8/12/2021	8/13/2021	11.92	195263.2	2.67	43748.2	9.99	163663.4	273	314	402674.9	3354282	0.01053
8/13/2021	8/14/2021	14.21	232827.6	14.25	233487.4	0.63	10305.7	273	314	476620.7	3970250	0.01247
8/14/2021	8/15/2021	11.94	195509.4	11.93	195395.6	0.39	6347.3	273	314	397252.3	3309111	0.01039
8/15/2021	8/16/2021	11.00	180229.6	11.11	181931.8	1.04	16998.4	273	314	379159.8	3158401	0.00992
8/16/2021	8/17/2021	13.91	227818.5	0.92	15128.8	14.01	229433.7	273	314	472380.9	3934933	0.01236
8/17/2021	8/18/2021	1.76	28948.5	7.00	115057.2	8.25	135603.0	274	314	279608.7	2329141	0.00731

		WSAC		Hours Online WSAC		WSAC		output per pump			Recirc Rate	PM10
		PUMP A	gallons	PUMP B	gallons	PUMP C	gallons	gpm	TDS (ppm)	Total gallons per day	(lb/day)	lb/day
8/18/2021	8/19/2021	1.59	26262.4	1.59	26262.5	1.62	26766.6	275	314	79291.6	660499	0.00207
8/19/2021	8/20/2021	0.35	5772.9	0.35	5795.9	0.35	5818.9	276	314	17387.8	144840	0.00045
8/20/2021	8/21/2021	0.00	0.0	0.00	0.0	0.00	0.0	277	314	0.0	0	0.00000
8/21/2021	8/22/2021	0.00	0.0	0.00	0.0	0.00	0.0	278	314	0.0	0	0.00000
8/22/2021	8/23/2021	0.00	0.0	0.00	0.0	0.00	0.0	279	314	0.0	0	0.00000
8/23/2021	8/24/2021	0.00	0.0	0.00	0.0	0.00	0.0	280	314	0.0	0	0.00000
8/24/2021	8/25/2021	0.00	0.0	0.00	0.0	0.00	0.0	281	314	0.0	0	0.00000
8/25/2021	8/26/2021	0.00	0.0	0.00	0.0	0.00	0.0	282	314	0.0	0	0.00000
8/26/2021	8/27/2021	0.00	0.0	0.00	0.0	0.00	0.0	283	314	0.0	0	0.00000
8/27/2021	8/28/2021	0.00	0.0	0.00	0.0	0.00	0.0	284	314	0.0	0	0.00000
8/28/2021	8/29/2021	0.00	0.0	0.00	0.0	0.00	0.0	285	314	0.0	0	0.00000
8/29/2021	8/30/2021	0.00	0.0	0.00	0.0	0.00	0.0	286	314	0.0	0	0.00000
8/30/2021	8/31/2021	0.00	0.0	0.00	0.0	0.00	0.0	287	314	0.0	0	0.00000
8/30/2020	8/31/2020	0.81	13968.0	7.12	122976.0	7.20	124464.0	288	314	261408.0	2177529	0.00684
8/31/2020	9/1/2020	6.78	117240.1	6.63	114576.1	0.90	15480.1	288	314	247296.3	2059978	0.00647
		827.1		715.4		661.7						0.95123
		Hours		Hours		Hours						Total Lbs per year

McCampbell Analytical, Inc.
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Analytical Report

WorkOrder: 2108487

Report Created for: MRP San Joaquin Energy, LLC

14950 W. Schulte Road
Tracy, CA 95377

Project Contact: Taylor Leach
Project P.O.: TCY-21-12730
Project: WSAC Reservoir 2021 H20 sample-PTO

Project Received: 08/10/2021

Analytical Report reviewed & approved for release on 08/13/2021 by:

Jennifer Lagerbom
Project Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CA ELAP 1644 ♦ NELAP 4033 ORELAP

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Glossary of Terms & Qualifier Definitions

Client: MRP San Joaquin Energy, LLC
Project: WSAC Reservoir 2021 H20 sample-PTO
WorkOrder: 2108487

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Analytical Report

Client:	MRP San Joaquin Energy, LLC	**WorkOrder:**	2108487
Date Received:	08/10/2021 14:42	**Extraction Method:**	SM2540 C-1997
Date Prepared:	08/10/2021	**Analytical Method:**	SM2540 C-1997
Project:	WSAC Reservoir 2021 H20 sample-PTO	**Unit:**	mg/L

Total Dissolved Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
1-WASC-SA 2019	2108487-001A	Water	08/10/2021 09:55	WetChem	227360

Analytes	Result	RL	DF	Date Analyzed
Total Dissolved Solids	**314**	10.0	1	08/11/2021 17:30

Analyst(s): NYG

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Quality Control Report

Client:	MRP San Joaquin Energy, LLC	**WorkOrder:**	2108487
Date Prepared:	08/10/2021	**BatchID:**	227360
Date Analyzed:	08/11/2021	**Extraction Method:**	SM2540 C-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 C-1997
Matrix:	Water	**Unit:**	mg/L
Project:	WSAC Reservoir 2021 H20 sample-PTO	**Sample ID:**	MB/LCS/LCSD-227360

QC Summary Report for Total Dissolved Solids

Analyte	MB Result	MDL	RL			
Total Dissolved Solids	ND	10.0	10.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Dissolved Solids	1080	1060	1000	108	106	80-120	1.88	10

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2108487 **ClientCode: GWFT**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ EQuIS ☑ Dry-Weight ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☑ Detection Summary ☐ Excel

Report to:
Taylor Leach
MRP San Joaquin Energy, LLC
14950 W. Schulte Road
Tracy, CA 95377
(925) 457-5406 FAX:

Email: taylor.leach@naes.com
cc/3rd Party: wayne.toumbs@naes.com;
PO: TCY-21-12730
Project: WSAC Reservoir 2021 H20 sample-PTO

Bill to:
Accounts Payable
MRP San Joaquin Energy, LLC
14950 W. Schulte Road
Tracy, CA 95377
sanjoaquinAP@mrpgenco.com

Requested TAT: 5 days;

Date Received: **08/10/2021**
Date Logged: **08/10/2021**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2108487-001	1-WASC-SA 2019	Water	8/10/2021 09:55	☐	A	A										

Test Legend:

1	PRDisposal Fee	2	TDS_W	3		4	
5		6		7		8	
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: MRP SAN JOAQUIN ENERGY, LLC
Client Contact: Taylor Leach
Contact's Email: taylor.leach@naes.com

Project: WSAC Reservoir 2021 H20 sample-PTO
Comments:

Work Order: 2108487
QC Level: LEVEL 2
Date Logged: 8/10/2021

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☑ EQuIS ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

LabID	ClientSampID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Head Space	Dry-Weight	Collection Date & Time	TAT	Test Due Date	Sediment Content	Hold	SubOut
001A	1-WASC-SA 2019	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	☐	8/10/2021 9:55	5 days	8/17/2021	Present	☐	

NOTES: * STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

2102487

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 I

GeoTracker EDF ☐ PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10

Effluent Sample Requiring "J" flag ☐ **UST Clean Up Fund Project** ☐ **; Claim**

Report To: *Taylor Leach / Wayne Toumbs* **Bill To:**

Company: MRP *San Joaquin Energy LLC*

14950 West Schulte Road

Tracy CA 95377

E-Mail: *Taylor.Leach@naes.com*
Randy.Shepard@naes.com
Wayne.Toumbs@naes.com

Tele: Gary (925) 457-5406 / Wayne (209)-836-1605

Project #:

Project Name: WSAC Reservoir 2021 H2O sample -PTO

Project Location: *Tracy, CA*

Purchase Order# TCY-21-12730

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other	Analysis Request: Total Dissolved Solids (TDS)
1-WASC- SA 2019	WASC	8/10/21	0903	2								X			x	X

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By:	Date:	Time:	Received By:
	8/10/21	10:00	PTT 8/10/21 950
Relinquished By:	Date:	Time:	Received By:
PTT	8/10/21	1442	
Relinquished By:	Date:	Time:	Received By:

ICE/t°_____
GOOD CONDITION_____
HEAD SPACE ABSENT_____ 5.1°C WET
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:
PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name:	**MRP San Joaquin Energy, LLC**	Date and Time Received:	**8/10/2021 14:42**
Project:	**WSAC Reservoir 2021 H20 sample-PTO**	Date Logged:	**8/10/2021**
		Received by:	Tina Perez
WorkOrder №:	**2108487** Matrix: Water	Logged by:	Tina Perez
Carrier:	Patrick Johnson (MAI Courier)		

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
Chain of custody agrees with sample labels?	Yes	☑	No	☐	
Sample IDs noted by Client on COC?	Yes	☑	No	☐	
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐	
Sampler's name noted on COC?	Yes	☑	No	☐	
COC agrees with Quote?	Yes	☐	No	☐	NA ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	NA ☑
Custody seals intact on sample bottles?	Yes	☐	No	☐	NA ☑
Shipping container/cooler in good condition?	Yes	☑	No	☐	
Samples in proper containers/bottles?	Yes	☑	No	☐	
Sample containers intact?	Yes	☑	No	☐	
Sufficient sample volume for indicated test?	Yes	☑	No	☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes	☑	No	☐	NA ☐
Samples Received on Ice?	Yes	☑	No	☐	
	(Ice Type: WET ICE)				
Sample/Temp Blank temperature	Temp: 5.1°C				NA ☐
ZHS conditional analyses: VOA meets zero headspace requirement (VOCs, TPHg/BTEX, RSK)?	Yes	☐	No	☐	NA ☑
Sample labels checked for correct preservation?	Yes	☑	No	☐	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA ☑
UCMR Samples:					
pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes	☐	No	☐	NA ☑

Comments:

Appendix F

Biological Resources Mitigation Implementation and Monitoring Plan
Bio-2

505 Sansome St., Suite 1600
San Francisco, CA 94111
T 415.434.2600
TRCcompanies.com

December 21, 2021 *Submitted electronically*

Taylor Leach
San Joaquin Energy Inc.
14950 W. Schulte Road
Tracy, CA 95377

Subject: Tracy Combined Cycle Power Plant Project Condition Bio-2, 2021 Annual Biological Report, PO # TCY-20-12458

Dear Taylor:

On December 6, 2021, I visited the Tracy Combined Cycle Power Plant to conduct the annual biological resources inspection as required by Condition Number Bio-2 of the Final Commission Decision for 08-AFC-07. I was accompanied on my inspection of the plant by yourself, Taylor Leach, EHS Specialist, who answered questions regarding on-site activities over the last year. Below is a summary of my findings.

Activities/Tasks Accomplished

Typical operational and maintenance activities took place within the plant. Construction of a solar covered parking spaces has been completed since the last inspection. This construction was coordinated with the CEC. One landscaping tree was topped to reduce shade on the solar array.

Plant staff continued to inspect and maintain the perimeter fence to help prevent rodents and other wildlife from entering the plant. The fence appeared to be in good condition upon my inspection. Regularly placed bait stations installed in previous years inside and outside the plant continue to be maintained and monitored by a licensed pest control contractor.

The interior of the plant remains mostly free of vegetation aside from small areas of decorative plantings. Perimeter landscaping between the plant and the annuals grasslands southwest remains unchanged since the last inspection. The landscaping is regularly maintained. Irrigation to the landscaping along the berm north of the plant was leaking in several places and needed maintenance. The annual grassland vegetation in the mitigation area to the southwest of the plant was undisturbed during the year.

Pre-Activity Surveys

No new construction activities were initiated since the previous survey.

Mitigation/Minimization Measures Implemented

Construction-related minimization measures for the protection of special-status species were not required. As part of plant operations, all workers employed general housekeeping measures and were observant of any wildlife within the plant.

Worker Training

San Joaquin Energy provided Worker Environmental Awareness Training to three new employees. In addition, all visitors to the plant view a safety video which includes a brief discussion of sensitive wildlife species and instructs visitors to alert plant staff of any sensitive wildlife sightings.

Sensitive Wildlife Observed within the Plant and Mitigation Area

Ground cover at the site is predominantly gravel. Plant workers did not report observations of sensitive wildlife in the plant. A red-tailed hawk was observed perched on the cooling system where rock doves (*Columba livia*) continue to roost. Wildlife observed within the plant otherwise consisted of common species, including rock dove and house sparrow (*Passer domesticus*).

Outside of the plant, a Swainson's hawk (*Buteo swainsoni*) and a pair of turkey vultures (*Cathartes aura*) were observed foraging over grasslands south of the plant. Several black tailed jackrabbit (*Leporidae californicus*) were observed in the plant buffer lands. Other birds observed included white-crowned sparrow (*Zonotrichia leucophrys*), bushtit (*Psaltriparus minimus*), and American crow (*Corvus brachyrhynchos*). Ground squirrel (*Otospermophilus beecheyi*) burrows are present throughout the annual grasslands surrounding the plant. Larger mammal burrows are present beneath the landscaping trees east of the plant, but do not show signs of recent use such as fresh scrapes or prints.

Agency Visits

There were no reported visits from the agencies.

Incidents and Reported Takes/Harassments of Sensitive Wildlife

There were no incidents or takes associated with sensitive wildlife species.

Please feel free to contact me if you have any questions or require additional information.

Sincerely,

Molly Sandomire

CEC-Designated Biologist

505 Sansome St., Suite 1600
San Francisco, CA 94111
T 415.434.2600
TRCcompanies.com

January 26, 2022

via Electronic Mail

Taylor Leach
San Joaquin Energy Inc.
14950 W. Schulte Road
Tracy, CA 95377

Subject: Tracy Combined Cycle Power Plant - Condition Number Bio-2 January 2022 Biological Resource Activities

Mr. Leach,

On January 17, 2022, the carcass of a hawk was found within the Tracy Combined Cycle Power Plant (Plant) by San Joaquin Energy (SJE) personnel. Per Condition Number Bio-2 of the Final Commission Decision for 08-AFC-07, a California Energy Commission (CEC)-designated biologist shall submit in the monthly compliance report to the CEC copies of all written reports and summaries that document biological resource activities, including mortality events. Below is a summary of the findings related to the mortality event.

Sensitive Wildlife Observed within the Plant

On January 17, 2022, the carcass of a juvenile red-tailed hawk (*Buteo jamaicensis*) was found inside the Plant. The carcass was strewn across a cable tray located beneath the Power Distribution Center (see attached photographs and map). Based on the eviscerated abdomen, the suspected cause of the mortality was trauma/injury. In accordance with permit conditions, the carcass was promptly wrapped in plastic and stored in an on-site freezer, and agencies were notified as described below.

Red-tailed hawks are relatively common in the area and have been observed in and around the Plant during annual biological inspections, including during the recent December 2021 inspection.

Notification of the mortality event was made by yourself (Taylor Leach) on January 17, 2022 to Krysta Rogers of the California Department of Fish and Wildlife's (CDFW) Wildlife Investigations Laboratory (Krysta.Rogers@wildlife.ca.gov), and Steve Mayo of San Joaquin Council of Governments (mayo@scgov.org), and myself. In addition, you left a message on U.S. Fish & Wildlife Service San Joaquin County Chief, Endangered Species Division line but did not get a response.

Krysta Rogers then notified Andrea Boertien, CDFW Environmental Scientist

(andrea.boertien@wildlife.ca.gov) of the mortality event. On January 18, 2022, you notified Anwar Ali of the CEC (anwar.ali@energy.ca.gov) of the mortality event and follow up; and, at the request of CDFW, submitted a Wildlife Mortality Report.

Following the submittal of the Wildlife Mortality Report, Ms. Rogers identified the carcass from photographs as likely a juvenile red-tailed hawk and recommended that the carcass be disposed of in the trash, buried, or left outside to be further scavenged. Mr. Mayo and Ms. Boertien raised no objections. SJE personnel then disposed of the carcass through regular trash collection.

Please feel free to contact me if you have any additional questions.

Sincerely,

Molly Sandomire
Senior Environmental Planner/Biologist
TRC Solutions
CEC – Designated Biologist

Attachments:
Photographs of Deceased Hawk
Map of Deceased Hawk Location

PHOTOGRAPHS
January 17, 2022

Power Distribution Center

Cable tray under the Power Distribution Center

Hawk carcass

Deceased Bird

UNION PACIFIC RAILROAD

PG&E SWITCHYARD ACCESS ROADWAY

OVERHEAD ELECTRIC TRANSMISSION EASEMENT

FOR ENLARGED PLOT PLAN OF PLANT AREA SEE DWG G2

NEW PLANT AUXILIARY GATE

50' WIDE GAS LINE EASEMENT

EXISTING PLANT ENTRANCE ROADWAY FROM WEST SCHULTE ROAD

(E) TREES

20' WIDE ACCESS ROADWAY (TYP.)

STORM WATER RETENTION BASIN

PG&E SUBSTATION

EXISTING FENCE (TYP.)

NEW PLANT ENTRANCE GATE

EXT'G. ACCESS ROADWAY

NEW PLANT PERIMETER FENCE (TYP.)

PROPERTY LINE

37.25° TRUE PLANT

N

GRAPHIC SCALE

1" = 60'-0"

0' 60' 120' 180'

SYMBOL	DATE	REVISION DESCRIPTION	DRAWN	APP'D
2	9-25-12	AS BUILT	JJB	CLM
1	5-29-12	FENCE AND PARKING REVISED & PG&E ROAD ADDED	JJB	CLM
0	9-23-11	ISSUED FOR CONSTRUCTION	JJB	CLM

PB Power
A Parsons Brinckerhoff Company
303 SECOND STREET, SUITE 700 NORTH, SAN FRANCISCO, CALIFORNIA 94107

WOOD GROUP POWER SOLUTIONS, INC

GWF ENERGY LLC

GWF TRACY COMBINED CYCLE POWER PLANT
TRACY, CALIFORNIA

SITE PLAN

DR. JJB	APPROVED	DATE	DRAWING NO.	REV
DES. JJB			G1	2
CH. CLM	PRINCIPAL IN CHARGE	DATE	SHEET	OF

Appendix G

Hazardous Materials Inventory
Haz-1

Hazardous Materials
On- Site during 2021 - 2022

Material	CAS No.	Application	Hazardous Characteristics	Maximum Quantity On Site
Aqueous Ammonia (29.5% NH3 by weight)	7664-41-7	Control oxides of nitrogen (NOx) emissions through selective catalytic reduction	Health: irritation to permanent damage from inhalation, ingestion, and skin contact Physical: reactive, vapor is combustible	67,000 pounds
Carbon Monoxide (Balance Nitrogen)	630-08-0	CEMS Calibration Std.	Health: headaches, dizziness, convulsions, loss of consciousness, death Physical: flammable	1,600 ft3
Citric Acid	77-92-9	Cleaning Ultrafiltration unit membranes	Health: none Physical: non-flammable	100 pounds
Cleaning chemicals/detergents for Turbine Wash	None	Periodic cleaning of combustion turbine	Health: refer to individual chemical labels Physical: refer to individual chemical labels	Varies as needed (approx 100 gallons)
Diesel No. 2	None	Fuel for fire pump engine/off-road vehicles	Health: may be carcinogenic Physical: flammable	550 gallons
Hydraulic Oil	None	High-pressure combustion turbine starting system, turbine control valve actuators	Health: hazardous if ingested Physical: combustible	500 gallons
Hydrochloric Acid	7647-01-0	Cleaning Ultrafiltration unit membranes	Health: strongly corrosive and toxic, toxic by ingestion, strong irritant to eyes and skin Physical: non-flammable	200 gallons
Laboratory Reagents	None	Water/wastewater laboratory analysis	Health: refer to individual chemical labels Physical: refer to individual chemical labels	10 gallons liquids 100 pounds solids
Lubrication Oil	None	Lubricate rotating equipment (e.g., gas turbine and steam turbine bearings)	Health: hazardous if ingested Physical: flammable	40,000 gallons
Mineral Insulating Oil	8012-95-1	Transformers/switch yard	Health: hazardous if ingested Physical: may be flammable/combustible	80,000 gallons
Nitric Oxide (balance Nitrogen)	10102-43-9	CEMS Calibration Std.	Health: irritating to eyes and respiratory system, cyanosis, inhalation may result in chemical pneumonitis and pulmonary edema Physical: non-flammable	2,200 ft3

Propylene Glycol	57-55-6	Antifreeze	Health: causes irritation Physical: combustible	2,000 gallons
Powerfilm 1000	NA	Steam Line Corrosion Inhibitor	Not a hazardous substance or mixture	110 gallons
Sodium Hypochlorite	7681-52-9	Cleaning Ultrafiltration unit membranes	Health: corrosive and toxic, toxic by ingestion, strong irritant to tissue Physical: fire risk when in contact with organic materials	120 gallons
Sulfur Hexafluoride	2551-62-4	Switchyard/ switchgear devices	Health: hazardous if inhaled Physical: non-flammable	200 pounds
Sulfuric Acid (Lead-Acid Batteries)	7664-93-9	Battery Electrolyte	Health: strongly corrosive, strong irritant to all tissue, minor burns to permanent damage to tissue Physical: non-flammable	3,000 pounds
Coagulant	12042-91-0	Coagulant for clarifier	Health: Eye Irritant, respiratory irritant.	110 gallons
Flocculent	64742−47−8	Flocculent for Clarifier	Health: Eye Irritant, respiratory irritant.	110 gallons
Argon, Compressed	7440-37-1	Welding gas	Health: Asphyxiant, Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns. Physical: Flammable	250 Pounds
Oxygen, Compressed	7782-44-7	Welding Gas	Health: May cause eye, skin, or respiratory irritation. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns. Physical: Oxidizing agent	250 Pounds
Calcium hypochlorite	7778-54-3	Biocide for potable Water System	Health: Eye, skin, and Respiratory irritant. Physical: Chemically reactive, strong oxidizing agent.	100 Pounds
Oxalic Acid, Dihydrate 99.6%	6153-56-6	Chemical cleaning of Ultrafiltration unit membranes	Health: Irritant, corrosive, inhalation hazard. Physical: Corrosive Solid	400 pounds
Aqueous Ammonia (18.9% NH3 by weight)	7664-41-7	Control of Steam Boiler chemistry	Health: irritation to permanent damage from inhalation, ingestion, and skin contact Physical: reactive, vapor is combustible	990 gallons

Appendix H

Site Specific Operations on-site Security Plan
Haz-7

Security Policy

MRP San Joaquin Energy

Tracy Location: 14950 W. Schulte Rd., Tracy 95377 Hanford Location:10596 Idaho Avenue Hanford, CA 93230 Henrietta Location: 10550 Idaho Ave, Hanford 93230

1.0 DOCUMENT HISTORY

Review and Approval

This revision of the Security Program is hereby approved and effective on this date.

Taylor Leach	Environmental Specialist	4/18/2022
Submitted by	**Title**	**Date**
[signature]	Plant Manager	4-18-22
Approved By	**Title**	**Date**

Revision Tracking

Revision Date	Changes	Revised By
4/18/2022	Update Contact Information	T. Leach

AFFIDAVIT OF COMPLIANCE FOR PROJECT OWNERS

I, John Archibald

(Name of Person signing affidavit)/(Title)

Do hereby certify that the background investigations to ascertain the accuracy of the identity and employment history of all employees of MRP San Joaquin Energy, LLC for employment at:

San Joaquin Energy, Tracy Combined Cycle Power Plant have been conducted as required by the California Energy Commission Decision for the above-named facility.

Signature of officer or agent

Dated this 28th day of April, 2021

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER

Appendix I

Noise Complaint Resolution
Noise-2

TRACY COMBINED CYCLE POWER PLANT – NOISE-2

Tracy Combined Cycle Power Plant Project 08-AFC-07, Condition Noise-2 requires MRPSJE to document, investigate, evaluate and attempt to resolve all project-related noise complaints throughout the operation of the project.

No complaints were received during the year 2021.

Appendix J

Storm Water BMP monitoring and maintenance activities
Soil & Water-2

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
EAS 7/23/12	WM 7/23/12	--- ---	145653-FIG 2.2

OFFICE	X-REF	IMAGE
Concord	---	---

LEGEND:

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPERTY LINE
- LIMITS OF SITE
- NEW FENCE
- SURFACE DRAINAGE FLOW INDICATOR
- PERSONNEL GATE
- CATCH BASIN
- MANHOLE
- CULVERT
- EXISTING OVERHEAD POWER LINES
- EXISTING UNDERGROUND GAS LINES
- EXISTING POWER LINE TRANSMISSION TOWER
- INLET
- EXISTING TREES.

MOTOR OPERATED GATE

SAMPLE POINT LOCATION

RETENTION BASIN:
VOLUME REQUIRED: 4.40 AC-FT
VOLUME PROVIDED: 5.90 AC-FT
BOTTOM ELEV: 165
TOP ELEV: 174
(2) 25-YEAR 24-HOUR WSL: 172.30
FREEBOARD: 1.7'
SIZED PER SOURCE BELOW

SAMPLE POINT LOCATION

MOTOR OPERATED GATE

SITE NORTH

SCALE
0 30 60 FEET

SOURCE:
EROSION AND SEDIMENT CONTROL PLAN, GWF COMBINED CYCLE POWER PLANT, KIMLEY-HORN AND ASSOCIATES, INC., NOVEMBER, 2010.

Shaw Shaw Environmental, Inc.

GWF ENERGY, LLC.
SWPPP

FIGURE 2.2

GRADING AND DRAINAGE PLAN
(WESTERN SECTION)
GWF COMBINED CYCLE POWER PLANT

FORMAT REVISION 2/25/09

SOIL & WATER-2: Prior to site mobilization, the project owner shall obtain CPM approval for a site-specific Drainage, Erosion, and Sedimentation Control Plan (DESCP) that ensures protection of water quality and soil resources of the project site and all linear facilities for both the construction and operation phases of the project. This plan shall address appropriate methods and actions, both temporary and permanent, for the protection of water quality and soil resources, demonstrate no increase in offsite flooding potential, meet local requirements, and identify all monitoring and maintenance activities. Additionally, the plan shall incorporate the construction sequence of taking the existing retention basin offline, installing a modified drainage network, and constructing the new retention basin. Monitoring activities shall include routine measurement of the volume of accumulated sediment in the stormwater retention basin. Maintenance activities must include removal of accumulated sediment from the retention basin when an average depth of 0.5 feet of sediment has accumulated in the retention basin. The plan shall be consistent with the grading and drainage plan as required by Condition of Certification

The capacity of the storm water basin is 5.90 ac-ft. The original depth of the storm water basin was 10 feet and 1.7'.

TRACY COMBINED CYCLE POWER PLANT – Soil & Water -2

Tracy Combined Cycle Power Plant Project 08-AFC-07, Condition Soil & Water-2 requires MRP Sand Joaquin Energy to evaluate and document any erosion observed in the storm water basin.

The capacity of the storm water basin is 5.90 ac-ft. The original depth of the storm water basin was 10 feet and 1.7 inches. The current depth of the basin is 10 feet and 1.7 inches.

No erosion has been observed during this reporting period (2021 - 2022).

Appendix K

Annual Water Use Summary
Soil & Water-4

Water Usage Summary: *All Units in Ac-Ft*									
	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	1.1	2.6	1.4	0.7	0.8	2.0	1.7	1.2	1.2
February	0.1	1.7	0.5	1.1	1.2	1.0	2.4	1.2	1.3
March	0.8	1.2	2.2	3.0	1.7	2.4	3.1	1.2	1.0
April	1.7	2.0	3.8	1.9	2.2	2.5	2.5	0.8	2.2
May	0.9	1.8	2.9	1.3	2.0	1.3	1.6	1.2	2.6
June	1.7	2.8	10.6	2.3	3.7	2.2	4.0	1.5	4.0
July	5.6	3.4	4.2	2.7	5.9	7.4	3.0	0.1	7.7
August	3.8	0.5	0.3	2.5	4.1	5.1	5.3	1.7	5.3
September	5.5	2.5	1.4	1.3	5.2	3.1	4.0	0.6	4.7
October	2.0	3.8	2.9	1.4	4.5	3.9	3.1	1.4	2.0
November	1.9	1.5	2.2	0.7	2.6	3.9	3.5	1.2	1.6
December	2.7	0.4	2.6	0.9	3.0	1.9	1.9	2.1	2.2

Annual Water Usage			
Year	Total	Monthly Min	Monthly Max
2012	17.3	0.0	4.5
2013	27.7	0.1	5.6
2014	24.2	0.4	3.8
2015	35.1	0.3	10.6
2016	19.7	0.7	3.0
2017	36.8	0.8	5.9
2018	36.6	1.0	7.4
2019	36.0	1.6	5.3
2020	14.2	0.1	2.1
2021	35.7	1.0	7.7

* All water is surface water, sourced from the Delta-Mendota Canal

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

Revised: 9/7/2017

Main Menu / Calibration Data Sheet

Contact Information

Purchase Order:	TCY-19-12056	**Service Request:**	1787888
Customer Name:	MRP San Joaquin Energy LLC	**Quote#:**	U26 ES8082
Location/Project:	Tracy Ca	**Sales Representative:**	Cathy Ershen
Address 1:	14950 W Schulte RD	**Phone:**	916-849-0591
Address 2:	Tracy CA 95377	**Email:**	Cathy.Ershen@Emerson.com
Customer Contact:	Kevin Kelly	**Service Representative:**	David James
Phone:	925-766-7319	**Phone:**	209-597-0378
Email:	kevin.kelly@naes.com	**Email:**	David.James@Emerson.com

# of Sheets
2

Note:
For full functionality these sheets should be run in Excel 2010 or higher
There could be some loss of functionality in lower versions.

David James

David James
Rosemount Service Technician
Phone: 209-597-0378

May 15, 2019
Date

May 15, 2019

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	TCY-19-12056	**Service Request:**	1787888
Customer Name:	MRP San Joaquin Energy LLC	**Quote#:**	U26 ES8082
Location/Project:	Tracy Ca	**Sales Representative:**	Cathy Ershen
Address 1:	14950 W Schulte RD	**Phone:**	916-849-0591
Address 2:	Tracy CA 95377	**Email:**	Cathy.Ershen@Emerson.com
Customer Contact:	Kevin Kelly	**Service Representative:**	David James
Phone:	925-766-7319	**Phone:**	209-597-0378
Email:	kevin.kelly@naes.com	**Email:**	David.James@Emerson.com

Device Information

Device Type: Magnetic Flow Meter		**Serial Number:**	**0371750**
Device Tag: Mag Meter		**Range:**	**0 To 30 f/s**
Model: 8712ESR1A1N0M4		**Calibration #**	**086705608535005**

Test Equipment Used

Asset #	Description	Calibration Due
ES-01444	FLUKE 754 Documenting Calibrator	3/12/20
PS-01222	700PD3 Pressure Module	3/12/20
PS-01443	700PA5 Pressure Module	3/12/20
PS-01001	700P27 Pressure Module	3/12/20

As Found Calibration Data

Specified Range f/s	Applied % Of Span	Applied f/s	Specified Output In mA	Output Tolerance +/- mA	Indicated Digital/Hart Output In f/s	Measured Analog Output In mA	Pass/Fail
0.000	0.00	0.00	4.0000	0.0100	0.000	4.001	Pass
3.000	10.00	3.00	5.6000	0.0140	3.000	5.601	Pass
10.000	33.33	10.00	9.3333	0.0233	10.000	9.334	Pass
30.000	100.00	30.00	20.0000	0.0500	30.000	19.999	Pass

As Left Calibration Data

0.000	0.00	0.00	4.0000	0.0100	0.000	4.001	Pass
3.000	10.00	3.00	5.6000	0.0140	3.000	5.601	Pass
10.000	33.33	10.00	9.3333	0.0233	10.000	9.334	Pass
30.000	100.00	30.00	20.0000	0.0500	30.000	19.999	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Rocky Jones

David James
Rosemount Service Representative
PH: 209-597-0378

May 15, 2019
Date

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

May 15, 2019

Test Equipment List

Contact Information

Purchase Order:	TCY-19-12056	**Service Request:**	1787888
Customer Name:	MRP San Joaquin Energy LLC	**Quote#:**	U26 ES8082
Location/Project:	Tracy Ca	**Sales Representative:**	Cathy Ershen
Address 1:	14950 W Schulte RD	**Phone:**	916-849-0591
Address 2:	Tracy CA 95377	**Email:**	Cathy.Ershen@Emerson.com
Customer Contact:	Kevin Kelly	**Service Representative:**	David James
Phone:	925-766-7319	**Phone:**	209-597-0378
Email:	kevin.kelly@naes.com	**Email:**	David.James@Emerson.com

Master Test Equipment List

Asset#	Description	Next Cal Due
ES-01444	FLUKE 754 Documenting Calibrator	**3/12/20**
PS-01222	700PD3 Pressure Module	**3/12/20**
PS-01443	700PA5 Pressure Module	**3/12/20**
PS-01001	700P27 Pressure Module	**3/12/20**
PS-01271	700P30 Pressure Module	**3/12/20**
PS-00934	750P05 Pressure Module	**3/12/20**
PS-01004	750P04 Pressure Module	**3/12/20**

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

David James
David James
Rosemount Service Technician
Phone: 209-597-0378

May 15, 2019
Date

Meter Verification
Magnetic Flowmeter

Wednesday, February 09, 2022

5:37:47 AM

Instrument Owner :
Company :

Contact Name/Tested By :
Telephone :

Transmitter Identification

Transmitter Tag :
Transmitter Model : 8712E
Transmitter Serial Number : 596546

Sensor Identification

Sensor Serial Number : 242063

Transmitter Configuration

Calibration Number : 0867605608535005
Upper Range Value : 892.00000 gal/min
Lower Range Value : 0.00000 gal/min
Line Size : 6.00 in
Damping : 2.00000 Sec

Test Conditions and Verification Limits

Test Condition : No flow, Full Pipe
No Flow Limit : 3 %
Flowing Limit : 2 %
Empty Pipe Limit : 5 %

Sensor Health Verification Results

Coil Resistance Baseline : 11.11319 ohm
Measured Coil Resistance : 10.40635 ohm
Coil Circuit Test Result : Pass
Electrode Resistance Baseline : 52.68371
Measured Electrode Resistance : 39.99750
Electrode Circuit Test Result : Pass

Sensor Calibration Verification Results

Coil Inductance Baseline : 36.09742
Measured Coil Inductance : 35.82772
Sensor Deviation : -0.74714 %
Sensor Calibration Test Result : Pass

Transmitter Calibration Verification Result

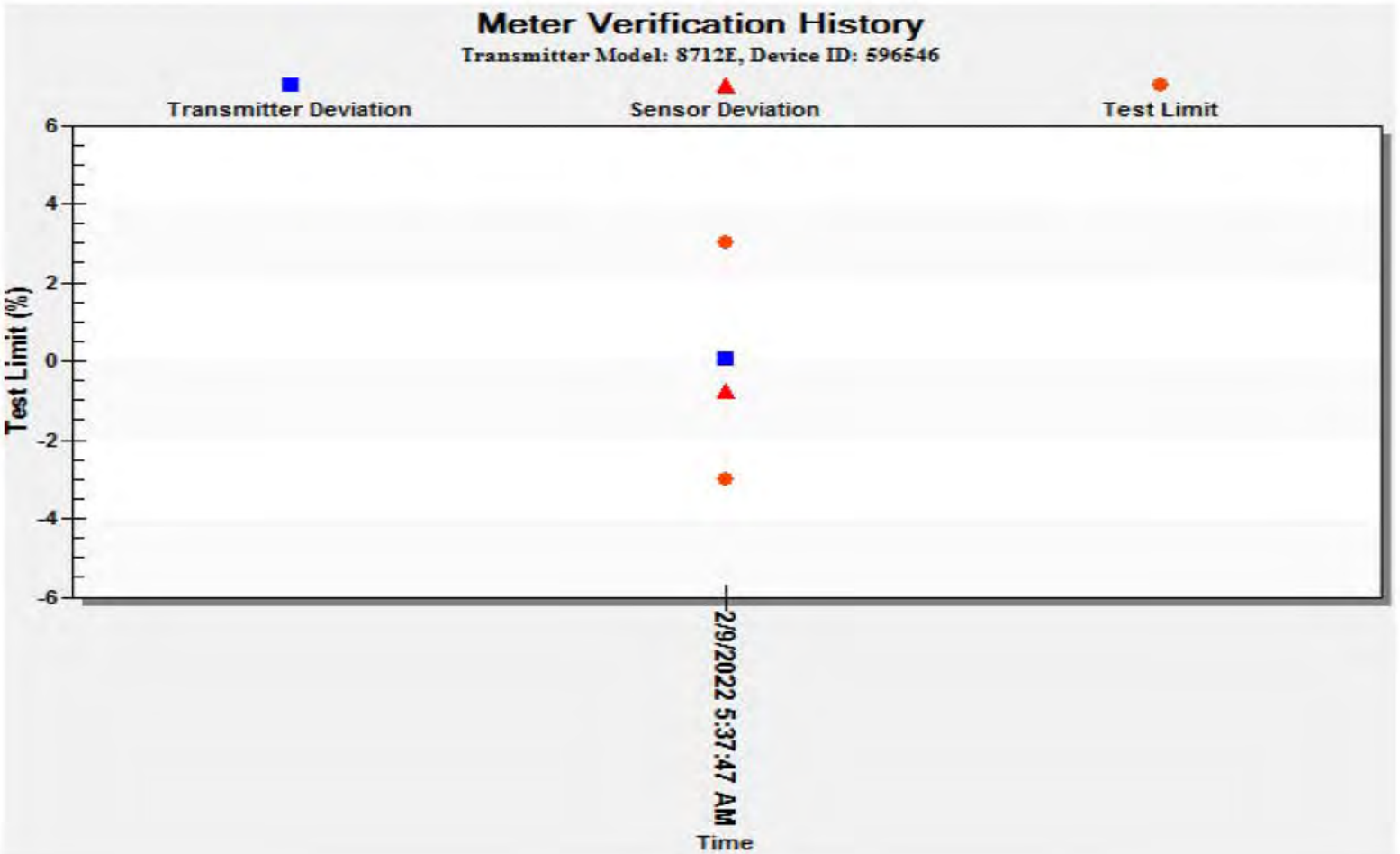
Simulated Velocity : 30.00000 ft/s
Actual Velocity : 30.01355 ft/s
Transmitter Deviation : 0.04517 %
Calibration Test Result : Pass

Meter Verification Test Result

Result : Pass

_____

Customer Signature


Meter Verification History
Transmitter Model: 8712E, Device ID: 596546
Transmitter Deviation
Sensor Deviation
Test Limit
6
4
2
0
-2
-4
-6
Test Limit (%)
2/9/2022 5:37:47 AM
Time

NOTES

1.Methodology

Verification of the mag product is based on using a secondary parameter, coil signature, to verify that the magnetic field has not changed since the device was calibrated at the factory. Based on Faraday's law, the induced voltage measured by the meter is proportional to the velocity of the fluid, the distance between the electrodes, and the magnetic field strength. Since the distance between the electrodes is mechanically fixed, by confirming that the magnetic field has not changed, the performance of the meter can be verified.

2.Procedural Keys

The transmitter takes a measurement of the coil signature, coil resistance, and electrode resistance and compares it to a baseline value. Deviations from these baseline values are then calculated and checked against the test criteria. The coil signature test verifies that the magnetic field has not changed. The coil resistance test verifies the health of the coil circuit. The electrode resistance check verifies the health of the electrode circuit. Additionally, a transmitter test is conducted to verify that the transmitter is interpreting the signals from the sensor correctly and is providing an accurate flow measurement. These measurements and tests can be conducted while the device is in service allowing the process to continue to operate during the verification cycle.

3.Outcome

Passing of the meter verification test indicates that the device is within normal operating procedures and is measuring as accurately as when it left the factory.

Appendix L

Industrial Wastewater and Contact Storm Water
Soil & Water-6

TRACY COMBINED CYCLE POWER PLANT – Soil & Water-6

Tracy Combined Cycle Power Plant Project 08-AFC-07, Condition Soil and Water-6 prohibits discharges other than non-contact stormwater by MRP San Joaquin Energy.

MRPSJE discharges all its stormwater to the on-site stormwater basin. No stormwater leaves the site. Wastewater generated by turbine washing is hauled off-site and disposed of as non-hazardous waste. Contact storm water is collected in the secondary containment areas built around equipment to catch stormwater. The water is checked for oil residue and either left to evaporate or sent to the oil/water separator. The water from the clean water side of the oil/water separator is recycled to the raw water storage tank for use in the water systems.

No stormwater discharges have ever taken place from the stormwater pond to date.

Appendix M

Surface Treatment Maintenance
Vis-6

TRACY COMBINED CYCLE POWER PLANT – Vis-6

Tracy Combined Cycle Power Plant Project # -08-AFC-07, Condition Vis-6 requires MRP San Joaquin Energy to provide a status report regarding surface treatment maintenance.

The plant was inspected and did not find any major painted surfaces in need of maintenance. Touch up painting throughout the facility occurred in 2018 and is performed continuously as needed.

No major painting or other major surface treatment maintenance is planned for 2022.

Appendix N

Hazardous Waste Disposal
Waste-6

Table 1. Estimated Non-Hazardous Wastes Generated During Operations and Maintenance

Material Type	Disposal Method (onsite reuse, salvage for future use, recycling or landfill disposal)	Final Destination (company name and location)	Estimated Quantity (cubic yards [cy] unless stated otherwise)
Bottles and Cans (glass, aluminum and plastic California Redemption Value containers)	Recycling	Tracy Materials Recovery Facility	<1 cy
Cardboard	Recycling	Tracy Materials Recovery Facility	<5 cy
Electronics (computers, monitors, other)	Recycling and/or proper disposal	Consolidated at GWF Power Systems, Pittsburg, CA	<1 cy
Metals and Metal Scrap	Recycling	Tracy Materials Recovery Facility	<5 cy
Pallets	Recycling	Tracy Materials Recovery Facility	<5 cy
Paper (white and colored)	Recycling	Tracy Materials Recovery Facility	<2 cy
Plastics (non-beverage, non-hazardous containers, film, other)	Landfill Disposal (except certain containers and some film)	Tracy Materials Recovery Facility	<2 cy
Wood (clean)	Recycling	Tracy Materials Recovery Facility	40 cy
Garbage, Solid Waste, Debris, Trash or Rubbish	Landfill Disposal	Tracy Materials Recovery Facility and Transfer Station	10 cy
Water Quality Control filters (sock or cartridge)	Water sediment and particulate filtration media	Tracy Materials Recovery Facility	Less than 500 pounds/year
Combustion Turbine Generator Wash Water (detergent solution)	Collected and held in onsite wastewater holding tank. Trucked offsite for recycling at a wastewater processing facility.	Evergreen Oil in Newark, CA	6,000 gallons/year
Oily water from oil/water separator	Onsite re-use after carbon filtration. Filtered water enters raw water tank	N/A	5,000 gallons /year
Clarifier sludge	Landfill Disposal	Tracy Delta Disposal Service	<1 cubic yard

Table 2. Estimated Hazardous Wastes Generated During Operations and Maintenance

Waste	Origin	Composition	Estimated Quantity (pounds per year [lb/yr] or gallons per year [gal/yr] unless stated otherwise)	Classification	Disposal
Oily debris	Parts and equipment maintenance, minor leaks and spills	Absorbents, rags, soil, hydrocarbons	1,300 lb/yr	H11azardous	Recycle or dispose at a permitted TSDF
Drained used oil filters	Gas turbine lubricating oil system	Filter media, metals, and hydrocarbons	1,000 lb/yr	Nonhazardous	Recycle at an approved metal reclamation facility or TSDF
Used oil	Lubrication systems	Hydrocarbons	500 lb/yr	Hazardous	Recycle at authorized used oil collection center or TSDF
Solvents, paints, adhesives	Maintenance	Varies	200 lb/yr	Hazardous	Recycle or dispose at a permitted TSDF
Turbine wash	Water and Detergent solution turbine washes	Detergent solution	6,000 gal/yr	Hazardous or Nonhazardous	Dispose at a permitted TSDF or nonhazardous wastewater processing facility
Laboratory waste	Water treatment lab analyses	Spent reagents/ laboratory wastes	50 gals/yr	Hazardous	Dispose at a permitted TSDF
SCR catalyst units	SCR system (Warranty is 3 years-use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	60 to 70 tons every 3 to 5 yrs	Hazardous	Recycled by SCR manufacturer or disposed of in Class I landfill

Table 2. Estimated Hazardous Wastes Generated During Operations and Maintenance

Carbon monoxide (CO) catalyst units	Heat recovery steam generator (HRSG) (Use tends to be 3 to 5 years)	Metal and heavy metals, including vanadium	6 to 7 tons every 3 to 5 yrs	Hazardous	Recycled by manufacturer
Spent lead acid batteries	Electrical room, equipment	Heavy metals, corrosive acid	5 batteries/yr	Hazardous	Recycle at a permitted TSDF
Spent alkaline batteries	Electronic equipment	Metals, corrosives	50 lb/yr	Universal waste solids	Recycle at an authorized recycling facility
Fluorescent and H.I.D. lamps	Lighting	Heavy metals	50 lb/yr	Universal Waste	Recycle at an authorized recycling facility
Chemical feed area drainage	Spillage, tank overflow, area washdown water	Water with water treatment chemicals	Minimal	May be hazardous if corrosive	Dispose at a permitted TSDF
Aerosol cans	Non-empty aerosol can waste	Varies; flammable gas	120 lb/yr	Universal Waste	Recycle at a permitted TSDF

Tracy Uniform Hazardous Waste Manifest
2021

EPA ID # CAL000442227

Date	Doc #	Manifest	Weight		Material	code	Designated Facility	To DTSC	iTrack
1/6/21		022516387JJK	150	P	Non-RCRA Waste Liquid Used Oil/Mixed Oils	221	Asbury Enviornemntal 1920 Morgan Road, Ceres, CA 95358		
1/11/21		014706784FLE		P	Non-RCRA Hazardus Waste Liquid (oil)	221	Enviornmental Waste Solutions Parker South, AZ		
1/11/21				P	Non-RCRA Hazardus Waste Solid (oily Derbis)	352	Enviornmental Waste Solutions Parker South, AZ	2/5/21	
9/23/21		015885339FLE	221	P	Non-RCRA Hazardous Waste Solid (cation exchange polymer, Resin)	181	US Ecology Nevada, Inc Beaty, NV 89003	10/7/21	
9/23/21	D385261		22	P	Universal Waste Batteries (Nickel Cadmium Batteries (Dry Cell)) (ACT96742		ACT (SD) 2010 Mission Road, Escondido, CA		