FINAL

GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT

PROOF OF OPERABILITY – MONTH 12 (DECEMBER 2020)

MOSES LAKE WELLFIELD, WASHINGTON

SOUTH GROUNDWATER PLUME GROUNDWATER COLLECTION SYSTEM

MOSES LAKE, WASHINGTON

APRIL 2021

Prepared for:

United States Army Corps of Engineers
Seattle District
4735 E. Marginal Way South
Seattle, WA 98134-2388
Contract Number W912DQ-16-D-3004
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Prepared by:

FPM-CTI Joint Venture, LLC
181 Kenwood Avenue
Oneida, New York 13421

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List of Acronyms and Abbreviations

µg/L	microgram per liter
mg/L	milligram per liter
CTP	Central treatment plant
FAT	Facility Acceptance Testing
FPM-CTI	FPM-CTI Joint Venture LLC
GAC	granular activated carbon
gpm	gallons per minute
GWCS	Groundwater collection system
IROD	Interim Record of Decision
lbs	pounds
PAL	Project Action Limit
PO	Proof of Operability
RPMW	Remedy Performance Monitoring Well
SGP	South Groundwater Plume
TCE	Trichloroethylene
TSS	Total Suspended Solids
UFP-QAPP	Unified Federal Policy – Quality Assurance Project Plan
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

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1.1 PURPOSE

FPM-CTI Joint Venture, LLC (FPM-CTI) has been tasked to design, construct, and operate a new groundwater collection system (GWCS) and central treatment plant (CTP) for the South Groundwater Plume (SGP) at the Moses Lake Wellfield Contamination Superfund Site (Site), located in Moses Lake, Washington. Work is being conducted under the U.S. Army Corps of Engineers (USACE) Seattle District Contract Number W912DQ-16-D-3004, Delivery Order W912DW-18-F-2012. This Groundwater Sampling and Monthly Operations and Maintenance Report has been prepared by FPM-CTI to meet the process control and remedy performance monitoring contract requirements for the SGP. The Groundwater Monitoring and Monthly Operations Status are presented together, rather than as separate reports. This Proof of Operability (PO) Groundwater Sampling and Monthly Operations and Maintenance Report details the December 2020 sampling of the system operations network. The December 2020 sampling event was the twelfth sampling event of the 18-month PO period.

All work was completed in accordance with the *Optimized Uniform Federal Policy – Quality Assurance Project Plan, Process Control and Remedy Performance Monitoring, Moses Lake South Plume Groundwater Treatment Remedy, Moses Lake, Washington, Rev 3 (FPM-CTI 2019)*. Field notes were not generated during this PO period, so **Appendix A** is not included. Field forms, including development forms, groundwater sampling logs, calibration logs, and health and safety forms were not generated during this PO period, so **Appendix B** is not included. Laboratory analytical results are included as **Appendix C** with the associated Data Verification and Usability Reports presented as **Appendix D**. The CTP Logs are provided as **Appendix E**.

1.2 SITE CONCEPTUAL MODEL

The Site is located approximately two miles south of the Grant County Airport in Moses Lake, Washington (**Figure 1**). The Site is located along Loring Drive to the east of Owens Road and west of Road I NE.

The Grant County Airport was originally developed as the Moses Lake Army Air Base in 1942. The base was used as a temporary training location for aircraft pilots and crew until 1945. Between 1945 and 1948, the Boeing Corporation tested B-47 and B-50 aircraft at the base. The U.S. Air Force Air Defense Command assumed control of base operations in November 1948, and it was renamed Larson Air Force Base in 1950. In 1952 the U.S. Air Force initiated testing of the Boeing B-52 at the base. Use of the base during the 1950s and 1960s included a Tactical Air Command base, a Military Air Transport Service, and a Strategic Air Command base. Support facilities at the base included fueling areas, barracks, a hospital, a wastewater disposal plant, and conventional weapon storage areas. The Boeing Flight Center was constructed in 1954. Boeing operations included aircraft fueling, painting, testing, maintenance, and cleaning, in addition to metal fatigue testing for the B-52 fuel cell modification program. Titan I missile support facilities were constructed between 1960 and 1962. Boeing ceased operations at the facility in 1963. In 1964, the U.S. Department of Defense determined that the base was no longer needed. The base began

operation as the Grant County Airport in 1966, and Boeing resumed operations at the facility in 1968 (CH2M Hill 2017).

USACE initiated an Inventory Project Report for the former Larson Air Force Base in 1989 to determine initial USACE actions. The Washington State Department of Ecology added the base to its Confirmed and Suspected Sites Report in 1992. The United States Environmental Protection Agency (USEPA) named the collective affected areas at and hydrogeologically downgradient of the former base the "Moses Lake Wellfield Contamination Superfund Site" (Moses Lake Superfund Site) in 1992 when the facility was added to the National Priorities List. In 1996, the facility was also added to Ecology's Toxic Cleanup Program (Site ID: 106). USACE completed the Final Remedial Investigation and Baseline Risk Assessment in July 2003 (MWH Global, Inc. 2003) and the Groundwater Feasibility Study in April 2007 (USACE 2007). USEPA signed the Interim Record of Decision (IROD) on September 30, 2008, as did Ecology on October 17, 2008 (CH2M Hill 2017).

The Site occupies a nearly flat fluvial terrace bounded to the east by Crab Creek and to the south and west by Moses Lake. The uppermost geologic units affected by contamination include sand and coarse gravel deposited by glacial floods (Hanford Formation), underlain by silt and sand deposited in lakes and rivers (Ringold Formation, locally eroded away to the north and east). Bedrock consists of several extensive basalt flows that form the Wanapum Basalt Formation. The Wanapum Basalt at the Site is divided into three members, from geologically youngest to oldest: the Priest Rapids Member, the Roza Member, and the Frenchman Springs Member. The Roza Member consists of three basalt flows, of which Roza 1 is the youngest and uppermost unit. The Priest Rapids Member overlies the Roza Member in the central portions of the Site but is generally highly weathered and has been eroded away entirely along the east and west margins. The basalt flows typically have a vesticulated fractured, and sometimes brecciated flowtop overlying a dense flow interior characterized by vertical cooling fractures. The deeper and less weathered the basalt flows are, the more likely these fractures are to be completely filled by secondary minerals (CH2M Hill 2017).

The aquifers relevant to the Site include the: 1) Hanford formation; 2) Priest Rapids and flowtop of Roza 1; 3) Roza 2 flowtop; and 4) Roza 3. The intervening water-confining units, which likely function as leaky aquitards, include the: 1) Ringold Formation; 2) dense flow interior of Roza 1; and 3) dense flow interior of Roza 2. Based on feasibility study estimates (USACE 2007), groundwater flows horizontally through the Hanford formation up to 100 times faster than in the basalt aquifers (the flowtop zones) and up to 1,000 times faster than in the Ringold Formation. Vertical groundwater flow is generally downward between all the units, and some leakage (water and contaminants) can occur through the Ringold Formation and the uppermost dense basalt flow interiors (CH2M Hill 2017).

1.3 STATEMENT OF REMEDY GOALS AND CONDITIONS FOR TERMINATING THE GROUNDWATER WATER REMEDY

The IROD for the Site defines the long-term objective for the SGP remedy is restoration of groundwater beneficial use. To achieve the long-term objective, Roza 1 groundwater is pumped and treated in areas near the center of the plume where the groundwater contaminant of concern trichloroethylene (TCE) concentrations are significantly above the 5 micrograms/liter (µg/L) cleanup level, while allowing dilution to clean up the lower- concentration areas (generally less than 20 µg/L) around the edge of the plume. Additionally, a short-term objective for the SGP pump-and-treat remedy component is to collect data needed to develop long-term performance criteria to optimize system operations and ensure that cleanup levels are achieved within the 30-year lifecycle estimated in the IROD. To achieve the short-term objective, an 18-month PO period was specified in the project Statement of Work, during which system uptime and treatment effectiveness will be maintained at the highest possible level such that water level and water quality data can be collected to accurately reflect aquifer and TCE plume response to pump-and-treat operations.

1.4 REMEDY DESCRIPTION

1.4.1 Pump and Treat System Description

The pump-and-treat system utilizes five extraction wells with the treatment objective of reducing TCE concentrations from an average combined influent concentration of 21 µg/L (25 µg/L combined maximum) to 2.5 µg/L, which is one half of the 5 µg/L treatment limit specified in the IROD. This treatment objective has been set to ensure that the 5 µg/L treatment limit is consistently met. Treated groundwater is infiltrated back into the vadose zone through two infiltration trenches.

1.4.2 Other Remedy Components

A Remedy Performance Monitoring Well (RPMW) network is required for monitoring groundwater levels and TCE concentrations to assess overall GWCS performance. Twenty-seven monitoring wells have been incorporated into the RPMW network, which includes twenty-one pre-existing monitoring wells that were used for previous investigations, and six new monitoring wells (19-BW01 through 19-BW06) installed in May 2019.

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2.1 SYSTEM DOWNTIME

2.1.1 Routine

The system is designed to run continuously. Therefore, any downtime is considered non-routine.

2.1.2 Non-Routine

The system was operational 100% of the time in December 2020. Pump failure at EW-1 is discussed in **Section 2.4.1**.

2.2 OPERATIONAL DATA AND PROCESS MONITORING DATA

Process control monitoring conducted in December 2020 consisted of automatic monitoring of the GWCS, system operations sampling, and evaluation the utilization of granular activated carbon (GAC) filtration. As part of process control monitoring, system operation samples were collected on December 21, 2020. Recorded automatic monitoring data are provided in **Table 5** and the CTP logs are included in **Appendix E**. While discrepancies between the totalized influent flow, GAC skid totalized flow, and infiltration trench totalized flow were recorded (**Table 5**), evaluation of the totalizers to verify that the scaling factors are correct is ongoing. System sample results are provided in **Table 2**.

2.2.1 Plant Influent and Effluent, and Efficiency of Above-Ground Treatment Components

Extraction well influent samples were not collected during P12, so **Table 1** is not included for this event. The next scheduled extraction well influent sampling event is during PO14 in February 2021. Systems operation samples collected on December 21, 2020 from the following system sampling locations: Equalization Tank Effluent (BV-LG1-3 and BV-FF-2B), Lead GAC Effluent (BV-LG1-5), and Treated Water Effluent (BV-LG1-7 and BV-TW-3). Analytical results associated with the system sampling locations are provided in **Table 2**.

Equalization Tank Effluent sample BV-LG1-3, Lead GAC Effluent sample BV-LG1-5, and Treatment Water Effluent sample BV-LG1-7 were analyzed for the volatile organic compound (VOC) TCE by USEPA Method 8260B. Equalization Tank Effluent sample BV-FF-2B and Treatment Water Effluent sample BV-TW-3 were analyzed for Total Suspended Solids (TSS) by SM Method 2540D with pH readings collected utilizing field instrumentation. All VOC and TSS samples were submitted to Agriculture & Priority Pollutants Laboratories, Inc for definitive analysis.

TCE was detected in Equalization Tank Effluent sample BV-LG1-3 above the Project Action Limit (PAL) at a concentration of 16 µg/L. This value represents the total TCE concentration of groundwater received from the four operation extraction wells prior to GAC treatment. The post-treatment sample collected from the Lead GAC Effluent location was reported below the PAL at

4.6 µg/L and the sample collected from the Treatment Water Effluent location was reported as non-detect. These values represent the concentration of TCE in groundwater following GAC treatment.

TSS results from the Equalization Tank Effluent sample BV-FF-2B and the Treatment Water Effluent sample BV-TW-3 were reported within the PAL as 1.7 milligrams per liter (mg/L) and non-detect, respectively. Respective pH readings taken from these sample locations were 6.72 and 6.67, within the established PALs for pH.

The laboratory analytical results were validated by the project chemist in accordance with the Unified Federal Policy – Quality Assurance Project Plan (UFP-QAPP) (FPM-CTI 2019). The laboratory analytical results are provided as **Appendix C**, and **Appendix D** contains the Data Verification and Usability Report.

2.2.2 Extraction Well Data

The SGP GWCS began operating on December 17, 2019. The 30-day Facility Acceptance Testing (FAT) period ran from SGP GWCS startup through January 16, 2020 with the 18-month PO period beginning on January 16, 2020. Through December 31, 2020 the system has been 99.9% operational with a total of 36,108,155 gallons of groundwater extracted, which includes groundwater extracted during the FAT.

A summary of the extracted groundwater totals through December 31, 2020 are summarized in the following table.

Central Treatment Plant September Extraction Log

Extraction Well	Date	Design Value Flow (gpm)[1]	Actual Flow (gpm)	Total Gallons Extracted	Total Operational Hours
EW01	12/31/20	5.0	0.0	858	0.0
EW02	12/31/20	30.0	30.1	16,930,639	8,144.3
EW03	12/31/20	2.1	2.3	1,343,294	8,235.8
EW04	12/31/20	15.0	12.0	7,297,935	7,718.9
EW05	12/31/20	18.0	13.1	10,535,429	8,158.0
			Total:	36,108,155	

Notes:
[1] – USACE 2017.
gpm – gallons per minute

The specific capacity of extraction wells was not estimated for this event because water levels were not measured in December 2020. The next scheduled well gauging is during PO14 in February, 2021.

2.3 UTILITIES, CONSUMABLES, AND WASTE HANDLING/DISPOSAL

2.3.1 Utilities Used

According to the Grant County Public Utility District, 5,304.248 kilowatt hours of electricity were used for all system operations between December 3, 2020 and January 5, 2021.

2.3.2 Consumables Used

GAC replacement has not been required since SGP GWCS began operating on December 17, 2019.

The Lead GAC Effluent TCE concentration collected on December 21, 2020 was detected at a concentration of 4.6 µg/L (approximately 29% of the Equalization Tank Effluent [16 µg/L]). The Treatment Water Effluent TCE concentration was below the detection limit, confirming that breakthrough is not occurring through the lead vessel (LGAC-1A), as shown in **Table 2**.

The system design anticipated TCE breakthrough of the carbon in the lead vessel of the active skid after treating 5,000,000 gallons of water. This calculation was based on the assumption that the influent TCE concentration would be 25 µg/L. The equalization tank effluent TCE concentration measured on December 21, 2020 was 16 µg/L, slightly lower than the design concentration.

Based on calculation associated with the 36,108,155 gallons of groundwater having been treated thus far, it is estimated that breakthrough will be observed in February or March, 2021. When the TCE effluent concentration is measured at or near 70% of the TCE influent concentration during monthly system sampling, a switch from GAC vessel LGAC1 to LGAC2 will occur.

2.3.3 Waste Handling/Disposal

Personal protective equipment used during field activities (e.g., latex or nitrile gloves) and sampling supplies (paper towels, plastic bags, etc.) were placed in plastic trash bags and disposed of at an on-site trash receptacle or dumpster.

No other waste was generated during PO12 requiring disposal.

2.4 PROBLEMS ENCOUNTERED WITH P&T COMPONENT OPERATION

2.4.1 Subsurface

Extraction well EW-1 has been inoperable since December 2019. The pump was removed and sent to the manufacturer for evaluation in January 2020. The evaluation noted significant corrosion on the carbon steel well casing and iron oxide flaking, and iron fouling on the screen that was not present before pumping. The pump impellers were seized and there was debris within the impeller. The evaluation concluded that the pump failure appears to be the result of solids that were in the water column, as a result of corrosion of the carbon steel well casing and screen.

EW-1 is upgradient of extraction wells EW-3, EW-4, and EW-5, and any contamination that would be captured by EW-1 will be contained by the other extraction wells, preventing migration of contaminants. However, when the EW-1 pump is returned to operation, the potential exists for the equalization tank effluent TCE concentration to slightly increase due to the location of EW-1 within the TCE plume.

Investigation into the cause of the EW-1 pump failure was conducted in November 2020 with analytical results presented to USACE on December 29, 2020. Based on this investigation and subsequent evaluation, a proposal for rehabilitation of EW-1 will be submitted to USACE for approval.

2.4.2 Above-Ground Treatment System

No problems were encountered with the above-ground system during PO12.

2.5 SYSTEM MODIFICATIONS AND MAINTENANCE

2.5.1 Routine Maintenance

No maintenance activities were conducted during PO12.

2.5.2 System Modifications and Non-Routine Maintenance

On December 17, 2020, a low-level alarm at EW-4 resulted in the lowering of the flow rate at that extraction well from 12.6 gpm to 12.0 gpm. Similarly, a low-level alarm at EW-5 on December 19, 2020, resulted in the lowering of the flow rate at that extraction well from 14.0 to 13.0 gpm. No additional system modifications or maintenance activities were conducted during PO12.

3.1 SAMPLING EVENTS PERFORMED DURING THIS REPORTING PERIOD

PDBs were deployed during the eighth PO sampling event at all 27 RPMWs on August 18 through 20, 2020. The PO12 event did not include well gauging or collection of groundwater samples. The next scheduled event that will include well gauging and collection of groundwater samples is PO14. As such, **Tables 3 and 4**, and **Appendix B** are not included.

3.2 SAMPLING RESULTS AND INTERPRETATION

3.2.1 Water Levels

Water levels were not measured as part of PO12.

3.2.2 Ground Water Concentrations

Groundwater was not sampled as part of PO12.

3.3 INTERPRETATION OF PROGRESS TOWARD SYSTEM OBJECTIVES

3.3.1 Progress with Respect to Long-Term Objective

As stated in **Section 1.3**, the long-term objective for the SGP remedy is restoration of groundwater beneficial use by pumping and treating Roza 1 groundwater in areas where TCE concentrations are significantly above the 5 µg/L cleanup level, while allowing dilution to clean up the lower-concentration areas (generally less than 20 µg/L) around the edge of the plume.

Based on the total volume of extracted groundwater (36,108,155 gallons), utilizing analytical data collected at the extraction wells in December 2020 (the most recent event that TCE was sampled in extraction wells), it is estimated that approximately 5.575 pounds (lbs) of TCE have been treated since system startup in December 2019.

TCE removal calculations are provided in **Table 6** and cumulative system totals are provided in **Table 8**.

3.3.2 Progress with Respect to Short-Term Objective

As stated in **Section 1.2**, the short-term objective for the SGP pump-and-treat remedy component is to acquire the experience and data needed over the 18-month PO period to guide development of the long-term performance criteria that will be necessary to guide and optimize system operations to assure that cleanup levels are achieved within the 30-year lifecycle.

The overall progress achieved during this PO period (PO11) is detailed throughout this report. With 6 months of PO remaining, forthcoming analytical and system monitoring data will be utilized to develop long-term performance criteria to meet the aforementioned long-term objective for the SGP.

3.3.3 Gaps or Inconsistencies in Site Conceptual Model

No gaps or inconsistencies in the Site Conceptual Model were identified as part of PO12.

4.1 SUGGESTIONS FOR SYSTEM MODIFICATION OR IMPROVEMENT

4.1.1 Suggested System Modifications

No system modifications are recommended based on groundwater sampling and operations and maintenance activities conducted during PO12.

4.1.2 Suggested System Improvements

Suggested system improvements are limited to:

1) Returning EW-1 to operational status as soon as practical, and
2) Ensuring that all sampling parameters are collected as per the UFP-QAPP.

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5.1 CONCLUSIONS

5.1.1 Process Control Monitoring Results

The SGP GWCS began operating on December 17, 2019 and has been 99.9% operational through December 31, 2020. A total of 36,108,155 gallons of groundwater has been extracted with an estimated 5.575 lbs of TCE removed from the treated groundwater (A cumulative summary of system totals are provided in **Table 8**). As discussed in **Section 2.2**, TCE, TSS, and pH results meet the established system design limits/ranges (design limits/ranges are provided in **Table 2**). As discussed in **Section 2.3.2**, breakthrough of TCE has been observed at the lead GAC vessel at a concentration of 4.6 µg/L, approximately 29% of the equalization tank effluent concentration of 16 µg/L. If the treatment water effluent TCE concentration is measured at or near 70% of the equalization tank effluent TCE concentration during the next monthly sampling event, a switch to the secondary GAC vessel will occur.

5.1.2 Groundwater Sampling Results

Groundwater sampling was not conducted during PO12. The next quarterly gauging and sampling event is scheduled to be completed during PO14.

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CH2M Hill, 2017. South Groundwater Plume Upper Basalt/Roza 1 Aquifer, Basis of Design, Moses Lake Wellfield Contamination Superfund Site, Moses Lake, Washington. January 2017.

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FPM-CTI, 2020. Draft Final As-Built Design Package, Moses Lake South Plume Groundwater Treatment Remedy, Moses Lake Wellfield Contamination Superfund Site, Moses Lake, Washington, March 2020.

MWH Global, Inc, 2003. Final Remedial Investigation and Baseline Risk Assessment Report, Moses Lake Wellfield Superfund Site, Moses Lake, Washington, July 2003.

U.S. Army Corps of Engineers (USACE), 2007. Groundwater Feasibility Study, Moses Lake Wellfield Superfund Site, City of Moses Lake, Washington. Prepared for U.S. Environmental Protection Agency. Draft Final. April 2007.

USACE, Seattle District, 2017. Moses Lake, Washington Performance Specification for the South Groundwater Plume Upper Basalt/Roza 1 Aquifer Remedial Action. July 2017.

USEPA, 2019. Regional Screening Level (RSL) Summary Table, November 2019.

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TABLES

TABLE 2
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE SYSTEM SAMPLE RESULTS
DECEMBER 2020
MOSES LAKE, WA

System Component	Sample Location Code	Sample ID	Date	pH	Trichloroethene (TCE) (µg/L)			Total Suspended Solids (mg/L)		
USEPA MCL or PAL[1]				6.5 < x <8.5	5			5		
				Result	Result	LOQ	Qual	Result	LOQ	Qual
Equalization Tank Effluent	BV-LG1–3 / BV-LG2-3	ML00-BVLG13-1220	12/21/2020	NS	**16**	1.0	--	NS	--	--
	BV-FF-2A / BV-FF-2B	ML00-BVFF2B-1220	12/21/2020	6.72	NS	--	--	**1.7**	1.0	--
Lead GAC Effluent	BV-LG1–5 / BV-LG2-5	ML00-BVLG15-1220	12/21/2020	NS	**4.6**	1.0	--	NS	--	--
Treatment Water Effluent	BV-LG1–7 / BV-LG2-7	ML00-BVLG17-1220	12/21/2020	NS	<	1.0	U	NS	--	--
	BV-TW-3	ML00-BVTW3-1220	12/21/2020	6.67	NS	--	--	<	1.0	--

Notes:

Bold indicates compound was detected.

indicates exceedence of USEPA MCL/Project Action Limit.

[1] - USEPA Regional Screening Levels / National Primary/Secondary Drinking Water Standards, November 2019.

Acronyms and Abbreviations:

ID = identification
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
mg/L = milligrams per liter
< = nondetect
NS = not sampled
-- = indicates no data.
D = indicates the value is the result of a dilution.
J = indicates the value is estimated.
TCE = trichloroethene
USEPA = United States Environmental Protection Agency

TABLE 5
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
PROCESS CONTROL MONITORING - AUTOMATIC MONITORING DATA
DECEMBER 2020
MOSES LAKE, WA

	Units	12/31/2020	Design Values
EW01 Flow rate	gpm	0.0	5[a]
EW02 Flow rate	gpm	30.1	30[a]
EW03 Flow rate	gpm	2.3	2.1[a]
EW04 Flow rate	gpm	12.0	15[a]
EW05 Flow rate	gpm	13.1	18[a]
Combined Flow rate	gpm	57.5	70[a]
EW01 Operational Time	hours	0.0	
EW02 Operational Time	hours	8,144.3	
EW03 Operational Time	hours	8,235.8	
EW04 Operational Time	hours	7,718.9	
EW05 Operational Time	hours	8,158.0	
EW01 GW elev	ft amsl	1,070.8	1022.3[a]
EW02 GW elev	ft amsl	1,000.5	1007[a]
EW03 GW elev	ft amsl	1,011.3	1033.4[a]
EW04 GW elev	ft amsl	1,015.3	1020.1[a]
EW05 GW elev	ft amsl	1,020.6	1027.4[a]
EW01 totalized influent flow	gallons	858	
EW02 totalized influent flow	gallons	16,930,639	
EW03 totalized influent flow	gallons	1,343,294	
EW04 totalized influent flow	gallons	7,297,935	
EW05 totalized influent flow	gallons	10,535,429	
System totalized influent flow	gallons	36,108,155	
Filter BF1 in pressure	psig	5.8	
Filter BF1 out pressure	psig	6.0	
Filter BF1 diff pressure	psig	-0.2	0 to 5[b]
Filter BF2 in pressure	psig	5.6	
Filter BF2 out pressure	psig	5.9	
Filter BF2 diff pressure	psig	-0.3	0 to 5[b]
LGAC1 skid totalized flow	gallons	33,554,464	
LGAC2 skid totalized flow	gallons	2,294	
LGAC PIT-P-201A pressure	psig	1.7	
LGAC PIT-P-201B pressure	psig	1.9	
LGAC1A diff pressure	psig	-0.2	< 10[b]
LGAC PIT-P-201C pressure	psig	2.1	
LGAC1B diff pressure	psig	-0.2	< 10[b]
LGAC PIT-P-202A pressure	psig	-0.9	
LGAC PIT-P-202B pressure	psig	0	
LGAC2A diff pressure	psig	-0.9	< 10[b]
LGAC PIT-P-202C pressure	psig	1	
LGAC2B diff pressure	psig	-1	< 10[b]
Backwash flow rate	gpm	0.0	
Backwash totalized flow	gallons	3,568	
IT-1 totalized flow	gallons	20,580,974	
IT-2 totalized flow	gallons	8,889,169	

Notes:
a = USACE, 2017
b = FPM-CTI, 2020
ft amsl = feet above mean sea level
gpm = gallons per minute
psig = pounds per square inch in gauge
Differential pressure values are calculated. All other values are measured.
Flow rates are instantaneous measurements, collected on 12/31/2020.

TABLE 6
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE REMOVAL CALCULATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Pre-Functional Testing	Observed TCE Concentration (ug/L)[2]	Extracted Water Total 12/17/19 (gallons)	Extracted Water Difference From Previous Reading (gallons)	TCE Removed (lbs)
EW-1	NS	3,293	0	0.002
EW-2	6.7	21,496	0	0.001
EW-3	23	2,029	0	0.000
EW-4	63	9,392	0	0.005
EW-5	26	12,148	0	0.003
30-Day Testing	**Observed TCE Concentration (ug/L)[2]**	**Extracted Water Total 01/16/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	See Note 1	0.000
EW-2	6.7	1,250,704	See Note 1	0.070
EW-3	23	87,438	See Note 1	0.017
EW-4	63	627,286	See Note 1	0.330
EW-5	26	769,358	See Note 1	0.167
1/23/2020	**Observed TCE Concentration (ug/L)[2]**	**Extracted Water Total 01/23/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	6.7	1,550,471	299,767	0.017
EW-3	23	108,175	20,737	0.004
EW-4	63	777,169	149,883	0.079
EW-5	26	956,455	187,097	0.041
1/31/2020	**Observed TCE Concentration (ug/L)[2]**	**Extracted Water Total 01/31/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	6.7	1,886,587	336,116	0.019
EW-3	23	131,833	23,658	0.005
EW-4	63	945,228	168,059	0.088
EW-5	26	1,142,938	186,483	0.040

TABLE 6
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE REMOVAL CALCULATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

2/27/2020	Observed TCE Concentration (ug/L)[3]	Extracted Water Total 02/27/2020 (gallons)	Extracted Water Difference From Previous Reading (gallons)	TCE Removed (lbs)
EW-1	NS	858	0	0.000
EW-2	5.8	3,054,817	1,168,230	0.057
EW-3	18	204,848	73,015	0.011
EW-4	60	1,529,344	584,116	0.292
EW-5	27	1,727,055	584,117	0.132
3/26/2020	**Observed TCE Concentration (ug/L)[4]**	**Extracted Water Total 03/26/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	7.6	4,238,832	1,184,015	0.075
EW-3	73	278,849	74,001	0.045
EW-4	23	2,121,352	592,008	0.114
EW-5	28	2,319,065	592,010	0.138
4/30/2020	**Observed TCE Concentration (ug/L)[4]**	**Extracted Water Total 04/30/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)[7]**
EW-1	NS	858	0	0.000
EW-2	7.6	5,738,377	1,499,545	0.095
EW-3	73	372,571	93,722	0.057
EW-4	23	2,871,074	749,722	0.144
EW-5	28	3,068,840	749,775	0.175
6/4/2020	**Observed TCE Concentration (ug/L)[4]**	**Extracted Water Total 06/04/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)[7]**
EW-1	NS	858	0	0.000
EW-2	7.6	7,232,434	1,494,057	0.095
EW-3	73	465,665	93,094	0.057
EW-4	23	3,615,839	744,765	0.143
EW-5	28	3,813,610	744,770	0.174

TABLE 6
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE REMOVAL CALCULATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

6/25/2020	Observed TCE Concentration (ug/L)[5]	Extracted Water Total 06/25/2020 (gallons)	Extracted Water Difference From Previous Reading (gallons)	TCE Removed (lbs)
EW-1	NS	858	0	0.000
EW-2	7	8,105,320	872,886	0.058
EW-3	64	521,166	55,501	0.031
EW-4	20	4,065,900	450,061	0.120
EW-5	24	4,333,145	519,535	0.074
7/31/2020	**Observed TCE Concentration (ug/L)[5]**	**Extracted Water Total 07/31/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)[7]**
EW-1	NS	858	0	0.000
EW-2	7	9,676,736	1,571,416	0.105
EW-3	64	714,198	193,032	0.106
EW-4	20	4,645,157	579,257	0.155
EW-5	24	5,904,145	1,571,000	0.223
8/26/2020	**Observed TCE Concentration (ug/L)[6]**	**Extracted Water Total 08/26/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	6.6	10,762,829	1,086,093	0.060
EW-3	61	850,043	135,845	0.069
EW-4	20	4,901,858	256,701	0.043
EW-5	23	6,994,852	1,090,707	0.209
10/1/2020	**Observed TCE Concentration (ug/L)[6]**	**Extracted Water Total 10/1/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	6.6	12,574,350	1,811,521	0.100
EW-3	61	1,042,203	192,160	0.098
EW-4	20	5,622,979	721,121	0.120
EW-5	23	8,478,835	1,483,983	0.285

TABLE 6
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE REMOVAL CALCULATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

10/31/2020	Observed TCE Concentration (ug/L)[6]	Extracted Water Total 10/31/2020 (gallons)	Extracted Water Difference From Previous Reading (gallons)	TCE Removed (lbs)
EW-1	NS	858	0	0.000
EW-2	6.6	14,377,023	1,802,673	0.099
EW-3	61	1,143,016	100,813	0.051
EW-4	20	6,184,731	561,752	0.094
EW-5	23	9,225,325	746,490	0.143
12/4/2020	**Observed TCE Concentration (ug/L)[8]**	**Extracted Water Total 12/4/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	3.4	15,894,783	1,517,760	0.043
EW-3	63	1,255,650	112,634	0.059
EW-4	23	6,882,714	697,983	0.134
EW-5	23	10,111,993	886,668	0.170
12/31/2020	**Observed TCE Concentration (ug/L)[8]**	**Extracted Water Total 12/31/2020 (gallons)**	**Extracted Water Difference From Previous Reading (gallons)**	**TCE Removed (lbs)**
EW-1	NS	858	0	0.000
EW-2	3.4	16,930,639	1,035,856	0.029
EW-3	63	1,343,294	87,644	0.046
EW-4	23	7,297,935	415,221	0.080
EW-5	23	10,535,429	423,436	0.081

Total Water Extracted (gallons)	Total TCE Removed (lbs)
36,108,155	5.575

Notes:

Due to a percieved sampling error, EW-3 and EW-4 TCE concentrations from January 2020 sampling have been switched.

Due to totalizer errors at EW2, EW3, EW4, and EW5, Extracted Water Totals utilize the Total Flow Estimates listed in Appendix E.

1 = Totalizers were zeroed before start of 30-Day Test.

2 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - January 2020.

3 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - February 2020.

4 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - March 2020.

5 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - June 2020.

6 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - August 2020.

7 = Estimate uses the most recently measured previous Extraction Well TCE concentrations.

8 = TCE concentrations from Table 1 - Moses Lake Extraction Well Analytical Results - November 2020.

NS = Not Sampled

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
99-BW18	8/15/2019	**7.1**
	1/8/2020	**5.9**
	2/18/2020	**5.7**
	3/19/2020	**6.7**
	6/10/2020	**6.7**
	8/20/2020	ND
	10/12/2020	**5.7**
00-BW10	8/15/2019	ND
	1/8/2020	ND
	2/19/2020	ND
	3/19/2020	ND
	6/9/2020	ND
	8/19/2020	ND
	10/13/2020	**1.6**
00-BW13	8/14/2019	ND
	1/9/2020	ND
	2/18/2020	ND
	3/19/2020	ND
	6/10/2020	ND
	8/20/2020	ND
	10/12/2020	**0.33 J**
02-BW01	8/15/2019	**11**
	1/8/2020	**9.0**
	2/19/2020	**8.3**
	3/19/2020	**9.4**
	6/9/2020	**10**
	8/19/2020	**12**
	10/13/2020	**9.0**
04-BW09	8/14/2019	**20**
	1/9/2020	**22 / 23**
	2/18/2020	**23 / 23**
	3/19/2020	**24 / 25**
	6/10/2020	**21 / 21**
	8/20/2020	**21 / 21**
	10/14/2020	**17 / 18**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
04-CW05	8/15/2019	**2.2**
	1/8/2020	**2.2**
	2/18/2020	**1.9**
	3/19/2020	**1.9**
	6/10/2020	**1.9**
	8/20/2020	**2.5**
	10/12/2020	**1.9**
04-CW07 Upper Screen	8/15/2019	**6.1**
	1/8/2020	**5.5**
	2/19/2020	**5.0**
	3/19/2020	**5.2**
	6/9/2020	**5.2**
	8/19/2020	ND
	10/13/2020	**5.0**
04-CW07 Lower Screen	8/15/2019	**5.6**
	1/8/2020	**5.4**
	2/19/2020	**4.8**
	3/19/2020	**5.0**
	6/9/2020	**5.3**
	8/19/2020	ND
	10/13/2020	**5.1**
12-BW01	8/14/2019	ND
	1/9/2020	ND
	2/18/2020	ND
	3/19/2020	ND
	6/10/2020	**1.2**
	8/20/2020	ND
	10/12/2020	ND
12-BW02	8/15/2019	**7.8**
	1/8/2020	**6.9**
	2/19/2020	**6.6**
	3/19/2020	**7.5**
	6/9/2020	**6.7**
	8/20/2020	**8.9**
	10/14/2020	**6.6**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
12-BW03 Upper Screen	8/15/2019	ND
	1/9/2020	**0.55 J**
	2/19/2020	**0.73 J**
	3/19/2020	**0.61 J**
	6/9/2020	**0.57 J**
	8/19/2020	**0.58 J**
	10/14/2020	**0.45 J**
12-BW03 Lower Screen	8/15/2019	ND
	1/9/2020	**0.49 J**
	2/19/2020	**0.55 J**
	3/19/2020	**0.68 J**
	6/9/2020	**0.67 J**
	8/20/2020	**0.87 J**
	10/14/2020	ND
12-BW04 Upper Screen	8/15/2019	**22**
	1/9/2020	**18**
	2/19/2020	**17**
	3/19/2020	**17**
	6/9/2020	**17**
	8/20/2020	**23**
	10/12/2020	**19**
12-BW04 Lower Screen	8/15/2019	**22**
	1/9/2020	**20**
	2/19/2020	**17**
	3/19/2020	**19**
	6/9/2020	**18**
	8/20/2020	**22**
	10/12/2020	**18**
12-BW05	8/15/2019	**100**
	1/8/2020	**98**
	2/18/2020	**83**
	3/19/2020	**98**
	6/10/2020	**91**
	8/20/2020	**110**
	10/12/2020	**84**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
12-BW06	8/15/2019	**6.3**
	1/8/2020	**5.5**
	2/19/2020	**4.9**
	3/19/2020	**5.7**
	6/9/2020	**5.4**
	8/19/2020	**6.5**
	10/14/2020	**5.0**
12-BW07	8/15/2019	**100**
	1/8/2020	**97**
	2/18/2020	**80**
	3/19/2020	**93**
	6/10/2020	**93**
	8/20/2020	**110**
	10/12/2020	**89**
12-BW08	8/15/2019	**8.9**
	1/8/2020	**3.6**
	2/19/2020	**3.2**
	3/19/2020	**3.9**
	6/9/2020	**4.6**
	8/19/2020	**6.2**
	10/13/2020	**5.1**
12-CW01	8/15/2019	**4.2**
	1/8/2020	**4.1**
	2/19/2020	**3.7**
	3/19/2020	**4.3**
	6/10/2020	**0.4 J**
	8/19/2020	**4.7**
	10/14/2020	**3.5**
12-CW04	8/15/2019	**0.52 J**
	1/8/2020	**0.72 J**
	2/18/2020	**0.97 J**
	3/19/2020	**0.86 J**
	6/10/2020	**1.0**
	8/20/2020	**0.88 J**
	10/12/2020	**1.6**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
12-CW05	8/15/2019	ND
	1/8/2020	**0.59 J**
	2/19/2020	ND
	3/19/2020	**0.66 J**
	6/9/2020	**3.7**
	8/20/2020	ND
	10/14/2020	**0.44 J**
14-BW01	8/15/2019	**64**
	1/8/2020	**87**
	2/18/2020	**77**
	3/19/2020	**93**
	6/10/2020	**90**
	8/20/2020	**110**
	10/12/2020	**93**
14-BW02	8/15/2019	**18 / 20**
	1/8/2020	**28 / 27**
	2/18/2020	**13 / 13**
	3/19/2020	**17 / 17**
	6/10/2020	**13**
	8/20/2020	ND
	10/12/2020	**12 / 16**
14-BW03	8/14/2019	**9.0**
	1/9/2020	**6.2**
	2/18/2020	**3.4**
	3/19/2020	**3.9**
	6/10/2020	**3.7**
	8/20/2020	**3.5**
	10/12/2020	**3.9**
19-BW01	8/14/2019	**71 / 73**
	1/8/2020	**69 / 72**
	2/18/2020	**59 / 58**
	3/19/2020	**69 / 69**
	6/10/2020	**68 / 69**
	8/20/2020	**86 / 86**
	10/12/2020	**65 / 68**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
19-BW02	8/15/2019	**11**
	1/8/2020	**11**
	2/18/2020	**7.8**
	3/19/2020	**8.5**
	6/10/2020	**8.0**
	8/20/2020	ND
	10/14/2020	**7.3**
19-BW03	8/15/2019	**73**
	1/8/2020	**69**
	2/18/2020	**57**
	3/19/2020	**68**
	6/10/2020	**61**
	8/20/2020	**77 / 77**
	10/12/2020	**59**
19-BW04	8/15/2019	**7.5 / 6.2**
	1/9/2020	**6.0**
	2/19/2020	**5.3**
	3/19/2020	**2.5**
	6/9/2020	**6.2**
	8/19/2020	**7.6**
	10/12/2020	**6.7**
19-BW05	8/15/2019	**9.2**
	1/8/2020	**7.2**
	2/19/2020	**7.2**
	3/19/2020	**8.6**
	6/9/2020	**8.2**
	8/19/2020	**11**
	10/12/2020	**9.1**
19-BW06	8/15/2019	ND
	1/8/2020	ND
	2/19/2020	ND
	3/19/2020	ND
	6/9/2020	ND
	8/19/2020	ND
	10/13/2020	**0.34 J**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5
EX-01	1/10/2020	NS
	2/19/2020	NS
	3/17/2020	NS
	6/10/2020	NS
	8/26/2020	NS
	11/23/2020	NS
EX-02	1/10/2020	**6.7**
	2/19/2020	**5.8 / 5.7**
	3/17/2020	**7.6 / 7.4 J**
	6/10/2020	**7.0 / 7.1**
	8/26/2020	**6.6 / 6.6**
	11/23/2020	**3.4 / 3.4**
EX-03	1/10/2020	**63**
	2/19/2020	**18**
	3/17/2020	**73**
	6/10/2020	**64**
	8/26/2020	**61**
	11/23/2020	**63**
EX-04	1/10/2020	**23**
	2/19/2020	**60**
	3/17/2020	**23**
	6/10/2020	**20**
	8/26/2020	**20**
	11/23/2020	**23**
EX-05	1/10/2020	**26**
	2/19/2020	**27**
	3/17/2020	**28 J**
	6/10/2020	**24**
	8/26/2020	**23**
	11/23/2020	**23**

TABLE 7
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE TCE CONCENTRATIONS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Well ID	Date	Trichloroethene (TCE) (µg/L)
USEPA MCL[1]		5

Notes:

Bold indicates compound was detected.

indicates exceedence of USEPA MCL/Project Action Limit.

[1] - USEPA Regional Screening Levels / National Primary/Secondary Drinking Water St
71 / 73 - indicates primary and duplicate sample results

Acronyms and Abbreviations:

ID = identification

MCL = Maximum Contaminant Level

µg/L = micrograms per liter

ND = nondetect

NS = not sampled

D = indicates the value is the result of a dilution.

J = indicates the value is estimated.

TCE = trichloroethene

USEPA = United States Environmental Protection Agency

TABLE 8
GROUNDWATER SAMPLING AND MONTHLY OPERATIONS AND MAINTENANCE REPORT
PROOF OF OPERABILITY - MONTH 12
MOSES LAKE OPERATIONAL TOTALS OVER TIME
DECEMBER 2020
MOSES LAKE, WA

Period Start	Period End	Duration (Days)	Operation	Total Combined Flow Rate (gpm)	Total Operational Time this Perod (hours)	Total Groundwater Treated this Period (gallons)	Total Groundwater Treated to Date (gallons)[1]	Estimated TCE Removed this Period (lbs)	Estimated TCE Removed To Date (lbs)[1]
12/17/2019	1/16/2020	30	FAT	N/A	N/A	2,735,644	2,735,644	0.584	0.594[2]
1/16/2020	1/23/2020	7	PO1	65.0	N/A	657,484	3,393,128	0.140	0.735
1/23/2020	1/31/2020	8	PO1	63.8	186.7	714,316	4,107,444	0.152	0.887
1/31/2020	2/27/2020	27	PO2	65.2	655.2	2,409,478	6,516,922	0.492	1.378
2/27/2020	3/26/2020	28	PO3	65.3	664.0	2,442,034	8,958,956	0.372	1.750
3/26/2020	4/30/2020	35	PO4	65.0	841.2	3,092,764	12,051,720	0.472	2.222
4/30/2020	6/4/2020	35	PO5	65.1	839.0	3,076,686	15,128,406	0.468	2.690
6/4/2020	6/25/2020	21	PO6	64.4	502.8	1,900,185	17,028,591	0.283	2.973
6/25/2020	7/31/2020	36	PO7	50.7	882.2	3,912,503	20,941,094	0.588	3.561
7/31/2020	8/26/2020	26	PO8	64.7	612.4	2,569,346	23,510,440	0.381	3.942
8/26/2020	10/1/2020	36	PO9	66.8	867.9	4,208,785	27,719,225	0.603	4.545
10/2/2020	10/31/2020	29	PO10	66.3	713.2	3,211,728	30,930,953	0.388	4.933
11/1/2020	12/4/2020	33	PO11	59.8	814.4	3,215,046	34,145,999	0.406	5.339
12/4/2020	12/31/2020	27	PO12	57.5	656.8	1,962,156	36,108,155	0.236	5.575

Notes:

Estimated TCE totals adjusted from PO1 report due to percieved sampling error, as per PO2 Report text.

TCE removal estimates after PO3 based on TCE concentrations from most recent preceding events.

Due to totalizer errors at EW2, EW3, EW4, and EW5, the Total Groundwater Treated is based on the Total Flow Estimates listed in Appendix E.

[1] = Results are cumulative.

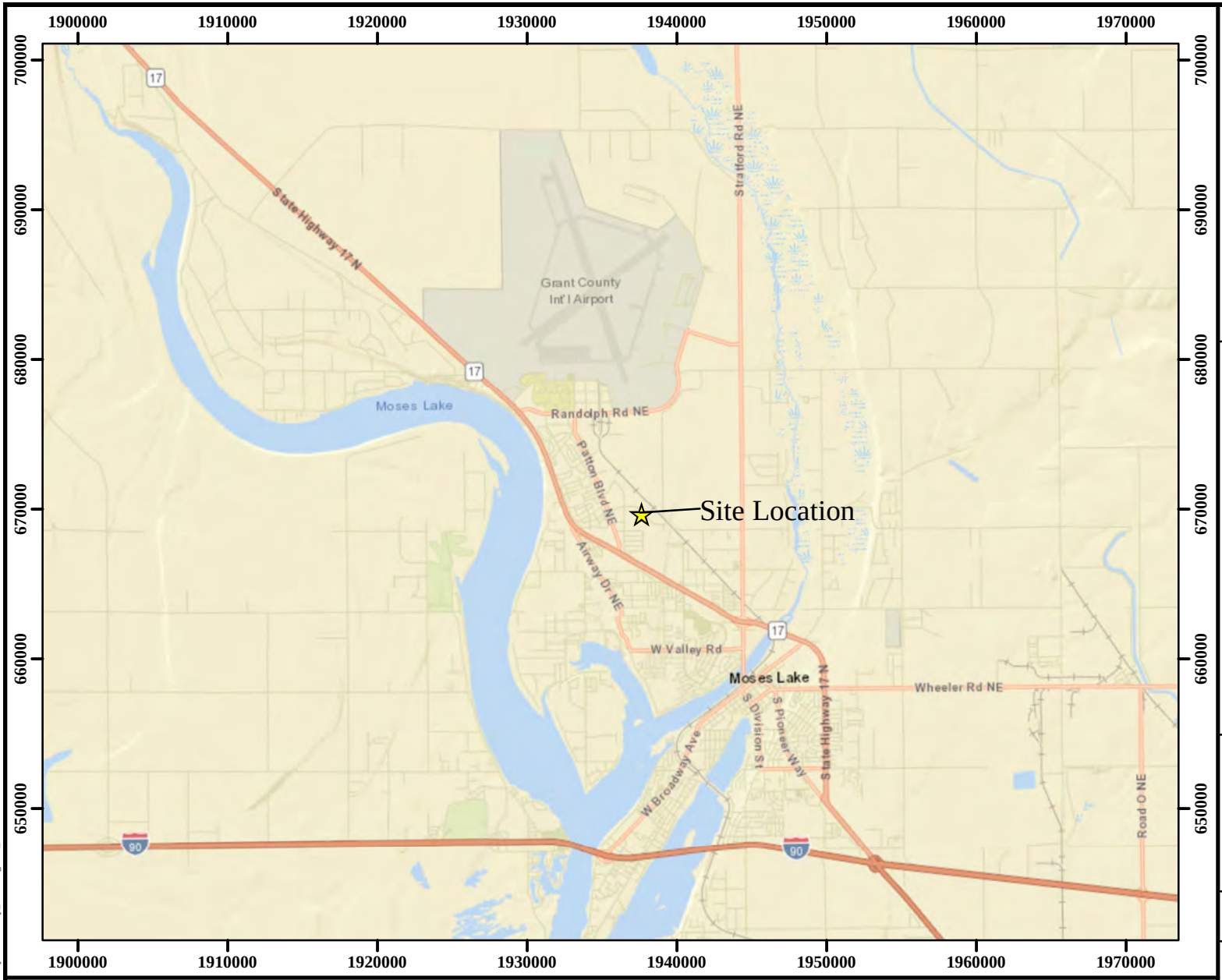
[2] = Includes estimated mass removal during pre-functional testing.

FAT = Facility Acceptance Test

N/A = Not Available

PO = Proof of Operability

FIGURES



Key Features

☆ Site Location

Moses Lake Wellfield
Contamination Site
Moses Lake, Washington

FIGURE 1

Moses Lake
Site Location

2020

NOTES:
Revision Date: 1/27/2020

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Basemap Date: None

1 inch = 10,000 feet

0 1,500 3,000 Meters

0 5,000 10,000 Feet

N W E S

Path: Y:\GIS_Projects\Moses_Lake\Projects\January_2020\Figure1_SiteLoc.mxd

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

December 30, 2020

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, New York 13421

Attn: Michael Grifasi

Title: Report of Data: Case 94541

Project: Moses Lake

Contract #: Prime contract # for DoD: W9128F-13-C-0022
Subcontract # 2016-02 PO # 1055-13-03

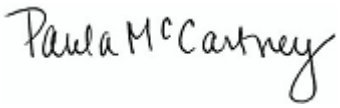
Dear Mr. Grifasi,

Six water samples were received December 22, 2020. Written results for the requested analysis are being provided on this December 30, 2020.

Results in this report apply to the samples analyzed in accordance with the email communication. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Diane Anderson, danderson@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.



Paula McCartney, Laboratory Director
APPL, Inc.

PM/da
Enclosure
cc: File

Data Validation Package

for

Moses Lake

ARF 94541

TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

CASE NARRATIVE

Case Narrative

ARF: 94541

Project: Moses Lake

Sample Receipt Information:

Six water samples were received December 22, 2020 at 3.2°C. The samples were assigned Analytical Request Form (ARF) number 94541. No exceptions were encountered.

Sample Preparation and Analysis:

For the EPA 8260B analysis, the samples were purged according to EPA method 8260B.

TSS was prepared and run according to the method.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request.

Exceptions, Abnormalities and Deviations:

EPA 8260B: In the continuing calibration 1223T19.D, two analytes increased in sensitivity above the upper limit. These analytes were not detected in the associated samples.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description	Prep DateTime	Analysis DateTime
94541	12/22/20	ML00-BVFF2B-1220	BA23602	12/21/20 8:20:00 AM	WATER	SM2540DLL	SM2540D TSS LOW LEVEL	12/28/20 9:00:00 PM	12/28/20 9:00:00 PM
94541	12/22/20	ML00-BVTW3-1220	BA23603	12/21/20 8:25:00 AM	WATER	SM2540DLL	SM2540D TSS LOW LEVEL	12/28/20 9:00:00 PM	12/28/20 9:00:00 PM
94541	12/22/20	ML00-BVLG13-1220	BA23604	12/21/20 8:40:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 2:16:00 AM	12/24/20 2:16:00 AM
94541	12/22/20	ML00-BVLG15-1220	BA23605	12/21/20 9:20:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 2:44:00 AM	12/24/20 2:44:00 AM
94541	12/22/20	ML00-BVLG17-1220	BA23606	12/21/20 9:30:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 3:12:00 AM	12/24/20 3:12:00 AM
94541	12/22/20	TRIP BLANK	BA23607	12/21/20 10:00:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/23/20 6:52:00 PM	12/23/20 6:52:00 PM

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, e.g. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, e.g. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, e.g. asphaltene, waste oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, e.g. asphaltene, waste oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

SAMPLE MANAGEMENT RECORDS

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 94541

Client: **FPM Remediations, Inc.**
Address: **181 Kenwood Avenue**
Oneida, NY 13421
Attn: **Mike Grifasi**
Phone: **315-336-7721** Fax:
Job: **1055-13-03 Moses Lake**
PO #: **subcontract #2016-02**
Chain of Custody (Y/N): **Y** # **49077**
RAD Screen (Y/N): **Y** pH (Y/N): **N**
Turn Around Type: **ONE WEEK**

Received by: **RBR**
Date Received: **12/22/20** Time: **13:30**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-5**
Chest Temp(s): **3.2°C**
Color: **VFRG/G-Blue**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Diane Anderson** DA 12/23/2020
QC Report Type: **DVP4/ERPIMS/WA**
Due Date: **12/29/20**

Comments:
AN: 10 business days for results, 15 business days for the Level IV report
DoD QSM v5; LOQ,LOD database, DL forms.

FR: login and report to m.grifasi@fpm-remediations.com,
EDD: APPL excel to m.grifasi@fpm-remediations.com,

prime contract #W9128F-13-C-0022

Sample Distribution:
VOA: 4-$86BMCALL
Wetlab: 2-$TSSLL

Charges:

Invoice To:

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ML00-BVFF2B-1220	BA23602W	12/21/20 08:20	$TSSLL
2.	ML00-BVTW3-1220	BA23603W	12/21/20 08:25	$TSSLL
3.	ML00-BVLG13-1220	BA23604W	12/21/20 08:40	$86BMCALL
4.	ML00-BVLG15-1220	BA23605W	12/21/20 09:20	$86BMCALL
5.	ML00-BVLG17-1220	BA23606W	12/21/20 09:30	$86BMCALL
6.	TRIP BLANK	BA23607W	12/21/20 10:00	$86BMCALL

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -5 UTC

APPL Sample Receipt Form

ARF# **94541**

Sample	Container Type	Count	p
BA23602	[1] PL Liter	1	NA
BA23603	[1] PL Liter	1	NA
BA23604	[13] VOAs - HCL	3	NA
BA23605	[13] VOAs - HCL	3	NA
BA23606	[13] VOAs - HCL	3	NA
BA23607	[13] VOAs - HCL	1	NA

Sample	Container Type	Count	p

94541

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 49077

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: FPM Remediations	Phone: 315-336-7721	Company Name: Same	Phone:
Address: 181 Kenwood Ave Oneida, NY 13421	Fax:	Address:	Fax:
Attn: Michael Grifasi		Attn:	

Project Name/Number	Sampler (Print)										Analysis Requested/Method Number												Date Shipped:
1055-13-03	Angela Stenhouse																						Carrier:
Purchase Order Number	Sampler (Signature)																						Waybill No.:
						Matrix																	Comments:
Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Aq	Sed.	Soil		TSS	VOC 8260B												
MLOO-BVFF2B-1220	Moses Lake	12/21/20	0820	PST	1	X				X													pH 6.72 14.6°C
MLOO-BVTW3-1020	Moses Lake	12/21/20	0825	PST	1	X				X													pH 6.67 13.9°C
MLOO-BVLG13-1220	Moses Lake	12/21/20	0840	PST	3	X					X												
MLOO-BVLG15-1220	Moses Lake	12/21/20	0920	PST	3	X					X												
MLOO-BVLG17-1220	Moses Lake	12/21/20	0930	PST	3	X					X												
Trip Blank	Moses Lake	12/21/20	1000	PST	1	X					X												

Shuttle Temperature: IRB @ 5.1/3.2°C

Turnaround Requested: Check one
~~Standard 2-3 wk~~ NO ~~One week~~ ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Angela Stenhouse	12/21/20	1048					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12/22/20	1330	

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 94541**

1) Project: 1055-13-03 Moses Lake Date Received: 12/22/20

2) Coolers: Number of Coolers: 1

3) No Were custody seals present and intact?
How many? 0 Name/Date on seal?

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: IRB CF:-1.9°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 5.1/3.2 2: 3: 4: 5: 6:
7: 8: 9: 10: 11: 12:

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA23607all
Smaller than a pea: BA23606all

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) NA Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number:
Lab notified if pH was not adequate:

Notes/Deficiencies:

Personnel receiving samples: RB Second reviewer: MA
Personnel labeling samples: MS
Project manager notified: RB Date/Time of notification 12/22/20
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG13-1220
Sample Collection Date: 12/21/20

ARF: 94541
APPL ID: BA23604
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T38
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG13-1220
Sample Collection Date: 12/21/20

ARF: 94541
APPL ID: BA23604
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	16	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.2	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	101	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T38
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
ARF: 94541
Sample ID: ML00-BVLG15-1220
APPL ID: BA23605
Sample Collection Date: 12/21/20
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T39
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG15-1220
Sample Collection Date: 12/21/20

ARF: 94541
APPL ID: BA23605
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	4.6	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	104	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.4	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T39
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

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181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG17-1220
Sample Collection Date: 12/21/20

ARF: 94541
APPL ID: BA23606
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T40
Instrument: Thor
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EPA 8260B WATER

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181 Kenwood Avenue
Oneida, NY 13421

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG17-1220
Sample Collection Date: 12/21/20

ARF: 94541
APPL ID: BA23606
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T40
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EPA 8260B WATER

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
ARF: 94541
Sample ID: TRIP BLANK
APPL ID: BA23607
Sample Collection Date: 12/21/20
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/23/20	12/23/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/23/20	12/23/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/23/20	12/23/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/23/20	12/23/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/23/20	12/23/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/23/20	12/23/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T22
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
ARF: 94541
Sample ID: TRIP BLANK
APPL ID: BA23607
Sample Collection Date: 12/21/20
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/23/20	12/23/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/23/20	12/23/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/23/20	12/23/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/23/20	12/23/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.6	85-114			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.8	89-112			%	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T22
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVFF2B-1220

APPL ID: BA23602

Sample Collection Date: 12/21/20

ARF: 94541

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM2540DLL	TOTAL SUSPENDED SOLIDS	1.7	1.0	0.80	0.40	mg/L	1	12/28/20	12/28/20

Printed: 12/30/20 1:46:26 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVTW3-1220

APPL ID: BA23603

Sample Collection Date: 12/21/20

ARF: 94541

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM2540DLL	TOTAL SUSPENDED SOLIDS	0.80 U	1.0	0.80	0.40	mg/L	1	12/28/20	12/28/20

Printed: 12/30/20 1:46:26 PM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94541

Case No: 94541 Date Analyzed: 12/23/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
AT201223-LCS	Lab Control Spike	81-118	98.4		85-114	99.2	
AT201223-LCSD	Lab Control SpikeD	81-118	100		85-114	102	
AT201223-BLK	Blank	81-118	102		85-114	99.0	
BA23607	TRIP BLANK	81-118	102		85-114	96.6	
BA23604	ML00-BVLG13-1220	81-118	102		85-114	97.2	
BA23605	ML00-BVLG15-1220	81-118	104		85-114	97.1	
BA23606	ML00-BVLG17-1220	81-118	103		85-114	100	

Comments: Batch: #86BMC-AT201223

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 94541

Case No: 94541 Date Analyzed: 12/23/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
AT201223-LCS	Lab Control Spike	80-119	99.2		89-112	102	
AT201223-LCSD	Lab Control SpikeD	80-119	100		89-112	101	
AT201223-BLK	Blank	80-119	99.7		89-112	101	
BA23607	TRIP BLANK	80-119	102		89-112	99.8	
BA23604	ML00-BVLG13-1220	80-119	101		89-112	101	
BA23605	ML00-BVLG15-1220	80-119	102		89-112	99.4	
BA23606	ML00-BVLG17-1220	80-119	102		89-112	100	

Comments: Batch: #86BMC-AT201223

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 94541

Case No: 94541 Date Analyzed: 12/23/20

Matrix: WATER Instrument: Thor

Blank ID: AT201223-BLK Time Analyzed: 1824

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT201223-LCS	Lab Control Spike	1223T19	12/23/20 1728
AT201223-LCSD	Lab Control SpikeD	1223T20	12/23/20 1756
AT201223-BLK	Blank	1223T21	12/23/20 1824
BA23607	TRIP BLANK	1223T22	12/23/20 1852
BA23604	ML00-BVLG13-1220	1223T38	12/24/20 0216
BA23605	ML00-BVLG15-1220	1223T39	12/24/20 0244
BA23606	ML00-BVLG17-1220	1223T40	12/24/20 0312

Comments: Batch: #86BMC-AT201223

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **AT2012W-23604 - 259950**
Batch ID: #86BMC-AT201223

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
BLANK	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
BLANK	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/23/20	12/23/20
BLANK	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
BLANK	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
BLANK	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
BLANK	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
BLANK	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/23/20	12/23/20
BLANK	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
BLANK	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.00 U	5.0	1.00	0.50	ug/L	12/23/20	12/23/20
BLANK	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
BLANK	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
BLANK	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
BLANK	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/23/20	12/23/20
BLANK	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/23/20	12/23/20
BLANK	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/23/20	12/23/20
BLANK	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
BLANK	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/23/20	12/23/20
BLANK	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
BLANK	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/23/20	12/23/20
BLANK	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/23/20	12/23/20
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
BLANK	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
BLANK	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
BLANK	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T21
Instrument: Thor
Sequence: 201222
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/20 1:37:01 PM

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **AT2012W-23604 - 259950**
Batch ID: #86BMC-AT201223

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/23/20	12/23/20
BLANK	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
BLANK	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/23/20	12/23/20
BLANK	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/23/20	12/23/20
BLANK	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/23/20	12/23/20
BLANK	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
BLANK	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/23/20	12/23/20
BLANK	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/23/20	12/23/20
BLANK	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/23/20	12/23/20
BLANK	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
BLANK	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
BLANK	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
BLANK	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
BLANK	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/23/20	12/23/20
BLANK	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/23/20	12/23/20
BLANK	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TRICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
BLANK	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/23/20	12/23/20
BLANK	SURROGATE: 1,2-DICHLOROET	102	81-118			%	12/23/20	12/23/20

Quant Method:T1222W.M
Run #:1223T21
Instrument:Thor
Sequence:201222
Initials:DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/20 1:37:01 PM

Method Blank
EPA 8260B WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **AT2012W-23604 - 259950**
Batch ID: #86BMC-AT201223

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	SURROGATE: 4-BROMOFLUORO	99.0	85-114			%	12/23/20	12/23/20
BLANK	SURROGATE: DIBROMOFLUOR	99.7	80-119			%	12/23/20	12/23/20
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T21
Instrument: Thor
Sequence: 201222
Initials: DG

GC SC-Blank-REG MDLs-DOD
Printed: 12/29/20 1:37:01 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94541
Case No:	94541	Date Analyzed:	12/23/20
Matrix:	WATER	Instrument:	Thor
LCS ID:	AT201223-LCS	Time Analyzed:	1728

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT201223-LCS	Lab Control Spike	1223T19	12/23/20 1728
AT201223-LCSD	Lab Control SpikeD	1223T20	12/23/20 1756
AT201223-BLK	Blank	1223T21	12/23/20 1824
BA23607	TRIP BLANK	1223T22	12/23/20 1852
BA23604	ML00-BVLG13-1220	1223T38	12/24/20 0216
BA23605	ML00-BVLG15-1220	1223T39	12/24/20 0244
BA23606	ML00-BVLG17-1220	1223T40	12/24/20 0312

Comments: Batch: #86BMC-AT201223

Laboratory Control Spike Recoveries
EPA 8260B WATER

APPL ID: **201223W-23604 LCS - 259950**
Batch ID: #86BMC-AT201223

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.2	10.3	102	103	78-124	0.98	20
1,1,1-TRICHLOROETHANE	10.00	10.9	11.5	109	115	74-131	5.4	20
1,1,2,2-TETRACHLOROETHANE	10.00	9.75	10.6	97.5	106	71-121	8.4	20
1,1,2-TRICHLOROETHANE	10.00	9.64	10.4	96.4	104	80-119	7.6	20
1,1-DICHLOROETHANE	10.00	10.2	10.5	102	105	77-125	2.9	20
1,1-DICHLOROETHENE	10.00	10.1	11.2	101	112	71-131	10.3	20
1,1-DICHLOROPROPENE	10.00	10.5	10.8	105	108	79-125	2.8	20
1,2,3-TRICHLOROBENZENE	10.00	10.1	10.5	101	105	69-129	3.9	20
1,2,3-TRICHLOROPROPANE	10.00	9.77	9.80	97.7	98.0	73-122	0.31	20
1,2,4-TRICHLOROBENZENE	10.00	10.2	10.6	102	106	69-130	3.8	20
1,2,4-TRIMETHYLBENZENE	10.00	10.7	10.9	107	109	78-124	1.9	20
1,2-DIBROMO-3-CHLOROPROPANE	10.00	9.74	8.99	97.4	89.9	62-128	8.0	20
1,2-DIBROMOETHANE	10.00	10.3	10.0	103	100	77-121	3.0	20
1,2-DICHLOROBENZENE	10.00	10.6	10.8	106	108	80-119	1.9	20
1,2-DICHLOROETHANE	10.00	10.0	10.1	100	101	73-128	1.00	20
1,2-DICHLOROPROPANE	10.00	9.96	10.3	99.6	103	78-122	3.4	20
1,3,5-TRIMETHYLBENZENE	10.00	10.9	11.5	109	115	75-124	5.4	20
1,3-DICHLOROBENZENE	10.00	10.1	10.6	101	106	80-119	4.8	20
1,3-DICHLOROPROPANE	10.00	10.4	10.8	104	108	80-119	3.8	20
1,4-DICHLOROBENZENE	10.00	10.4	10.4	104	104	79-118	0.0	20
2,2-DICHLOROPROPANE	10.00	10.5	10.9	105	109	67-139	3.7	20
2-BUTANONE	50.0	47.1	49.2	94.2	98.4	56-143	4.4	20
2-CHLOROTOLUENE	10.00	10.5	10.7	105	107	79-122	1.9	20
2-HEXANONE	50.0	47.3	50.3	94.6	101	57-139	6.1	20

Comments:

Primary	SPK	DUP
Quant Method :	T1222W.M	T1222W.M
Extraction Date :	12/23/20	12/23/20
Analysis Date :	12/23/20	12/23/20
Instrument :	Thor	Thor
Run :	1223T19	1223T20
Initials :	DG	

Laboratory Control Spike Recoveries
EPA 8260B WATER

APPL ID: **201223W-23604 LCS - 259950**
Batch ID: #86BMC-AT201223

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
4-CHLOROTOLUENE	10.00	10.6	11.0	106	110	78-122	3.7	20
4-METHYL-2-PENTANONE	50.0	47.1	50.3	94.2	101	70-130	6.6	20
ACETONE	50.0	43.6	47.1	87.2	94.2	39-160	7.7	20
BENZENE	10.00	10.3	10.4	103	104	79-120	0.97	20
BROMOBENZENE	10.00	10.3	10.6	103	106	80-120	2.9	20
BROMOCHLOROMETHANE	10.00	10.4	10.2	104	102	78-123	1.9	20
BROMODICHLOROMETHANE	10.00	10.2	10.1	102	101	79-125	0.99	20
BROMOFORM	10.00	10.0	10.3	100	103	66-130	3.0	20
BROMOMETHANE	10.00	11.0	10.6	110	106	53-141	3.7	20
CARBON DISULFIDE	10.00	10.5	10.4	105	104	64-133	0.96	20
CARBON TETRACHLORIDE	10.00	9.87	10.4	98.7	104	72-136	5.2	20
CHLOROBENZENE	10.00	10.4	10.7	104	107	82-118	2.8	20
CHLOROETHANE	10.00	10.9	11.7	109	117	60-138	7.1	20
CHLOROFORM	10.00	10.3	10.6	103	106	79-124	2.9	20
CHLOROMETHANE	10.00	10.3	10.5	103	105	50-139	1.9	20
CIS-1,2-DICHLOROETHENE	10.00	10.1	10.5	101	105	78-123	3.9	20
CIS-1,3-DICHLOROPROPENE	10.00	10.1	10.2	101	102	75-124	0.99	20
DIBROMOCHLOROMETHANE	10.00	10.0	9.95	100	99.5	74-126	0.50	20
DIBROMOMETHANE	10.00	10.4	10.5	104	105	79-123	0.96	20
DICHLORODIFLUOROMETHANE	10.00	12.5	12.5	125	125	32-152	0.0	20
ETHYLBENZENE	10.00	10.5	10.7	105	107	79-121	1.9	20
HEXACHLOROBUTADIENE	10.00	10.9	10.8	109	108	66-134	0.92	20
ISOPROPYLBENZENE	10.00	10.9	11.3	109	113	72-131	3.6	20
M,P-XYLENE	20.0	21.4	21.9	107	109	80-121	2.3	20

Comments: _____

Primary	SPK	DUP
Quant Method :	T1222W.M	T1222W.M
Extraction Date :	12/23/20	12/23/20
Analysis Date :	12/23/20	12/23/20
Instrument :	Thor	Thor
Run :	1223T19	1223T20
Initials :	DG	

Printed: 12/29/20 1:36:45 PM
APPL Standard LCSD

Laboratory Control Spike Recoveries
EPA 8260B WATER

APPL ID: **201223W-23604 LCS - 259950**
Batch ID: #86BMC-AT201223

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHYL TERT-BUTYL ETHER	10.00	9.70	9.90	97.0	99.0	71-124	2.0	20
METHYLENE CHLORIDE	10.00	10.0	10.6	100	106	74-124	5.8	20
N-BUTYLBENZENE	10.00	10.7	11.0	107	110	75-128	2.8	20
N-PROPYLBENZENE	10.00	10.7	11.0	107	110	76-126	2.8	20
NAPHTHALENE	10.00	9.94	10.3	99.4	103	61-128	3.6	20
O-XYLENE	10.00	10.6	10.6	106	106	78-122	0.0	20
P-ISOPROPYLTOLUENE	10.00	10.9	11.2	109	112	77-127	2.7	20
SEC-BUTYLBENZENE	10.00	10.6	11.2	106	112	77-126	5.5	20
STYRENE	10.00	10.4	10.5	104	105	78-123	0.96	20
TERT-BUTYL ALCOHOL	125	111	125	88.8	100	68-129	11.9	20
TERT-BUTYLBENZENE	10.00	10.9	11.3	109	113	78-124	3.6	20
TETRACHLOROETHENE	10.00	10.9	10.8	109	108	74-129	0.92	20
TOLUENE	10.00	10.4	10.4	104	104	80-121	0.0	20
TOTAL XYLENES	30.0	32.0	32.5	107	108	79-121	1.6	20
TRANS-1,2-DICHLOROETHENE	10.00	10.1	10.6	101	106	75-124	4.8	20
TRANS-1,3-DICHLOROPROPENE	10.00	9.83	10.5	98.3	105	73-127	6.6	20
TRICHLOROETHENE	10.00	10.8	11.0	108	110	79-123	1.8	20
TRICHLOROFLUOROMETHANE	10.00	12.6	13.1	126	131	65-141	3.9	20
VINYL CHLORIDE	10.00	11.3	12.5	113	125	58-137	10.1	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.6	25.0	98.4	100	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.8	25.5	99.2	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	24.8	25.1	99.2	100	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	25.6	25.2	102	101	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	T1222W.M	T1222W.M
Extraction Date :	12/23/20	12/23/20
Analysis Date :	12/23/20	12/23/20
Instrument :	Thor	Thor
Run :	1223T19	1223T20
Initials :	DG	

Printed: 12/29/20 1:36:46 PM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 1222T00.D

SDG No:
Date Analyzed: 12/22/20
Instrument: Thor
Time Analyzed: 16:34

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 12/2	1222T02.D	12/22/20 17:31
2		0.5ug/L VOC STD 12/2	1222T03.D	12/22/20 17:58
3		1ug/L VOC STD 12/22/	1222T04.D	12/22/20 18:26
4		2ug/L VOC STD 12/22/	1222T05.D	12/22/20 18:54
5		5ug/L VOC STD 12/22/	1222T06.D	12/22/20 19:22
6		10ug/L VOC STD 12/22	1222T07.D	12/22/20 19:50
7		20ug/L VOC STD 12/22	1222T08.D	12/22/20 20:18
8		40ug/L VOC STD 12/22	1222T09.D	12/22/20 20:46
9		100ug/L VOC STD 12/2	1222T10.D	12/22/20 21:13
10		(SS) 10ug/L VOC STD	1222T12.D	12/22/20 22:09
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.5
75	30 - 60% of mass 95	48.1
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.4
173	0 - 2.05% of mass 174	0.9
174	50 - 200% of mass 95	98.4
175	5 - 9% of mass 174	7.2
176	95 - 101% of mass 174	100.2
177	5 - 9% of mass 176	5.9

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 94541
Case No: 94541 Date Analyzed: 12/23/20
Matrix: Water Instrument: Thor
ID: 1223T16.D Time Analyzed: 16:05

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	201223A CCV/LCS 10ug	1223T19.D	12/23/20 17:28
2	Lab Control SpikeD	201223A LCSD 10ug/L	1223T20.D	12/23/20 17:56
3	Blank	201223A BLK	1223T21.D	12/23/20 18:24
4	TRIP BLANK	BA23607W01	1223T22.D	12/23/20 18:52
5	ML00-BVLG13-1220	BA23604W01	1223T38.D	12/24/20 2:16
6	ML00-BVLG15-1220	BA23605W01	1223T39.D	12/24/20 2:44
7	ML00-BVLG17-1220	BA23606W01	1223T40.D	12/24/20 3:12
8		Ending CCV 10ug/L 12	1223T43.D	12/24/20 4:36
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.5
75	30 - 60% of mass 95	48.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2.05% of mass 174	1.0
174	50 - 200% of mass 95	93.6
175	5 - 9% of mass 174	8.1
176	95 - 101% of mass 174	96.9
177	5 - 9% of mass 176	7.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 1222T07.D Date Analyzed: 12/22/20

Instrument ID: Thor Time Analyzed: 19:50

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	555464	6.57	467644	10.02	294878	12.59
	UPPER LIMIT	1110928	6.74	935288	10.19	589756	12.76
	LOWER LIMIT	277732	6.40	233822	9.85	147439	12.42
	SAMPLE NO.						
01	(SS) 10ug/L VOC STD 1	557693	6.57	469178	10.02	288980	12.59
02	201223A CCV/LCS 10ug	555731	6.57	461656	10.02	288415	12.59
03	201223A LCSD 10ug/L	555352	6.57	465158	10.02	285905	12.58
04	201223A BLK	549377	6.57	462729	10.02	280755	12.59
05	BA23607W01	547220	6.57	465155	10.02	280628	12.59
06	BA23604W01	521042	6.57	441496	10.02	267024	12.59
07	BA23605W01	513616	6.57	438104	10.02	266584	12.59
08	BA23606W01	512483	6.57	431921	10.02	262899	12.59
09	Ending CCV 10ug/L 12/2	519475	6.57	433870	10.02	274775	12.58
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

SM2540DLL

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	94541
Case No:	94541	Date Analyzed:	12/28/20
Matrix:	WATER	Instrument:	Mettler
Blank ID:	A201222-BLK	Time Analyzed:	2100

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA23603	ML00-BVTW3-1220		12/28/20 2100
BA23602	ML00-BVFF2B-1220		12/28/20 2100
A201222-LCSD	Lab Control SpikeD		12/28/20 2100
A201222-LCS	Lab Control Spike		12/28/20 2100
A201222-BLK	Blank		12/28/20 2100

Comments: Batch: #TSSLL-A201222

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM2540DL	TOTAL SUSPENDE	0.80 U	1.0	0.80	0.40	mg/L	12/28/20	12/28/20	#TSSLL-A201222-BA23603

Wetlab SC-Blank-REG MDLs
Printed: 12/30/20 1:45:24 PM

SM2540DLL

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	94541
Case No:	94541	Date Analyzed:	12/28/20
Matrix:	WATER	Instrument:	Mettler
LCS ID:	A201222-LCS	Time Analyzed:	2100

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA23603	ML00-BVTW3-1220		12/28/20 2100
BA23602	ML00-BVFF2B-1220		12/28/20 2100
A201222-LCSD	Lab Control SpikeD		12/28/20 2100
A201222-LCS	Lab Control Spike		12/28/20 2100
A201222-BLK	Blank		12/28/20 2100

Comments: Batch: #TSSLL-A201222

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM2540DL	TOTAL SUSPENDED SOLI	10	9.40	8.60	94.0	86.0	8.9	20	80-120	12/28/20	12/28/20	12/28/20	12/28/20	#TSSLL-A201222-BA2360

Comments:

ORGANICS

Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/22/20
Matrix: water Instrument: Thor Initials: DG

		Compound	1222T02.D	1222T03 D	1222T04.D	1222T05 D	1222T06 D	1222T07.D	1222T08.D	1222T09.D	1222T10.D		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TML	Dichlorodifluoromethane		0.0773	0.0855	0.0898	0.0550	0.0711	0.0831	0.0996	0.1043		0.08	19	TM	0.998		
4	TML	Freon 114		0.0560	0.0792	0.0740	0.0710	0.0859	0.0936	0.1000	0.0984		0.08	18	TM	1.000		
5	TM**	Chloromethane		0.1632	0.1632	0.1361	0.1233	0.1215	0.1179	0.1246	0.1136		0.13	15	TM**			
6	TM*	Vinyl chloride		0.0915	0.1092	0.0996	0.0888	0.0912	0.1033	0.1114	0.1068		0.10	8.8	TM*			
7		Butane																
8	TM	2-Chloro-1,1,1-trifluoroethane													TM			
9	TML	Bromomethane		0.0751	0.0998	0.0707	0.0724	0.0659	0.0634	0.0595	0.0539		0.07	20	TM	0.998		
10	TML	Chloroethane		0.1108	0.0886	0.0745	0.0651	0.0662	0.0682	0.0731	0.0677		0.08	20	TM	0.999		
11	TM	Dichlorofluoromethane		0.2172	0.1965	0.2011	0.2025	0.1964	0.2020	0.2018	0.1949		0.20	3.5	TM			
12	TM	Trichlorofluoromethane		0.1292	0.1498	0.1506	0.1170	0.1242	0.1420	0.1644	0.1583		0.14	12	TM			
13	TM	Pentane													TM			
14	TM	Diethyl ether													TM			
15	TM	1,2 Dichlorotrifluoroethane													TM			
16	TM	Acrolein		0.0053	0.0051	0.0041	0.0040	0.0046	0.0050	0.0046	0.0047		0.00	9.8	TM			
17	TM	Acetone	0.0483	0.0391	0.0347	0.0336	0.0338	0.0327	0.0328	0.0350	0.0351		0.04	14	TM			
18	TML	Freon-113		0.0479	0.0459	0.0422	0.0357	0.0425	0.0412	0.0459	0.0433		0.04	8.7	TM	0.999		
19	TM*	1,1-DCE		0.1391	0.1386	0.1463	0.1504	0.1524	0.1603	0.1582	0.1552		0.15	5.4	TM*			
20	TM	2-Propanol													TM			
21	TM	Acetonitrile		0.0037	0.0034	0.0037	0.0036	0.0033	0.0035	0.0034	0.0036		0.00	3.8	TM			
22	TM	t-Butanol	0.0040	0.0039	0.0037	0.0035	0.0039	0.0039	0.0036	0.0040	0.0035		0.00	5.3	TM			
23	TM	Methyl Acetate			0.1141	0.0875	0.0860	0.0764	0.0780	0.0794	0.0819		0.09	15	TM			
24	TML	Iodomethane		0.0197	0.0310	0.0329	0.0447	0.0602	0.0827	0.1001	0.1108		0.06	57	TM	0.997		
25	TM	Acrylonitrile			0.0380	0.0331	0.0318	0.0363	0.0322	0.0347	0.0343		0.03	6.4	TM			
26	TML	Methylene chloride		0.0903	0.0687	0.0594	0.0580	0.0597	0.0555	0.0592	0.0553		0.06	18	TM	0.999		
27	TM	Carbon disulfide		0.1522	0.1669	0.1444	0.1597	0.1535	0.1652	0.1660	0.1602		0.16	5.0	TM			
28	TM	*Methyl t-butyl ether (MtBE)*		*0.3265*	*0.3314*	*0.3209*	*0.3492*	*0.3257*	*0.3185*	*0.3273*	*0.3238*		0.33	2.9	TM			
29	TM	Trans-1,2-DCE		0.1603	0.1731	0.1392	0.1476	0.1507	0.1548	0.1547	0.1492		0.15	6.5	TM			
30	TM	Hexane													TM			
31	TM	Diisopropyl Ether		0.3397	0.3421	0.3386	0.3524	0.3544	0.3568	0.3490	0.3429		0.35	2.0	TM			
32	TM	2,2-Dichloro-1,1,1-trifluoroethane													TM			
33	TM**	1,1-DCA		0.1939	0.1852	0.1911	0.1958	0.1931	0.1993	0.1977	0.1896		0.19	2.4	TM**			
34	TM	Vinyl Acetate				0.0712	0.0777	0.0750	0.0695	0.0853	0.0704		0.07	8.0	TM			
35	TM	Ethyl tert Butyl Ether		0.3018	0.3403	0.3476	0.3530	0.3378	0.3481	0.3543	0.3501		0.34	5.0	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water
SDG No:
Initial Cal. Date: 12/22/20
Instrument: Thor
Initials: DG

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	MEK (2-Butanone)	0.0546	0.0503	0.0502	0.0491	0.0506	0.0482	0.0509	0.0516	0.0518		0.05	3.6	TM			
37	TM	Cis-1,2-DCE		0.2016	0.1875	0.1823	0.1880	0.1901	0.1885	0.1921	0.1831		0.19	3.2	TM			
38	TM	2,2-Dichloropropane		0.1883	0.1875	0.1789	0.1803	0.1761	0.1859	0.1866	0.1794		0.18	2.6	TM			
39	TM	2-Methylpentane													TM			
40	TM	3-Methylpentane		0.0776	0.0729	0.0655	0.0704	0.0682	0.0687	0.0701	0.0684		0.07	5.2	TM			
41	TM*	Chloroform		0.1965	0.2222	0.2117	0.2295	0.2230	0.2255	0.2254	0.2183		0.22	4.8	TM*			
42	TM	Bromochloromethane		0.0893	0.1025	0.0976	0.1032	0.1026	0.0977	0.1005	0.0970		0.10	4.6	TM			
43	S	Dibromofluoromethane(S)	0.2933	0.2859	0.2570	0.2488	0.2627	0.2664	0.2668	0.2714	0.2543		0.27	5.4	S			
44	TM	1,1,1-TCA		0.0755	0.0899	0.0857	0.0803	0.0853	0.0858	0.0888	0.0869		0.08	5.6	TM			
45	TM	Cyclohexane		0.1325	0.1689	0.1473	0.1335	0.1573	0.1674	0.1710	0.1673		0.16	10	TM			
46	TM	1,1-Dichloropropene		0.1474	0.1542	0.1398	0.1462	0.1496	0.1601	0.1591	0.1553		0.15	4.6	TM			
47	TM	2,2,4-Trimethylpentane		0.3079	0.2726	0.2625	0.2533	0.2876	0.3075	0.3183	0.3124		0.29	8.6	TM			
48	S	1,2-DCA-D4(S)	0.3341	0.3286	0.2924	0.2837	0.3047	0.3032	0.3038	0.3066	0.2898		0.31	5.5	S			
49	TML	Carbon Tetrachloride		0.1106	0.1179	0.1495	0.1421	0.1571	0.1634	0.1703	0.1711		0.15	16	TM	1.000		
50	TM	Tert Amyl Methyl Ether		0.3455	0.3369	0.3193	0.3376	0.3437	0.3335	0.3418	0.3336		0.34	2.4	TM			
51	TM	Methylcyclopentane													TM			
52	TM	1,2-DCA		0.1917	0.1721	0.1819	0.1915	0.1885	0.1874	0.1849	0.1788		0.18	3.7	TM			
53	TM	Benzene		0.5003	0.4890	0.4495	0.4744	0.4712	0.4873	0.4804	0.4660		0.48	3.3	TM			
54	TM	TCE		0.1187	0.1369	0.1360	0.1361	0.1401	0.1441	0.1475	0.1420		0.14	6.3	TM			
55	TM	2-Pentanone		0.0860	0.0806	0.0797	0.0649	0.0802	0.0814	0.0882	0.0770		0.08	8.8	TM			
56	TM*	1,2-Dichloropropane		0.1254	0.1310	0.1152	0.1275	0.1222	0.1274	0.1238	0.1221		0.12	3.8	TM*			
57	TM	Bromodichloromethane		0.1943	0.1667	0.1723	0.1866	0.1761	0.1802	0.1788	0.1794		0.18	4.7	TM			
58	TM	Methyl Cyclohexane		0.1126	0.1626	0.1416	0.1433	0.1673	0.1732	0.1813	0.1792		0.16	15	TM			
59	TM	Dibromomethane		0.1063	0.1044	0.1102	0.1102	0.1133	0.1155	0.1153	0.1126		0.11	3.6	TM			
60	TM	MIBK (methyl isobutyl ketone	0.1171	0.1089	0.1109	0.1099	0.1122	0.1075	0.1083	0.1171	0.1154		0.11	3.3	TM			
61	TM	1-Bromo-2-chloroethane		0.0872	0.0909	0.0917	0.0976	0.0977	0.0960	0.0969	0.0916		0.09	4.1	TM			
62	TM	2-Chloroethyl vinyl ether													TM			
63	TM	Cis-1,3-Dichloropropene		0.2228	0.2321	0.2075	0.2171	0.2215	0.2223	0.2224	0.2188		0.22	3.1	TM			
64	TM*	Toluene		0.5165	0.5239	0.5345	0.5532	0.5254	0.5463	0.5497	0.5366		0.54	2.5	TM*			
65	TM	Trans-1,3-Dichloropropene		0.1747	0.2059	0.2014	0.1980	0.2053	0.2003	0.2048	0.2004		0.20	5.1	TM			
66	TM	1,1,2-TCA		0.1293	0.1251	0.1206	0.1202	0.1180	0.1176	0.1215	0.1171		0.12	3.4	TM			
67	TM	2-Hexanone	0.0813	0.0718	0.0737	0.0758	0.0751	0.0715	0.0737	0.0790	0.0811		0.08	4.9	TM			
68	I	Chlorobenzene-D5 (IS)																
69	S	Toluene-D8(S)	1.322	1.287	1.122	1.132	1.172	1.199	1.193	1.187	1.128		1.2	5.8	S			
70	TM	1,2-EDB		0.1405	0.1514	0.1524	0.1589	0.1607	0.1511	0.1541	0.1551		0.15	4.0	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/22/20
Matrix: water Instrument: Thor Initials: DG

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	Tetrachloroethene		0.2564	0.2420	0.2301	0.2298	0.2297	0.2367	0.2319	0.2195		0.23	4.7	TM			
72	TML	1-Chlorohexane		0.2984	0.2154	0.1955	0.1652	0.1697	0.1766	0.1814	0.1847		0.20	22	TM	1.000		
73	TM	1,1,1,2-Tetrachloroethane		0.1851	0.1750	0.1669	0.1694	0.1780	0.1706	0.1729	0.1725		0.17	3.3	TM			
74	TM	m&p-Xylene		0.5279	0.5626	0.5425	0.5584	0.5627	0.5860	0.5848	0.5763		0.56	3.6	TM			
75	TM	o-Xylene		0.5761	0.5883	0.5658	0.6172	0.6225	0.6240	0.6237	0.6080		0.60	3.9	TM			
76	TM	Styrene		0.4446	0.4387	0.4334	0.4613	0.4709	0.4791	0.4940	0.4930		0.46	5.1	TM			
77	S	4-Bromofluorobenzene(S)	0.5453	0.5069	0.4479	0.4576	0.4663	0.4872	0.4869	0.4900	0.4706		0.48	6.0	S			
78	TM	1,3-Dichloropropane		0.2211	0.2316	0.2433	0.2340	0.2423	0.2410	0.2420	0.2375		0.24	3.2	TM			
79	TM	Dibromochloromethane		0.1857	0.1696	0.1746	0.1783	0.1805	0.1887	0.1828	0.1847		0.18	3.5	TM			
80	TM**	Chlorobenzene		0.4355	0.4346	0.4210	0.4353	0.4427	0.4490	0.4377	0.4361		0.44	1.8	TM**			
81	TM*	Ethylbenzene		0.6730	0.7551	0.7066	0.7208	0.7433	0.7452	0.7434	0.7355		0.73	3.7	TM*			
82	TM**	Bromoform		0.1378	0.1367	0.1305	0.1458	0.1413	0.1433	0.1473	0.1482		0.14	4.3	TM**			
83	I	1,4-Dichlorobenzene-D (IS)																
84	TM	Isopropylbenzene		1.136	1.109	1.105	1.175	1.167	1.227	1.222	1.148		1.2	4.0	TM			
85	TM**	1,1,2,2-Tetrachloroethane		0.2810	0.2810	0.3045	0.3108	0.2883	0.2866	0.3034	0.2960		0.29	3.9	TM**			
86	TM	1,2,3-Trichloropropane		0.0805	0.1014	0.1028	0.1101	0.1015	0.0994	0.1005	0.0964		0.10	8.5	TM			
87	TM	t-1,4-Dichloro-2-Butene			0.0419	0.0528	0.0590	0.0666	0.0589	0.0619	0.0649		0.06	14	TM			
88	TM	Bromobenzene		0.3637	0.3895	0.3572	0.3711	0.3729	0.3670	0.3666	0.3500		0.37	3.2	TM			
89	TM	n-Propylbenzene		1.335	1.334	1.261	1.305	1.325	1.381	1.386	1.319		1.3	3.0	TM			
90	TM	4-Ethyltoluene		1.135	1.015	1.065	1.133	1.163	1.205	1.206	1.164		1.1	5.9	TM			
91	TM	2-Chlorotoluene		0.9191	1.031	0.9625	0.9509	0.9547	0.9844	0.9599	0.9235		0.96	3.7	TM			
92	TM	1,3,5-Trimethylbenzene		0.9207	0.8691	0.9118	0.9669	0.9776	1.050	1.066	1.020		0.97	7.2	TM			
93	TM	4-Chlorotoluene		0.9471	1.003	0.9628	1.003	1.014	1.015	1.011	0.9684		0.99	2.7	TM			
94	TM	Tert-Butylbenzene		0.9300	1.001	0.9425	1.008	1.010	1.069	1.048	1.019		1.0	4.7	TM			
95	TM	1,2,4-Trimethylbenzene		1.029	0.9694	0.9476	0.9475	0.9847	1.062	1.086	1.058		1.0	5.4	TM			
96	TM	Sec-Butylbenzene		1.206	1.210	1.201	1.237	1.226	1.295	1.295	1.254		1.2	3.1	TM			
97	TM	p-Isopropyltoluene		1.032	1.027	1.026	1.088	1.074	1.161	1.173	1.135		1.1	5.6	TM			
98	TM	Benzyl Chloride		0.4465	0.4242	0.3799	0.4040	0.3951	0.4060	0.4196	0.4530		0.42	6.0	TM			
99	TM	1,3-DCB		0.6980	0.6750	0.6478	0.6713	0.6560	0.6799	0.6612	0.6478		0.67	2.6	TM			
100	TM	1,4-DCB		0.7007	0.6595	0.6720	0.6813	0.6778	0.6905	0.6774	0.6617		0.68	2.0	TM			
101	TM	n-Butylbenzene		0.9546	0.8292	0.8243	0.8846	0.8776	0.9565	0.9632	0.9570		0.91	6.5	TM			
102	TM	1,2-DCB		0.5504	0.6576	0.6247	0.6672	0.6537	0.6665	0.6607	0.6629		0.64	6.2	TM			
103	TML	Hexachloroethane		0.0880	0.1147	0.1165	0.1223	0.1273	0.1424	0.1572	0.1630		0.13	19	TM	0.999		
104	TM	1,2-Dibromo-3-chloropropane		0.0758	0.0691	0.0812	0.0775	0.0771	0.0763	0.0839	0.0875		0.08	7.2	TM			
105	TM	1,2,4-Trichlorobenzene		0.5191	0.4619	0.4411	0.4903	0.5039	0.5184	0.5343	0.5568		0.50	7.5	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/22/20
Matrix: water Instrument: Thor Initials: DG

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
106	TM	Hexachlorobutadiene		0.2444	0.2260	0.2422	0.2316	0.2484	0.2595	0.2654	0.2693		0.25	6.3	TM			
107	TM	Naphthalene			0.3901	0.4006	0.4281	0.4593	0.4807	0.5177	0.5342		0.46	12	TM			
108	TM	1,2,3-Trichlorobenzene		0.5423	0.4656	0.4317	0.4663	0.4681	0.4928	0.5205	0.5276		0.49	7.8	TM			
109																		
110																		
111																		
112																		
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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T02.D Vial: 2
Acq On : 22 Dec 20 17:31 Operator:
Sample : 0.3ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	555725	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	468339	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	281074	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	32598	5.48	ppb		0.00
Spiked Amount 25.000			Recovery = 21.936%				
48) 1,2-DCA-D4(S)	6.14	65	37135	5.47	ppb		0.00
Spiked Amount 25.000			Recovery = 21.896%				
69) Toluene-D8(S)	8.42	98	123814	5.54	ppb		0.00
Spiked Amount 25.000			Recovery = 22.148%				
77) 4-Bromofluorobenzene(S)	11.32	95	51074	5.63	ppb		0.00
Spiked Amount 25.000			Recovery = 22.520%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	431	1.86	ppb		99
4) Freon 114	1.29	85	237	0.78	ppb	#	67
5) Chloromethane	1.33	50	1375	0.47	ppb	#	85
6) Vinyl chloride	1.43	62	812	0.36	ppb	#	87
9) Bromomethane	1.72	96	735	-1.12	ppb	#	62
10) Chloroethane	1.82	64	780	0.17	ppb	#	83
11) Dichlorofluoromethane	2.01	67	1211	0.27	ppb	#	83
12) Trichlorofluoromethane	2.05	101	658	0.21	ppb	#	50
16) Acrolein	2.48	56	1331	12.86	ppb	#	68
17) Acetone	2.67	43	5364	6.68	ppb		91
18) Freon-113	2.61	101	191	0.31	ppb	#	62
19) 1,1-DCE	2.58	61	770	0.23	ppb	#	81
21) Acetonitrile	2.99	40	699	8.92	ppb	#	77
22) t-Butanol	3.43	59	882	10.50	ppb		93
23) Methyl Acetate	3.07	43	861	0.45	ppb	#	51
24) Iodomethane	2.74	142	110	2.68	ppb	#	41
25) Acrylonitrile	3.51	52	211	0.28	ppb	#	68
27) Carbon disulfide	2.80	76	1146	0.33	ppb	#	71
28) Methyl t-butyl ether (MtBE	3.59	73	2579	0.35	ppb		95
29) Trans-1,2-DCE	3.54	61	1020	0.30	ppb		87
31) Diisopropyl Ether	4.38	45	2183	0.28	ppb		91
33) 1,1-DCA	4.20	63	1249	0.29	ppb	#	80
34) Vinyl Acetate	4.34	43	547	0.33	ppb	#	73
35) Ethyl tert Butyl Ether	4.94	59	2237	0.29	ppb		95
36) MEK (2-Butanone)	5.14	43	6069	5.37	ppb		97
37) Cis-1,2-DCE	5.06	61	1305	0.31	ppb	#	86
38) 2,2-Dichloropropane	5.05	77	1130	0.28	ppb	#	51
40) 3-Methylpentane	3.60	57	503	0.32	ppb	#	47
41) Chloroform	5.52	83	1655	0.34	ppb		95
42) Bromochloromethane	5.38	49	630	0.29	ppb	#	75
44) 1,1,1-TCA	5.73	97	649	0.34	ppb	#	86
45) Cyclohexane	5.79	56	557	0.16	ppb		92
46) 1,1-Dichloropropene	5.95	75	1007	0.30	ppb	#	68
47) 2,2,4-Trimethylpentane	6.35	57	2053	0.32	ppb		95
49) Carbon Tetrachloride	5.94	117	410	0.65	ppb	#	75
50) Tert Amyl Methyl Ether	6.41	73	2518	0.34	ppb		92
52) 1,2-DCA	6.24	62	1330	0.32	ppb	#	78
53) Benzene	6.20	78	3643	0.34	ppb		94
54) TCE	7.02	130	701	0.23	ppb	#	82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T02.D Vial: 2
Acq On : 22 Dec 20 17:31 Operator:
Sample : 0.3ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

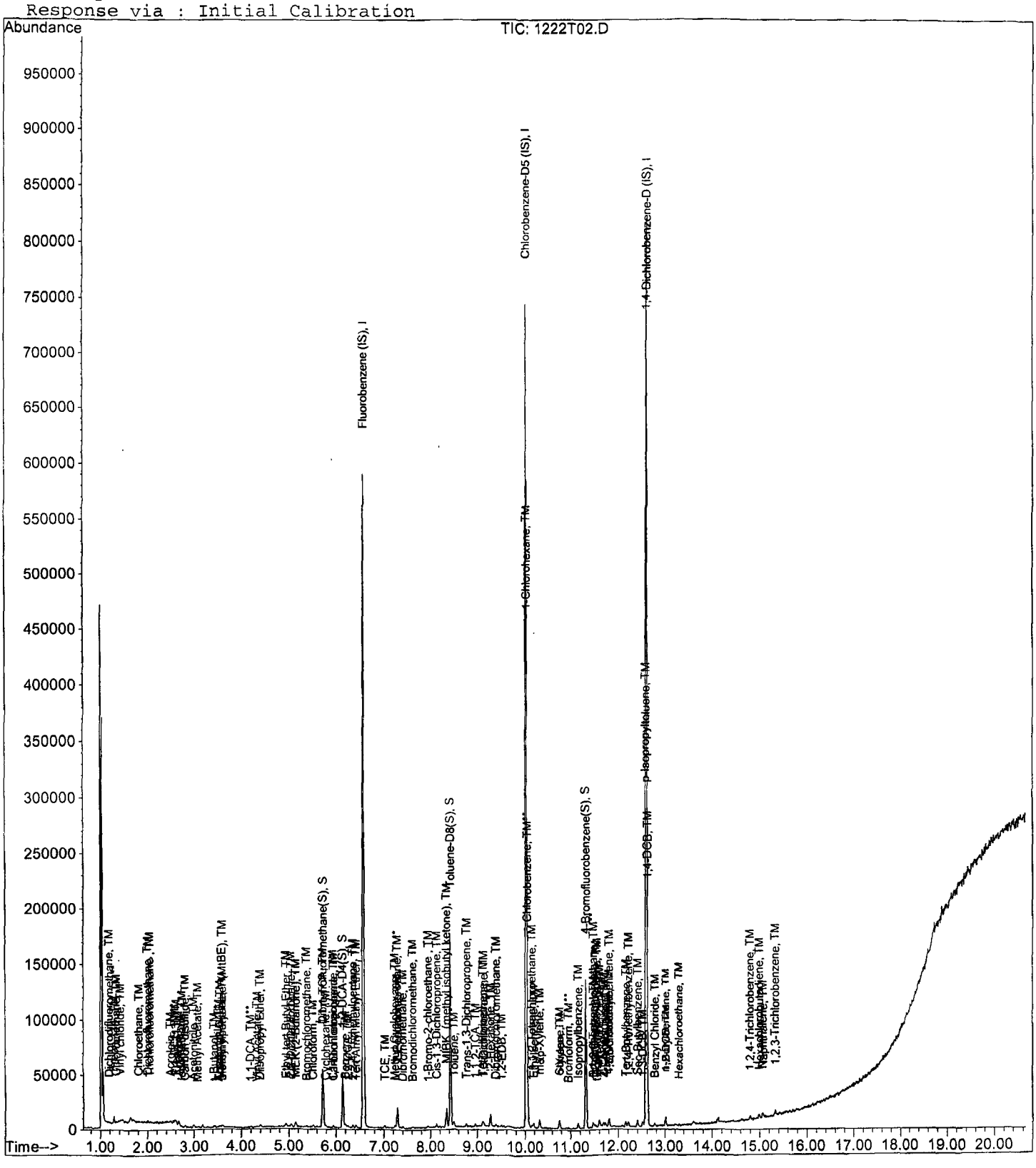
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	7.28	43	18927	10.68	ppb		97
56)	1,2-Dichloropropane	7.27	63	831	0.30	ppb	#	86
57)	Bromodichloromethane	7.61	83	1002	0.25	ppb		95
58)	Methyl Cyclohexane	7.23	83	716	0.20	ppb		86
59)	Dibromomethane	7.40	174	671	0.27	ppb	#	80
60)	MIBK (methyl isobutyl ket	8.34	43	13011	5.23	ppb	#	92
61)	1-Bromo-2-chloroethane	7.95	63	522	0.25	ppb	#	69
63)	Cis-1,3-Dichloropropene	8.13	75	1453	0.30	ppb	#	92
64)	Toluene	8.50	91	3306	0.28	ppb		97
65)	Trans-1,3-Dichloropropene	8.76	75	1363	0.31	ppb	#	80
66)	1,1,2-TCA	8.96	97	935	0.35	ppb	#	79
67)	2-Hexanone	9.27	43	9035	5.36	ppb	#	87
70)	1,2-EDB	9.50	107	827	0.29	ppb	#	81
71)	Tetrachloroethene	9.11	166	985	0.22	ppb	#	83
72)	1-Chlorohexane	10.04	91	1746	0.78	ppb		87
73)	1,1,1,2-Tetrachloroethane	10.14	131	840	0.26	ppb	#	85
74)	m&p-Xylene	10.32	91	5740	0.54	ppb		100
75)	o-Xylene	10.75	91	3019	0.27	ppb	#	83
76)	Styrene	10.77	104	2089	0.24	ppb		90
78)	1,3-Dichloropropane	9.13	76	1550	0.35	ppb	#	77
79)	Dibromochloromethane	9.37	129	905	0.27	ppb	#	79
80)	Chlorobenzene	10.05	112	2440	0.30	ppb		97
81)	Ethylbenzene	10.19	91	3872	0.28	ppb		98
82)	Bromoform	10.95	173	366	0.14	ppb	#	32
84)	Isopropylbenzene	11.16	105	3538	0.27	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.48	83	1038	0.31	ppb	#	58
86)	1,2,3-Trichloropropane	11.52	110	314	0.28	ppb	#	47
87)	t-1,4-Dichloro-2-Butene	11.55	53	52	0.08	ppb	#	11
88)	Bromobenzene	11.48	156	1142	0.28	ppb	#	45
89)	n-Propylbenzene	11.61	91	4694	0.31	ppb		98
90)	4-Ethyltoluene	11.74	105	3640	0.29	ppb		90
91)	2-Chlorotoluene	11.69	91	3587	0.33	ppb		88
92)	1,3,5-Trimethylbenzene	11.80	105	2928	0.27	ppb	#	85
93)	4-Chlorotoluene	11.82	91	3178	0.29	ppb		90
94)	Tert-Butylbenzene	12.16	119	3183	0.28	ppb		91
95)	1,2,4-Trimethylbenzene	12.21	105	3372	0.30	ppb	#	81
96)	Sec-Butylbenzene	12.41	105	3924	0.28	ppb		95
97)	p-Isopropyltoluene	12.56	119	3388	0.28	ppb		92
98)	Benzyl Chloride	12.77	91	1732	0.37	ppb	#	91
99)	1,3-DCB	12.51	146	2277	0.30	ppb		90
100)	1,4-DCB	12.62	146	2268	0.30	ppb	#	81
101)	n-Butylbenzene	13.01	91	3051	0.30	ppb		89
102)	1,2-DCB	13.03	146	2189	0.30	ppb		91
103)	Hexachloroethane	13.31	201	227	1.32	ppb	#	23
105)	1,2,4-Trichlorobenzene	14.80	180	1771	0.31	ppb		95
106)	Hexachlorobutadiene	14.99	225	810	0.29	ppb	#	54
107)	Naphthalene	15.07	128	2025	0.39	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	1575	0.29	ppb	#	77

(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\201222\1222T02.D Vial: 2
Acq On : 22 Dec 20 17:31 Operator:
Sample : 0.3ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T03.D Vial: 3
Acq On : 22 Dec 20 17:58 Operator:
Sample : 0.5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	554908	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	462504	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	278276	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	31734	5.35	ppb		0.00
Spiked Amount 25.000			Recovery = 21.388%				
48) 1,2-DCA-D4(S)	6.14	65	36466	5.38	ppb		0.00
Spiked Amount 25.000			Recovery = 21.532%				
69) Toluene-D8(S)	8.43	98	119047	5.39	ppb		0.00
Spiked Amount 25.000			Recovery = 21.564%				
77) 4-Bromofluorobenzene(S)	11.32	95	46891	5.23	ppb		0.00
Spiked Amount 25.000			Recovery = 20.936%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	858	2.04	ppb		98
4) Freon 114	1.29	85	621	0.96	ppb	#	80
5) Chloromethane	1.33	50	1811	0.61	ppb	#	85
6) Vinyl chloride	1.43	62	1015	0.46	ppb	#	88
9) Bromomethane	1.72	96	833	-1.04	ppb		90
10) Chloroethane	1.81	64	1230	0.47	ppb	#	80
11) Dichlorofluoromethane	2.00	67	2410	0.54	ppb		99
12) Trichlorofluoromethane	2.05	101	1434	0.46	ppb		86
16) Acrolein	2.49	56	2952	28.56	ppb		97
17) Acetone	2.67	43	8672	10.82	ppb		90
18) Freon-113	2.60	101	532	0.66	ppb	#	74
19) 1,1-DCE	2.58	61	1544	0.46	ppb		86
21) Acetonitrile	2.98	40	2042	26.11	ppb	#	82
22) t-Butanol	3.43	59	2146	25.60	ppb		100
23) Methyl Acetate	3.08	43	1525	0.80	ppb	#	51
24) Iodomethane	2.73	142	219	2.72	ppb	#	1
25) Acrylonitrile	3.51	52	76	0.10	ppb	#	64
26) Methylene chloride	3.18	84	1002	0.30	ppb		95
27) Carbon disulfide	2.80	76	1689	0.48	ppb	#	73
28) Methyl t-butyl ether (MtBE	3.60	73	3624	0.50	ppb		95
29) Trans-1,2-DCE	3.55	61	1779	0.52	ppb	#	77
31) Diisopropyl Ether	4.40	45	3770	0.49	ppb		94
33) 1,1-DCA	4.19	63	2152	0.50	ppb	#	80
34) Vinyl Acetate	4.35	43	1010	0.61	ppb	#	73
35) Ethyl tert Butyl Ether	4.93	59	3349	0.44	ppb	#	82
36) MEK (2-Butanone)	5.14	43	11165	9.90	ppb	#	86
37) Cis-1,2-DCE	5.05	61	2237	0.53	ppb		90
38) 2,2-Dichloropropane	5.04	77	2090	0.51	ppb	#	80
40) 3-Methylpentane	3.59	57	861	0.55	ppb	#	92
41) Chloroform	5.52	83	2181	0.45	ppb		95
42) Bromochloromethane	5.38	49	991	0.45	ppb		91
44) 1,1,1-TCA	5.73	97	838	0.45	ppb	#	90
45) Cyclohexane	5.78	56	1471	0.43	ppb		92
46) 1,1-Dichloropropene	5.95	75	1636	0.49	ppb	#	90
47) 2,2,4-Trimethylpentane	6.35	57	3417	0.53	ppb		100
49) Carbon Tetrachloride	5.93	117	1228	0.86	ppb	#	79
50) Tert Amyl Methyl Ether	6.42	73	3834	0.51	ppb	#	87
52) 1,2-DCA	6.24	62	2128	0.52	ppb	#	78
53) Benzene	6.21	78	5552	0.52	ppb	#	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T03.D Vial: 3
Acq On : 22 Dec 20 17:58 Operator:
Sample : 0.5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.01	130	1317	0.43	ppb		90
55)	2-Pentanone	7.28	43	47710	26.95	ppb		93
56)	1,2-Dichloropropane	7.27	63	1392	0.50	ppb	#	86
57)	Bromodichloromethane	7.61	83	2156	0.54	ppb	#	77
58)	Methyl Cyclohexane	7.23	83	1250	0.36	ppb		84
59)	Dibromomethane	7.40	174	1180	0.48	ppb	#	67
60)	MIBK (methyl isobutyl ket	8.34	43	24163	9.73	ppb		96
61)	1-Bromo-2-chloroethane	7.95	63	968	0.47	ppb		96
63)	Cis-1,3-Dichloropropene	8.13	75	2473	0.51	ppb		95
64)	Toluene	8.49	91	5732	0.48	ppb		85
65)	Trans-1,3-Dichloropropene	8.76	75	1939	0.44	ppb		95
66)	1,1,2-TCA	8.96	97	1435	0.53	ppb	#	78
67)	2-Hexanone	9.27	43	15926	9.46	ppb		99
70)	1,2-EDB	9.49	107	1300	0.46	ppb	#	87
71)	Tetrachloroethene	9.11	166	2372	0.55	ppb	#	71
72)	1-Chlorohexane	10.05	91	2760	1.09	ppb	#	86
73)	1,1,1,2-Tetrachloroethane	10.15	131	1712	0.53	ppb		89
74)	m&p-Xylene	10.32	91	9767	0.94	ppb		93
75)	o-Xylene	10.75	91	5329	0.48	ppb		96
76)	Styrene	10.77	104	4113	0.48	ppb	#	81
78)	1,3-Dichloropropane	9.14	76	2045	0.47	ppb	#	69
79)	Dibromochloromethane	9.38	129	1718	0.51	ppb		85
80)	Chlorobenzene	10.05	112	4028	0.50	ppb		92
81)	Ethylbenzene	10.18	91	6225	0.46	ppb		94
82)	Bromoform	10.95	173	1275	0.49	ppb		93
84)	Isopropylbenzene	11.16	105	6325	0.49	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.49	83	1564	0.48	ppb	#	94
86)	1,2,3-Trichloropropane	11.52	110	448	0.41	ppb		94
87)	t-1,4-Dichloro-2-Butene	11.54	53	78	0.12	ppb	#	11
88)	Bromobenzene	11.48	156	2024	0.50	ppb		94
89)	n-Propylbenzene	11.61	91	7429	0.50	ppb		94
90)	4-Ethyltoluene	11.74	105	6317	0.50	ppb		90
91)	2-Chlorotoluene	11.69	91	5115	0.48	ppb		93
92)	1,3,5-Trimethylbenzene	11.80	105	5124	0.47	ppb		91
93)	4-Chlorotoluene	11.82	91	5271	0.48	ppb		92
94)	Tert-Butylbenzene	12.16	119	5176	0.46	ppb		89
95)	1,2,4-Trimethylbenzene	12.21	105	5727	0.51	ppb	#	85
96)	Sec-Butylbenzene	12.40	105	6710	0.49	ppb		96
97)	p-Isopropyltoluene	12.56	119	5741	0.47	ppb		93
98)	Benzyl Chloride	12.76	91	2485	0.54	ppb		98
99)	1,3-DCB	12.52	146	3885	0.52	ppb		99
100)	1,4-DCB	12.61	146	3900	0.52	ppb	#	88
101)	n-Butylbenzene	13.01	91	5313	0.53	ppb		88
102)	1,2-DCB	13.03	146	3063	0.43	ppb		98
103)	Hexachloroethane	13.31	201	490	1.46	ppb	#	78
104)	1,2-Dibromo-3-chloropropan	13.86	157	422	0.48	ppb	#	71
105)	1,2,4-Trichlorobenzene	14.80	180	2889	0.52	ppb		85
106)	Hexachlorobutadiene	14.99	225	1360	0.49	ppb		93
107)	Naphthalene	15.06	128	2382	0.47	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	3018	0.55	ppb		93

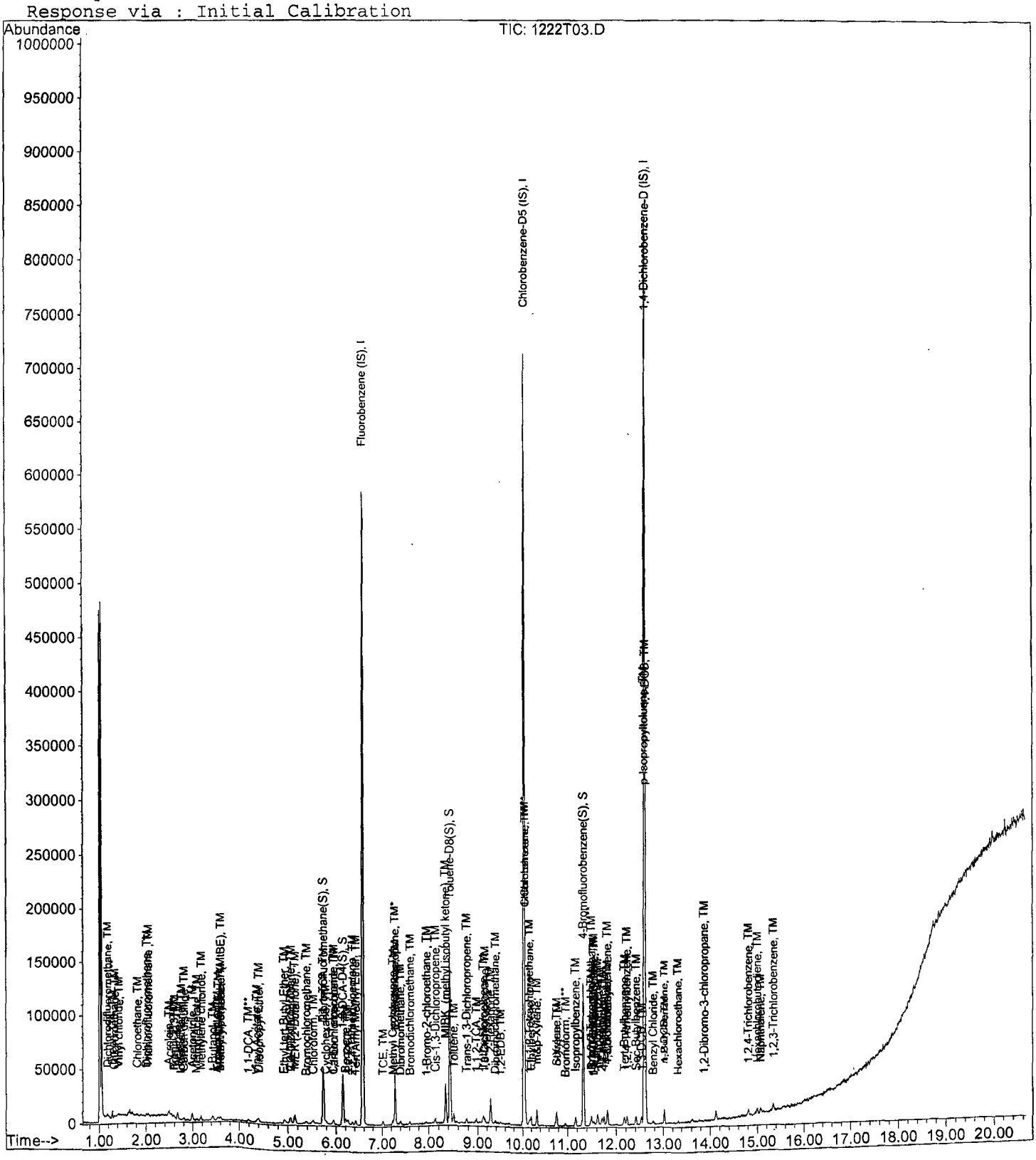
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T03.D Vial: 3
Acq On : 22 Dec 20 17:58 Operator:
Sample : 0.5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T04.D Vial: 4
Acq On : 22 Dec 20 18:26 Operator:
Sample : 1ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	551817	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	463112	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	281994	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	56730	9.61	ppb		0.00
Spiked Amount 25.000			Recovery	=	38.448%		
48) 1,2-DCA-D4(S)	6.14	65	64544	9.58	ppb		0.00
Spiked Amount 25.000			Recovery	=	38.324%		
69) Toluene-D8(S)	8.42	98	207913	9.40	ppb		0.00
Spiked Amount 25.000			Recovery	=	37.616%		
77) 4-Bromofluorobenzene(S)	11.32	95	82975	9.25	ppb		0.00
Spiked Amount 25.000			Recovery	=	36.996%		
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	1887	2.49	ppb		92
4) Freon 114	1.29	85	1749	1.47	ppb	#	82
5) Chloromethane	1.33	50	3603	1.23	ppb		98
6) Vinyl chloride	1.43	62	2411	1.09	ppb		90
9) Bromomethane	1.71	96	2202	0.12	ppb	#	74
10) Chloroethane	1.81	64	1956	0.96	ppb		92
11) Dichlorofluoromethane	2.01	67	4338	0.98	ppb		99
12) Trichlorofluoromethane	2.05	101	3306	1.06	ppb		86
16) Acrolein	2.49	56	5606	54.54	ppb	#	80
17) Acetone	2.67	43	15321	19.22	ppb		95
18) Freon-113	2.60	101	1014	1.16	ppb	#	73
19) 1,1-DCE	2.58	61	3059	0.92	ppb	#	65
21) Acetonitrile	2.99	40	3796	48.81	ppb		98
22) t-Butanol	3.43	59	4128	49.51	ppb	#	85
23) Methyl Acetate	3.09	43	2519	1.32	ppb	#	71
24) Iodomethane	2.74	142	684	2.91	ppb	#	55
25) Acrylonitrile	3.52	52	838	1.11	ppb		92
26) Methylene chloride	3.17	84	1516	0.72	ppb		86
27) Carbon disulfide	2.80	76	3685	1.05	ppb		98
28) Methyl t-butyl ether (MtBE	3.60	73	7314	1.01	ppb		93
29) Trans-1,2-DCE	3.55	61	3821	1.13	ppb	#	82
31) Diisopropyl Ether	4.40	45	7552	0.99	ppb		92
33) 1,1-DCA	4.19	63	4087	0.96	ppb	#	85
35) Ethyl tert Butyl Ether	4.93	59	7512	1.00	ppb		90
36) MEK (2-Butanone)	5.14	43	22142	19.74	ppb		95
37) Cis-1,2-DCE	5.06	61	4138	0.99	ppb		95
38) 2,2-Dichloropropane	5.05	77	4138	1.03	ppb		90
40) 3-Methylpentane	3.59	57	1608	1.04	ppb	#	86
41) Chloroform	5.52	83	4905	1.01	ppb		85
42) Bromochloromethane	5.38	49	2263	1.04	ppb	#	79
44) 1,1,1-TCA	5.73	97	1985	1.06	ppb	#	89
45) Cyclohexane	5.79	56	3729	1.09	ppb		98
46) 1,1-Dichloropropene	5.95	75	3403	1.02	ppb		96
47) 2,2,4-Trimethylpentane	6.35	57	6018	0.94	ppb		94
49) Carbon Tetrachloride	5.95	117	2602	1.22	ppb		92
50) Tert Amyl Methyl Ether	6.42	73	7437	1.00	ppb		98
52) 1,2-DCA	6.24	62	3798	0.93	ppb	#	94
53) Benzene	6.20	78	10794	1.02	ppb		91
54) TCE	7.02	130	3022	0.99	ppb	#	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T04.D Vial: 4
Acq On : 22 Dec 20 18:26 Operator:
Sample : 1ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
55)	2-Pentanone	7.28	43	88998	50.55 ppb		97
56)	1,2-Dichloropropane	7.27	63	2891	1.05 ppb	#	86
57)	Bromodichloromethane	7.61	83	3680	0.93 ppb		94
58)	Methyl Cyclohexane	7.23	83	3590	1.03 ppb		87
59)	Dibromomethane	7.41	174	2305	0.94 ppb		92
60)	MIBK (methyl isobutyl ket	8.34	43	48960	19.82 ppb		99
61)	1-Bromo-2-chloroethane	7.95	63	2006	0.97 ppb	#	85
63)	Cis-1,3-Dichloropropene	8.13	75	5122	1.05 ppb		91
64)	Toluene	8.50	91	11564	0.98 ppb		92
65)	Trans-1,3-Dichloropropene	8.77	75	4544	1.04 ppb	#	90
66)	1,1,2-TCA	8.96	97	2761	1.03 ppb		92
67)	2-Hexanone	9.27	43	32518	19.42 ppb		97
70)	1,2-EDB	9.50	107	2804	0.99 ppb	#	92
71)	Tetrachloroethene	9.11	166	4482	1.03 ppb		96
72)	1-Chlorohexane	10.05	91	3991	1.45 ppb	#	71
73)	1,1,1,2-Tetrachloroethane	10.15	131	3241	1.01 ppb		93
74)	m&p-Xylene	10.32	91	20845	2.00 ppb		93
75)	o-Xylene	10.75	91	10898	0.98 ppb		98
76)	Styrene	10.77	104	8126	0.94 ppb		98
78)	1,3-Dichloropropane	9.14	76	4290	0.98 ppb	#	82
79)	Dibromochloromethane	9.38	129	3141	0.94 ppb		98
80)	Chlorobenzene	10.05	112	8050	1.00 ppb		94
81)	Ethylbenzene	10.19	91	13988	1.04 ppb		97
82)	Bromoform	10.95	173	2532	0.97 ppb	#	86
84)	Isopropylbenzene	11.16	105	12510	0.96 ppb		99
85)	1,1,2,2-Tetrachloroethane	11.49	83	3170	0.96 ppb		91
86)	1,2,3-Trichloropropane	11.53	110	1144	1.02 ppb		91
87)	t-1,4-Dichloro-2-Butene	11.55	53	473	0.72 ppb		93
88)	Bromobenzene	11.48	156	4393	1.06 ppb		92
89)	n-Propylbenzene	11.61	91	15048	1.00 ppb		99
90)	4-Ethyltoluene	11.74	105	11448	0.89 ppb		96
91)	2-Chlorotoluene	11.70	91	11634	1.07 ppb		97
92)	1,3,5-Trimethylbenzene	11.81	105	9803	0.89 ppb		96
93)	4-Chlorotoluene	11.82	91	11308	1.01 ppb		97
94)	Tert-Butylbenzene	12.16	119	11291	1.00 ppb		86
95)	1,2,4-Trimethylbenzene	12.22	105	10935	0.96 ppb		96
96)	Sec-Butylbenzene	12.40	105	13654	0.98 ppb		100
97)	p-Isopropyltoluene	12.57	119	11588	0.94 ppb		95
98)	Benzyl Chloride	12.77	91	4785	1.02 ppb	#	91
99)	1,3-DCB	12.52	146	7614	1.01 ppb		94
100)	1,4-DCB	12.61	146	7439	0.97 ppb		88
101)	n-Butylbenzene	13.01	91	9353	0.92 ppb		100
102)	1,2-DCB	13.03	146	7418	1.02 ppb	#	91
103)	Hexachloroethane	13.31	201	1294	1.89 ppb		95
104)	1,2-Dibromo-3-chloropropan	13.88	157	779	0.88 ppb		93
105)	1,2,4-Trichlorobenzene	14.79	180	5210	0.92 ppb		94
106)	Hexachlorobutadiene	14.99	225	2549	0.91 ppb	#	89
107)	Naphthalene	15.07	128	4400	0.85 ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	5252	0.95 ppb		94

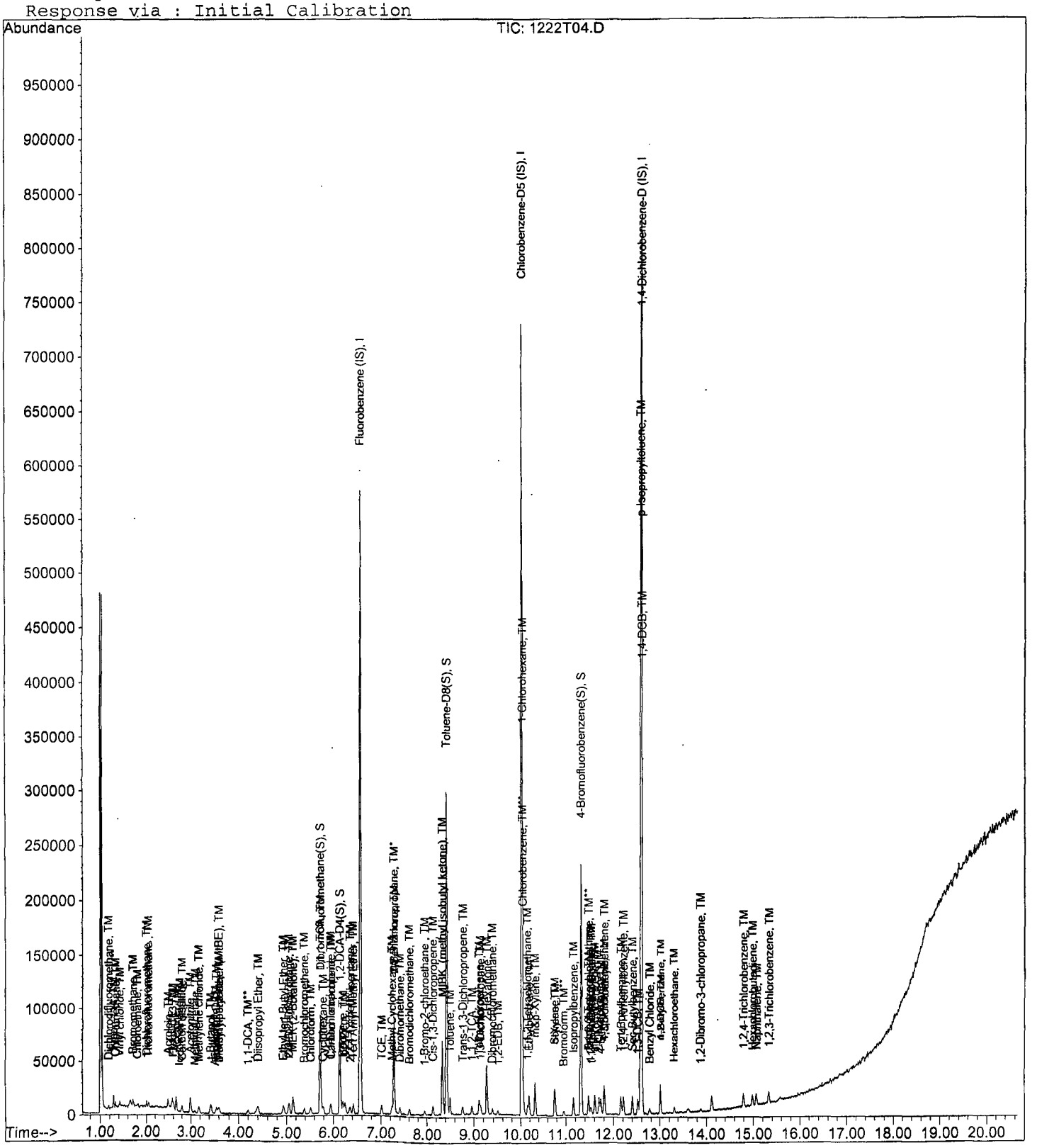
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T04.D Vial: 4
Acq On : 22 Dec 20 18:26 Operator:
Sample : 1ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T05.D Vial: 5
Acq On : 22 Dec 20 18:54 Operator:
Sample : 2ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	557384	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	465373	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	286043	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	55465	9.30	ppb		0.00
Spiked Amount 25.000			Recovery = 37.216%				
48) 1,2-DCA-D4(S)	6.14	65	63243	9.29	ppb		0.00
Spiked Amount 25.000			Recovery = 37.176%				
69) Toluene-D8(S)	8.43	98	210710	9.48	ppb		0.00
Spiked Amount 25.000			Recovery = 37.936%				
77) 4-Bromofluorobenzene(S)	11.32	95	85178	9.45	ppb		0.00
Spiked Amount 25.000			Recovery = 37.796%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	4006	3.38	ppb	#	88
4) Freon 114	1.29	85	3298	2.17	ppb		98
5) Chloromethane	1.33	50	6069	2.05	ppb		92
6) Vinyl chloride	1.43	62	4440	1.99	ppb	#	86
9) Bromomethane	1.71	96	3151	0.90	ppb		91
10) Chloroethane	1.81	64	3322	1.85	ppb		95
11) Dichlorofluoromethane	2.01	67	8968	2.00	ppb		94
12) Trichlorofluoromethane	2.05	101	6715	2.12	ppb		97
16) Acrolein	2.48	56	6879	66.25	ppb	#	81
17) Acetone	2.67	43	22484	27.93	ppb		95
18) Freon-113	2.61	101	1881	2.04	ppb	#	67
19) 1,1-DCE	2.58	61	6524	1.95	ppb	#	86
21) Acetonitrile	2.98	40	6172	78.57	ppb		91
22) t-Butanol	3.44	59	5770	68.52	ppb		95
23) Methyl Acetate	3.08	43	3393	1.77	ppb		96
24) Iodomethane	2.73	142	1465	3.22	ppb	#	83
25) Acrylonitrile	3.53	52	1475	1.93	ppb	#	78
26) Methylene chloride	3.17	84	2649	1.63	ppb		86
27) Carbon disulfide	2.80	76	6437	1.82	ppb	#	91
28) Methyl t-butyl ether (MtBE	3.59	73	14307	1.96	ppb		93
29) Trans-1,2-DCE	3.55	61	6206	1.81	ppb	#	88
31) Diisopropyl Ether	4.40	45	15097	1.95	ppb	#	76
33) 1,1-DCA	4.20	63	8523	1.98	ppb	#	90
34) Vinyl Acetate	4.36	43	3176	1.90	ppb	#	80
35) Ethyl tert Butyl Ether	4.94	59	15500	2.04	ppb		96
36) MEK (2-Butanone)	5.13	43	32833	28.98	ppb		97
37) Cis-1,2-DCE	5.06	61	8127	1.93	ppb		91
38) 2,2-Dichloropropane	5.05	77	7976	1.96	ppb		95
40) 3-Methylpentane	3.60	57	2921	1.87	ppb	#	85
41) Chloroform	5.51	83	9439	1.93	ppb	#	82
42) Bromochloromethane	5.38	49	4350	1.97	ppb		89
44) 1,1,1-TCA	5.73	97	3823	2.02	ppb	#	90
45) Cyclohexane	5.78	56	6566	1.89	ppb	#	95
46) 1,1-Dichloropropene	5.95	75	6232	1.85	ppb		98
47) 2,2,4-Trimethylpentane	6.35	57	11704	1.81	ppb		94
49) Carbon Tetrachloride	5.94	117	6666	2.28	ppb	#	73
50) Tert Amyl Methyl Ether	6.41	73	14239	1.90	ppb		99
52) 1,2-DCA	6.24	62	8112	1.97	ppb	#	92
53) Benzene	6.20	78	20042	1.88	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T05.D Vial: 5
Acq On : 22 Dec 20 18:54 Operator:
Sample : 2ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.02	130	6066	1.98	ppb		92
55)	2-Pentanone	7.28	43	133187	74.90	ppb		98
56)	1,2-Dichloropropane	7.27	63	5139	1.85	ppb		99
57)	Bromodichloromethane	7.61	83	7684	1.92	ppb		87
58)	Methyl Cyclohexane	7.23	83	6313	1.80	ppb		96
59)	Dibromomethane	7.40	174	4912	1.99	ppb		96
60)	MIBK (methyl isobutyl ket	8.34	43	73504	29.46	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	4089	1.96	ppb		97
63)	Cis-1,3-Dichloropropene	8.13	75	9251	1.88	ppb		93
64)	Toluene	8.50	91	23832	2.00	ppb		95
65)	Trans-1,3-Dichloropropene	8.77	75	8982	2.03	ppb		91
66)	1,1,2-TCA	8.95	97	5379	1.99	ppb	#	87
67)	2-Hexanone	9.27	43	50720	29.98	ppb		95
70)	1,2-EDB	9.50	107	5673	1.99	ppb	#	72
71)	Tetrachloroethene	9.11	166	8566	1.96	ppb		91
72)	1-Chlorohexane	10.05	91	7278	2.40	ppb	#	91
73)	1,1,1,2-Tetrachloroethane	10.15	131	6213	1.92	ppb		95
74)	m&p-Xylene	10.32	91	40397	3.86	ppb		100
75)	o-Xylene	10.75	91	21065	1.88	ppb		97
76)	Styrene	10.77	104	16136	1.87	ppb		98
78)	1,3-Dichloropropane	9.14	76	9057	2.06	ppb		96
79)	Dibromochloromethane	9.38	129	6502	1.93	ppb		92
80)	Chlorobenzene	10.05	112	15674	1.93	ppb		94
81)	Ethylbenzene	10.19	91	26305	1.94	ppb		93
82)	Bromoform	10.95	173	4860	1.85	ppb	#	74
84)	Isopropylbenzene	11.16	105	25290	1.90	ppb		97
85)	1,1,2,2-Tetrachloroethane	11.48	83	6968	2.07	ppb	#	92
86)	1,2,3-Trichloropropane	11.52	110	2352	2.07	ppb	#	88
87)	t-1,4-Dichloro-2-Butene	11.54	53	1208	1.82	ppb	#	59
88)	Bromobenzene	11.48	156	8174	1.95	ppb		91
89)	n-Propylbenzene	11.61	91	28850	1.89	ppb		93
90)	4-Ethyltoluene	11.74	105	24365	1.87	ppb		96
91)	2-Chlorotoluene	11.69	91	22025	2.00	ppb		94
92)	1,3,5-Trimethylbenzene	11.81	105	20864	1.87	ppb		97
93)	4-Chlorotoluene	11.82	91	22033	1.94	ppb		98
94)	Tert-Butylbenzene	12.16	119	21568	1.88	ppb		97
95)	1,2,4-Trimethylbenzene	12.22	105	21684	1.88	ppb		95
96)	Sec-Butylbenzene	12.40	105	27483	1.94	ppb		97
97)	p-Isopropyltoluene	12.57	119	23472	1.88	ppb		94
98)	Benzyl Chloride	12.76	91	8694	1.83	ppb	#	95
99)	1,3-DCB	12.52	146	14823	1.94	ppb		95
100)	1,4-DCB	12.61	146	15378	1.98	ppb		97
101)	n-Butylbenzene	13.01	91	18862	1.82	ppb		97
102)	1,2-DCB	13.03	146	14295	1.94	ppb		96
103)	Hexachloroethane	13.31	201	2665	2.62	ppb	#	85
104)	1,2-Dibromo-3-chloropropan	13.87	157	1859	2.07	ppb	#	86
105)	1,2,4-Trichlorobenzene	14.79	180	10094	1.75	ppb		87
106)	Hexachlorobutadiene	14.98	225	5542	1.95	ppb		93
107)	Naphthalene	15.06	128	9168	1.75	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	9879	1.76	ppb		100

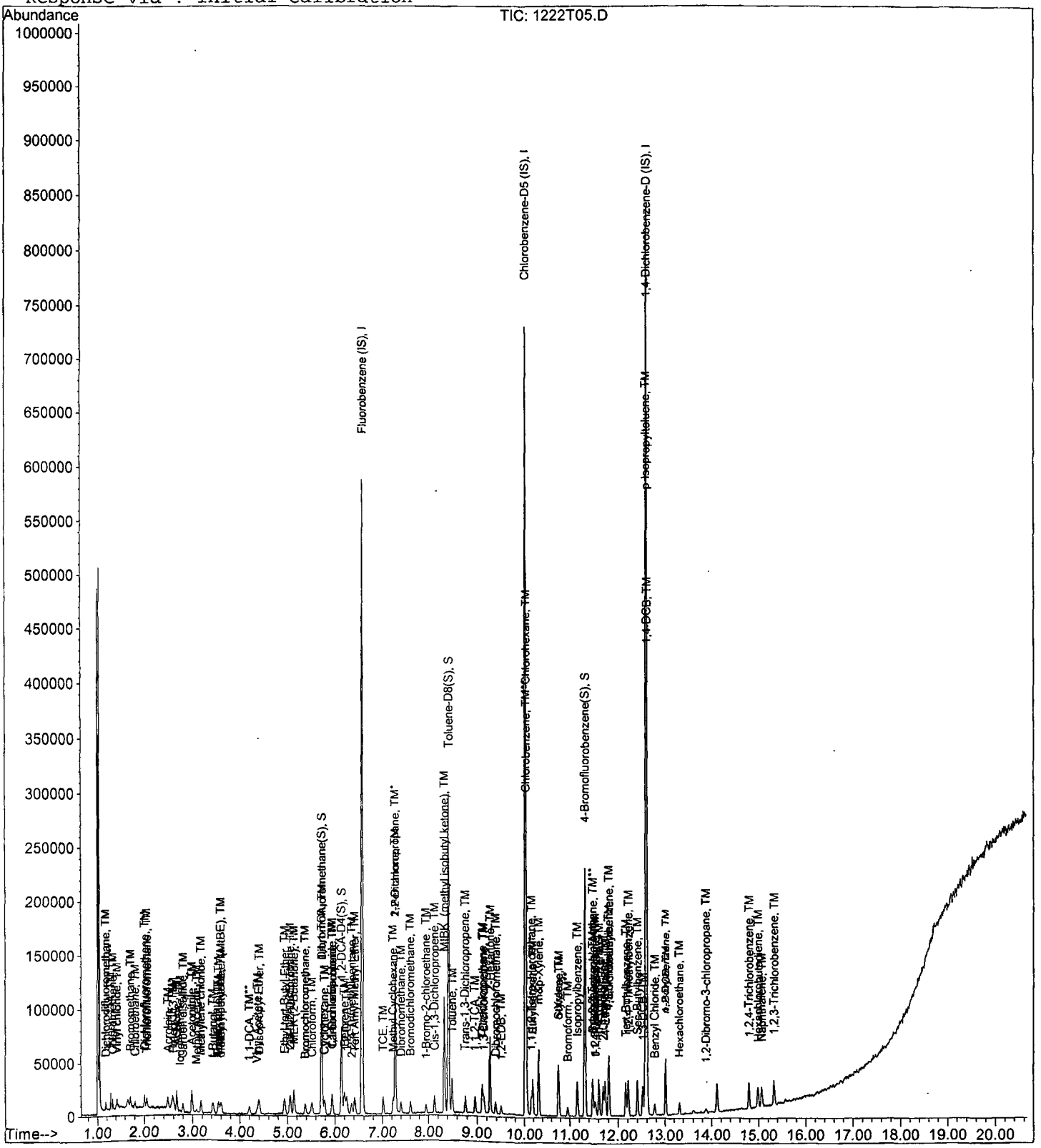
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T05.D Vial: 5
Acq On : 22 Dec 20 18:54 Operator:
Sample : 2ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:30 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T06.D Vial: 6
Acq On : 22 Dec 20 19:22 Operator:
Sample : 5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	552708	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	476150	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	291438	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	145197	24.56	ppb		0.00
Spiked Amount 25.000			Recovery = 98.244%				
48) 1,2-DCA-D4(S)	6.14	65	168397	24.96	ppb		0.00
Spiked Amount 25.000			Recovery = 99.828%				
69) Toluene-D8(S)	8.43	98	558025	24.55	ppb		0.00
Spiked Amount 25.000			Recovery = 98.188%				
77) 4-Bromofluorobenzene(S)	11.32	95	222005	24.07	ppb		0.00
Spiked Amount 25.000			Recovery = 96.276%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	6076	4.29	ppb		98
4) Freon 114	1.29	85	7852	4.25	ppb		95
5) Chloromethane	1.33	50	13629	4.64	ppb		97
6) Vinyl chloride	1.43	62	9811	4.43	ppb		98
9) Bromomethane	1.71	96	8001	5.00	ppb		93
10) Chloroethane	1.81	64	7192	4.44	ppb	#	82
11) Dichlorofluoromethane	2.01	67	22387	5.02	ppb		95
12) Trichlorofluoromethane	2.05	101	12930	4.12	ppb		97
16) Acrolein	2.49	56	11061	107.43	ppb		95
17) Acetone	2.67	43	29906	37.46	ppb		99
18) Freon-113	2.61	101	3943	4.20	ppb	#	70
19) 1,1-DCE	2.58	61	16622	5.01	ppb		97
21) Acetonitrile	2.99	40	7873	101.07	ppb		92
22) t-Butanol	3.43	59	8728	104.52	ppb		96
23) Methyl Acetate	3.08	43	9506	4.99	ppb		94
24) Iodomethane	2.74	142	4936	4.62	ppb		94
25) Acrylonitrile	3.53	52	3519	4.63	ppb	#	63
26) Methylene chloride	3.17	84	6410	4.71	ppb		92
27) Carbon disulfide	2.80	76	17656	5.04	ppb		97
28) Methyl t-butyl ether (MtBE	3.60	73	38604	5.33	ppb		99
29) Trans-1,2-DCE	3.55	61	16317	4.80	ppb		93
31) Diisopropyl Ether	4.40	45	38955	5.08	ppb		99
33) 1,1-DCA	4.19	63	21647	5.07	ppb		94
34) Vinyl Acetate	4.36	43	8591	5.19	ppb	#	94
35) Ethyl tert Butyl Ether	4.94	59	39021	5.17	ppb		97
36) MEK (2-Butanone)	5.13	43	44762	39.85	ppb		91
37) Cis-1,2-DCE	5.05	61	20780	4.97	ppb		93
38) 2,2-Dichloropropane	5.05	77	19926	4.93	ppb		92
40) 3-Methylpentane	3.59	57	7783	5.01	ppb	#	94
41) Chloroform	5.52	83	25373	5.24	ppb		88
42) Bromochloromethane	5.37	49	11403	5.22	ppb		94
44) 1,1,1-TCA	5.73	97	8874	4.73	ppb		95
45) Cyclohexane	5.78	56	14753	4.29	ppb		97
46) 1,1-Dichloropropene	5.95	75	16164	4.83	ppb		99
47) 2,2,4-Trimethylpentane	6.35	57	27995	4.36	ppb		98
49) Carbon Tetrachloride	5.94	117	15711	4.67	ppb		99
50) Tert Amyl Methyl Ether	6.41	73	37324	5.02	ppb		95
52) 1,2-DCA	6.24	62	21174	5.19	ppb	#	90
53) Benzene	6.20	78	52439	4.97	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T06.D Vial: 6
Acq On : 22 Dec 20 19:22 Operator:
Sample : 5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

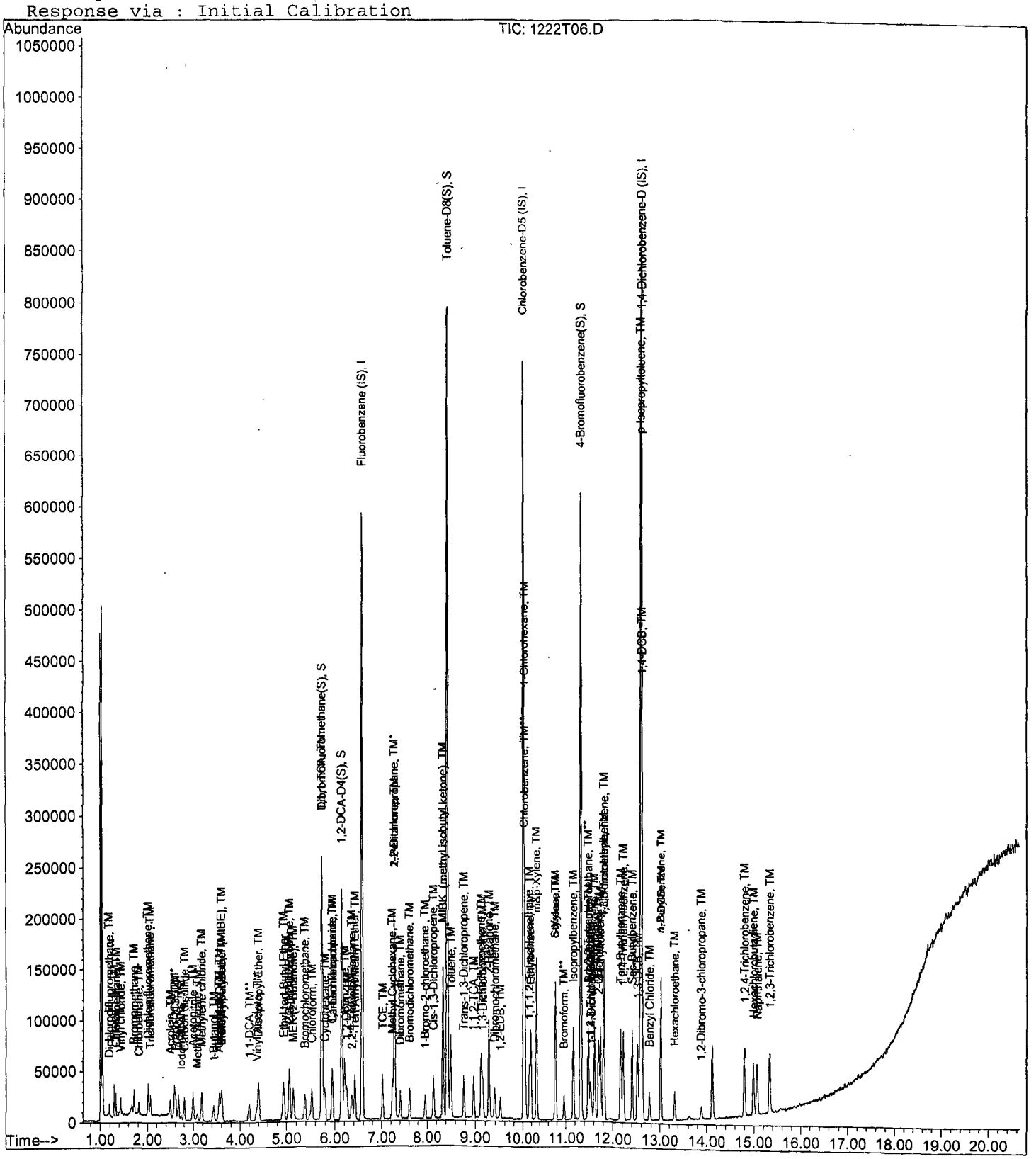
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.02	130	15049	4.94	ppb		92
55)	2-Pentanone	7.28	43	179265	101.66	ppb		98
56)	1,2-Dichloropropane	7.27	63	14095	5.13	ppb	#	97
57)	Bromodichloromethane	7.61	83	20626	5.20	ppb		99
58)	Methyl Cyclohexane	7.23	83	15843	4.55	ppb		89
59)	Dibromomethane	7.40	174	12184	4.97	ppb		86
60)	MIBK (methyl isobutyl ket	8.34	43	99262	40.12	ppb		97
61)	1-Bromo-2-chloroethane	7.95	63	10791	5.21	ppb		99
63)	Cis-1,3-Dichloropropene	8.13	75	23995	4.92	ppb		97
64)	Toluene	8.50	91	61152	5.16	ppb		95
65)	Trans-1,3-Dichloropropene	8.76	75	21889	4.98	ppb		98
66)	1,1,2-TCA	8.96	97	13283	4.96	ppb		94
67)	2-Hexanone	9.27	43	66403	39.58	ppb		98
70)	1,2-EDB	9.50	107	15135	5.19	ppb	#	98
71)	Tetrachloroethene	9.11	166	21886	4.90	ppb		92
72)	1-Chlorohexane	10.05	91	15729	4.75	ppb		97
73)	1,1,1,2-Tetrachloroethane	10.15	131	16135	4.87	ppb		91
74)	m&p-Xylene	10.32	91	106355	9.92	ppb		98
75)	o-Xylene	10.75	91	58779	5.12	ppb		97
76)	Styrene	10.76	104	43927	4.97	ppb		99
78)	1,3-Dichloropropane	9.14	76	22288	4.95	ppb		90
79)	Dibromochloromethane	9.39	129	16975	4.93	ppb		99
80)	Chlorobenzene	10.05	112	41454	4.99	ppb		96
81)	Ethylbenzene	10.19	91	68639	4.95	ppb		96
82)	Bromoform	10.95	173	13884	5.16	ppb	#	98
84)	Isopropylbenzene	11.16	105	68477	5.06	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.48	83	18113	5.29	ppb		97
86)	1,2,3-Trichloropropane	11.52	110	6417	5.56	ppb	#	88
87)	t-1,4-Dichloro-2-Butene	11.55	53	3441	5.09	ppb		99
88)	Bromobenzene	11.48	156	21632	5.05	ppb		97
89)	n-Propylbenzene	11.61	91	76089	4.90	ppb		97
90)	4-Ethyltoluene	11.74	105	66024	4.99	ppb		96
91)	2-Chlorotoluene	11.70	91	55424	4.95	ppb		96
92)	1,3,5-Trimethylbenzene	11.81	105	56357	4.97	ppb		98
93)	4-Chlorotoluene	11.82	91	58481	5.07	ppb		98
94)	Tert-Butylbenzene	12.16	119	58739	5.02	ppb		94
95)	1,2,4-Trimethylbenzene	12.22	105	55230	4.69	ppb		94
96)	Sec-Butylbenzene	12.40	105	72102	4.99	ppb		98
97)	p-Isopropyltoluene	12.57	119	63405	4.99	ppb		98
98)	Benzyl Chloride	12.76	91	23549	4.86	ppb		96
99)	1,3-DCB	12.52	146	39130	5.03	ppb		95
100)	1,4-DCB	12.61	146	39710	5.03	ppb		98
101)	n-Butylbenzene	13.01	91	51560	4.88	ppb		96
102)	1,2-DCB	13.02	146	38887	5.19	ppb		98
103)	Hexachloroethane	13.31	201	7127	4.92	ppb	#	90
104)	1,2-Dibromo-3-chloropropan	13.87	157	4517	4.93	ppb	#	85
105)	1,2,4-Trichlorobenzene	14.79	180	28576	4.87	ppb		93
106)	Hexachlorobutadiene	14.99	225	13498	4.66	ppb		93
107)	Naphthalene	15.06	128	24952	4.67	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	27180	4.76	ppb		90

(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\201222\1222T06.D Vial: 6
Acq On : 22 Dec 20 19:22 Operator:
Sample : 5ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T07.D Vial: 7
Acq On : 22 Dec 20 19:50 Operator:
Sample : 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	555464	25.00	ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	467644	25.00	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	294878	25.00	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.73	111	147955	24.90	ppb	0.00
Spiked Amount 25.000			Recovery =	99.612%		
48) 1,2-DCA-D4(S)	6.14	65	168437	24.84	ppb	0.00
Spiked Amount 25.000			Recovery =	99.356%		
69) Toluene-D8(S)	8.43	98	560822	25.12	ppb	0.00
Spiked Amount 25.000			Recovery =	100.476%		
77) 4-Bromofluorobenzene(S)	11.32	95	227817	25.15	ppb	0.00
Spiked Amount 25.000			Recovery =	100.596%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.18	85	15803	8.44	ppb	100
4) Freon 114	1.29	85	19090	9.33	ppb	100
5) Chloromethane	1.33	50	26988	9.14	ppb	100
6) Vinyl chloride	1.43	62	20264	9.10	ppb	100
9) Bromomethane	1.71	96	14631	10.52	ppb	100
10) Chloroethane	1.81	64	14701	9.38	ppb	100
11) Dichlorofluoromethane	2.01	67	43638	9.74	ppb	100
12) Trichlorofluoromethane	2.05	101	27586	8.75	ppb	100
16) Acrolein	2.49	56	12646	122.21	ppb	100
17) Acetone	2.67	43	36380	45.34	ppb	100
18) Freon-113	2.61	101	9448	9.85	ppb	85
19) 1,1-DCE	2.58	61	33859	10.16	ppb	100
21) Acetonitrile	2.98	40	9269	118.40	ppb	100
22) t-Butanol	3.42	59	10871	129.53	ppb	100
23) Methyl Acetate	3.08	43	16964	8.86	ppb	100
24) Iodomethane	2.73	142	13378	8.00	ppb	100
25) Acrylonitrile	3.52	52	8067	10.57	ppb	100
26) Methylene chloride	3.18	84	13266	10.25	ppb	100
27) Carbon disulfide	2.80	76	34112	9.69	ppb	100
28) Methyl t-butyl ether (MtBE	3.59	73	72358	9.93	ppb	100
29) Trans-1,2-DCE	3.55	61	33487	9.81	ppb	100
31) Diisopropyl Ether	4.40	45	78734	10.21	ppb	100
33) 1,1-DCA	4.20	63	42896	9.99	ppb	100
34) Vinyl Acetate	4.35	43	16664	10.02	ppb	100
35) Ethyl tert Butyl Ether	4.93	59	75044	9.89	ppb	100
36) MEK (2-Butanone)	5.13	43	53506	47.39	ppb	100
37) Cis-1,2-DCE	5.06	61	42245	10.05	ppb	100
38) 2,2-Dichloropropane	5.04	77	39127	9.63	ppb	100
40) 3-Methylpentane	3.60	57	15142	9.71	ppb	95
41) Chloroform	5.52	83	49558	10.18	ppb	100
42) Bromochloromethane	5.38	49	22790	10.38	ppb	100
44) 1,1,1-TCA	5.73	97	18952	10.06	ppb	100
45) Cyclohexane	5.78	56	34953	10.11	ppb	100
46) 1,1-Dichloropropene	5.95	75	33246	9.88	ppb	100
47) 2,2,4-Trimethylpentane	6.35	57	63903	9.91	ppb	100
49) Carbon Tetrachloride	5.94	117	34898	9.68	ppb	100
50) Tert Amyl Methyl Ether	6.41	73	76365	10.21	ppb	100
52) 1,2-DCA	6.24	62	41871	10.21	ppb	100
53) Benzene	6.20	78	104704	9.87	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T07.D Vial: 7
Acq On : 22 Dec 20 19:50 Operator:
Sample : 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.01	130	31119	10.17	ppb		100
55)	2-Pentanone	7.28	43	222856	125.75	ppb		100
56)	1,2-Dichloropropane	7.27	63	27162	9.83	ppb		100
57)	Bromodichloromethane	7.61	83	39132	9.82	ppb		100
58)	Methyl Cyclohexane	7.23	83	37175	10.61	ppb		100
59)	Dibromomethane	7.40	174	25178	10.21	ppb		100
60)	MIBK (methyl isobutyl ket	8.34	43	119415	48.02	ppb		100
61)	1-Bromo-2-chloroethane	7.95	63	21704	10.42	ppb		100
63)	Cis-1,3-Dichloropropene	8.13	75	49204	10.04	ppb		100
64)	Toluene	8.50	91	116742	9.81	ppb		100
65)	Trans-1,3-Dichloropropene	8.76	75	45623	10.33	ppb		100
66)	1,1,2-TCA	8.96	97	26225	9.74	ppb		100
67)	2-Hexanone	9.27	43	79425	47.11	ppb		100
70)	1,2-EDB	9.50	107	30069	10.50	ppb		100
71)	Tetrachloroethene	9.11	166	42970	9.80	ppb		100
72)	1-Chlorohexane	10.05	91	31738	9.47	ppb		100
73)	1,1,1,2-Tetrachloroethane	10.15	131	33287	10.24	ppb		100
74)	m&p-Xylene	10.32	91	210516	20.00	ppb		100
75)	o-Xylene	10.75	91	116447	10.32	ppb		100
76)	Styrene	10.76	104	88088	10.14	ppb		100
78)	1,3-Dichloropropane	9.14	76	45329	10.24	ppb		100
79)	Dibromochloromethane	9.39	129	33760	9.99	ppb		100
80)	Chlorobenzene	10.05	112	82804	10.14	ppb		100
81)	Ethylbenzene	10.19	91	139047	10.21	ppb		100
82)	Bromoform	10.95	173	26424	9.99	ppb		100
84)	Isopropylbenzene	11.16	105	137693	10.05	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.48	83	34011	9.81	ppb		100
86)	1,2,3-Trichloropropane	11.53	110	11971	10.24	ppb		100
87)	t-1,4-Dichloro-2-Butene	11.55	53	7860	11.49	ppb		100
88)	Bromobenzene	11.48	156	43984	10.15	ppb		100
89)	n-Propylbenzene	11.61	91	156287	9.96	ppb		100
90)	4-Ethyltoluene	11.74	105	137176	10.24	ppb		100
91)	2-Chlorotoluene	11.70	91	112604	9.94	ppb		100
92)	1,3,5-Trimethylbenzene	11.81	105	115313	10.05	ppb		100
93)	4-Chlorotoluene	11.82	91	119553	10.23	ppb		100
94)	Tert-Butylbenzene	12.16	119	119116	10.07	ppb		100
95)	1,2,4-Trimethylbenzene	12.22	105	116150	9.75	ppb		100
96)	Sec-Butylbenzene	12.40	105	144631	9.88	ppb		100
97)	p-Isopropyltoluene	12.56	119	126638	9.86	ppb		100
98)	Benzyl Chloride	12.76	91	46598	9.50	ppb		100
99)	1,3-DCB	12.51	146	77373	9.83	ppb		100
100)	1,4-DCB	12.61	146	79944	10.00	ppb		100
101)	n-Butylbenzene	13.01	91	103509	9.69	ppb		100
102)	1,2-DCB	13.02	146	77109	10.17	ppb		100
103)	Hexachloroethane	13.31	201	15012	8.95	ppb		100
104)	1,2-Dibromo-3-chloropropan	13.87	157	9099	9.82	ppb		100
105)	1,2,4-Trichlorobenzene	14.79	180	59439	10.01	ppb		100
106)	Hexachlorobutadiene	14.99	225	29296	10.00	ppb		100
107)	Naphthalene	15.06	128	54176	10.01	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	55217	9.57	ppb		100

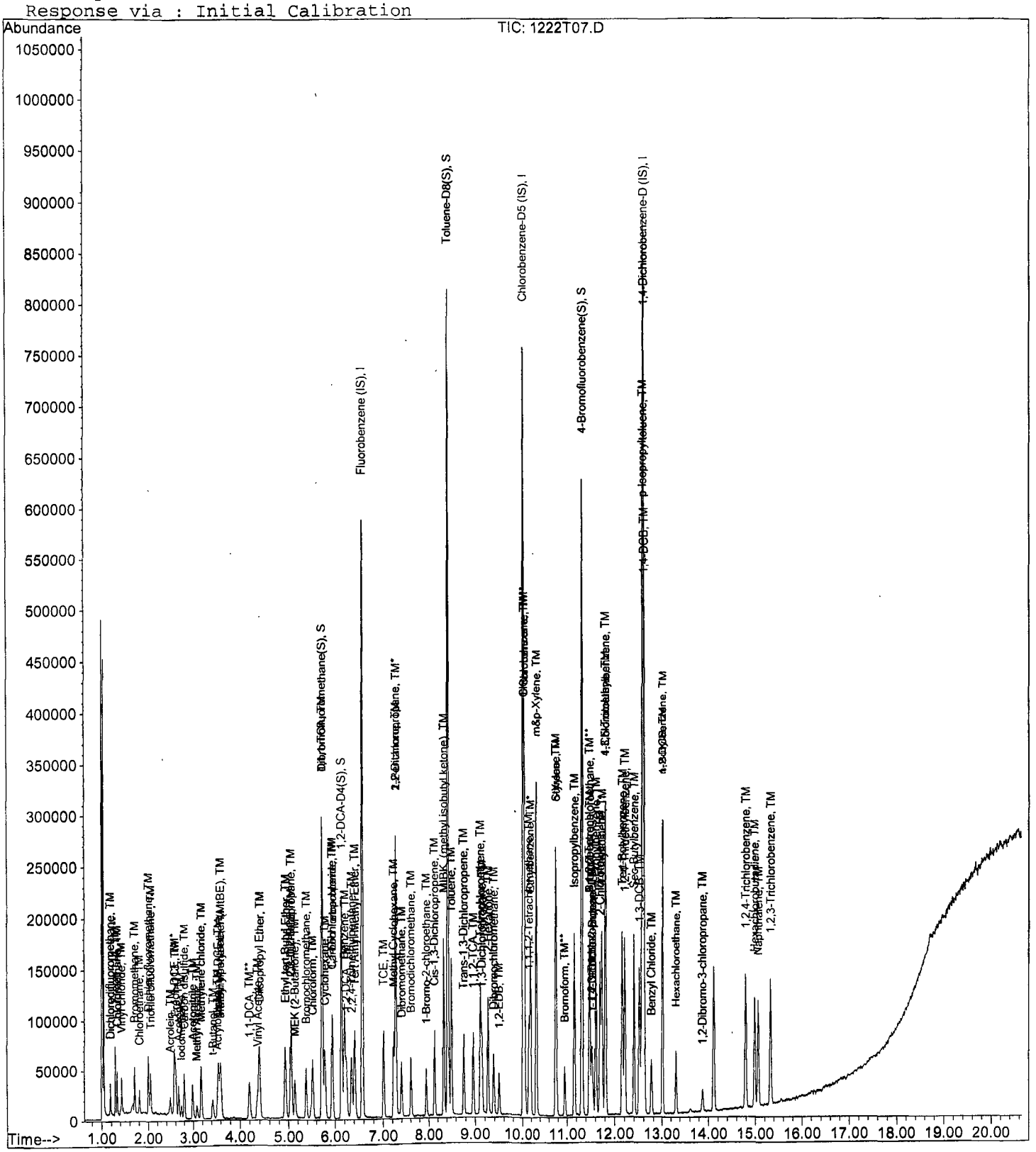
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T07.D Vial: 7
Acq On : 22 Dec 20 19:50 Operator:
Sample : 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T08.D Vial: 8
Acq On : 22 Dec 20 20:18 Operator:
Sample : 20ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	550400	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	466349	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	289645	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	293675	49.89	ppb		0.00
Spiked Amount 25.000			Recovery = 199.540%				
48) 1,2-DCA-D4(S)	6.14	65	334397	49.77	ppb		0.00
Spiked Amount 25.000			Recovery = 199.064%				
69) Toluene-D8(S)	8.42	98	1113037	49.99	ppb		0.00
Spiked Amount 25.000			Recovery = 199.964%				
77) 4-Bromofluorobenzene(S)	11.32	95	454090	50.27	ppb		0.00
Spiked Amount 25.000			Recovery = 201.064%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	36600	17.48	ppb		96
4) Freon 114	1.29	85	41230	19.54	ppb		97
5) Chloromethane	1.33	50	51922	17.74	ppb		89
6) Vinyl chloride	1.43	62	45504	20.63	ppb		97
9) Bromomethane	1.70	96	27912	21.86	ppb		95
10) Chloroethane	1.81	64	30050	19.71	ppb		99
11) Dichlorofluoromethane	2.01	67	88942	20.04	ppb		100
12) Trichlorofluoromethane	2.05	101	62537	20.01	ppb		96
16) Acrolein	2.49	56	16348	159.45	ppb		90
17) Acetone	2.67	43	43266	54.42	ppb		92
18) Freon-113	2.61	101	18152	19.00	ppb		90
19) 1,1-DCE	2.58	61	70565	21.36	ppb		97
21) Acetonitrile	2.98	40	11422	147.24	ppb		92
22) t-Butanol	3.43	59	11959	143.81	ppb	#	89
23) Methyl Acetate	3.08	43	34324	18.09	ppb		99
24) Iodomethane	2.73	142	36399	17.36	ppb	#	94
25) Acrylonitrile	3.52	52	14194	18.77	ppb	#	64
26) Methylene chloride	3.17	84	24440	19.49	ppb		92
27) Carbon disulfide	2.80	76	72728	20.84	ppb		97
28) Methyl t-butyl ether (MtBE	3.59	73	140230	19.42	ppb		99
29) Trans-1,2-DCE	3.55	61	68160	20.14	ppb		98
31) Diisopropyl Ether	4.40	45	157102	20.57	ppb		96
33) 1,1-DCA	4.19	63	87768	20.63	ppb		95
34) Vinyl Acetate	4.35	43	30624	18.58	ppb		100
35) Ethyl tert Butyl Ether	4.93	59	153284	20.38	ppb		99
36) MEK (2-Butanone)	5.14	43	67229	60.10	ppb		97
37) Cis-1,2-DCE	5.06	61	83000	19.93	ppb		96
38) 2,2-Dichloropropane	5.05	77	81877	20.34	ppb		99
40) 3-Methylpentane	3.59	57	30232	19.56	ppb		94
41) Chloroform	5.52	83	99304	20.59	ppb		90
42) Bromochloromethane	5.38	49	43015	19.78	ppb		93
44) 1,1,1-TCA	5.73	97	37800	20.25	ppb		95
45) Cyclohexane	5.79	56	73691	21.50	ppb		98
46) 1,1-Dichloropropene	5.95	75	70492	21.14	ppb		97
47) 2,2,4-Trimethylpentane	6.35	57	135392	21.19	ppb		99
49) Carbon Tetrachloride	5.94	117	71953	19.55	ppb		98
50) Tert Amyl Methyl Ether	6.41	73	146867	19.82	ppb		99
52) 1,2-DCA	6.24	62	82504	20.30	ppb		98
53) Benzene	6.20	78	214549	20.42	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T08.D Vial: 8
Acq On : 22 Dec 20 20:18 Operator:
Sample : 20ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.02	130	63438	20.93	ppb		98
55)	2-Pentanone	7.28	43	268930	153.15	ppb		98
56)	1,2-Dichloropropane	7.27	63	56110	20.50	ppb		98
57)	Bromodichloromethane	7.61	83	79357	20.10	ppb		100
58)	Methyl Cyclohexane	7.23	83	76274	21.98	ppb		94
59)	Dibromomethane	7.40	174	50838	20.81	ppb		96
60)	MIBK (methyl isobutyl ket	8.34	43	143075	58.07	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	42288	20.50	ppb		97
63)	Cis-1,3-Dichloropropene	8.13	75	97886	20.16	ppb		95
64)	Toluene	8.50	91	240559	20.39	ppb		96
65)	Trans-1,3-Dichloropropene	8.76	75	88177	20.14	ppb		98
66)	1,1,2-TCA	8.96	97	51779	19.41	ppb		97
67)	2-Hexanone	9.27	43	97361	58.28	ppb		97
70)	1,2-EDB	9.50	107	56364	19.75	ppb		87
71)	Tetrachloroethene	9.11	166	88324	20.19	ppb		97
72)	1-Chlorohexane	10.05	91	65904	19.42	ppb		95
73)	1,1,1,2-Tetrachloroethane	10.15	131	63650	19.63	ppb		98
74)	m&p-Xylene	10.32	91	437267	41.66	ppb		100
75)	o-Xylene	10.75	91	232801	20.69	ppb		98
76)	Styrene	10.77	104	178746	20.63	ppb		99
78)	1,3-Dichloropropane	9.14	76	89902	20.37	ppb		98
79)	Dibromochloromethane	9.38	129	70397	20.90	ppb		97
80)	Chlorobenzene	10.05	112	167502	20.57	ppb		97
81)	Ethylbenzene	10.19	91	278015	20.48	ppb		100
82)	Bromoform	10.95	173	53470	20.28	ppb	#	89
84)	Isopropylbenzene	11.16	105	284204	21.13	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.48	83	66408	19.50	ppb		98
86)	1,2,3-Trichloropropane	11.52	110	23034	20.07	ppb	#	86
87)	t-1,4-Dichloro-2-Butene	11.54	53	13656	20.32	ppb		93
88)	Bromobenzene	11.48	156	85032	19.99	ppb		97
89)	n-Propylbenzene	11.61	91	320059	20.76	ppb		97
90)	4-Ethyltoluene	11.74	105	279251	21.22	ppb		98
91)	2-Chlorotoluene	11.70	91	228107	20.49	ppb		98
92)	1,3,5-Trimethylbenzene	11.81	105	243371	21.59	ppb		99
93)	4-Chlorotoluene	11.82	91	235124	20.49	ppb		98
94)	Tert-Butylbenzene	12.16	119	247732	21.31	ppb		97
95)	1,2,4-Trimethylbenzene	12.22	105	246001	21.01	ppb		94
96)	Sec-Butylbenzene	12.40	105	300187	20.89	ppb		99
97)	p-Isopropyltoluene	12.57	119	269021	21.31	ppb		98
98)	Benzyl Chloride	12.76	91	94082	19.52	ppb		97
99)	1,3-DCB	12.51	146	157544	20.38	ppb		98
100)	1,4-DCB	12.61	146	160004	20.38	ppb		99
101)	n-Butylbenzene	13.01	91	221626	21.12	ppb		99
102)	1,2-DCB	13.02	146	154442	20.73	ppb		98
103)	Hexachloroethane	13.31	201	33006	18.56	ppb		92
104)	1,2-Dibromo-3-chloropropan	13.87	157	17671	19.42	ppb		99
105)	1,2,4-Trichlorobenzene	14.79	180	120128	20.60	ppb		99
106)	Hexachlorobutadiene	14.99	225	60125	20.90	ppb		94
107)	Naphthalene	15.06	128	111376	20.96	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	114188	20.14	ppb		99

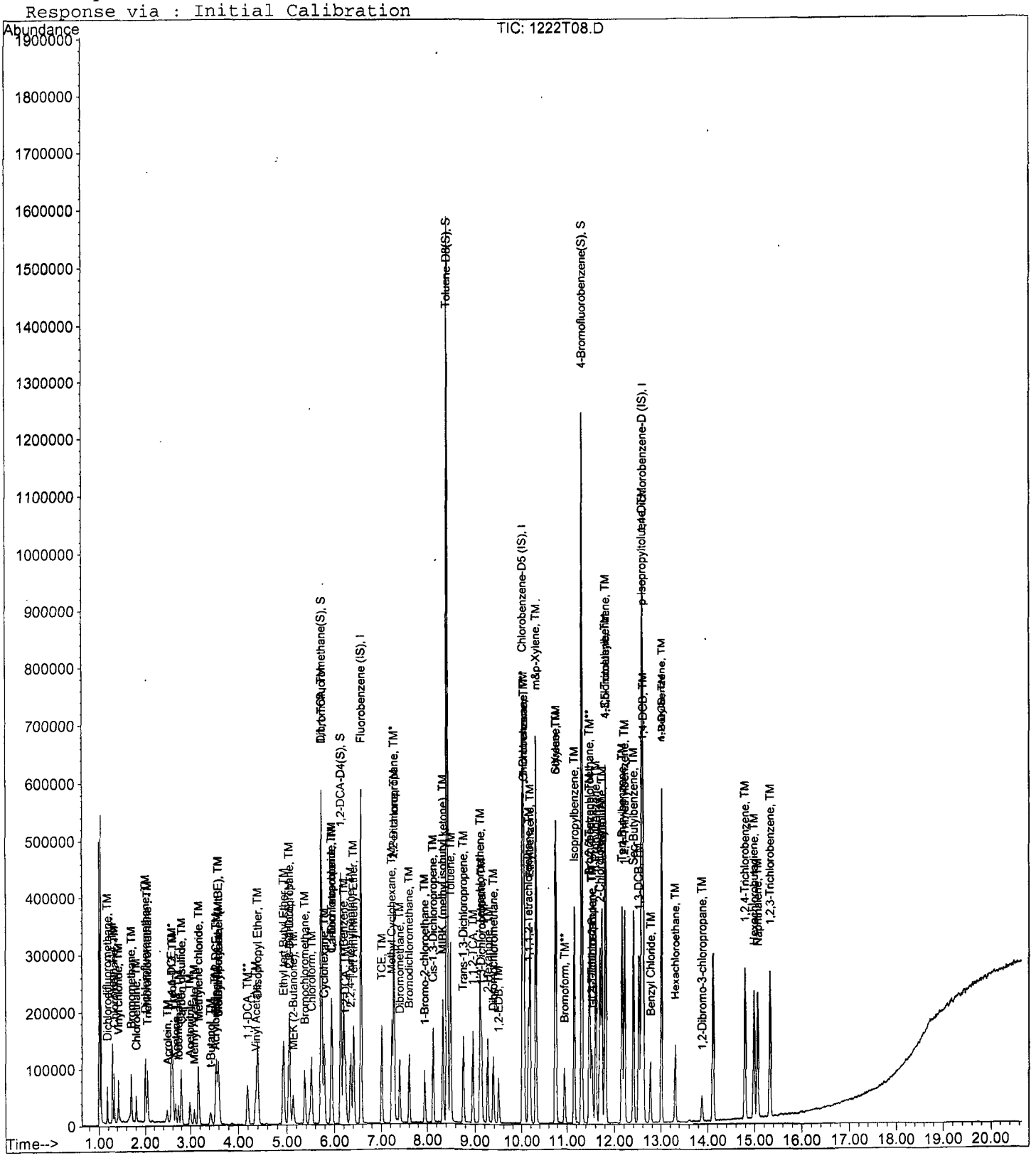
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T08.D Vial: 8
Acq On : 22 Dec 20 20:18 Operator:
Sample : 20ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T09.D Vial: 9
Acq On : 22 Dec 20 20:46 Operator:
Sample : 40ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	543256	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	467976	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	294687	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	294830	50.74	ppb		0.00
Spiked Amount 25.000			Recovery = 202.960%				
48) 1,2-DCA-D4(S)	6.14	65	333095	50.22	ppb		0.00
Spiked Amount 25.000			Recovery = 200.896%				
69) Toluene-D8(S)	8.42	98	1110615	49.71	ppb		0.00
Spiked Amount 25.000			Recovery = 198.836%				
77) 4-Bromofluorobenzene(S)	11.32	95	458576	50.59	ppb		0.00
Spiked Amount 25.000			Recovery = 202.344%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	86600	39.55	ppb		99
4) Freon 114	1.29	85	86938	40.98	ppb		96
5) Chloromethane	1.33	50	108278	37.49	ppb		94
6) Vinyl chloride	1.43	62	96808	44.46	ppb		98
9) Bromomethane	1.70	96	51688	42.53	ppb		98
10) Chloroethane	1.80	64	63504	42.58	ppb		99
11) Dichlorofluoromethane	2.01	67	175426	40.05	ppb		99
12) Trichlorofluoromethane	2.05	101	142938	46.34	ppb		98
16) Acrolein	2.49	56	17379	171.73	ppb		97
17) Acetone	2.67	43	60771	77.44	ppb		98
18) Freon-113	2.60	101	39928	42.22	ppb		85
19) 1,1-DCE	2.58	61	137500	42.17	ppb		98
21) Acetonitrile	2.99	40	12899	168.47	ppb		88
22) t-Butanol	3.43	59	15070	183.60	ppb		93
23) Methyl Acetate	3.08	43	69005	36.85	ppb		97
24) Iodomethane	2.73	142	86996	38.30	ppb		97
25) Acrylonitrile	3.52	52	30124	40.36	ppb	#	60
26) Methylene chloride	3.17	84	51448	42.16	ppb		97
27) Carbon disulfide	2.80	76	144320	41.90	ppb		99
28) Methyl t-butyl ether (MtBE	3.59	73	284497	39.93	ppb		99
29) Trans-1,2-DCE	3.55	61	134493	40.27	ppb		92
31) Diisopropyl Ether	4.40	45	303332	40.23	ppb		96
33) 1,1-DCA	4.20	63	171884	40.94	ppb		97
34) Vinyl Acetate	4.35	43	74132	45.57	ppb		98
35) Ethyl tert Butyl Ether	4.93	59	307951	41.48	ppb		99
36) MEK (2-Butanone)	5.14	43	89754	81.29	ppb		97
37) Cis-1,2-DCE	5.06	61	167011	40.63	ppb		98
38) 2,2-Dichloropropane	5.05	77	162202	40.82	ppb		94
40) 3-Methylpentane	3.59	57	60952	39.95	ppb		96
41) Chloroform	5.52	83	195890	41.16	ppb		92
42) Bromochloromethane	5.38	49	87392	40.71	ppb		94
44) 1,1,1-TCA	5.73	97	77216	41.91	ppb		95
45) Cyclohexane	5.79	56	148675	43.95	ppb		100
46) 1,1-Dichloropropene	5.95	75	138270	42.01	ppb		98
47) 2,2,4-Trimethylpentane	6.35	57	276633	43.86	ppb		97
49) Carbon Tetrachloride	5.94	117	148062	40.18	ppb		97
50) Tert Amyl Methyl Ether	6.41	73	297063	40.63	ppb		99
52) 1,2-DCA	6.23	62	160733	40.07	ppb		96
53) Benzene	6.20	78	417541	40.26	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T09.D Vial: 9
Acq On : 22 Dec 20 20:46 Operator:
Sample : 40ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.02	130	128207	42.86	ppb		96
55)	2-Pentanone	7.28	43	335576	193.61	ppb		99
56)	1,2-Dichloropropane	7.27	63	107625	39.83	ppb		99
57)	Bromodichloromethane	7.61	83	155414	39.89	ppb		96
58)	Methyl Cyclohexane	7.23	83	157587	46.00	ppb		96
59)	Dibromomethane	7.40	174	100196	41.55	ppb		93
60)	MIBK (methyl isobutyl ket	8.33	43	203578	83.71	ppb		97
61)	1-Bromo-2-chloroethane	7.95	63	84240	41.37	ppb		96
63)	Cis-1,3-Dichloropropene	8.13	75	193273	40.33	ppb		96
64)	Toluene	8.50	91	477769	41.04	ppb		95
65)	Trans-1,3-Dichloropropene	8.77	75	177974	41.19	ppb		96
66)	1,1,2-TCA	8.96	97	105569	40.09	ppb		95
67)	2-Hexanone	9.27	43	137405	83.33	ppb		99
70)	1,2-EDB	9.50	107	115393	40.28	ppb		89
71)	Tetrachloroethene	9.11	166	173638	39.55	ppb		94
72)	1-Chlorohexane	10.05	91	135855	39.60	ppb		97
73)	1,1,1,2-Tetrachloroethane	10.15	131	129465	39.80	ppb		96
74)	m&p-Xylene	10.32	91	875722	83.15	ppb		99
75)	o-Xylene	10.75	91	466997	41.36	ppb		98
76)	Styrene	10.77	104	369867	42.55	ppb		98
78)	1,3-Dichloropropane	9.14	76	181221	40.92	ppb		98
79)	Dibromochloromethane	9.39	129	136840	40.48	ppb		98
80)	Chlorobenzene	10.05	112	327722	40.11	ppb		97
81)	Ethylbenzene	10.19	91	556594	40.85	ppb		99
82)	Bromoform	10.95	173	110305	41.68	ppb	#	97
84)	Isopropylbenzene	11.16	105	576024	42.09	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.48	83	143054	41.29	ppb		99
86)	1,2,3-Trichloropropane	11.52	110	47403	40.59	ppb	#	89
87)	t-1,4-Dichloro-2-Butene	11.55	53	29189	42.68	ppb		92
88)	Bromobenzene	11.48	156	172841	39.93	ppb		95
89)	n-Propylbenzene	11.61	91	653327	41.65	ppb		99
90)	4-Ethyltoluene	11.74	105	568760	42.48	ppb		99
91)	2-Chlorotoluene	11.70	91	452593	39.96	ppb		98
92)	1,3,5-Trimethylbenzene	11.81	105	502809	43.85	ppb		100
93)	4-Chlorotoluene	11.82	91	476451	40.81	ppb		98
94)	Tert-Butylbenzene	12.16	119	494033	41.77	ppb		96
95)	1,2,4-Trimethylbenzene	12.22	105	511989	42.99	ppb		96
96)	Sec-Butylbenzene	12.40	105	610433	41.75	ppb		97
97)	p-Isopropyltoluene	12.57	119	552945	43.06	ppb		98
98)	Benzyl Chloride	12.76	91	197825	40.34	ppb		97
99)	1,3-DCB	12.51	146	311734	39.64	ppb		97
100)	1,4-DCB	12.61	146	319402	39.99	ppb		99
101)	n-Butylbenzene	13.01	91	454151	42.53	ppb		100
102)	1,2-DCB	13.02	146	311518	41.10	ppb		99
103)	Hexachloroethane	13.31	201	74142	39.53	ppb		96
104)	1,2-Dibromo-3-chloropropan	13.87	157	39576	42.74	ppb		98
105)	1,2,4-Trichlorobenzene	14.79	180	251906	42.47	ppb		94
106)	Hexachlorobutadiene	14.99	225	125154	42.75	ppb		95
107)	Naphthalene	15.06	128	244096	45.15	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	245426	42.55	ppb		97

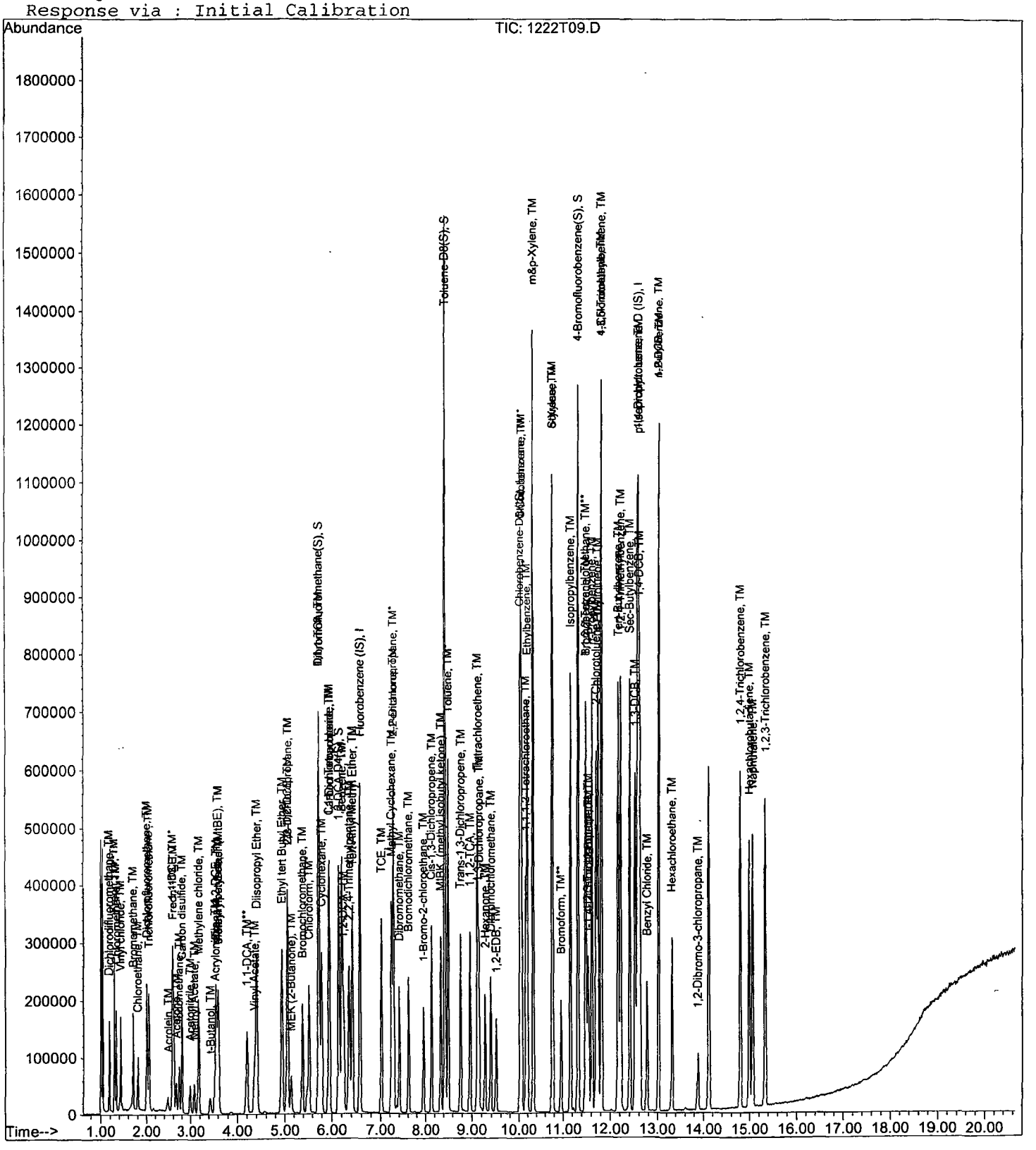
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T09.D Vial: 9
Acq On : 22 Dec 20 20:46 Operator:
Sample : 40ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T10.D Vial: 10
Acq On : 22 Dec 20 21:13 Operator:
Sample : 100ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	545422	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	463411	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	304194	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	554905	95.12	ppb		0.00
Spiked Amount 25.000			Recovery = 380.480%				
48) 1,2-DCA-D4(S)	6.14	65	632303	94.96	ppb		0.00
Spiked Amount 25.000			Recovery = 379.840%				
69) Toluene-D8(S)	8.43	98	2090415	94.48	ppb		0.00
Spiked Amount 25.000			Recovery = 377.940%				
77) 4-Bromofluorobenzene(S)	11.32	95	872275	97.17	ppb		0.00
Spiked Amount 25.000			Recovery = 388.680%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	227586	100.82	ppb		95
4) Freon 114	1.29	85	214645	99.79	ppb		96
5) Chloromethane	1.33	50	247927	85.49	ppb		95
6) Vinyl chloride	1.43	62	232896	106.53	ppb		98
9) Bromomethane	1.70	96	117616	98.60	ppb		97
10) Chloroethane	1.80	64	147738	99.12	ppb		100
11) Dichlorofluoromethane	2.00	67	425112	96.68	ppb		98
12) Trichlorofluoromethane	2.05	101	345418	111.55	ppb		99
16) Acrolein	2.49	56	22910	225.49	ppb		87
17) Acetone	2.68	43	76520	97.13	ppb		95
18) Freon-113	2.60	101	94496	99.36	ppb		87
19) 1,1-DCE	2.58	61	338664	103.45	ppb		98
21) Acetonitrile	2.99	40	15833	205.96	ppb		89
22) t-Butanol	3.44	59	17290	209.81	ppb		98
23) Methyl Acetate	3.08	43	178742	95.08	ppb		98
24) Iodomethane	2.73	142	241834	101.37	ppb		98
25) Acrylonitrile	3.53	52	74892	99.95	ppb	#	69
26) Methylene chloride	3.17	84	120744	99.24	ppb		96
27) Carbon disulfide	2.80	76	349440	101.04	ppb		99
28) Methyl t-butyl ether (MtBE	3.59	73	706440	98.75	ppb		99
29) Trans-1,2-DCE	3.55	61	325589	97.09	ppb		97
31) Diisopropyl Ether	4.40	45	748086	98.82	ppb		98
33) 1,1-DCA	4.20	63	413716	98.14	ppb		96
34) Vinyl Acetate	4.35	43	153664	94.08	ppb		100
35) Ethyl tert Butyl Ether	4.93	59	763806	102.48	ppb		98
36) MEK (2-Butanone)	5.13	43	113117	102.04	ppb		96
37) Cis-1,2-DCE	5.06	61	399419	96.79	ppb		94
38) 2,2-Dichloropropane	5.04	77	391454	98.11	ppb		96
40) 3-Methylpentane	3.59	57	149260	97.44	ppb		96
41) Chloroform	5.52	83	476289	99.67	ppb		92
42) Bromochloromethane	5.38	49	211617	98.18	ppb		95
44) 1,1,1-TCA	5.73	97	189632	102.51	ppb		92
45) Cyclohexane	5.78	56	365096	107.51	ppb		96
46) 1,1-Dichloropropene	5.95	75	338841	102.54	ppb		96
47) 2,2,4-Trimethylpentane	6.35	57	681469	107.62	ppb		98
49) Carbon Tetrachloride	5.94	117	373217	100.06	ppb		96
50) Tert Amyl Methyl Ether	6.41	73	727753	99.13	ppb		98
52) 1,2-DCA	6.24	62	390171	96.88	ppb	#	95
53) Benzene	6.20	78	1016656	97.64	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T10.D Vial: 10
Acq On : 22 Dec 20 21:13 Operator:
Sample : 100ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.02	130	309714	103.12	ppb		98
55)	2-Pentanone	7.28	43	378138	217.30	ppb		99
56)	1,2-Dichloropropane	7.27	63	266368	98.19	ppb		100
57)	Bromodichloromethane	7.61	83	391377	100.05	ppb		98
58)	Methyl Cyclohexane	7.23	83	390877	113.65	ppb		98
59)	Dibromomethane	7.40	174	245601	101.45	ppb		95
60)	MIBK (methyl isobutyl ket	8.34	43	251658	103.07	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	199808	97.74	ppb		97
63)	Cis-1,3-Dichloropropene	8.13	75	477369	99.21	ppb		95
64)	Toluene	8.50	91	1170667	100.16	ppb		96
65)	Trans-1,3-Dichloropropene	8.76	75	437313	100.80	ppb		96
66)	1,1,2-TCA	8.96	97	255482	96.64	ppb		97
67)	2-Hexanone	9.27	43	176833	106.82	ppb		97
70)	1,2-EDB	9.50	107	287446	101.33	ppb		92
71)	Tetrachloroethene	9.11	166	406865	93.59	ppb		95
72)	1-Chlorohexane	10.05	91	342317	100.33	ppb		95
73)	1,1,1,2-Tetrachloroethane	10.15	131	319816	99.28	ppb		96
74)	m&p-Xylene	10.32	91	2136344	204.83	ppb		100
75)	o-Xylene	10.75	91	1126991	100.79	ppb		98
76)	Styrene	10.76	104	913834	106.16	ppb		98
78)	1,3-Dichloropropane	9.14	76	440197	100.37	ppb		99
79)	Dibromochloromethane	9.39	129	342355	102.27	ppb		96
80)	Chlorobenzene	10.05	112	808445	99.92	ppb		99
81)	Ethylbenzene	10.19	91	1363349	101.05	ppb		99
82)	Bromoform	10.95	173	274716	104.83	ppb	#	91
84)	Isopropylbenzene	11.16	105	1396996	98.88	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.48	83	360183	100.70	ppb		99
86)	1,2,3-Trichloropropane	11.52	110	117246	97.26	ppb	#	87
87)	t-1,4-Dichloro-2-Butene	11.55	53	78937	111.82	ppb		100
88)	Bromobenzene	11.48	156	425855	95.30	ppb		99
89)	n-Propylbenzene	11.61	91	1604404	99.09	ppb		99
90)	4-Ethyltoluene	11.74	105	1416842	102.52	ppb		98
91)	2-Chlorotoluene	11.70	91	1123724	96.12	ppb		99
92)	1,3,5-Trimethylbenzene	11.81	105	1240928	104.83	ppb		99
93)	4-Chlorotoluene	11.82	91	1178297	97.78	ppb		98
94)	Tert-Butylbenzene	12.16	119	1239538	101.53	ppb		96
95)	1,2,4-Trimethylbenzene	12.22	105	1286741	104.66	ppb		96
96)	Sec-Butylbenzene	12.40	105	1525552	101.07	ppb		100
97)	p-Isopropyltoluene	12.57	119	1381307	104.21	ppb		97
98)	Benzyl Chloride	12.76	91	551227	108.89	ppb		96
99)	1,3-DCB	12.52	146	788247	97.11	ppb		98
100)	1,4-DCB	12.61	146	805081	97.64	ppb		97
101)	n-Butylbenzene	13.02	91	1164432	105.64	ppb		99
102)	1,2-DCB	13.02	146	806602	103.10	ppb		99
103)	Hexachloroethane	13.31	201	198356	100.56	ppb		95
104)	1,2-Dibromo-3-chloropropan	13.87	157	106459	111.38	ppb		98
105)	1,2,4-Trichlorobenzene	14.79	180	677455	110.64	ppb		96
106)	Hexachlorobutadiene	14.99	225	327715	108.45	ppb		96
107)	Naphthalene	15.06	128	649984	116.47	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	641989	107.82	ppb		98

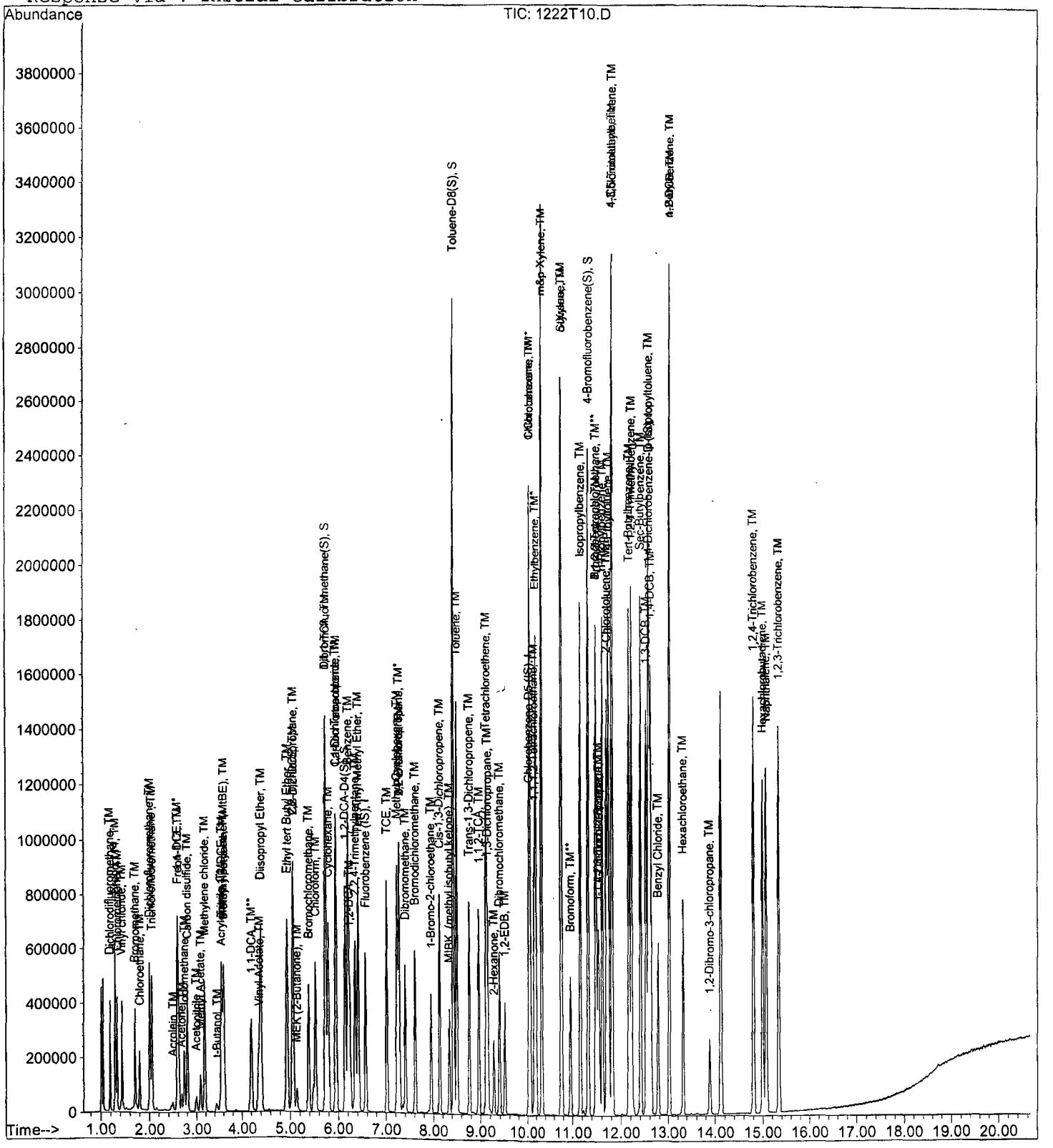
(#) = qualifier out of range (m) = manual integration

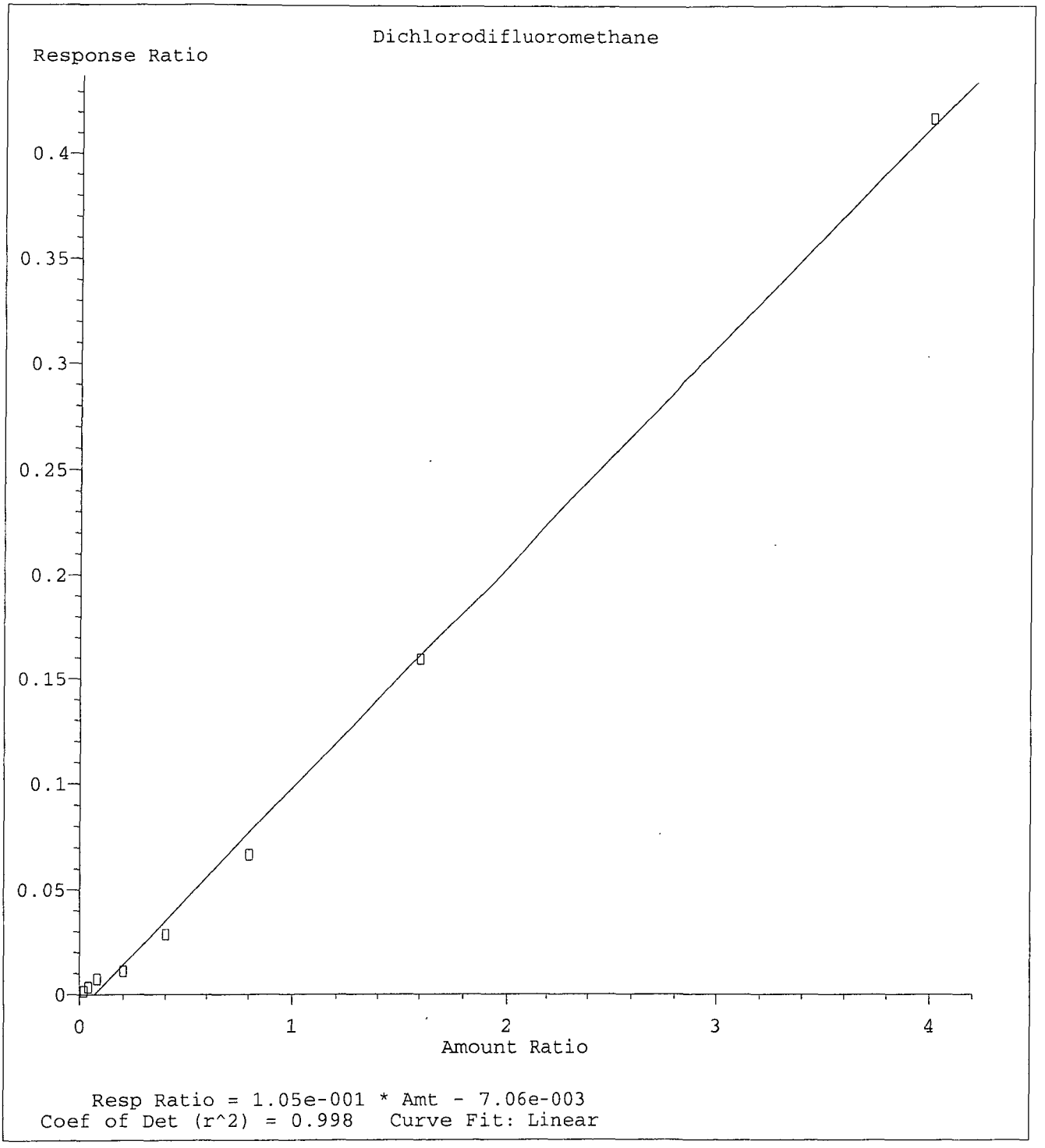
Quantitation Report

Data File : M:\THOR\DATA\201222\1222T10.D Vial: 10
Acq On : 22 Dec 20 21:13 Operator:
Sample : 100ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

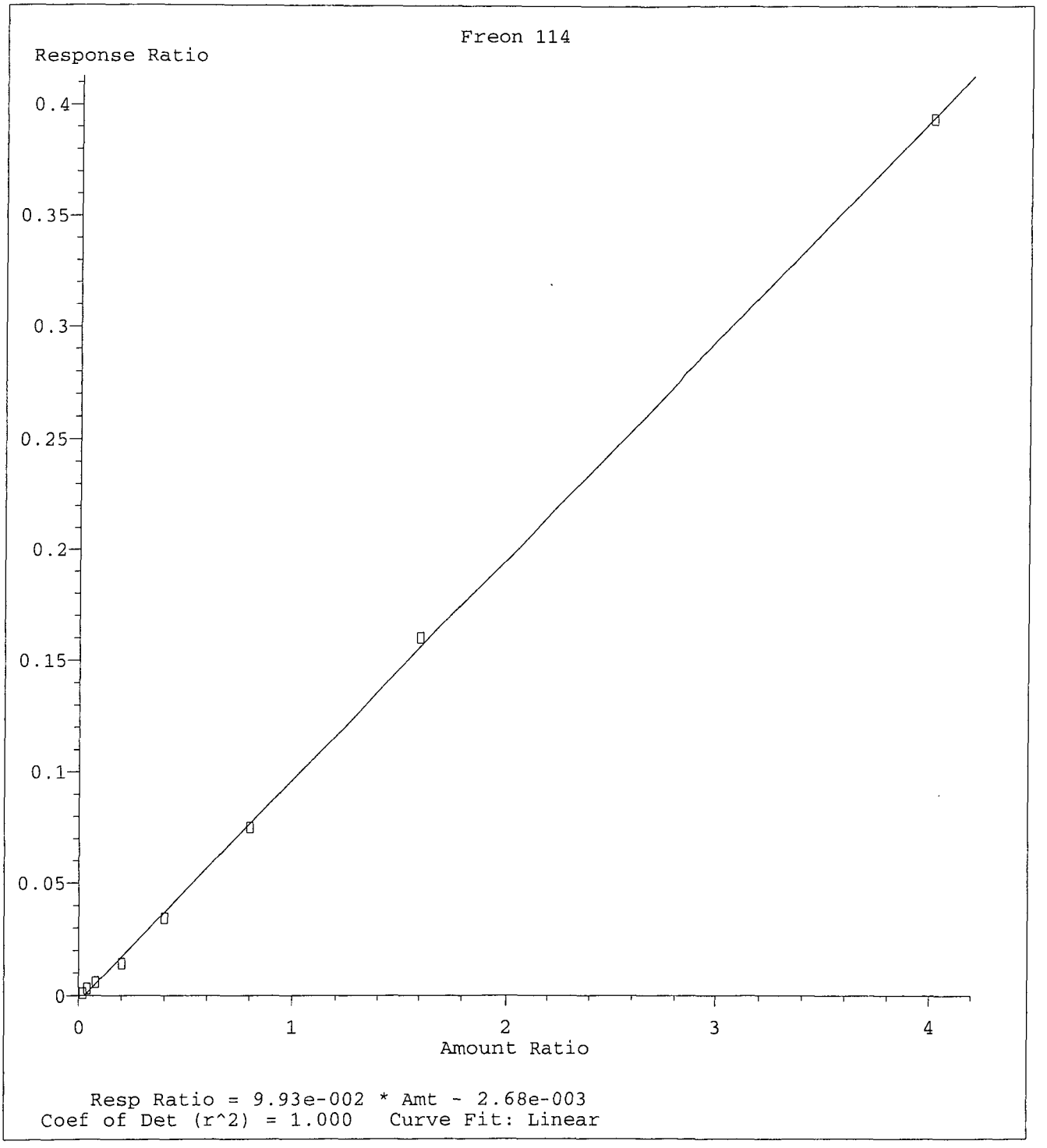
Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration

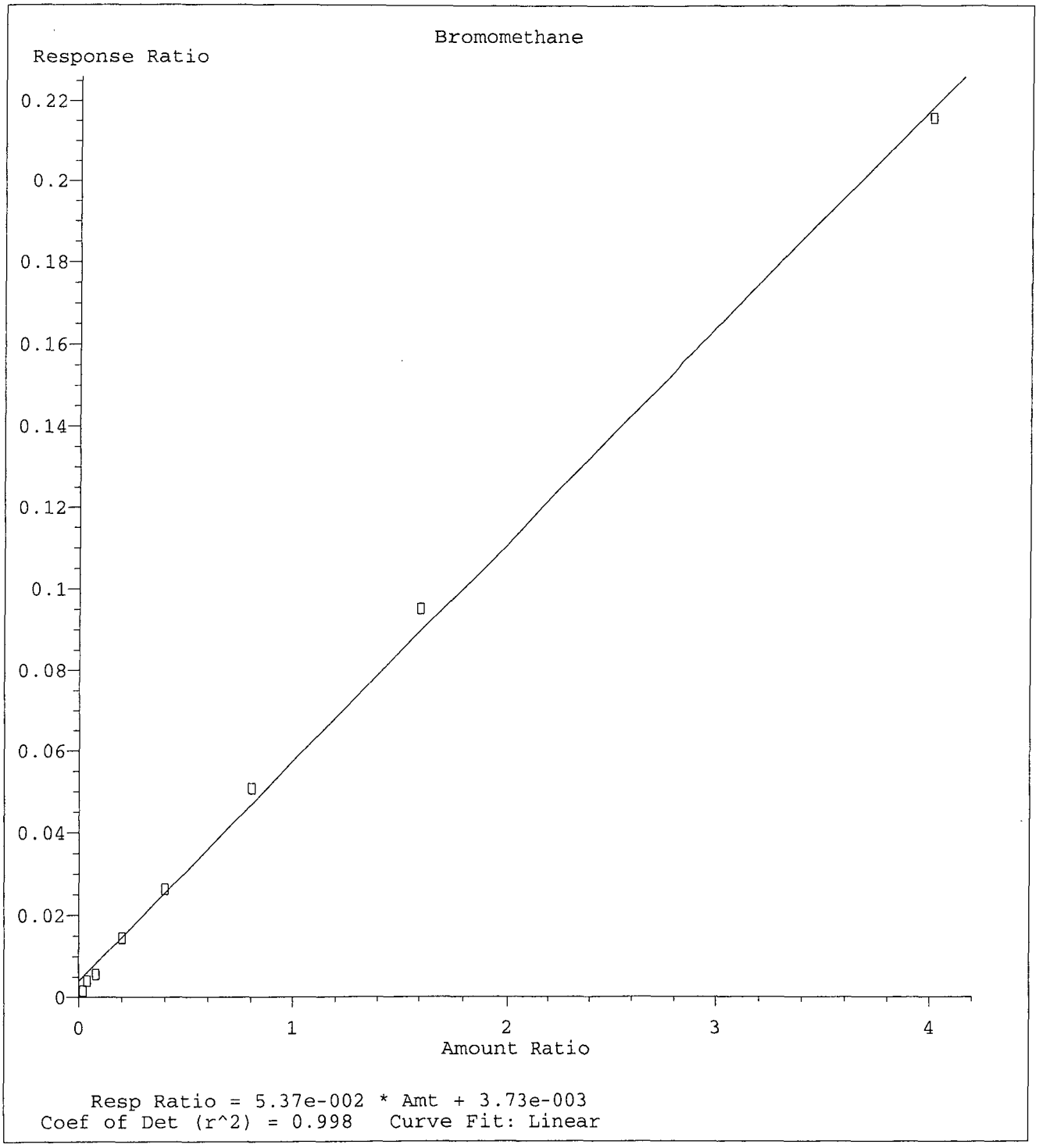




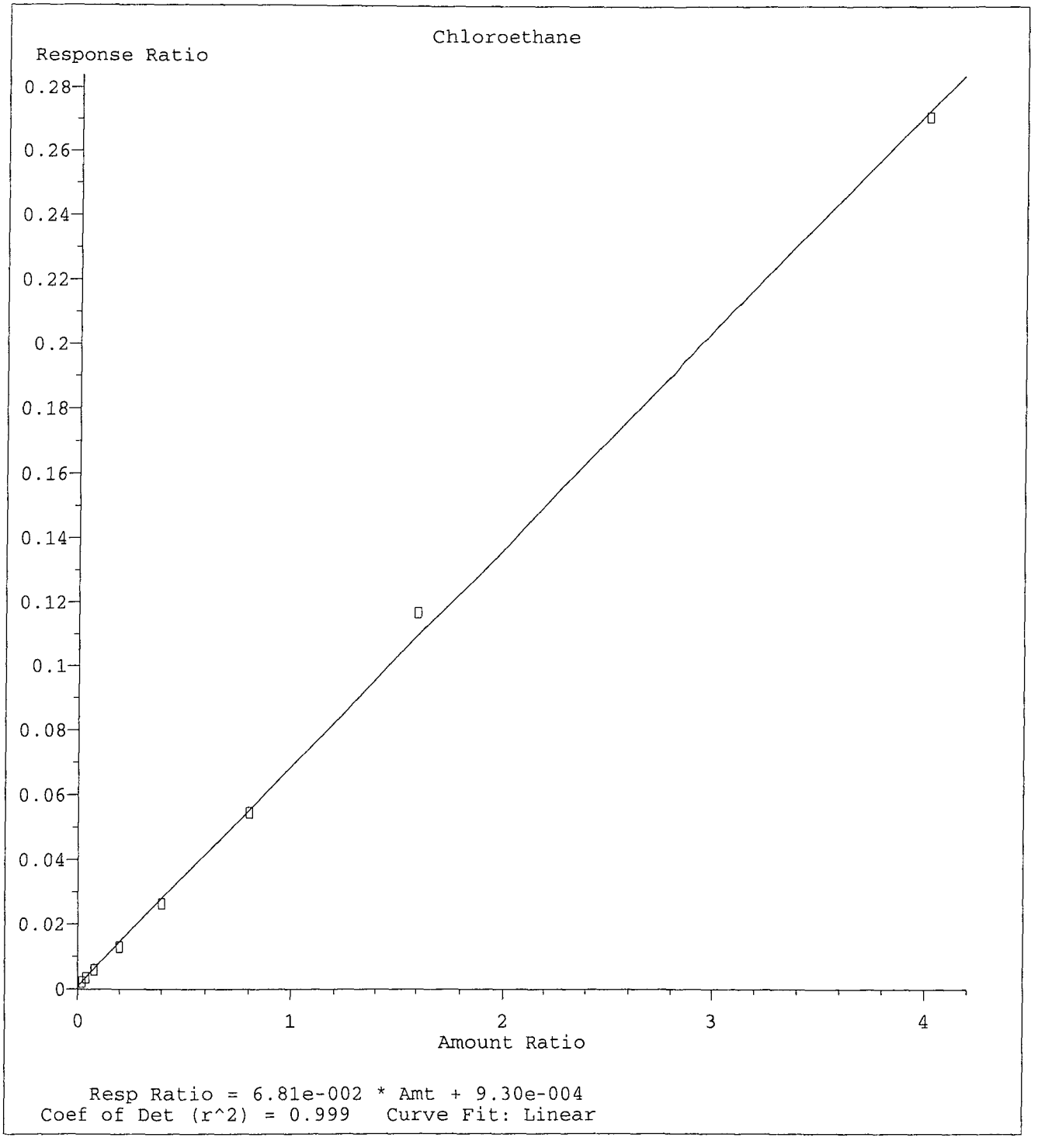
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



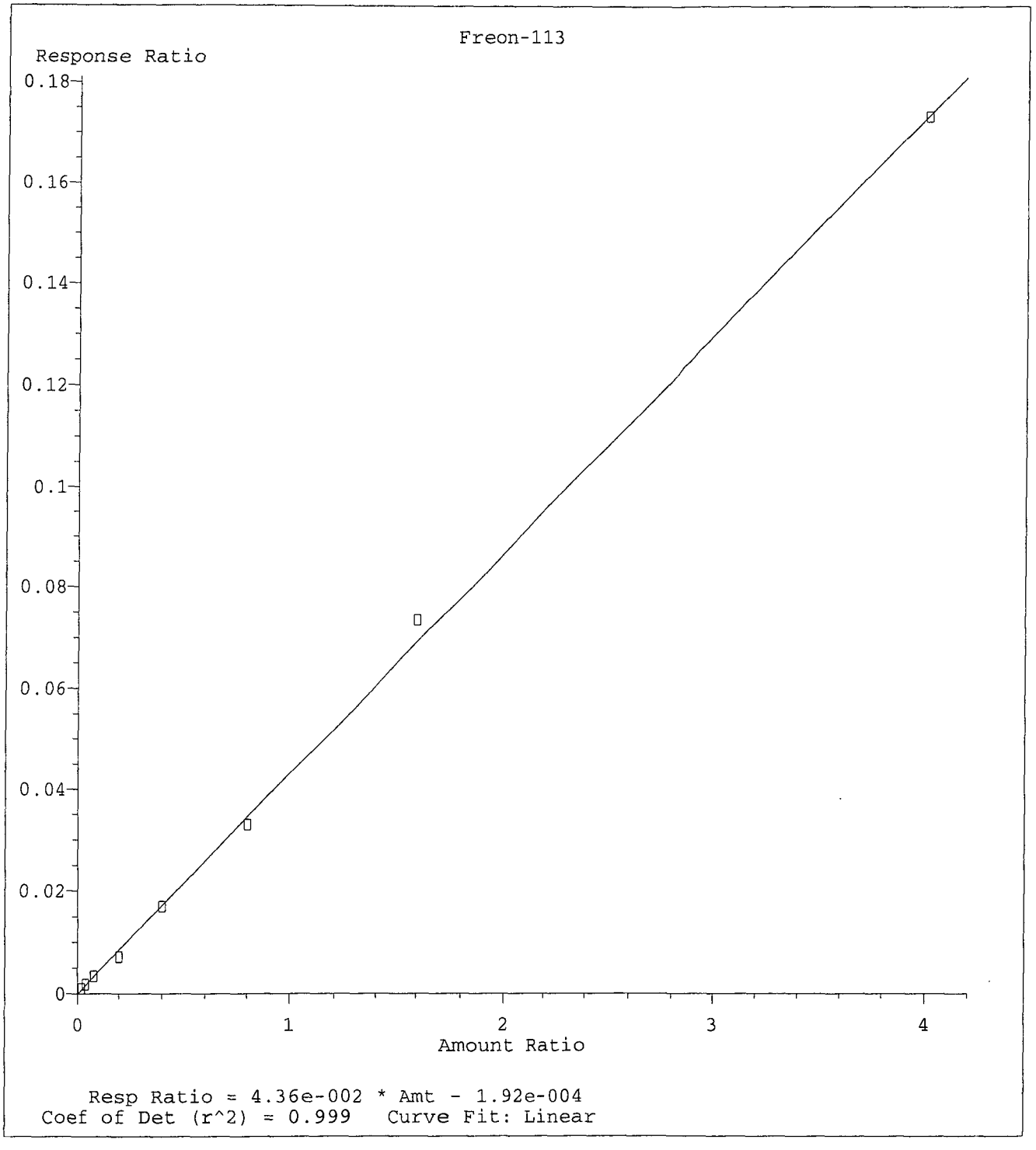
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



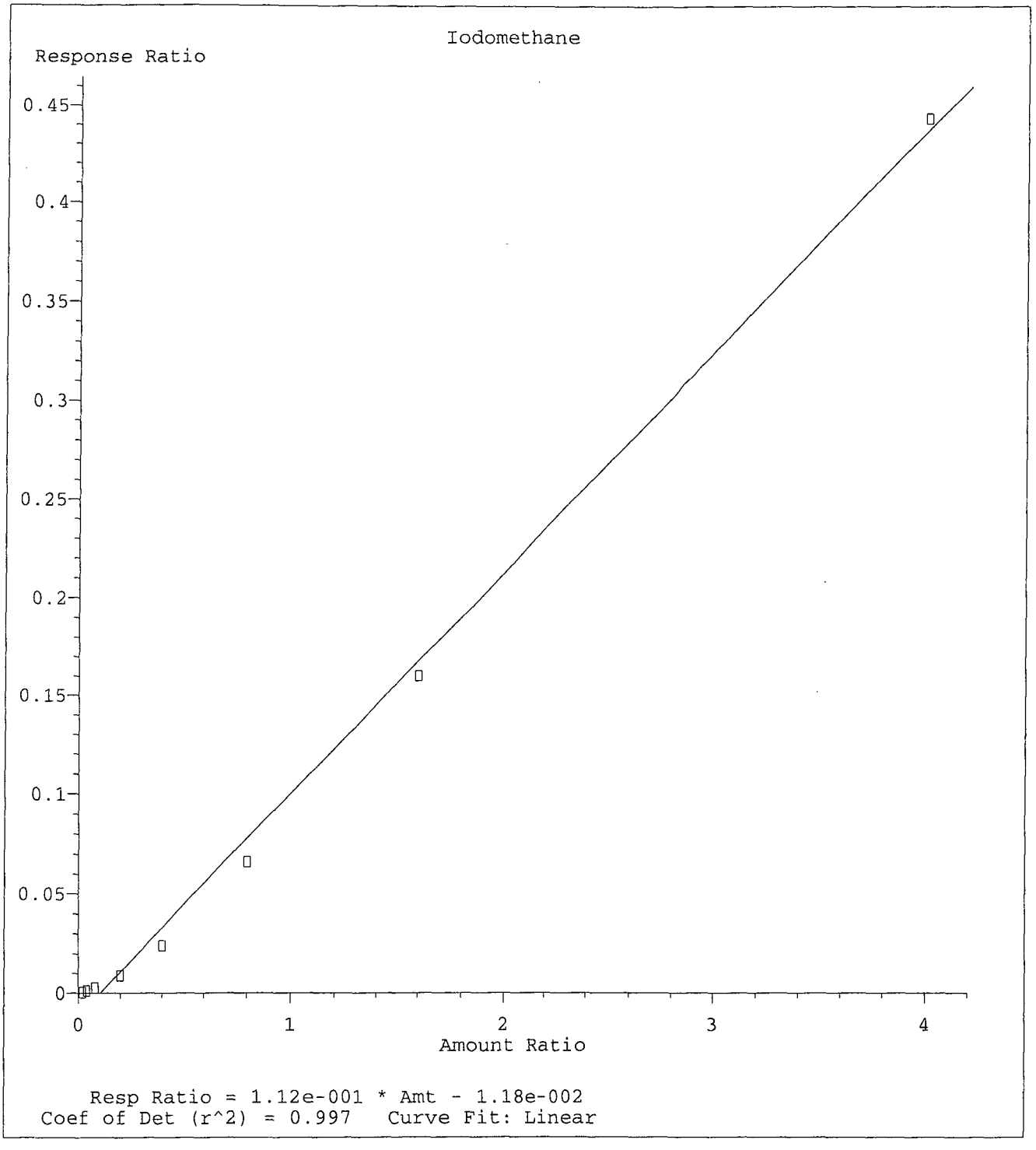
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



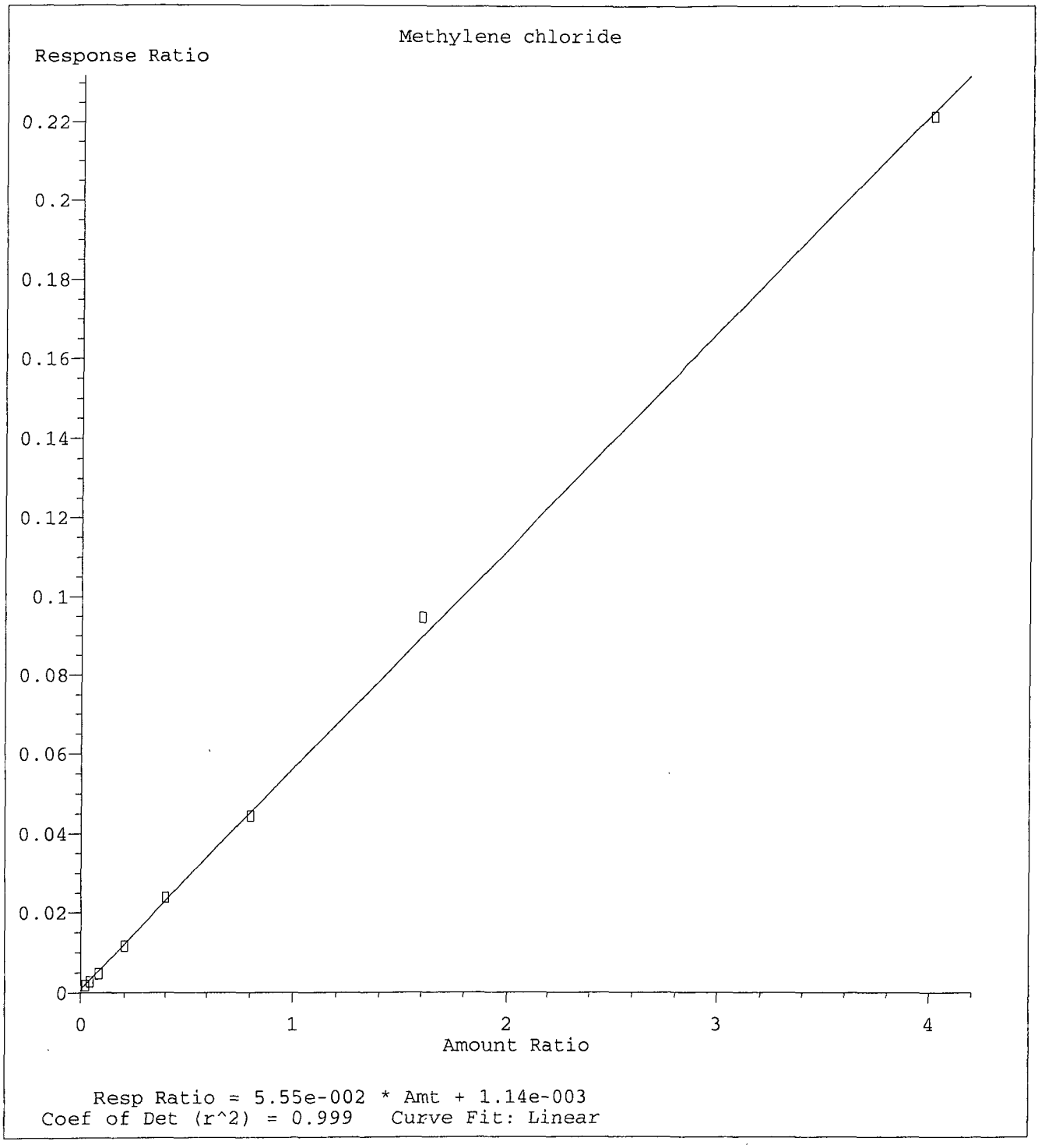
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



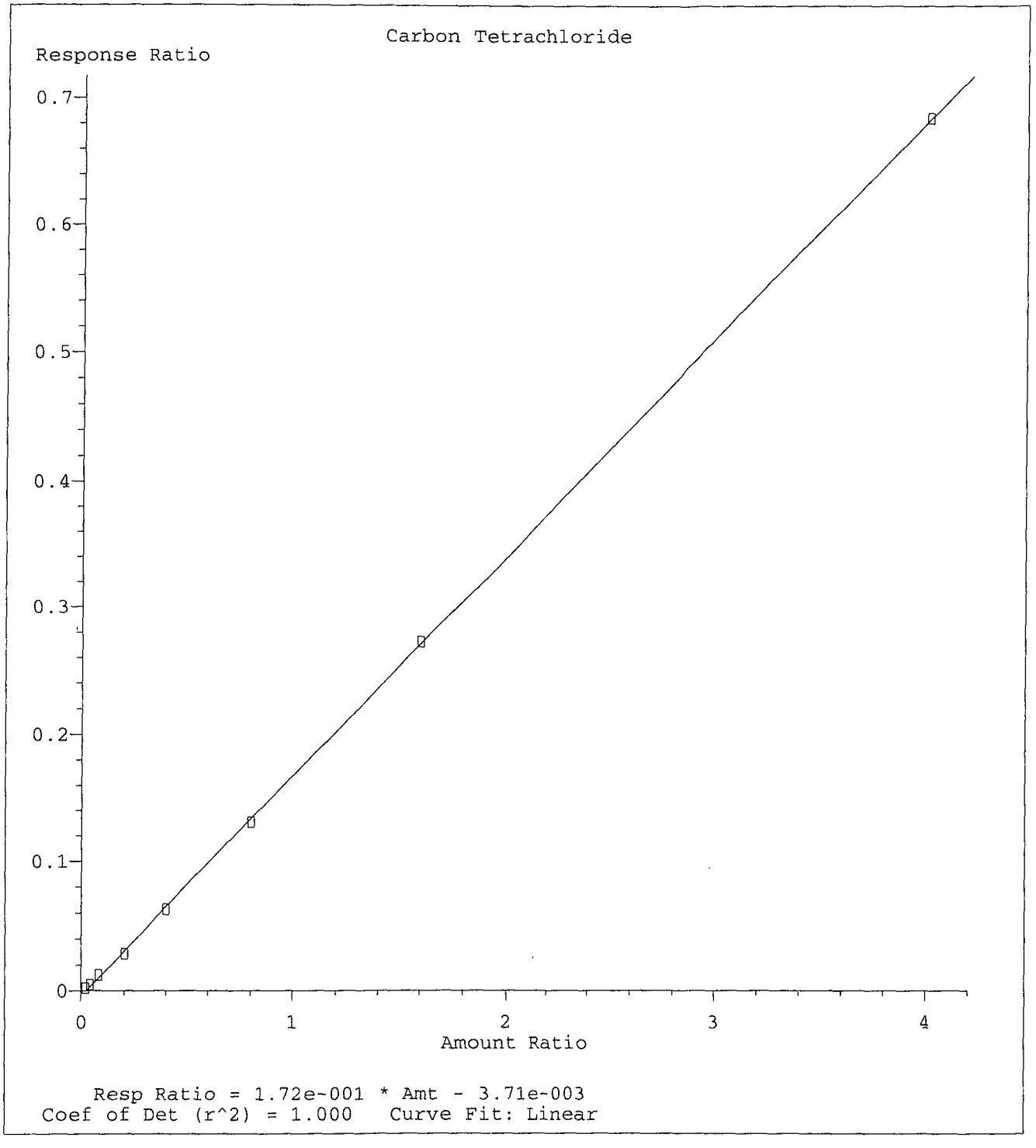
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



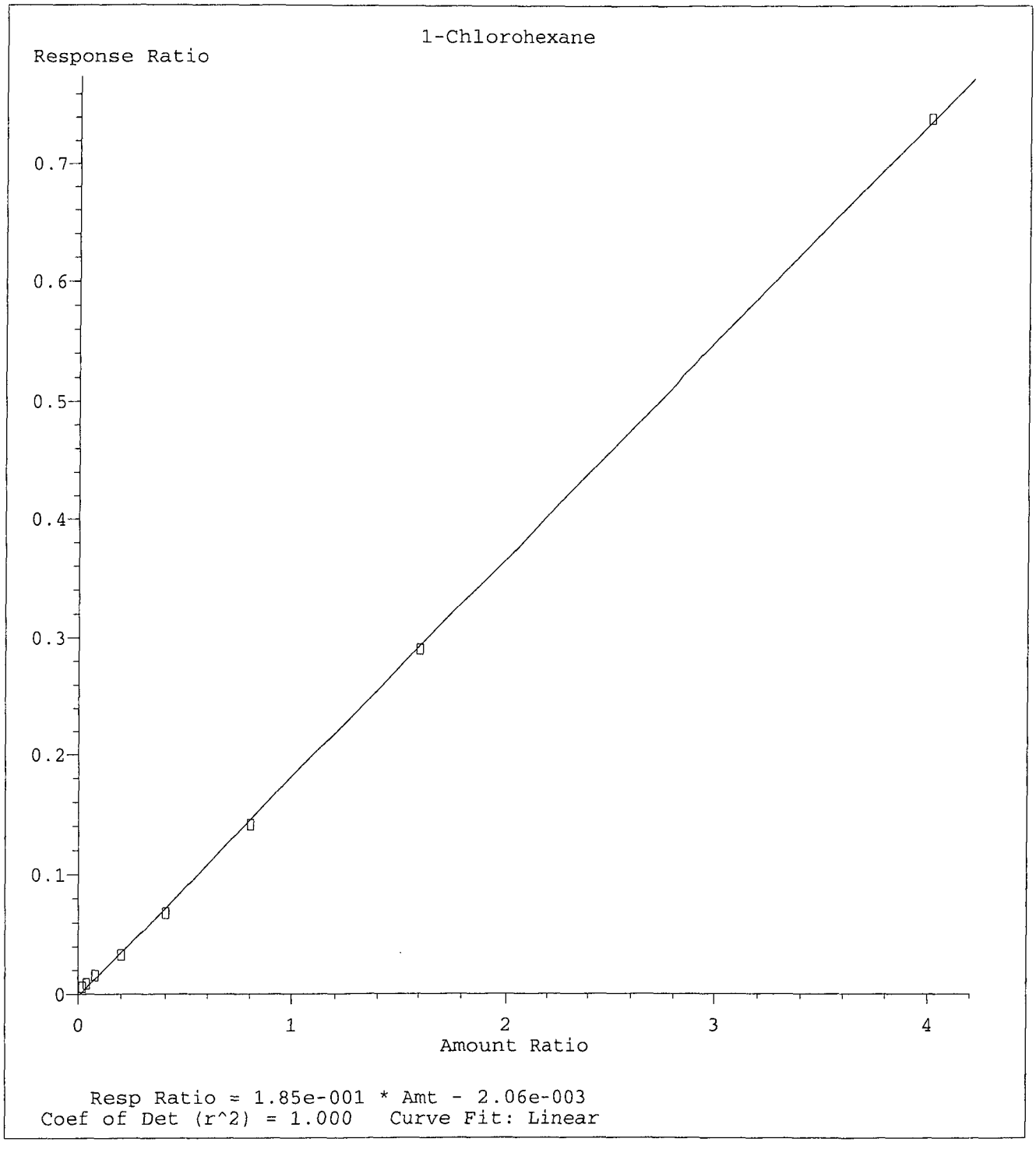
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



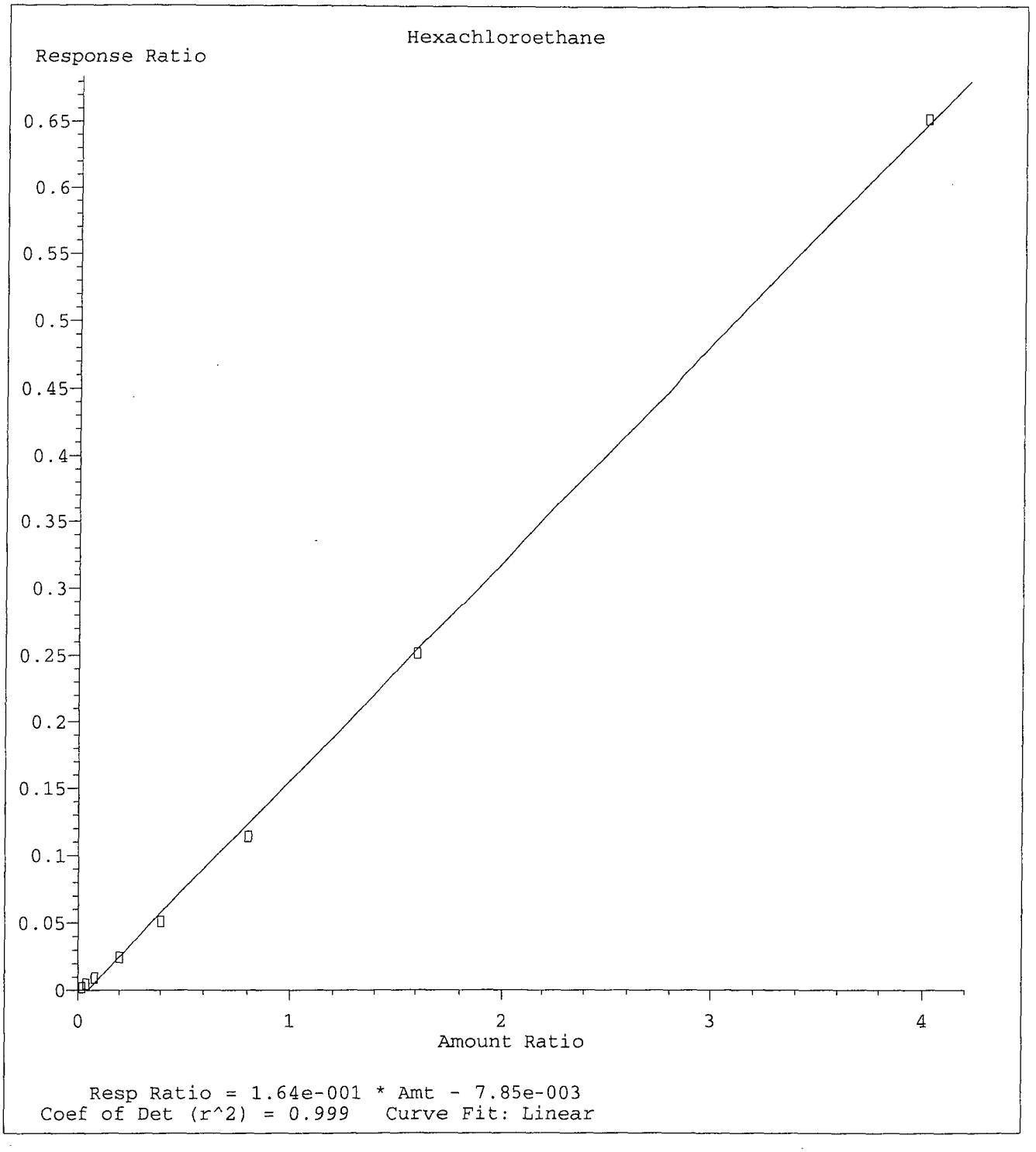
Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020



Method Name: M:\THOR\DATA\201222\T1222W.M
Calibration Table Last Updated: Wed Dec 23 11:30:26 2020

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/22/20
Instrument: Thor
Initial Cal. Date: 12/22/20
Data File: 1222T12.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Chlorotrifluoroethene	0.0000	0.0006	0.00	TM		
2	TML	Dichlorodifluoromethane	0.0832	0.0695	16	TML	17	
3	TML	Freon 114	0.0823	0.0492	40	TML	44	*NT
4	TM**	Chloromethane	0.1329	0.1252	5.8	TM**		
5	TM*	Vinyl chloride	0.1002	0.0964	3.8	TM*		
6		Butane	0.0000	0.0027	0.00			
7	TML	Bromomethane	0.0701	0.0649	7.3	TML	3.5	
8	TML	Chloroethane	0.0768	0.0589	23	TML	17	
9	TM	Dichlorofluoromethane	0.2016	0.1706	15	TM		
10	TM	Trichlorofluoromethane	0.1419	0.1246	12	TM		
11	TM	Pentane	0.0000	0.0004	0.00	TM		
12	TM	Diethyl ether	0.0000	0.0004	0.00	TM		
13	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0002	0.00	TM		
14	TM	Acrolein	0.0047	0.0043	7.2	TM		
15	TM	Acetone	0.0361	0.0369	2.3	TM		
16	TML	Freon-113	0.0431	0.0302	30	TML	30	* NT
17	TM*	1,1-DCE	0.1501	0.1507	0.43	TM*		
18	TM	2-Propanol	0.0000	0.0001	0.00	TM		
19	TM	Acetonitrile	0.0035	0.0037	3.6	TM		
20	TM	t-Butanol	0.0038	0.0043	13	TM		
21	TM	Methyl Acetate	0.0862	0.0782	9.3	TM		
22	TML	Iodomethane	0.0603	0.0474	21	TML	31	*NT
23	TM	Acrylonitrile	0.0343	0.0362	5.5	TM		
24	TML	Methylene chloride	0.0633	0.0607	4.1	TML	4.3	
25	TM	Carbon disulfide	0.1585	0.1381	13	TM		
26	TM	Methyl t-butyl ether (MtBE)	0.3279	0.3088	5.8	TM		
27	TM	Trans-1,2-DCE	0.1537	0.1483	3.5	TM		
28	TM	Hexane	0.0000	0.0001	0.00	TM		
29	TM	Diisopropyl Ether	0.3470	0.3255	6.2	TM		
30	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM		
31	TM**	1,1-DCA	0.1932	0.2052	6.2	TM**		
32	TM	Vinyl Acetate	0.0749	0.0758	1.2	TM		
33	TM	Ethyl tert Butyl Ether	0.3416	0.3214	5.9	TM		
34	TM	MEK (2-Butanone)	0.0508	0.0549	8.1	TM		
35	TM	Cis-1,2-DCE	0.1891	0.1873	0.98	TM		
36	TM	2,2-Dichloropropane	0.1829	0.1732	5.3	TM		
37	TM	2-Methylpentane	0.0000	0.0031	0.00	TM		
38	TM	3-Methylpentane	0.0702	0.0656	6.5	TM		
39	TM*	Chloroform	0.2190	0.2202	0.55	TM*		
40	TM	Bromochloromethane	0.0988	0.0989	0.08	TM		
		Average			7.1			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/22/20
Instrument: Thor
Cal. Date: 12/22/20
Data File: 1222T12.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	1,1,1-TCA	0.0848	0.0841	0.86	TM		
42	TM	Cyclohexane	0.1557	0.1234	21	TM		*NT
43	TM	1,1-Dichloropropene	0.1515	0.1512	0.18	TM		
44	TM	2,2,4-Trimethylpentane	0.2902	0.2097	28	TM		*NT
45	TML	Carbon Tetrachloride	0.1478	0.1452	1.7	TML	10	
46	TM	Tert Amyl Methyl Ether	0.3365	0.3103	7.8	TM		
47	TM	Methylcyclopentane	0.0000	0.0002	0.00	TM		
48	TM	1,2-DCA	0.1846	0.1901	3.0	TM		
49	TM	Benzene	0.4773	0.4757	0.33	TM		
50	TM	TCE	0.1377	0.1434	4.2	TM		
51	TM	2-Pentanone	0.0798	0.0891	12	TM		
52	TM*	1,2-Dichloropropane	0.1243	0.1254	0.82	TM*		
53	TM	Bromodichloromethane	0.1793	0.1799	0.34	TM		
54	TM	Methyl Cyclohexane	0.1576	0.1224	22	TM		*NT
55	TM	Dibromomethane	0.1110	0.1135	2.3	TM		
56	TM	MIBK (methyl isobutyl ketone)	0.1119	0.1271	14	TM		
57	TM	1-Bromo-2-chloroethane	0.0937	0.0910	2.9	TM		
58	TM	2-Chloroethyl vinyl ether	0.0000	0.0003	0.00	TM		
59	TM	Cis-1,3-Dichloropropene	0.2205	0.2226	0.93	TM		
60	TM*	Toluene	0.5358	0.5453	1.8	TM*		
61	TM	Trans-1,3-Dichloropropene	0.1989	0.2049	3.0	TM		
62	TM	1,1,2-TCA	0.1212	0.1211	0.08	TM		
63	TM	2-Hexanone	0.0759	0.0830	9.4	TM		
64	TM	1,2-EDB	0.1530	0.1579	3.2	TM		
65	TM	Tetrachloroethene	0.2345	0.2451	4.5	TM		
66	TML	1-Chlorohexane	0.1984	0.1449	27	TML	19	
67	TM	1,1,1,2-Tetrachloroethane	0.1738	0.1751	0.74	TM		
68	TM	m&p-Xylene	0.5627	0.5752	2.2	TM		
69	TM	o-Xylene	0.6032	0.6236	3.4	TM		
70	TM	Styrene	0.4644	0.4728	1.8	TM		
71	TM	1,3-Dichloropropane	0.2366	0.2489	5.2	TM		
72	TM	Dibromochloromethane	0.1806	0.1804	0.11	TM		
73	TM**	Chlorobenzene	0.4365	0.4464	2.3	TM**		
74	TM*	Ethylbenzene	0.7278	0.7343	0.88	TM*		
75	TM**	Bromoform	0.1414	0.1389	1.8	TM**		
76	TM	Isopropylbenzene	1.161	1.184	2.0	TM		
77	TM**	1,1,2,2-Tetrachloroethane	0.2940	0.3078	4.7	TM**		
78	TM	1,2,3-Trichloropropane	0.0991	0.1121	13	TM		
79	TM	t-1,4-Dichloro-2-Butene	0.0580	0.0549	5.4	TM		
80	TM	Bromobenzene	0.3672	0.3828	4.2	TM		
		Average			5.5			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/22/20
Instrument: Thor
Cal. Date: 12/22/20
Data File: 1222T12.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	n-Propylbenzene	1.331	1.342	0.85	TM	
82	TM	4-Ethyltoluene	1.136	1.045	8.0	TM	
83	TM	2-Chlorotoluene	0.9608	0.9654	0.48	TM	
84	TM	1,3,5-Trimethylbenzene	0.9728	1.024	5.3	TM	
85	TM	4-Chlorotoluene	0.9904	1.017	2.7	TM	
86	TM	Tert-Butylbenzene	1.003	1.027	2.4	TM	
87	TM	1,2,4-Trimethylbenzene	1.010	1.042	3.1	TM	
88	TM	Sec-Butylbenzene	1.241	1.236	0.38	TM	
89	TM	p-Isopropyltoluene	1.089	1.116	2.5	TM	
90	TM	Benzyl Chloride	0.4160	0.3563	14	TM	
91	TM	1,3-DCB	0.6671	0.6805	2.0	TM	
92	TM	1,4-DCB	0.6776	0.6989	3.1	TM	
93	TM	n-Butylbenzene	0.9059	0.9293	2.6	TM	
94	TM	1,2-DCB	0.6430	0.6752	5.0	TM	
95	TML	Hexachloroethane	0.1289	0.1355	5.1	TML	5.5
96	TM	1,2-Dibromo-3-chloropropane	0.0786	0.0857	9.1	TM	
97	TM	1,2,4-Trichlorobenzene	0.5032	0.5528	9.9	TM	
98	TM	Hexachlorobutadiene	0.2483	0.2593	4.4	TM	
99	TM	Naphthalene	0.4587	0.5526	20	TM	
100	TM	1,2,3-Trichlorobenzene	0.4894	0.5130	4.8	TM	
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.3		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T12.D Vial: 12
Acq On : 22 Dec 20 22:09 Operator:
Sample : (SS) 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	557693	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	469178	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	288980	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	145336	24.36	ppb		0.00
Spiked Amount 25.000			Recovery = 97.460%				
48) 1,2-DCA-D4(S)	6.14	65	170229	25.00	ppb		0.00
Spiked Amount 25.000			Recovery = 100.012%				
69) Toluene-D8(S)	8.43	98	552363	24.66	ppb		0.00
Spiked Amount 25.000			Recovery = 98.636%				
77) 4-Bromofluorobenzene(S)	11.32	95	219907	24.20	ppb		0.00
Spiked Amount 25.000			Recovery = 96.784%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	15510	8.29	ppb		94
4) Freon 114	1.29	85	10972	5.63	ppb		98
5) Chloromethane	1.33	50	27928	9.42	ppb		96
6) Vinyl chloride	1.43	62	21496	9.62	ppb		97
9) Bromomethane	1.70	96	14486	10.35	ppb		93
10) Chloroethane	1.81	64	13135	8.31	ppb		100
11) Dichlorofluoromethane	2.01	67	38060	8.47	ppb		98
12) Trichlorofluoromethane	2.05	101	27792	8.78	ppb		95
16) Acrolein	2.49	56	12051	116.00	ppb		92
17) Acetone	2.67	43	41192	51.13	ppb		97
18) Freon-113	2.60	101	6738	7.03	ppb	#	84
19) 1,1-DCE	2.58	61	33619	10.04	ppb		92
21) Acetonitrile	2.98	40	10179	129.50	ppb		98
22) t-Butanol	3.43	59	11920	141.47	ppb		100
23) Methyl Acetate	3.08	43	17437	9.07	ppb		98
24) Iodomethane	2.74	142	10571	6.85	ppb		92
25) Acrylonitrile	3.52	52	8082	10.55	ppb	#	75
26) Methylene chloride	3.17	84	13541	10.43	ppb		98
27) Carbon disulfide	2.80	76	30816	8.71	ppb		97
28) Methyl t-butyl ether (MtBE	3.60	73	68879	9.42	ppb		98
29) Trans-1,2-DCE	3.55	61	33073	9.65	ppb		94
31) Diisopropyl Ether	4.40	45	72603	9.38	ppb		98
33) 1,1-DCA	4.20	63	45778	10.62	ppb		97
34) Vinyl Acetate	4.35	43	16904	10.12	ppb		96
35) Ethyl tert Butyl Ether	4.93	59	71689	9.41	ppb		98
36) MEK (2-Butanone)	5.13	43	61281	54.06	ppb		97
37) Cis-1,2-DCE	5.06	61	41781	9.90	ppb		96
38) 2,2-Dichloropropane	5.05	77	38647	9.47	ppb		91
40) 3-Methylpentane	3.60	57	14643	9.35	ppb		92
41) Chloroform	5.52	83	49127	10.05	ppb		89
42) Bromochloromethane	5.38	49	22055	10.01	ppb		89
44) 1,1,1-TCA	5.73	97	18752	9.91	ppb		96
45) Cyclohexane	5.79	56	27537	7.93	ppb		97
46) 1,1-Dichloropropene	5.95	75	33727	9.98	ppb		99
47) 2,2,4-Trimethylpentane	6.35	57	46772	7.22	ppb		98
49) Carbon Tetrachloride	5.94	117	32386	8.98	ppb		91
50) Tert Amyl Methyl Ether	6.41	73	69212	9.22	ppb		98
52) 1,2-DCA	6.24	62	42415	10.30	ppb		96
53) Benzene	6.20	78	106108	9.97	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1222T12.D Vial: 12
Acq On : 22 Dec 20 22:09 Operator:
Sample : (SS) 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	TCE	7.01	130	31986	10.42	ppb		91
55)	2-Pentanone	7.28	43	248378	139.59	ppb		98
56)	1,2-Dichloropropane	7.27	63	27967	10.08	ppb		99
57)	Bromodichloromethane	7.61	83	40136	10.03	ppb		95
58)	Methyl Cyclohexane	7.23	83	27304	7.76	ppb		98
59)	Dibromomethane	7.40	174	25315	10.23	ppb		91
60)	MIBK (methyl isobutyl ket	8.33	43	141798	56.80	ppb		97
61)	1-Bromo-2-chloroethane	7.95	63	20304	9.71	ppb		99
63)	Cis-1,3-Dichloropropene	8.13	75	49653	10.09	ppb		93
64)	Toluene	8.50	91	121651	10.18	ppb		96
65)	Trans-1,3-Dichloropropene	8.76	75	45698	10.30	ppb		95
66)	1,1,2-TCA	8.96	97	27009	9.99	ppb		94
67)	2-Hexanone	9.27	43	92609	54.71	ppb		99
70)	1,2-EDB	9.50	107	29638	10.32	ppb		92
71)	Tetrachloroethene	9.11	166	45992	10.45	ppb		91
72)	1-Chlorohexane	10.05	91	27186	8.13	ppb		95
73)	1,1,1,2-Tetrachloroethane	10.15	131	32857	10.07	ppb		96
74)	m&p-Xylene	10.32	91	215888	20.44	ppb		99
75)	o-Xylene	10.75	91	117025	10.34	ppb		99
76)	Styrene	10.77	104	88724	10.18	ppb		98
78)	1,3-Dichloropropane	9.14	76	46720	10.52	ppb		100
79)	Dibromochloromethane	9.39	129	33856	9.99	ppb		92
80)	Chlorobenzene	10.05	112	83782	10.23	ppb		97
81)	Ethylbenzene	10.19	91	137802	10.09	ppb		98
82)	Bromoform	10.95	173	26062	9.82	ppb	#	93
84)	Isopropylbenzene	11.16	105	136882	10.20	ppb		98
85)	1,1,2,2-Tetrachloroethane	11.48	83	35581	10.47	ppb		99
86)	1,2,3-Trichloropropane	11.52	110	12956	11.31	ppb		88
87)	t-1,4-Dichloro-2-Butene	11.55	53	6343	9.46	ppb		90
88)	Bromobenzene	11.48	156	44244	10.42	ppb		95
89)	n-Propylbenzene	11.61	91	155120	10.08	ppb		99
90)	4-Ethyltoluene	11.74	105	120748	9.20	ppb		98
91)	2-Chlorotoluene	11.70	91	111596	10.05	ppb		97
92)	1,3,5-Trimethylbenzene	11.81	105	118392	10.53	ppb		98
93)	4-Chlorotoluene	11.81	91	117524	10.27	ppb		99
94)	Tert-Butylbenzene	12.16	119	118751	10.24	ppb		100
95)	1,2,4-Trimethylbenzene	12.21	105	120463	10.31	ppb		94
96)	Sec-Butylbenzene	12.40	105	142844	9.96	ppb		96
97)	p-Isopropyltoluene	12.57	119	129040	10.25	ppb		97
98)	Benzyl Chloride	12.76	91	41190	8.57	ppb		99
99)	1,3-DCB	12.52	146	78663	10.20	ppb		98
100)	1,4-DCB	12.61	146	80789	10.31	ppb		100
101)	n-Butylbenzene	13.01	91	107415	10.26	ppb		98
102)	1,2-DCB	13.02	146	78049	10.50	ppb		99
103)	Hexachloroethane	13.31	201	15662	9.45	ppb		97
104)	1,2-Dibromo-3-chloropropan	13.87	157	9910	10.91	ppb		93
105)	1,2,4-Trichlorobenzene	14.79	180	63899	10.99	ppb		99
106)	Hexachlorobutadiene	14.99	225	29970	10.44	ppb		97
107)	Naphthalene	15.06	128	63872	12.05	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	59303	10.48	ppb		97

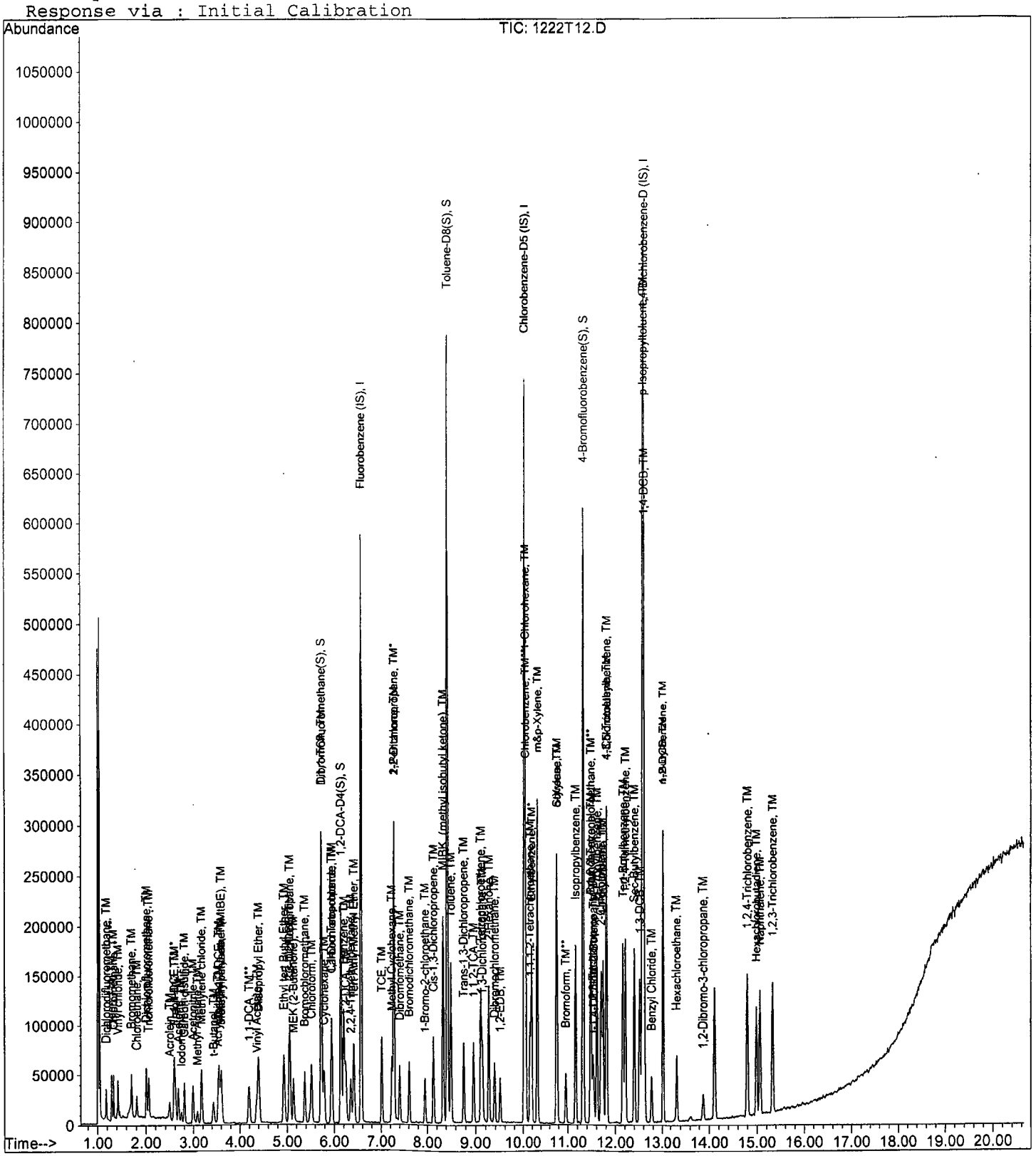
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1222T12.D Vial: 12
Acq On : 22 Dec 20 22:09 Operator:
Sample : (SS) 10ug/L VOC STD 12/22/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 23 11:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/23/20
Matrix: water Instrument: Thor
Initial Cal. Date: 12/22/20
Data File: 1223T19.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Chlorotrifluoroethene	0.0000	0.0012	0.00	TM		
3	TML	Dichlorodifluoromethane	0.0832	0.1142	37	TML	25	*
4	TML	Freon 114	0.0823	0.0963	17	TML	3.8	
5	TM**	Chloromethane	0.1329	0.1368	2.9	TM**		
6	TM*	Vinyl chloride	0.1002	0.1129	13	TM*		
7		Butane	0.0000	0.0024	0.00			
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
9	TML	Bromomethane	0.0701	0.0684	2.3	TML	10	
10	TML	Chloroethane	0.0768	0.0765	0.32	TML	9.0	
11	TM	Dichlorofluoromethane	0.2016	0.2065	2.5	TM		
12	TM	Trichlorofluoromethane	0.1419	0.1795	26	TM		*
13	TM	Pentane	0.0000	0.0003	0.00	TM		
14	TM	Diethyl ether	0.0000	0.0003	0.00	TM		
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0005	0.00	TM		
16	TM	Acrolein	0.0047	0.0041	11	TM		
17	TM	Acetone	0.0361	0.0315	13	TM		
18	TML	Freon-113	0.0431	0.0439	1.8	TML	1.6	
19	TM*	1,1-DCE	0.1501	0.1521	1.4	TM*		
20	TM	2-Propanol	0.0000	0.0002	0.00	TM		
21	TM	Acetonitrile	0.0035	0.0033	7.4	TM		
22	TM	t-Butanol	0.0038	0.0033	11	TM		
23	TM	Methyl Acetate	0.0862	0.0779	9.6	TM		
24	TML	Iodomethane	0.0603	0.0746	24	TML	7.2	
25	TM	Acrylonitrile	0.0343	0.0343	0.14	TM		
26	TML	Methylene chloride	0.0633	0.0586	7.4	TML	0.50	
27	TM	Carbon disulfide	0.1585	0.1668	5.2	TM		
28	TM	Methyl t-butyl ether (MtBE)	0.3279	0.3182	3.0	TM		
29	TM	Trans-1,2-DCE	0.1537	0.1556	1.3	TM		
30	TM	Hexane	0.0000	0.0019	0.00	TM		
31	TM	Diisopropyl Ether	0.3470	0.3485	0.45	TM		
32	TM	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM		
33	TM**	1,1-DCA	0.1932	0.1973	2.1	TM**		
34	TM	Vinyl Acetate	0.0749	0.0774	3.4	TM		
35	TM	Ethyl tert Butyl Ether	0.3416	0.3431	0.42	TM		
36	TM	MEK (2-Butanone)	0.0508	0.0479	5.8	TM		
37	TM	Cis-1,2-DCE	0.1891	0.1910	0.99	TM		
38	TM	2,2-Dichloropropane	0.1829	0.1924	5.2	TM		
39	TM	2-Methylpentane	0.0000	0.0008	0.00	TM		
40	TM	3-Methylpentane	0.0702	0.0673	4.2	TM		
		Average			5.6			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/23/20
Instrument: Thor
Cal. Date: 12/22/20
Data File: 1223T19.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM*	Chloroform	0.2190	0.2254	2.9	TM*	
42	TM	Bromochloromethane	0.0988	0.1031	4.4	TM	
43	S	Dibromofluoromethane(S)	0.2674	0.2657	0.65	S	
44	TM	1,1,1-TCA	0.0848	0.0923	8.9	TM	
45	TM	Cyclohexane	0.1557	0.1714	10	TM	
46	TM	1,1-Dichloropropene	0.1515	0.1592	5.1	TM	
47	TM	2,2,4-Trimethylpentane	0.2902	0.3351	15	TM	
48	S	1,2-DCA-D4(S)	0.3052	0.3001	1.7	S	
49	TML	Carbon Tetrachloride	0.1478	0.1603	8.5	TML	1.3
50	TM	Tert Amyl Methyl Ether	0.3365	0.3318	1.4	TM	
51	TM	Methylcyclopentane	0.0000	0.0002	0.00	TM	
52	TM	1,2-DCA	0.1846	0.1847	0.08	TM	
53	TM	Benzene	0.4773	0.4933	3.4	TM	
54	TM	TCE	0.1377	0.1483	7.7	TM	
55	TM	2-Pentanone	0.0798	0.0780	2.3	TM	
56	TM*	1,2-Dichloropropane	0.1243	0.1239	0.38	TM*	
57	TM	Bromodichloromethane	0.1793	0.1828	2.0	TM	
58	TM	Methyl Cyclohexane	0.1576	0.1810	15	TM	
59	TM	Dibromomethane	0.1110	0.1153	3.9	TM	
60	TM	MIBK (methyl isobutyl ketone)	0.1119	0.1054	5.8	TM	
61	TM	1-Bromo-2-chloroethane	0.0937	0.0932	0.53	TM	
62	TM	2-Chloroethyl vinyl ether	0.0000	0.0005	0.00	TM	
63	TM	Cis-1,3-Dichloropropene	0.2205	0.2219	0.63	TM	
64	TM*	Toluene	0.5358	0.5560	3.8	TM*	
65	TM	Trans-1,3-Dichloropropene	0.1989	0.1956	1.7	TM	
66	TM	1,1,2-TCA	0.1212	0.1168	3.6	TM	
67	TM	2-Hexanone	0.0759	0.0718	5.3	TM	
68	I	Chlorobenzene-D5 (IS)	ISTD			I	
69	S	Toluene-D8(S)	1.194	1.221	2.3	S	
70	TM	1,2-EDB	0.1530	0.1579	3.2	TM	
71	TM	Tetrachloroethene	0.2345	0.2554	8.9	TM	
72	TML	1-Chlorohexane	0.1984	0.1898	4.3	TML	5.6
73	TM	1,1,1,2-Tetrachloroethane	0.1738	0.1766	1.6	TM	
74	TM	m&p-Xylene	0.5627	0.6034	7.2	TM	
75	TM	o-Xylene	0.6032	0.6378	5.7	TM	
76	TM	Styrene	0.4644	0.4845	4.3	TM	
77	S	4-Bromofluorobenzene(S)	0.4843	0.4810	0.67	S	
78	TM	1,3-Dichloropropane	0.2366	0.2468	4.3	TM	
79	TM	Dibromochloromethane	0.1806	0.1814	0.46	TM	
80	TM**	Chlorobenzene	0.4365	0.4542	4.1	TM**	
		Average			4.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/23/20
Instrument: Thor
Cal. Date: 12/22/20
Data File: 1223T19.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM*	Ethylbenzene	0.7278	0.7643	5.0	TM*	
82	TM**	Bromoform	0.1414	0.1416	0.14	TM**	
83	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
84	TM	Isopropylbenzene	1.161	1.266	9.0	TM	
85	TM**	1,1,2,2-Tetrachloroethane	0.2940	0.2867	2.5	TM**	
86	TM	1,2,3-Trichloropropane	0.0991	0.0968	2.3	TM	
87	TM	t-1,4-Dichloro-2-Butene	0.0580	0.0568	2.2	TM	
88	TM	Bromobenzene	0.3672	0.3769	2.6	TM	
89	TM	n-Propylbenzene	1.331	1.418	6.6	TM	
90	TM	4-Ethyltoluene	1.136	1.223	7.7	TM	
91	TM	2-Chlorotoluene	0.9608	1.013	5.5	TM	
92	TM	1,3,5-Trimethylbenzene	0.9728	1.060	9.0	TM	
93	TM	4-Chlorotoluene	0.9904	1.051	6.1	TM	
94	TM	Tert-Butylbenzene	1.003	1.098	9.5	TM	
95	TM	1,2,4-Trimethylbenzene	1.010	1.084	7.3	TM	
96	TM	Sec-Butylbenzene	1.241	1.319	6.4	TM	
97	TM	p-Isopropyltoluene	1.089	1.187	8.9	TM	
98	TM	Benzyl Chloride	0.4160	0.4232	1.7	TM	
99	TM	1,3-DCB	0.6671	0.6745	1.1	TM	
100	TM	1,4-DCB	0.6776	0.7023	3.6	TM	
101	TM	n-Butylbenzene	0.9059	0.9692	7.0	TM	
102	TM	1,2-DCB	0.6430	0.6801	5.8	TM	
103	TML	Hexachloroethane	0.1289	0.1444	12	TML	0.03
104	TM	1,2-Dibromo-3-chloropropane	0.0786	0.0765	2.6	TM	
105	TM	1,2,4-Trichlorobenzene	0.5032	0.5134	2.0	TM	
106	TM	Hexachlorobutadiene	0.2483	0.2698	8.7	TM	
107	TM	Naphthalene	0.4587	0.4560	0.58	TM	
108	TM	1,2,3-Trichlorobenzene	0.4894	0.4927	0.68	TM	
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			5.1		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	555731	25.000	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	461656	25.000	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	288415	25.000	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	147638	24.838	ppb		0.00
Spiked Amount 25.000			Recovery =	99.352%			
48) 1,2-DCA-D4(S)	6.14	65	166774	24.582	ppb		0.00
Spiked Amount 25.000			Recovery =	98.328%			
69) Toluene-D8(S)	8.42	98	563583	25.570	ppb		0.00
Spiked Amount 25.000			Recovery =	102.280%			
77) 4-Bromofluorobenzene(S)	11.32	95	222067	24.832	ppb		0.00
Spiked Amount 25.000			Recovery =	99.328%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	25385	12.531	ppb		97
4) Freon 114	1.29	85	21408	10.378	ppb		99
5) Chloromethane	1.33	50	30416	10.294	ppb		97
6) Vinyl chloride	1.43	62	25088	11.262	ppb		99
9) Bromomethane	1.71	96	15215	11.004	ppb		98
10) Chloroethane	1.81	64	17011	10.898	ppb		96
11) Dichlorofluoromethane	2.01	67	45912	10.248	ppb		98
12) Trichlorofluoromethane	2.05	101	39891	12.643	ppb		92
16) Acrolein	2.48	56	11498	111.067	ppb		91
17) Acetone	2.67	43	34971	43.565	ppb		99
18) Freon-113	2.61	101	9748	10.159	ppb		87
19) 1,1-DCE	2.58	61	33807	10.135	ppb		97
21) Acetonitrile	2.99	40	9069	115.786	ppb		94
22) t-Butanol	3.42	59	9306	110.834	ppb		97
23) Methyl Acetate	3.08	43	17307	9.035	ppb		95
24) Iodomethane	2.74	142	16593	9.283	ppb	#	94
25) Acrylonitrile	3.52	52	7624	9.986	ppb	#	66
26) Methylene chloride	3.17	84	13029	10.050	ppb		99
27) Carbon disulfide	2.80	76	37072	10.521	ppb		98
28) Methyl t-butyl ether (MtBE	3.60	73	70726	9.703	ppb		100
29) Trans-1,2-DCE	3.55	61	34598	10.126	ppb		93
31) Diisopropyl Ether	4.40	45	77477	10.045	ppb		92
33) 1,1-DCA	4.20	63	43857	10.211	ppb		98
34) Vinyl Acetate	4.35	43	17216	10.344	ppb		100
35) Ethyl tert Butyl Ether	4.93	59	76258	10.042	ppb		98
36) MEK (2-Butanone)	5.13	43	53213	47.112	ppb		99
37) Cis-1,2-DCE	5.06	61	42460	10.099	ppb		94
38) 2,2-Dichloropropane	5.05	77	42761	10.519	ppb		96
40) 3-Methylpentane	3.59	57	14959	9.584	ppb		99
41) Chloroform	5.52	83	50102	10.290	ppb		92
42) Bromochloromethane	5.38	49	22916	10.435	ppb		94
44) 1,1,1-TCA	5.73	97	20528	10.891	ppb		94
45) Cyclohexane	5.78	56	38092	11.009	ppb		98
46) 1,1-Dichloropropene	5.95	75	35378	10.508	ppb		94
47) 2,2,4-Trimethylpentane	6.35	57	74482	11.544	ppb		98
49) Carbon Tetrachloride	5.94	117	35638	9.866	ppb		97
50) Tert Amyl Methyl Ether	6.41	73	73750	9.860	ppb		99
52) 1,2-DCA	6.24	62	41068	10.008	ppb	#	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Benzene	6.20	78	109652	10.336	ppb		96
54)	TCE	7.01	130	32964	10.772	ppb		93
55)	2-Pentanone	7.28	43	216633	122.182	ppb		98
56)	1,2-Dichloropropane	7.27	63	27537	9.962	ppb		98
57)	Bromodichloromethane	7.61	83	40639	10.196	ppb		98
58)	Methyl Cyclohexane	7.23	83	40236	11.482	ppb		88
59)	Dibromomethane	7.40	174	25633	10.391	ppb		97
60)	MIBK (methyl isobutyl ket	8.33	43	117192	47.107	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	20720	9.947	ppb		92
63)	Cis-1,3-Dichloropropene	8.13	75	49333	10.063	ppb		96
64)	Toluene	8.50	91	123599	10.378	ppb		100
65)	Trans-1,3-Dichloropropene	8.76	75	43470	9.834	ppb		96
66)	1,1,2-TCA	8.96	97	25958	9.637	ppb		94
67)	2-Hexanone	9.27	43	79844	47.336	ppb		97
70)	1,2-EDB	9.50	107	29163	10.320	ppb		99
71)	Tetrachloroethene	9.11	166	47164	10.891	ppb		94
72)	1-Chlorohexane	10.05	91	35040	10.559	ppb		94
73)	1,1,1,2-Tetrachloroethane	10.15	131	32611	10.161	ppb		93
74)	m&p-Xylene	10.32	91	222862	21.449	ppb		99
75)	o-Xylene	10.75	91	117786	10.574	ppb		99
76)	Styrene	10.77	104	89477	10.434	ppb		98
78)	1,3-Dichloropropane	9.14	76	45579	10.432	ppb		100
79)	Dibromochloromethane	9.38	129	33505	10.046	ppb		95
80)	Chlorobenzene	10.05	112	83870	10.406	ppb		99
81)	Ethylbenzene	10.19	91	141129	10.500	ppb		97
82)	Bromoform	10.95	173	26141	10.014	ppb	#	99
84)	Isopropylbenzene	11.16	105	146069	10.904	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.48	83	33073	9.752	ppb		94
86)	1,2,3-Trichloropropane	11.52	110	11171	9.774	ppb		91
87)	t-1,4-Dichloro-2-Butene	11.54	53	6549	9.785	ppb		96
88)	Bromobenzene	11.48	156	43482	10.263	ppb		93
89)	n-Propylbenzene	11.61	91	163595	10.657	ppb		99
90)	4-Ethyltoluene	11.74	105	141133	10.771	ppb		99
91)	2-Chlorotoluene	11.70	91	116887	10.545	ppb		98
92)	1,3,5-Trimethylbenzene	11.81	105	122322	10.899	ppb		99
93)	4-Chlorotoluene	11.81	91	121221	10.610	ppb		93
94)	Tert-Butylbenzene	12.16	119	126712	10.947	ppb		92
95)	1,2,4-Trimethylbenzene	12.22	105	125085	10.731	ppb		95
96)	Sec-Butylbenzene	12.40	105	152208	10.635	ppb		100
97)	p-Isopropyltoluene	12.57	119	136898	10.893	ppb		95
98)	Benzyl Chloride	12.77	91	48820	10.171	ppb		98
99)	1,3-DCB	12.51	146	77817	10.111	ppb		97
100)	1,4-DCB	12.61	146	81018	10.364	ppb		99
101)	n-Butylbenzene	13.01	91	111817	10.700	ppb		100
102)	1,2-DCB	13.02	146	78457	10.577	ppb		97
103)	Hexachloroethane	13.31	201	16659	9.997	ppb		97
104)	1,2-Dibromo-3-chloropropan	13.87	157	8829	9.742	ppb		98
105)	1,2,4-Trichlorobenzene	14.79	180	59233	10.203	ppb		91
106)	Hexachlorobutadiene	14.98	225	31129	10.865	ppb		98
107)	Naphthalene	15.06	128	52608	9.942	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	56843	10.068	ppb		92

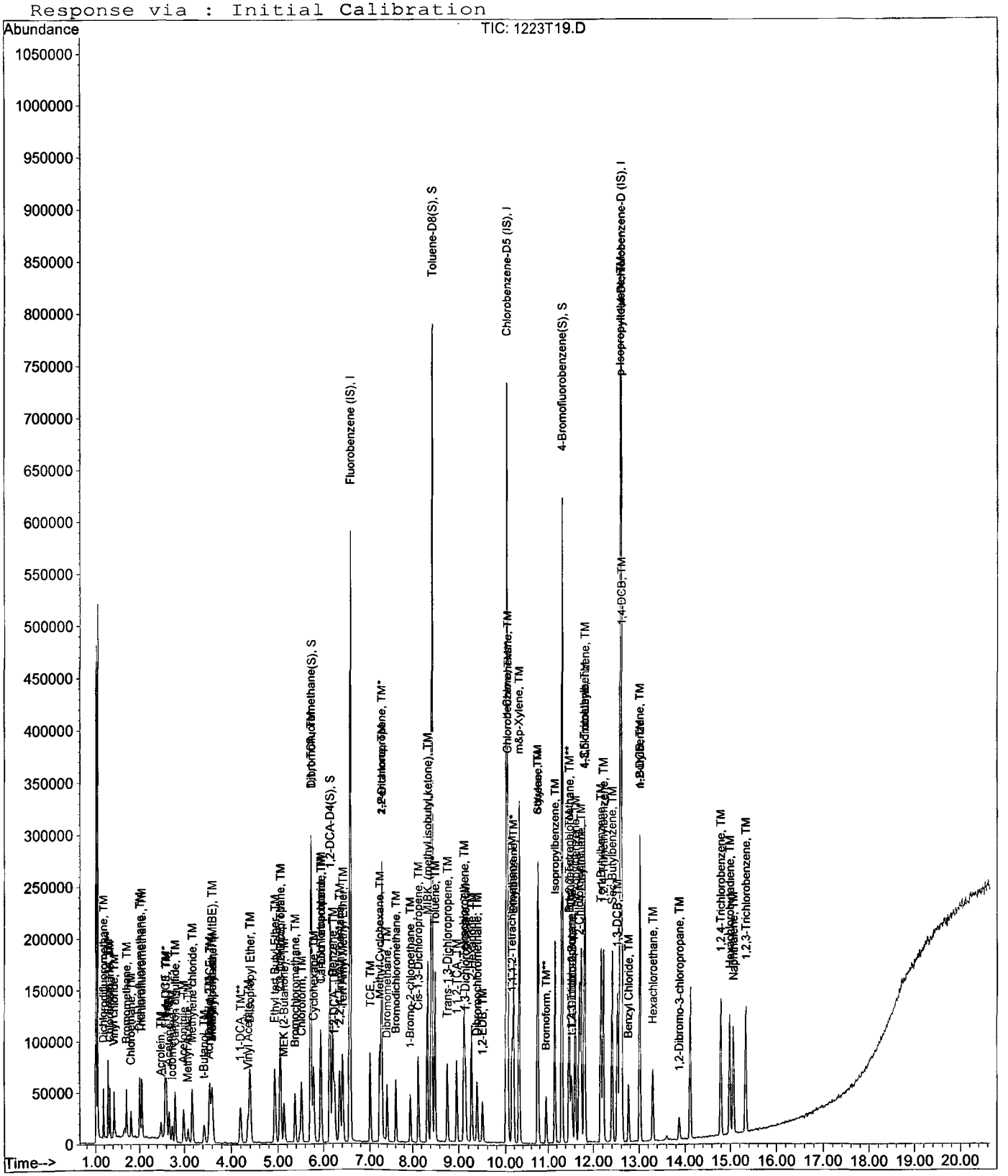
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: water

SDG No:
Date Analyzed: 12/24/20
Instrument: Thor
Initial Cal. Date: 12/22/20
Data File: 1223T43.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Chlorotrifluoroethene	0.0000	0.0009	0.00	TM	
3	TML	Dichlorodifluoromethane	0.0832	0.1241	49	TML	35
4	TML	Freon 114	0.0823	0.0725	12	TML	20
5	TM**	Chloromethane	0.1329	0.1540	16	TM**	
6	TM*	Vinyl chloride	0.1002	0.1306	30	TM*	
7		Butane	0.0000	0.0026	0.00		
8	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM	
9	TML	Bromomethane	0.0701	0.0792	13	TML	30
10	TML	Chloroethane	0.0768	0.0853	11	TML	22
11	TM	Dichlorofluoromethane	0.2016	0.2329	16	TM	
12	TM	Trichlorofluoromethane	0.1419	0.1996	41	TM	
13	TM	Pentane	0.0000	0.0004	0.00	TM	
14	TM	Diethyl ether	0.0000	0.0001	0.00	TM	
15	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0001	0.00	TM	
16	TM	Acrolein	0.0047	0.0060	29	TM	
17	TM	Acetone	0.0361	0.0409	13	TM	
18	TML	Freon-113	0.0431	0.0362	16	TML	16
19	TM*	1,1-DCE	0.1501	0.1722	15	TM*	
20	TM	2-Propanol	0.0000	0.0004	0.00	TM	
21	TM	Acetonitrile	0.0035	0.0037	5.5	TM	
22	TM	t-Butanol	0.0038	0.0044	18	TM	
23	TM	Methyl Acetate	0.0862	0.1103	28	TM	
24	TML	Iodomethane	0.0603	0.0814	35	TML	1.2
25	TM	Acrylonitrile	0.0343	0.0455	32	TM	
26	TML	Methylene chloride	0.0633	0.0766	21	TML	33
27	TM	Carbon disulfide	0.1585	0.1759	11	TM	
28	TM	Methyl t-butyl ether (MtBE)	0.3279	0.4287	31	TM	
29	TM	Trans-1,2-DCE	0.1537	0.1790	16	TM	
30	TM	Hexane	0.0000	0.0012	0.00	TM	
31	TM	Diisopropyl Ether	0.3470	0.4400	27	TM	
32	TM**	1,1-DCA	0.1932	0.2413	25	TM**	
33	TM	Ethyl tert Butyl Ether	0.3416	0.4381	28	TM	
34	TM	MEK (2-Butanone)	0.0508	0.0637	25	TM	
35	TM	Cis-1,2-DCE	0.1891	0.2282	21	TM	
36	TM	2,2-Dichloropropane	0.1829	0.1803	1.4	TM	
37	TM	2-Methylpentane	0.0000	0.0016	0.00	TM	
38	TM	3-Methylpentane	0.0702	0.0889	27	TM	
39	TM*	Chloroform	0.2190	0.2761	26	TM*	
40	TM	Bromochloromethane	0.0988	0.1260	28	TM	
		Average			17.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/24/20
Matrix: water Instrument: Thor
Cal. Date: 12/22/20
Data File: 1223T43.D

		Compound	MEAN	CCRF	%D		%Drift
41	S	Dibromofluoromethane(S)	0.2674	0.2705	1.1	S	
42	TM	1,1,1-TCA	0.0848	0.1046	23	TM	
43	TM	Cyclohexane	0.1557	0.1688	8.4	TM	
44	TM	1,1-Dichloropropene	0.1515	0.1746	15	TM	
45	TM	2,2,4-Trimethylpentane	0.2902	0.2664	8.2	TM	
46	S	1,2-DCA-D4(S)	0.3052	0.3127	2.5	S	
47	TML	Carbon Tetrachloride	0.1478	0.1764	19	TML	8.0
48	TM	Tert Amyl Methyl Ether	0.3365	0.4405	31	TM	
49	TM	1,2-DCA	0.1846	0.2357	28	TM	
50	TM	Benzene	0.4773	0.5911	24	TM	
51	TM	TCE	0.1377	0.1888	37	TM	
52	TM	2-Pentanone	0.0798	0.0960	20	TM	
53	TM*	1,2-Dichloropropane	0.1243	0.1534	23	TM*	
54	TM	Bromodichloromethane	0.1793	0.2185	22	TM	
55	TM	Methyl Cyclohexane	0.1576	0.1730	9.7	TM	
56	TM	Dibromomethane	0.1110	0.1431	29	TM	
57	TM	MIBK (methyl isobutyl ketone)	0.1119	0.1443	29	TM	
58	TM	1-Bromo-2-chloroethane	0.0937	0.1194	27	TM	
59	TM	2-Chloroethyl vinyl ether	0.0000	0.0002	0.00	TM	
60	TM	Cis-1,3-Dichloropropene	0.2205	0.2644	20	TM	
61	TM*	Toluene	0.5358	0.6562	22	TM*	
62	TM	Trans-1,3-Dichloropropene	0.1989	0.2490	25	TM	
63	TM	1,1,2-TCA	0.1212	0.1578	30	TM	
64	TM	2-Hexanone	0.0759	0.0940	24	TM	
65	I	Chlorobenzene-D5 (IS)	ISTD			I	
66	S	Toluene-D8(S)	1.194	1.205	0.95	S	
67	TM	1,2-EDB	0.1530	0.2075	36	TM	
68	TM	Tetrachloroethene	0.2345	0.3084	31	TM	
69	TML	1-Chlorohexane	0.1984	0.1908	3.8	TML	6.1
70	TM	1,1,1,2-Tetrachloroethane	0.1738	0.2142	23	TM	
71	TM	m&p-Xylene	0.5627	0.7036	25	TM	
72	TM	o-Xylene	0.6032	0.7482	24	TM	
73	TM	Styrene	0.4644	0.5752	24	TM	
74	S	4-Bromofluorobenzene(S)	0.4843	0.4838	0.11	S	
75	TM	1,3-Dichloropropane	0.2366	0.3144	33	TM	
76	TM	Dibromochloromethane	0.1806	0.2364	31	TM	
77	TM**	Chlorobenzene	0.4365	0.5574	28	TM**	
78	TM*	Ethylbenzene	0.7278	0.8889	22	TM*	
79	TM**	Bromoform	0.1414	0.1774	25	TM**	
80	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
		Average			20.7		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/24/20
Matrix: water Instrument: Thor
Cal. Date: 12/22/20
Data File: 1223T43.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Isopropylbenzene	1.161	1.398	20	TM	
82	TM**	1,1,2,2-Tetrachloroethane	0.2940	0.3402	16	TM**	
83	TM	1,2,3-Trichloropropane	0.0991	0.1324	34	TM	
84	TM	t-1,4-Dichloro-2-Butene	0.0580	0.0603	4.0	TM	
85	TM	Bromobenzene	0.3672	0.4521	23	TM	
86	TM	n-Propylbenzene	1.331	1.587	19	TM	
87	TM	4-Ethyltoluene	1.136	1.366	20	TM	
88	TM	2-Chlorotoluene	0.9608	1.151	20	TM	
89	TM	1,3,5-Trimethylbenzene	0.9728	1.201	24	TM	
90	TM	4-Chlorotoluene	0.9904	1.182	19	TM	
91	TM	Tert-Butylbenzene	1.003	1.213	21	TM	
92	TM	1,2,4-Trimethylbenzene	1.010	1.198	19	TM	
93	TM	Sec-Butylbenzene	1.241	1.423	15	TM	
94	TM	p-Isopropyltoluene	1.089	1.243	14	TM	
95	TM	Benzyl Chloride	0.4160	0.3544	15	TM	
96	TM	1,3-DCB	0.6671	0.8102	21	TM	
97	TM	1,4-DCB	0.6776	0.8248	22	TM	
98	TM	n-Butylbenzene	0.9059	0.9522	5.1	TM	
99	TM	1,2-DCB	0.6430	0.7973	24	TM	
100	TML	Hexachloroethane	0.1289	0.1862	44	TML	25
101	TM	1,2-Dibromo-3-chloropropane	0.0786	0.0941	20	TM	
102	TM	1,2,4-Trichlorobenzene	0.5032	0.5886	17	TM	
103	TM	Hexachlorobutadiene	0.2483	0.2774	12	TM	
104	TM	Naphthalene	0.4587	0.5879	28	TM	
105	TM	1,2,3-Trichlorobenzene	0.4894	0.5725	17	TM	
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			19.7		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T43.D Vial: 28
Acq On : 24 Dec 20 4:36 Operator:
Sample : Ending CCV 10ug/L 12/23/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	519475	25.00	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	433870	25.00	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.58	152	274775	25.00	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	140502	25.29	ppb		0.00
Spiked Amount 25.000			Recovery = 101.148%				
48) 1,2-DCA-D4(S)	6.14	65	162465	25.62	ppb		0.00
Spiked Amount 25.000			Recovery = 102.472%				
69) Toluene-D8(S)	8.42	98	522787	25.24	ppb		0.00
Spiked Amount 25.000			Recovery = 100.952%				
77) 4-Bromofluorobenzene(S)	11.32	95	209892	24.97	ppb		0.00
Spiked Amount 25.000			Recovery = 99.896%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	25787	13.47	ppb		99
4) Freon 114	1.29	85	15060	7.98	ppb		98
5) Chloromethane	1.33	50	32000	11.59	ppb		92
6) Vinyl chloride	1.43	62	27136	13.03	ppb		97
9) Bromomethane	1.70	96	16464	13.01	ppb		93
10) Chloroethane	1.81	64	17717	12.18	ppb		99
11) Dichlorofluoromethane	2.01	67	48402	11.56	ppb		98
12) Trichlorofluoromethane	2.05	101	41477	14.06	ppb		99
16) Acrolein	2.49	56	15559	160.78	ppb		90
17) Acetone	2.67	43	42448	56.57	ppb		90
18) Freon-113	2.61	101	7513	8.40	ppb		90
19) 1,1-DCE	2.58	61	35776	11.47	ppb		98
21) Acetonitrile	2.99	40	9658	131.91	ppb		97
22) t-Butanol	3.43	59	11555	147.22	ppb		98
23) Methyl Acetate	3.08	43	22921	12.80	ppb		97
24) Iodomethane	2.73	142	16909	9.88	ppb		96
25) Acrylonitrile	3.52	52	9446	13.24	ppb	#	86
26) Methylene chloride	3.17	84	15924	13.30	ppb		98
27) Carbon disulfide	2.80	76	36560	11.10	ppb		98
28) Methyl t-butyl ether (MtBE	3.59	73	89078	13.07	ppb		98
29) Trans-1,2-DCE	3.55	61	37186	11.64	ppb		94
31) Diisopropyl Ether	4.39	45	91432	12.68	ppb		95
33) 1,1-DCA	4.20	63	50131	12.49	ppb		97
35) Ethyl tert Butyl Ether	4.93	59	91026	12.82	ppb		98
36) MEK (2-Butanone)	5.13	43	66233	62.73	ppb		97
37) Cis-1,2-DCE	5.06	61	47412	12.06	ppb		93
38) 2,2-Dichloropropane	5.05	77	37469	9.86	ppb		92
40) 3-Methylpentane	3.59	57	18478	12.67	ppb		97
41) Chloroform	5.52	83	57362	12.60	ppb		96
42) Bromochloromethane	5.38	49	26187	12.76	ppb		94
44) 1,1,1-TCA	5.73	97	21744	12.34	ppb		89
45) Cyclohexane	5.78	56	35069	10.84	ppb		93
46) 1,1-Dichloropropene	5.95	75	36280	11.53	ppb		98
47) 2,2,4-Trimethylpentane	6.35	57	55349	9.18	ppb		98
49) Carbon Tetrachloride	5.94	117	36649	10.80	ppb		97
50) Tert Amyl Methyl Ether	6.41	73	91530	13.09	ppb		100
52) 1,2-DCA	6.23	62	48973	12.77	ppb		97
53) Benzene	6.20	78	122822	12.39	ppb		97
54) TCE	7.02	130	39237	13.72	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T43.D Vial: 28
Acq On : 24 Dec 20 4:36 Operator:
Sample : Ending CCV 10ug/L 12/23/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	2-Pentanone	7.28	43	249474	150.52	ppb		99
56)	1,2-Dichloropropane	7.27	63	31880	12.34	ppb		99
57)	Bromodichloromethane	7.61	83	45410	12.19	ppb		97
58)	Methyl Cyclohexane	7.23	83	35951	10.97	ppb		98
59)	Dibromomethane	7.40	174	29731	12.89	ppb		88
60)	MIBK (methyl isobutyl ket	8.33	43	149970	64.49	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	24800	12.74	ppb		96
63)	Cis-1,3-Dichloropropene	8.13	75	54937	11.99	ppb		96
64)	Toluene	8.50	91	136353	12.25	ppb		95
65)	Trans-1,3-Dichloropropene	8.76	75	51743	12.52	ppb		97
66)	1,1,2-TCA	8.96	97	32791	13.02	ppb		98
67)	2-Hexanone	9.26	43	97620	61.91	ppb		98
70)	1,2-EDB	9.50	107	36008	13.56	ppb		90
71)	Tetrachloroethene	9.11	166	53520	13.15	ppb	#	84
72)	1-Chlorohexane	10.05	91	33105	10.61	ppb		95
73)	1,1,1,2-Tetrachloroethane	10.15	131	37180	12.33	ppb		90
74)	m&p-Xylene	10.31	91	244231	25.01	ppb		99
75)	o-Xylene	10.75	91	129847	12.40	ppb		97
76)	Styrene	10.76	104	99833	12.39	ppb		95
78)	1,3-Dichloropropane	9.14	76	54563	13.29	ppb		98
79)	Dibromochloromethane	9.39	129	41025	13.09	ppb		88
80)	Chlorobenzene	10.05	112	96728	12.77	ppb		94
81)	Ethylbenzene	10.19	91	154261	12.21	ppb		99
82)	Bromoform	10.95	173	30784	12.55	ppb	#	84
84)	Isopropylbenzene	11.16	105	153704	12.04	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.48	83	37393	11.57	ppb		95
86)	1,2,3-Trichloropropane	11.52	110	14553	13.36	ppb		95
87)	t-1,4-Dichloro-2-Butene	11.54	53	6631	10.40	ppb	#	80
88)	Bromobenzene	11.48	156	49691	12.31	ppb		96
89)	n-Propylbenzene	11.61	91	174437	11.93	ppb		99
90)	4-Ethyltoluene	11.74	105	150107	12.02	ppb		100
91)	2-Chlorotoluene	11.70	91	126506	11.98	ppb		99
92)	1,3,5-Trimethylbenzene	11.81	105	132053	12.35	ppb		99
93)	4-Chlorotoluene	11.81	91	129954	11.94	ppb		99
94)	Tert-Butylbenzene	12.16	119	133354	12.09	ppb		96
95)	1,2,4-Trimethylbenzene	12.21	105	131646	11.85	ppb		95
96)	Sec-Butylbenzene	12.40	105	156376	11.47	ppb		97
97)	p-Isopropyltoluene	12.57	119	136661	11.41	ppb		95
98)	Benzyl Chloride	12.76	91	38953	8.52	ppb		98
99)	1,3-DCB	12.51	146	89045	12.14	ppb		99
100)	1,4-DCB	12.61	146	90650	12.17	ppb		98
101)	n-Butylbenzene	13.01	91	104661	10.51	ppb		100
102)	1,2-DCB	13.02	146	87631	12.40	ppb		99
103)	Hexachloroethane	13.31	201	20467	12.55	ppb		94
104)	1,2-Dibromo-3-chloropropan	13.87	157	10344	11.98	ppb		93
105)	1,2,4-Trichlorobenzene	14.79	180	64697	11.70	ppb		97
106)	Hexachlorobutadiene	14.99	225	30493	11.17	ppb		97
107)	Naphthalene	15.06	128	64616	12.82	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	62928	11.70	ppb		97

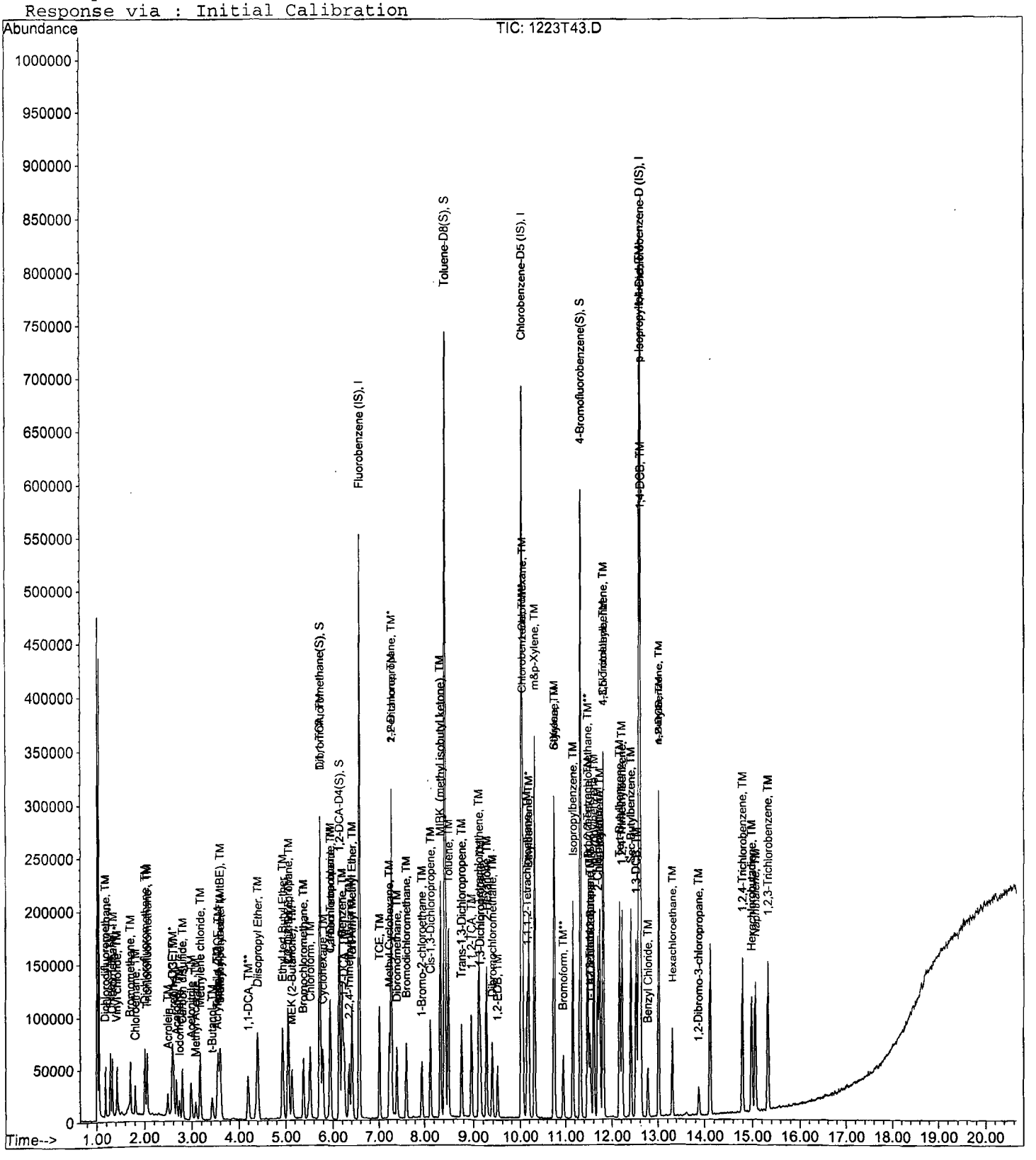
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T43.D Vial: 28
Acq On : 24 Dec 20 4:36 Operator:
Sample : Ending CCV 10ug/L 12/23/20 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



ORGANICS

Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\201222\1223T38.D Vial: 23
Acq On : 24 Dec 20 2:16 Operator:
Sample : BA23604W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:28 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	521042	25.000	ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	441496	25.000	ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	267024	25.000	ppb	0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.73	111	141280	25.351	ppb	0.00
Spiked Amount 25.000			Recovery = 101.404%			
48) 1,2-DCA-D4(S)	6.14	65	161738	25.427	ppb	0.00
Spiked Amount 25.000			Recovery = 101.708%			
69) Toluene-D8(S)	8.42	98	531045	25.194	ppb	0.00
Spiked Amount 25.000			Recovery = 100.776%			
77) 4-Bromofluorobenzene(S)	11.32	95	207777	24.295	ppb	0.00
Spiked Amount 25.000			Recovery = 97.180%			
Target Compounds						Qvalue
54) TCE	7.01	130	44858	15.634	ppb	96

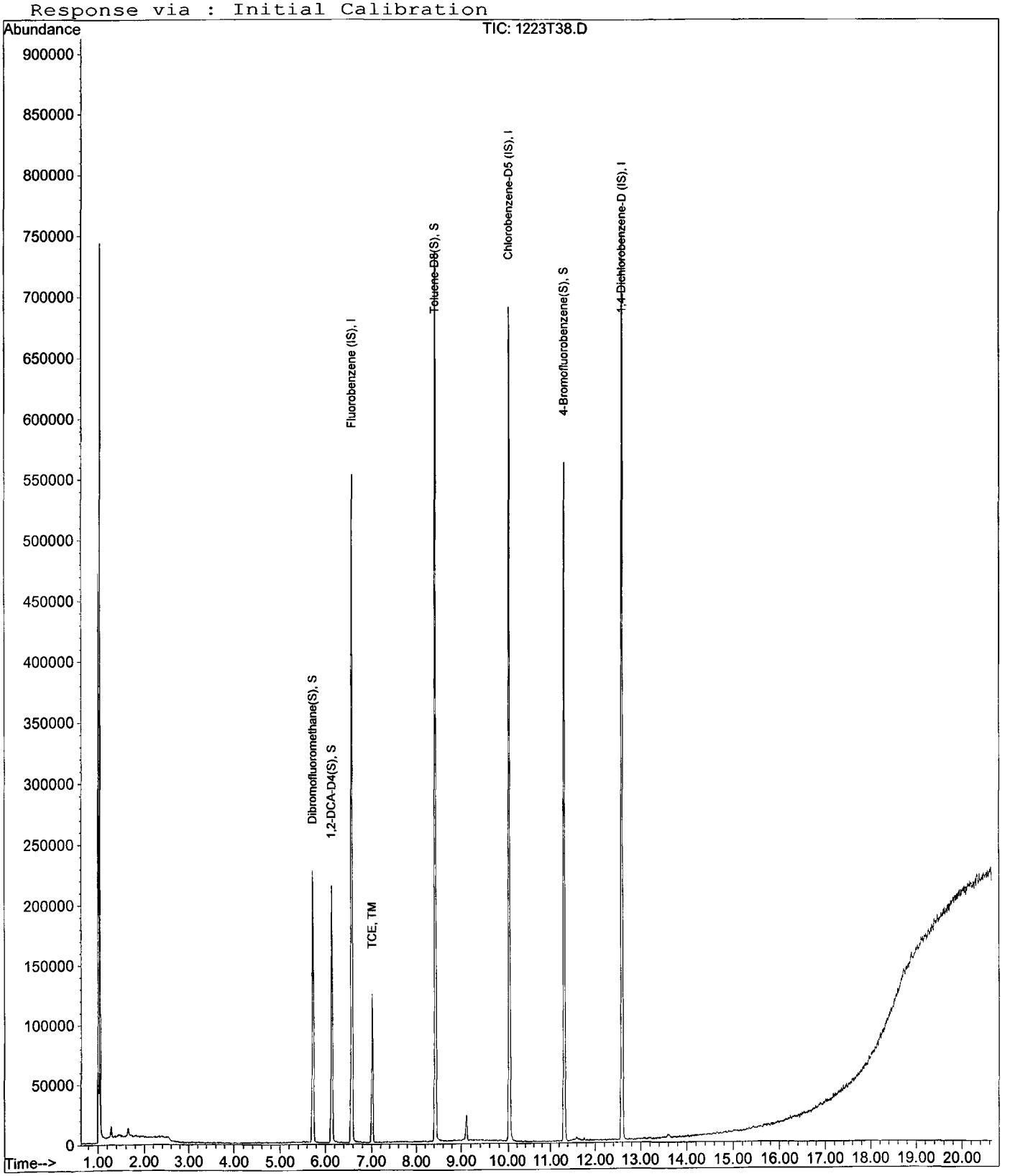
(#) = qualifier out of range (m) = manual integration

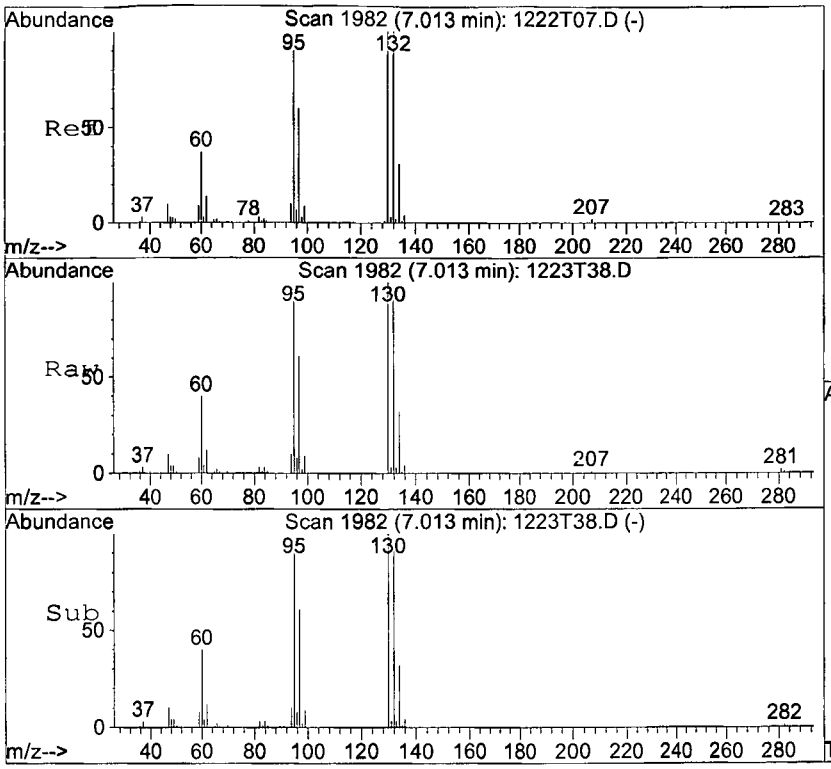
Quantitation Report

Data File : M:\THOR\DATA\201222\1223T38.D Vial: 23
Acq On : 24 Dec 20 2:16 Operator:
Sample : BA23604W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:28 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration

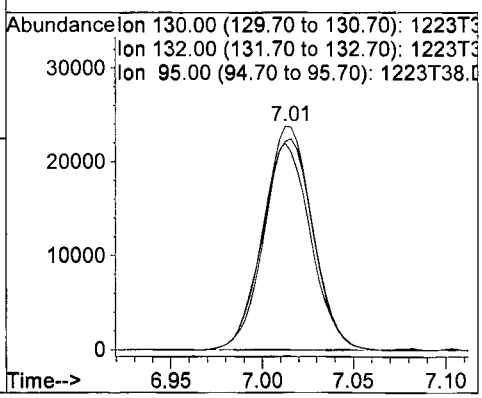




#54
TCE
Concen: 15.634 ppb
RT: 7.01 min Scan# 1982
Delta R.T. 0.00 min
Lab File: 1223T38.D
Acq: 24 Dec 20 2:16

Tgt Ion:130 Resp: 44858

Ion	Ratio	Lower	Upper
130	100		
132	93.2	79.8	119.8
95	92.2	72.2	108.4



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\201222\1223T39.D Vial: 24
Acq On : 24 Dec 20 2:44 Operator:
Sample : BA23605W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:30 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	513616	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	438104	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	266584	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.73	111	140440	25.564 ppb	0.00
Spiked Amount 25.000			Recovery =	102.256%	
48) 1,2-DCA-D4(S)	6.14	65	162587	25.930 ppb	0.00
Spiked Amount 25.000			Recovery =	103.720%	
69) Toluene-D8(S)	8.42	98	520001	24.861 ppb	0.00
Spiked Amount 25.000			Recovery =	99.444%	
77) 4-Bromofluorobenzene(S)	11.32	95	206030	24.277 ppb	0.00
Spiked Amount 25.000			Recovery =	97.108%	
Target Compounds					Qvalue
54) TCE	7.01	130	13070	4.621 ppb	95

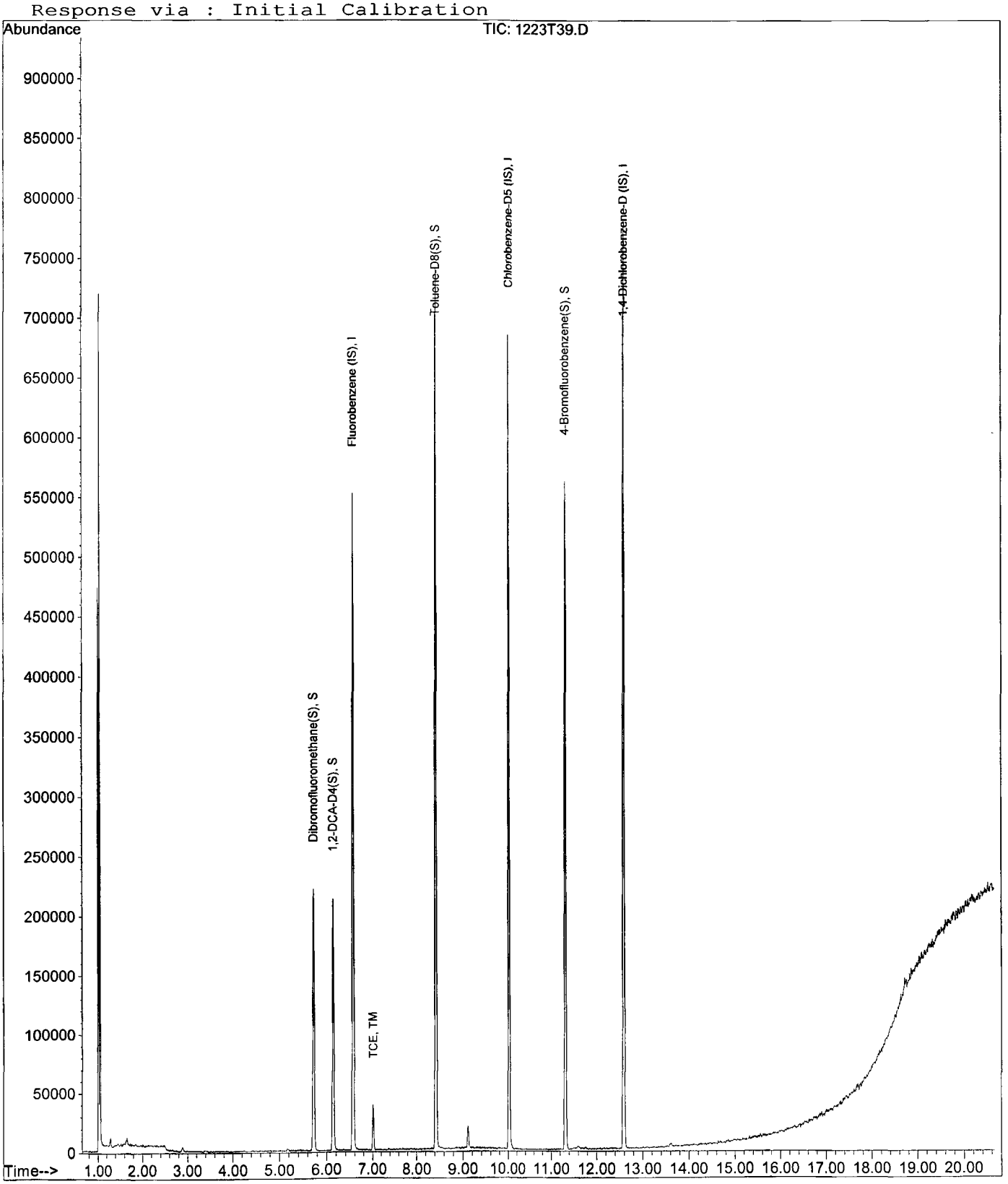
(#) = qualifier out of range (m) = manual integration

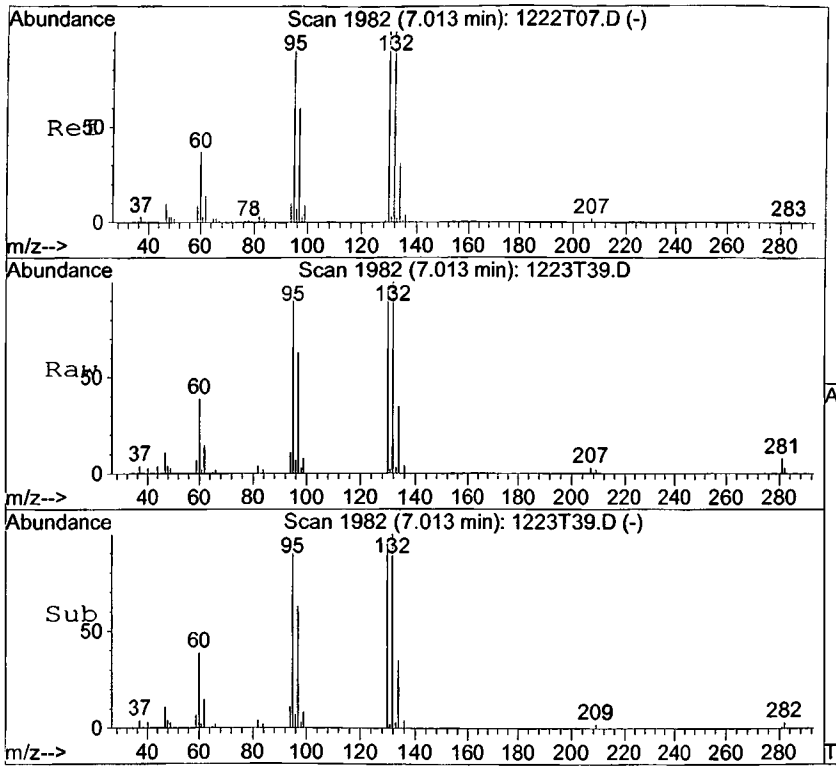
Quantitation Report

Data File : M:\THOR\DATA\201222\1223T39.D Vial: 24
Acq On : 24 Dec 20 2:44 Operator:
Sample : BA23605W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:30 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration

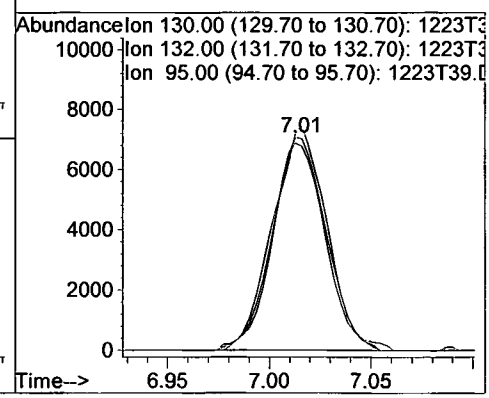




#54
TCE
Concen: 4.621 ppb
RT: 7.01 min Scan# 1982
Delta R.T. 0.00 min
Lab File: 1223T39.D
Acq: 24 Dec 20 2:44

Tgt Ion:130 Resp: 13070

Ion	Ratio	Lower	Upper
130	100		
132	101.8	79.8	119.8
95	97.4	72.2	108.4



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\201222\1223T40.D Vial: 25
Acq On : 24 Dec 20 3:12 Operator:
Sample : BA23606W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:31 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	512483	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	431921	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	262899	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.73	111	140105	25.560 ppb	0.00
Spiked Amount 25.000			Recovery = 102.240%		
48) 1,2-DCA-D4(S)	6.14	65	160829	25.706 ppb	0.00
Spiked Amount 25.000			Recovery = 102.824%		
69) Toluene-D8(S)	8.42	98	517053	25.074 ppb	0.00
Spiked Amount 25.000			Recovery = 100.296%		
77) 4-Bromofluorobenzene(S)	11.32	95	209436	25.032 ppb	0.00
Spiked Amount 25.000			Recovery = 100.128%		

Target Compounds Qvalue

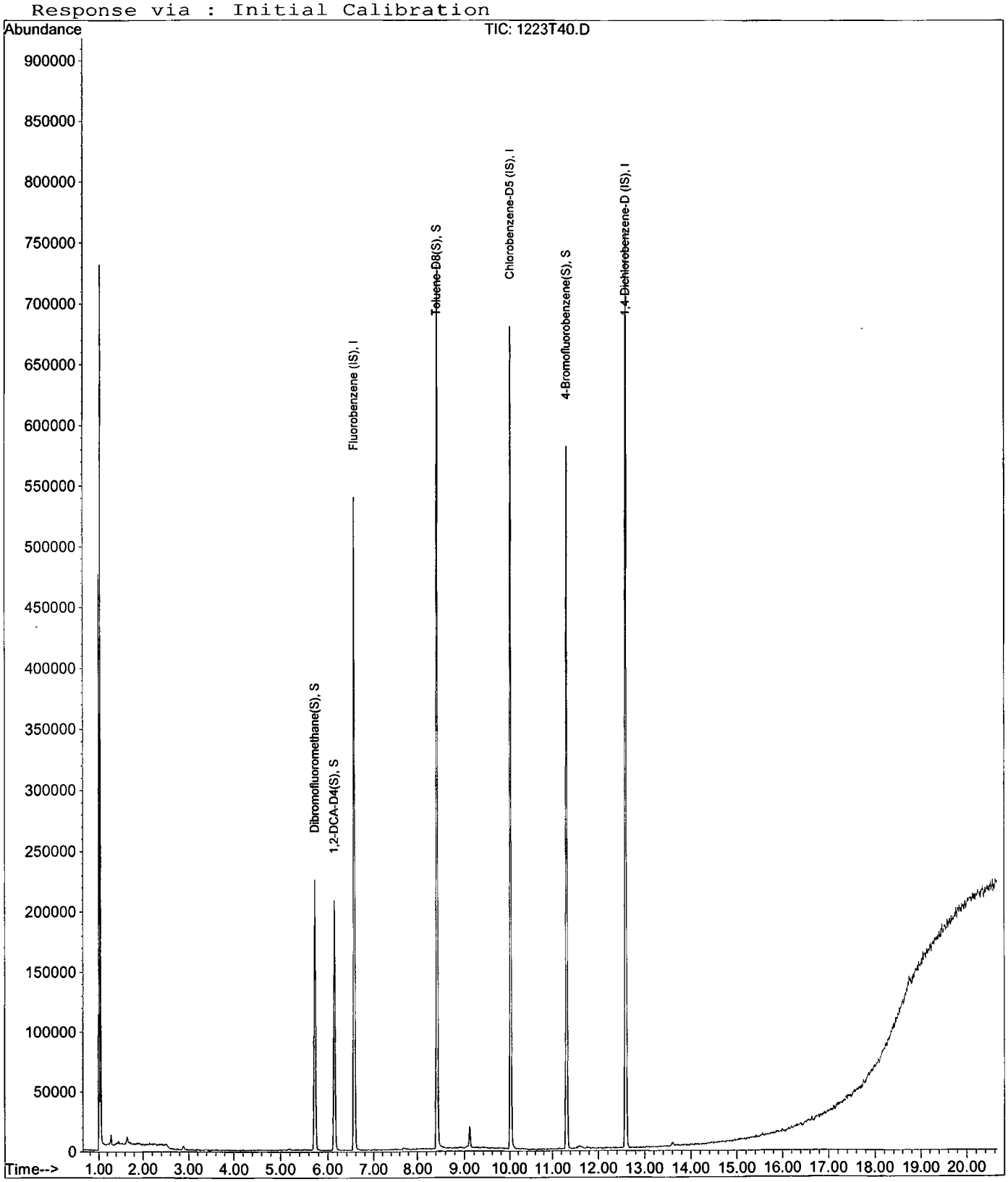
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T40.D Vial: 25
Acq On : 24 Dec 20 3:12 Operator:
Sample : BA23606W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:31 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\201222\1223T22.D Vial: 7
Acq On : 23 Dec 20 18:52 Operator:
Sample : BA23607W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:19 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	547220	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	465155	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	280628	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.73	111	149178	25.487 ppb	0.00
Spiked Amount 25.000			Recovery =	101.948%	
48) 1,2-DCA-D4(S)	6.14	65	170047	25.454 ppb	0.00
Spiked Amount 25.000			Recovery =	101.816%	
69) Toluene-D8(S)	8.42	98	553847	24.940 ppb	0.00
Spiked Amount 25.000			Recovery =	99.760%	
77) 4-Bromofluorobenzene(S)	11.32	95	217552	24.144 ppb	0.00
Spiked Amount 25.000			Recovery =	96.576%	

Target Compounds Qvalue

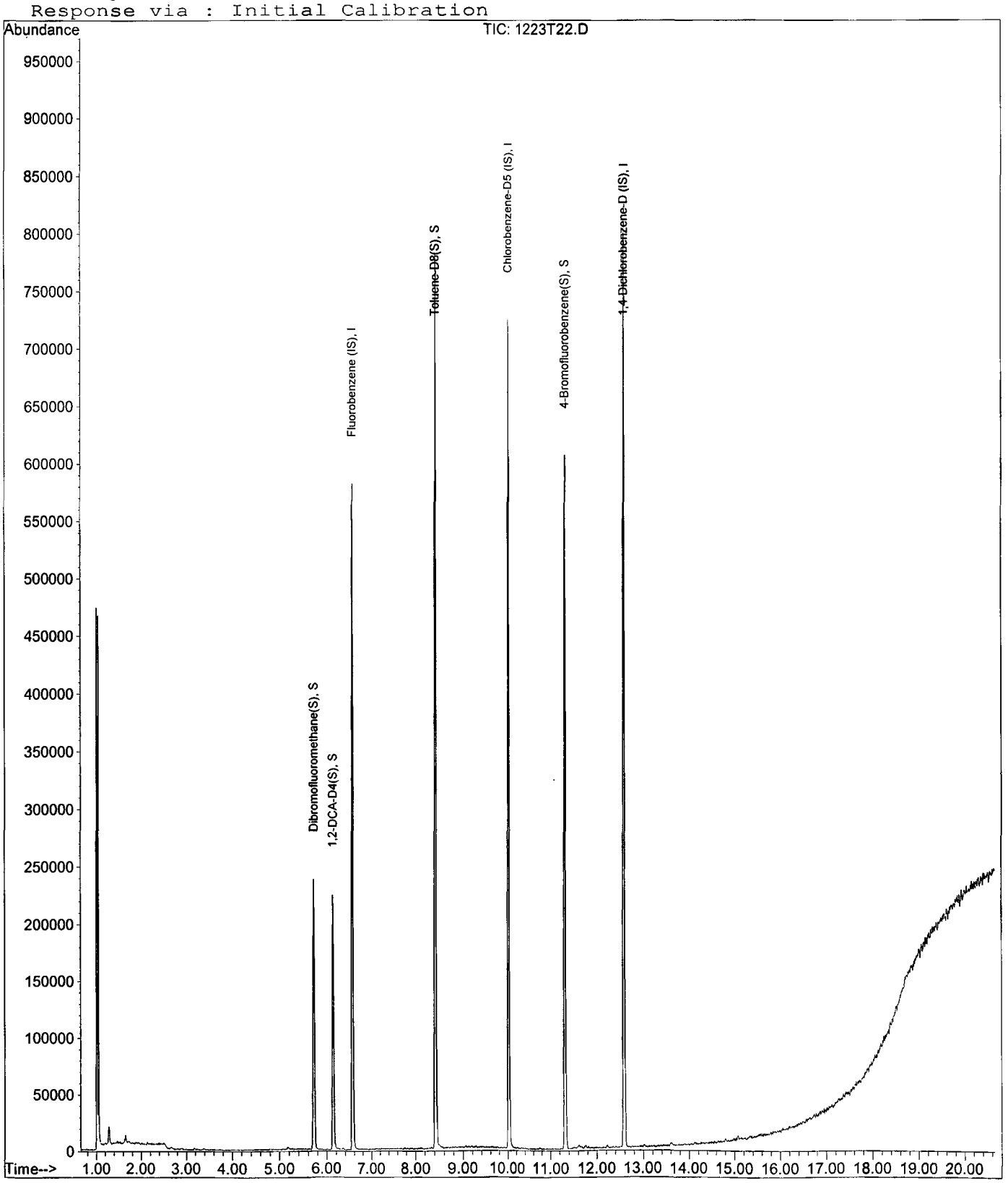
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T22.D Vial: 7
Acq On : 23 Dec 20 18:52 Operator:
Sample : BA23607W01 Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:19 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\201222\1223T21.D Vial: 6
Acq On : 23 Dec 20 18:24 Operator:
Sample : 201223A BLK Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:17 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.57	96	549377	25.000 ppb	0.00
68) Chlorobenzene-D5 (IS)	10.02	117	462729	25.000 ppb	0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	280755	25.000 ppb	0.00
System Monitoring Compounds					
43) Dibromofluoromethane(S)	5.73	111	146467	24.926 ppb	0.00
Spiked Amount 25.000			Recovery =	99.704%	
48) 1,2-DCA-D4(S)	6.14	65	171182	25.523 ppb	0.00
Spiked Amount 25.000			Recovery =	102.092%	
69) Toluene-D8(S)	8.42	98	557141	25.219 ppb	0.00
Spiked Amount 25.000			Recovery =	100.876%	
77) 4-Bromofluorobenzene(S)	11.32	95	221782	24.743 ppb	0.00
Spiked Amount 25.000			Recovery =	98.972%	

Target Compounds Qvalue

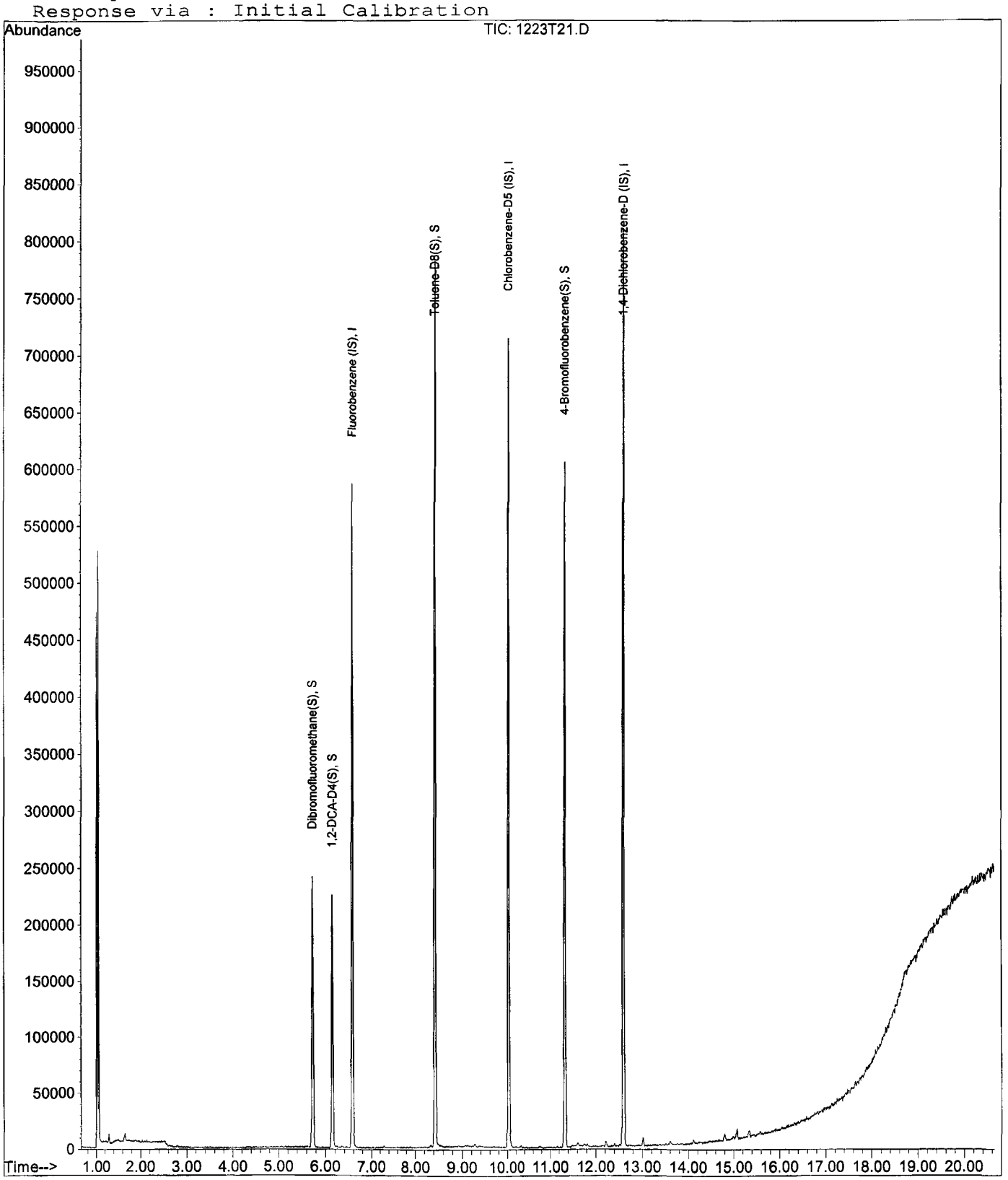
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T21.D Vial: 6
Acq On : 23 Dec 20 18:24 Operator:
Sample : 201223A BLK Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 29 13:17 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	555731	25.000	ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	461656	25.000	ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.59	152	288415	25.000	ppb		0.00
System Monitoring Compounds							
43) Dibromofluoromethane(S)	5.73	111	147638	24.838	ppb		0.00
Spiked Amount 25.000			Recovery =	99.352%			
48) 1,2-DCA-D4(S)	6.14	65	166774	24.582	ppb		0.00
Spiked Amount 25.000			Recovery =	98.328%			
69) Toluene-D8(S)	8.42	98	563583	25.570	ppb		0.00
Spiked Amount 25.000			Recovery =	102.280%			
77) 4-Bromofluorobenzene(S)	11.32	95	222067	24.832	ppb		0.00
Spiked Amount 25.000			Recovery =	99.328%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.18	85	25385	12.531	ppb		97
4) Freon 114	1.29	85	21408	10.378	ppb		99
5) Chloromethane	1.33	50	30416	10.294	ppb		97
6) Vinyl chloride	1.43	62	25088	11.262	ppb		99
9) Bromomethane	1.71	96	15215	11.004	ppb		98
10) Chloroethane	1.81	64	17011	10.898	ppb		96
11) Dichlorofluoromethane	2.01	67	45912	10.248	ppb		98
12) Trichlorofluoromethane	2.05	101	39891	12.643	ppb		92
16) Acrolein	2.48	56	11498	111.067	ppb		91
17) Acetone	2.67	43	34971	43.565	ppb		99
18) Freon-113	2.61	101	9748	10.159	ppb		87
19) 1,1-DCE	2.58	61	33807	10.135	ppb		97
21) Acetonitrile	2.99	40	9069	115.786	ppb		94
22) t-Butanol	3.42	59	9306	110.834	ppb		97
23) Methyl Acetate	3.08	43	17307	9.035	ppb		95
24) Iodomethane	2.74	142	16593	9.283	ppb	#	94
25) Acrylonitrile	3.52	52	7624	9.986	ppb	#	66
26) Methylene chloride	3.17	84	13029	10.050	ppb		99
27) Carbon disulfide	2.80	76	37072	10.521	ppb		98
28) Methyl t-butyl ether (MtBE	3.60	73	70726	9.703	ppb		100
29) Trans-1,2-DCE	3.55	61	34598	10.126	ppb		93
31) Diisopropyl Ether	4.40	45	77477	10.045	ppb		92
33) 1,1-DCA	4.20	63	43857	10.211	ppb		98
34) Vinyl Acetate	4.35	43	17216	10.344	ppb		100
35) Ethyl tert Butyl Ether	4.93	59	76258	10.042	ppb		98
36) MEK (2-Butanone)	5.13	43	53213	47.112	ppb		99
37) Cis-1,2-DCE	5.06	61	42460	10.099	ppb		94
38) 2,2-Dichloropropane	5.05	77	42761	10.519	ppb		96
40) 3-Methylpentane	3.59	57	14959	9.584	ppb		99
41) Chloroform	5.52	83	50102	10.290	ppb		92
42) Bromochloromethane	5.38	49	22916	10.435	ppb		94
44) 1,1,1-TCA	5.73	97	20528	10.891	ppb		94
45) Cyclohexane	5.78	56	38092	11.009	ppb		98
46) 1,1-Dichloropropene	5.95	75	35378	10.508	ppb		94
47) 2,2,4-Trimethylpentane	6.35	57	74482	11.544	ppb		98
49) Carbon Tetrachloride	5.94	117	35638	9.866	ppb		97
50) Tert Amyl Methyl Ether	6.41	73	73750	9.860	ppb		99
52) 1,2-DCA	6.24	62	41068	10.008	ppb	#	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Benzene	6.20	78	109652	10.336	ppb		96
54)	TCE	7.01	130	32964	10.772	ppb		93
55)	2-Pentanone	7.28	43	216633	122.182	ppb		98
56)	1,2-Dichloropropane	7.27	63	27537	9.962	ppb		98
57)	Bromodichloromethane	7.61	83	40639	10.196	ppb		98
58)	Methyl Cyclohexane	7.23	83	40236	11.482	ppb		88
59)	Dibromomethane	7.40	174	25633	10.391	ppb		97
60)	MIBK (methyl isobutyl ket	8.33	43	117192	47.107	ppb		98
61)	1-Bromo-2-chloroethane	7.95	63	20720	9.947	ppb		92
63)	Cis-1,3-Dichloropropene	8.13	75	49333	10.063	ppb		96
64)	Toluene	8.50	91	123599	10.378	ppb		100
65)	Trans-1,3-Dichloropropene	8.76	75	43470	9.834	ppb		96
66)	1,1,2-TCA	8.96	97	25958	9.637	ppb		94
67)	2-Hexanone	9.27	43	79844	47.336	ppb		97
70)	1,2-EDB	9.50	107	29163	10.320	ppb		99
71)	Tetrachloroethene	9.11	166	47164	10.891	ppb		94
72)	1-Chlorohexane	10.05	91	35040	10.559	ppb		94
73)	1,1,1,2-Tetrachloroethane	10.15	131	32611	10.161	ppb		93
74)	m&p-Xylene	10.32	91	222862	21.449	ppb		99
75)	o-Xylene	10.75	91	117786	10.574	ppb		99
76)	Styrene	10.77	104	89477	10.434	ppb		98
78)	1,3-Dichloropropane	9.14	76	45579	10.432	ppb		100
79)	Dibromochloromethane	9.38	129	33505	10.046	ppb		95
80)	Chlorobenzene	10.05	112	83870	10.406	ppb		99
81)	Ethylbenzene	10.19	91	141129	10.500	ppb		97
82)	Bromoform	10.95	173	26141	10.014	ppb	#	99
84)	Isopropylbenzene	11.16	105	146069	10.904	ppb		99
85)	1,1,2,2-Tetrachloroethane	11.48	83	33073	9.752	ppb		94
86)	1,2,3-Trichloropropane	11.52	110	11171	9.774	ppb		91
87)	t-1,4-Dichloro-2-Butene	11.54	53	6549	9.785	ppb		96
88)	Bromobenzene	11.48	156	43482	10.263	ppb		93
89)	n-Propylbenzene	11.61	91	163595	10.657	ppb		99
90)	4-Ethyltoluene	11.74	105	141133	10.771	ppb		99
91)	2-Chlorotoluene	11.70	91	116887	10.545	ppb		98
92)	1,3,5-Trimethylbenzene	11.81	105	122322	10.899	ppb		99
93)	4-Chlorotoluene	11.81	91	121221	10.610	ppb		93
94)	Tert-Butylbenzene	12.16	119	126712	10.947	ppb		92
95)	1,2,4-Trimethylbenzene	12.22	105	125085	10.731	ppb		95
96)	Sec-Butylbenzene	12.40	105	152208	10.635	ppb		100
97)	p-Isopropyltoluene	12.57	119	136898	10.893	ppb		95
98)	Benzyl Chloride	12.77	91	48820	10.171	ppb		98
99)	1,3-DCB	12.51	146	77817	10.111	ppb		97
100)	1,4-DCB	12.61	146	81018	10.364	ppb		99
101)	n-Butylbenzene	13.01	91	111817	10.700	ppb		100
102)	1,2-DCB	13.02	146	78457	10.577	ppb		97
103)	Hexachloroethane	13.31	201	16659	9.997	ppb		97
104)	1,2-Dibromo-3-chloropropan	13.87	157	8829	9.742	ppb		98
105)	1,2,4-Trichlorobenzene	14.79	180	59233	10.203	ppb		91
106)	Hexachlorobutadiene	14.98	225	31129	10.865	ppb		98
107)	Naphthalene	15.06	128	52608	9.942	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	56843	10.068	ppb		92

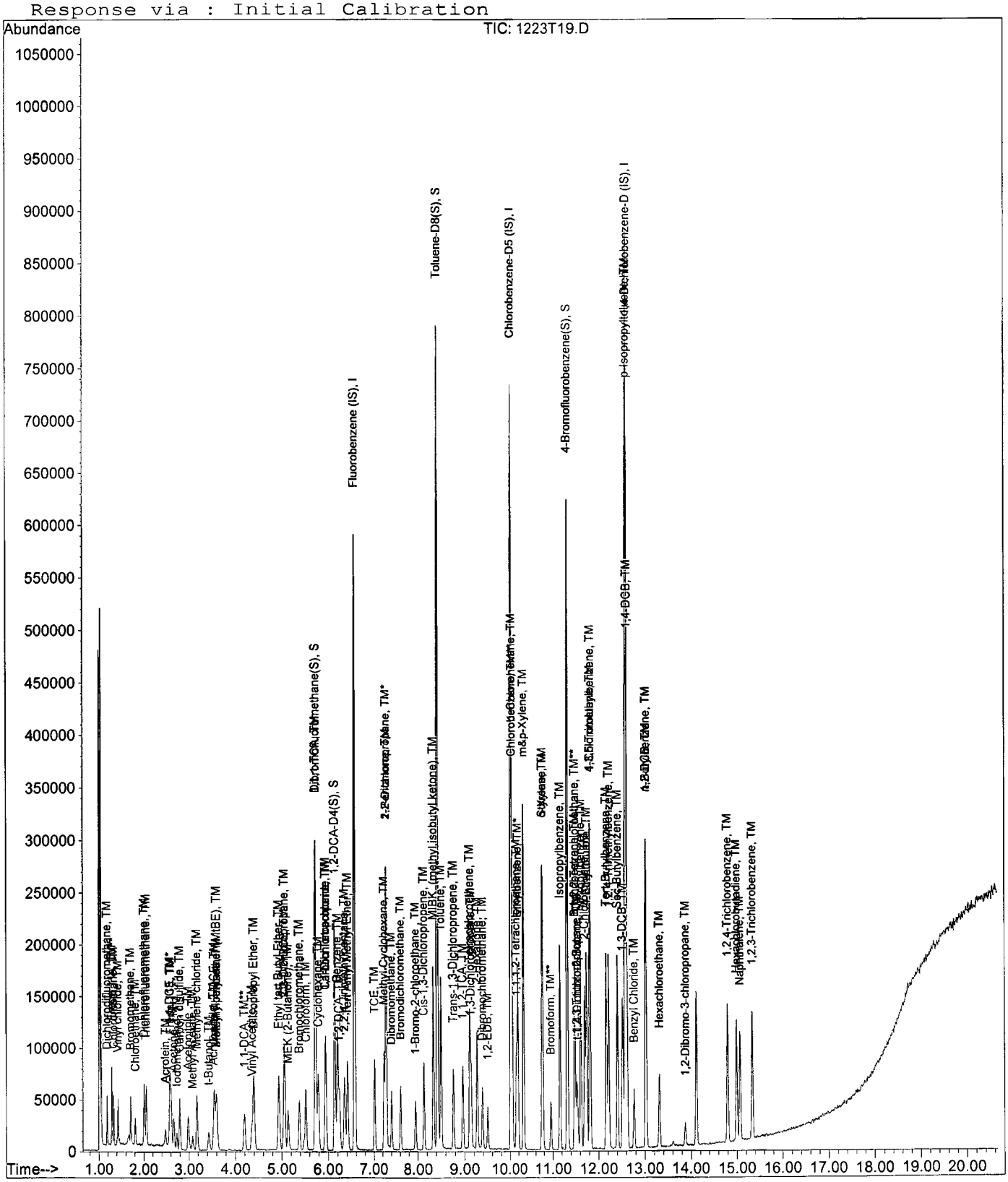
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T19.D Vial: 4
Acq On : 23 Dec 20 17:28 Operator:
Sample : 201223A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T20.D Vial: 5
Acq On : 23 Dec 20 17:56 Operator:
Sample : 201223A LCSD 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.57	96	555352	25.000 ppb		0.00
68) Chlorobenzene-D5 (IS)	10.02	117	465158	25.000 ppb		0.00
83) 1,4-Dichlorobenzene-D (IS)	12.58	152	285905	25.000 ppb		0.00
System Monitoring Compounds						
43) Dibromofluoromethane(S)	5.73	111	148848	25.059 ppb		0.00
Spiked Amount 25.000			Recovery = 100.236%			
48) 1,2-DCA-D4(S)	6.14	65	169271	24.967 ppb		0.00
Spiked Amount 25.000			Recovery = 99.868%			
69) Toluene-D8(S)	8.42	98	560531	25.240 ppb		0.00
Spiked Amount 25.000			Recovery = 100.960%			
77) 4-Bromofluorobenzene(S)	11.32	95	229632	25.485 ppb		0.00
Spiked Amount 25.000			Recovery = 101.940%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.18	85	25305	12.504 ppb		97
4) Freon 114	1.29	85	21538	10.444 ppb		92
5) Chloromethane	1.33	50	31092	10.530 ppb		96
6) Vinyl chloride	1.43	62	27752	12.467 ppb		97
9) Bromomethane	1.71	96	14752	10.625 ppb		94
10) Chloroethane	1.81	64	18281	11.746 ppb		100
11) Dichlorofluoromethane	2.01	67	46743	10.440 ppb		97
12) Trichlorofluoromethane	2.05	101	41327	13.107 ppb		96
16) Acrolein	2.48	56	12199	117.919 ppb		95
17) Acetone	2.67	43	37812	47.137 ppb		92
18) Freon-113	2.60	101	10037	10.464 ppb	#	85
19) 1,1-DCE	2.58	61	37492	11.247 ppb		98
21) Acetonitrile	2.98	40	9245	118.114 ppb		95
22) t-Butanol	3.43	59	10526	125.449 ppb		97
23) Methyl Acetate	3.08	43	17789	9.293 ppb		98
24) Iodomethane	2.73	142	18400	10.012 ppb	#	96
25) Acrylonitrile	3.53	52	7824	10.255 ppb	#	73
26) Methylene chloride	3.17	84	13747	10.640 ppb		94
27) Carbon disulfide	2.80	76	36528	10.374 ppb		100
28) Methyl t-butyl ether (MtBE	3.59	73	72077	9.895 ppb		100
29) Trans-1,2-DCE	3.55	61	36229	10.610 ppb		97
31) Diisopropyl Ether	4.40	45	80134	10.396 ppb		92
33) 1,1-DCA	4.20	63	44861	10.451 ppb		96
34) Vinyl Acetate	4.35	43	18232	10.962 ppb		98
35) Ethyl tert Butyl Ether	4.93	59	75905	10.002 ppb		100
36) MEK (2-Butanone)	5.14	43	55521	49.189 ppb		98
37) Cis-1,2-DCE	5.05	61	44323	10.549 ppb		98
38) 2,2-Dichloropropane	5.05	77	44168	10.872 ppb		96
40) 3-Methylpentane	3.59	57	15620	10.015 ppb		97
41) Chloroform	5.52	83	51666	10.619 ppb		93
42) Bromochloromethane	5.38	49	22436	10.223 ppb		91
44) 1,1,1-TCA	5.73	97	21624	11.480 ppb		90
45) Cyclohexane	5.78	56	38542	11.146 ppb		95
46) 1,1-Dichloropropene	5.95	75	36348	10.803 ppb		98
47) 2,2,4-Trimethylpentane	6.35	57	73227	11.357 ppb		99
49) Carbon Tetrachloride	5.94	117	37781	10.433 ppb		99
50) Tert Amyl Methyl Ether	6.41	73	74919	10.023 ppb		99
52) 1,2-DCA	6.24	62	41503	10.120 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\201222\1223T20.D Vial: 5
Acq On : 23 Dec 20 17:56 Operator:
Sample : 201223A LCSD 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Quant Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Benzene	6.20	78	109815	10.358	ppb		96
54)	TCE	7.02	130	33527	10.963	ppb		98
55)	2-Pentanone	7.28	43	232311	131.114	ppb		98
56)	1,2-Dichloropropane	7.27	63	28466	10.306	ppb		98
57)	Bromodichloromethane	7.61	83	40074	10.061	ppb		97
58)	Methyl Cyclohexane	7.23	83	40633	11.603	ppb		94
59)	Dibromomethane	7.40	174	25997	10.546	ppb		99
60)	MIBK (methyl isobutyl ket	8.33	43	125157	50.343	ppb		95
61)	1-Bromo-2-chloroethane	7.95	63	19728	9.477	ppb		92
63)	Cis-1,3-Dichloropropene	8.13	75	50186	10.244	ppb		95
64)	Toluene	8.50	91	123474	10.375	ppb		99
65)	Trans-1,3-Dichloropropene	8.76	75	46279	10.477	ppb		96
66)	1,1,2-TCA	8.96	97	27881	10.358	ppb		93
67)	2-Hexanone	9.27	43	84721	50.262	ppb		94
70)	1,2-EDB	9.50	107	28473	10.000	ppb		92
71)	Tetrachloroethene	9.11	166	47119	10.798	ppb		92
72)	1-Chlorohexane	10.05	91	35289	10.554	ppb		95
73)	1,1,1,2-Tetrachloroethane	10.15	131	33459	10.347	ppb		94
74)	m&p-Xylene	10.31	91	229230	21.896	ppb		100
75)	o-Xylene	10.75	91	118797	10.585	ppb		99
76)	Styrene	10.76	104	91144	10.549	ppb		95
78)	1,3-Dichloropropane	9.14	76	47579	10.808	ppb		99
79)	Dibromochloromethane	9.38	129	33421	9.946	ppb		92
80)	Chlorobenzene	10.05	112	87067	10.721	ppb		98
81)	Ethylbenzene	10.19	91	144296	10.655	ppb		99
82)	Bromoform	10.95	173	27165	10.327	ppb	#	95
84)	Isopropylbenzene	11.16	105	149731	11.276	ppb		100
85)	1,1,2,2-Tetrachloroethane	11.48	83	35539	10.572	ppb		99
86)	1,2,3-Trichloropropane	11.52	110	11109	9.805	ppb		85
87)	t-1,4-Dichloro-2-Butene	11.54	53	8472	12.769	ppb		91
88)	Bromobenzene	11.48	156	44311	10.551	ppb		98
89)	n-Propylbenzene	11.61	91	167984	11.038	ppb		98
90)	4-Ethyltoluene	11.74	105	146715	11.295	ppb		96
91)	2-Chlorotoluene	11.70	91	117613	10.704	ppb		100
92)	1,3,5-Trimethylbenzene	11.80	105	128279	11.530	ppb		100
93)	4-Chlorotoluene	11.82	91	124298	10.975	ppb		94
94)	Tert-Butylbenzene	12.16	119	129241	11.263	ppb		94
95)	1,2,4-Trimethylbenzene	12.21	105	126197	10.921	ppb		95
96)	Sec-Butylbenzene	12.40	105	158464	11.170	ppb		98
97)	p-Isopropyltoluene	12.56	119	139208	11.174	ppb		98
98)	Benzyl Chloride	12.76	91	49801	10.467	ppb		98
99)	1,3-DCB	12.51	146	80920	10.606	ppb		97
100)	1,4-DCB	12.61	146	80915	10.442	ppb		98
101)	n-Butylbenzene	13.01	91	113910	10.996	ppb		97
102)	1,2-DCB	13.02	146	79656	10.833	ppb		96
103)	Hexachloroethane	13.31	201	17116	10.318	ppb		92
104)	1,2-Dibromo-3-chloropropan	13.87	157	8075	8.988	ppb		90
105)	1,2,4-Trichlorobenzene	14.79	180	60760	10.558	ppb		90
106)	Hexachlorobutadiene	14.99	225	30770	10.834	ppb		99
107)	Naphthalene	15.06	128	54208	10.334	ppb	#	100
108)	1,2,3-Trichlorobenzene	15.33	180	58758	10.499	ppb		98

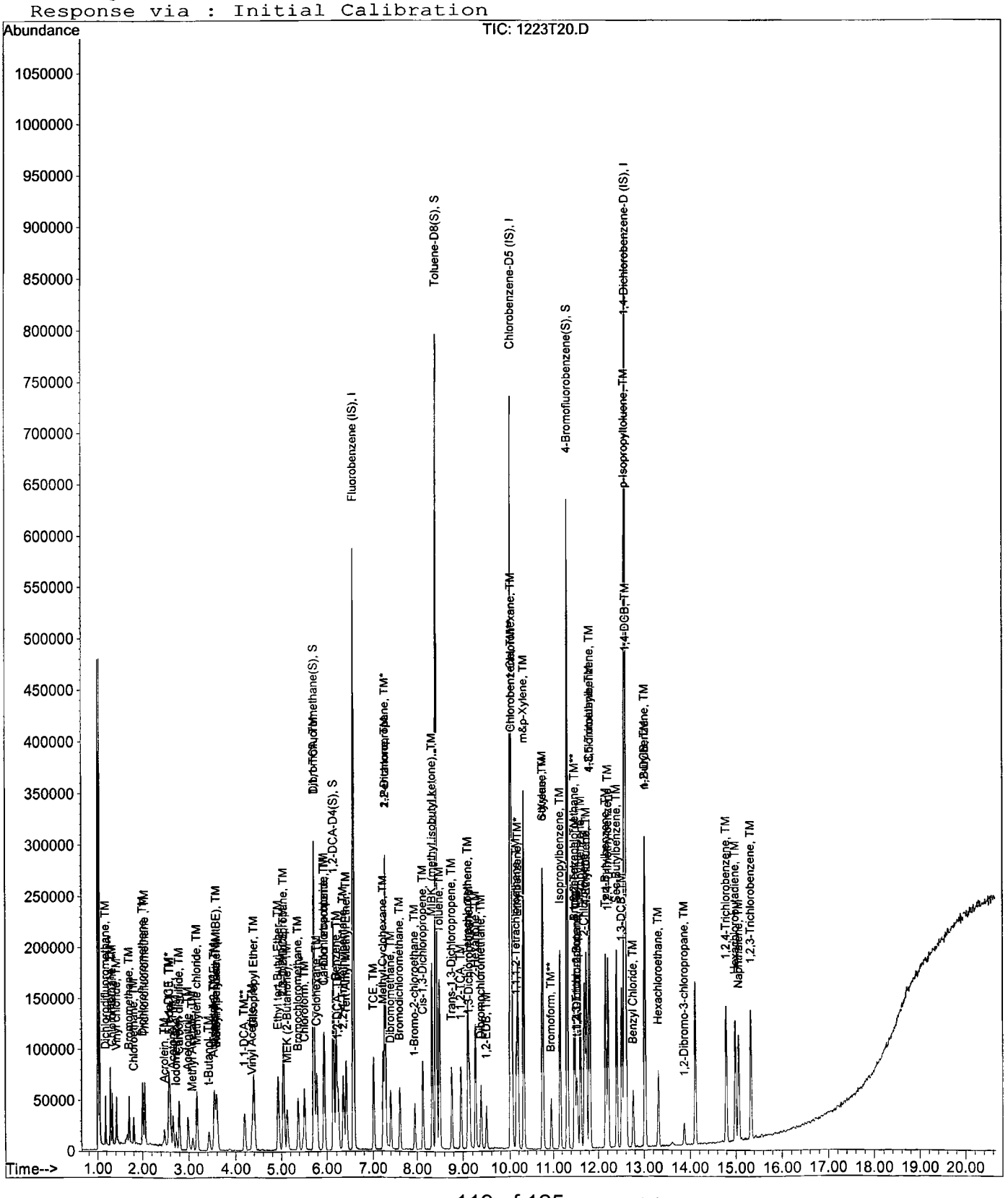
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\201222\1223T20.D Vial: 5
Acq On : 23 Dec 20 17:56 Operator:
Sample : 201223A LCSD 10ug/L Inst : Thor
Misc : IS&S 11/13/20 Multiplr: 1.00

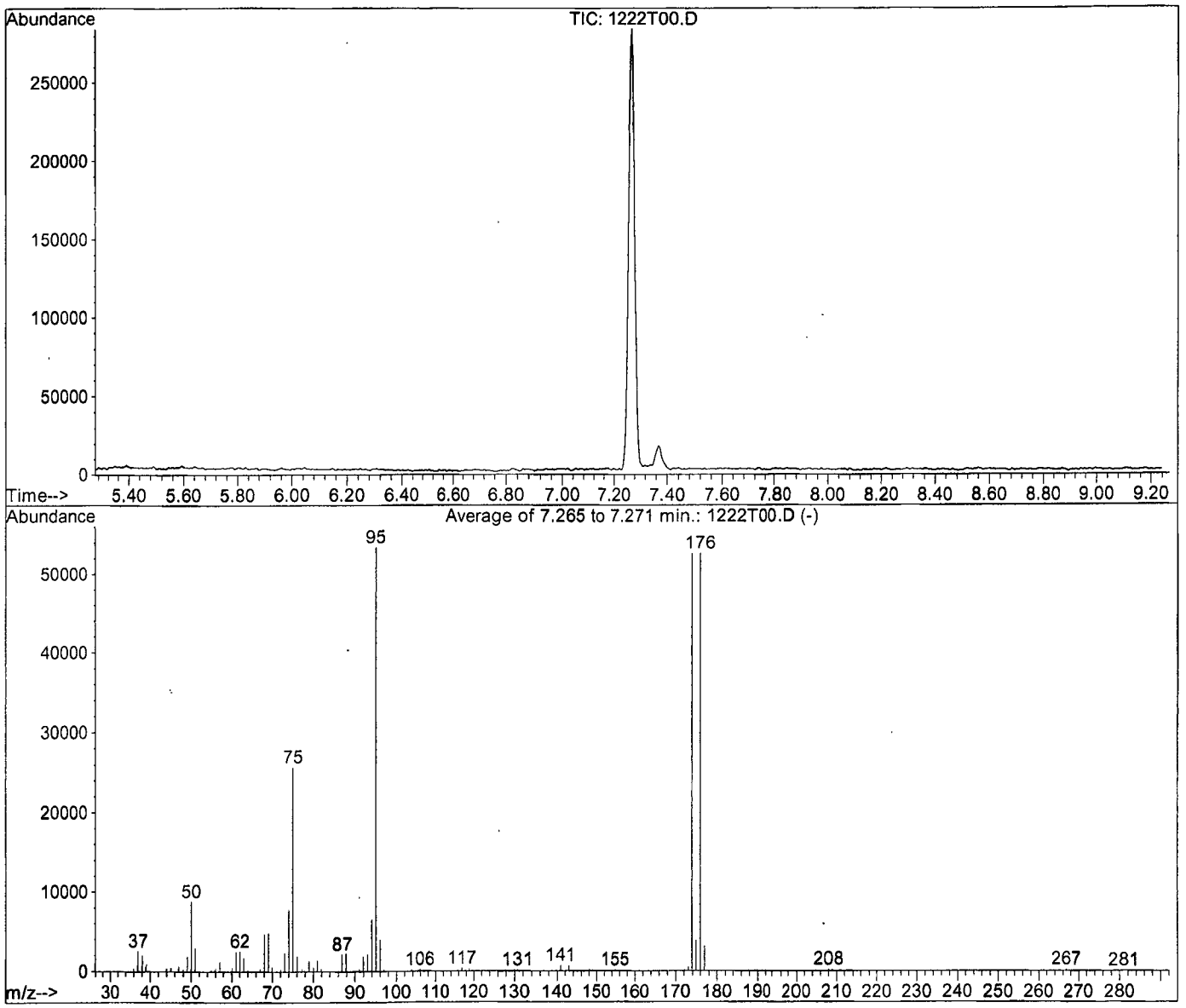
Quant Time: Dec 28 9:57 2020 Quant Results File: T1222W.RES

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Dec 23 11:30:26 2020
Response via : Initial Calibration



Data File : M:\THOR\DATA\201222\1222T00.D Vial: 1
Acq On : 22 Dec 20 16:34 Operator:
Sample : 25ug/mL BFB STD 12/9/20 Inst : Thor
Misc : 2uL Multiplr: 1.00

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 2076, 2077, 2078; Background Corrected with Scan 2063

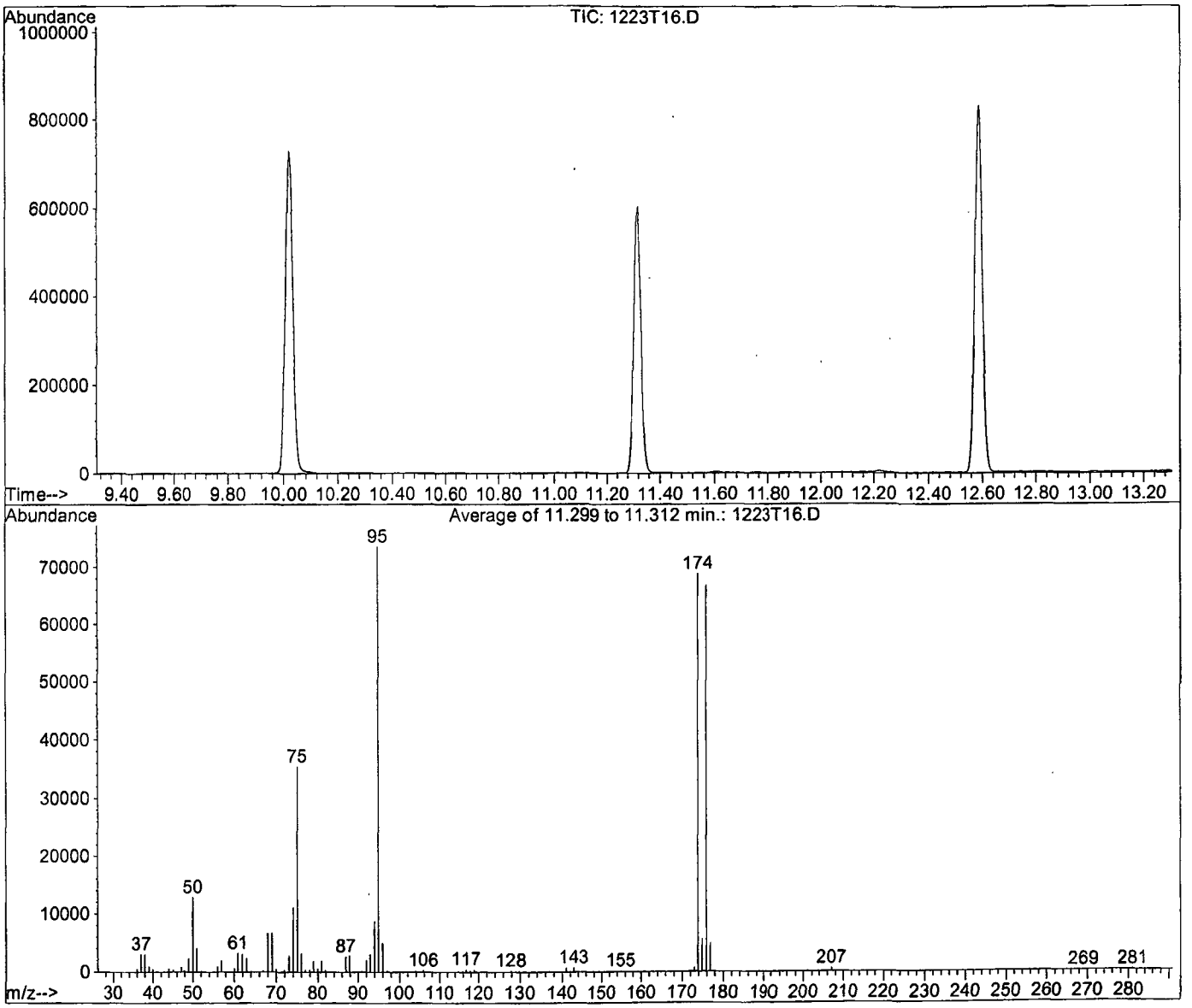
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	8800	PASS
75	95	30	60	48.1	25699	PASS
95	95	100	100	100.0	53429	PASS
96	95	5	9	7.4	3968	PASS
173	174	0.00	2	0.9	448	PASS
174	95	50	200	98.4	52571	PASS
175	174	5	9	7.2	3776	PASS
176	174	95	101	100.2	52653	PASS
177	176	5	9	5.9	3115	PASS

1222T00.D T1222W.M Wed Dec 23 12:09:10 2020

Data File : M:\THOR\DATA\201222\1223T16.D
Acq On : 23 Dec 20 16:05
Sample : 25ug/mL BFB STD 12/9/20
Misc : IS&S 11/13/20

Vial: 1
Operator:
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\201222\T1222W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 11.299 to 11.312 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	12858	PASS
75	95	30	60	48.2	35459	PASS
95	95	100	100	100.0	73573	PASS
96	95	5	9	6.8	4990	PASS
173	174	0.00	2	1.0	697	PASS
174	95	50	200	93.6	68853	PASS
175	174	5	9	8.1	5555	PASS
176	174	95	101	96.9	66749	PASS
177	176	5	9	7.2	4839	PASS

Injection Log

Directory: M:\THOR\DATA\201222\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1222T00.D	1	25ug/mL BFB STD 12/9/20	2uL	22 Dec 20 16:34
2	2	1222T02.D	1	0.3ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 17:31
3	3	1222T03.D	1	0.5ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 17:58
4	4	1222T04.D	1	1ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 18:26
5	5	1222T05.D	1	2ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 18:54
6	6	1222T06.D	1	5ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 19:22
7	7	1222T07.D	1	10ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 19:50
8	8	1222T08.D	1	20ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 20:18
9	9	1222T09.D	1	40ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 20:46
10	10	1222T10.D	1	100ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 21:13
11	12	1222T12.D	1	(SS) 10ug/L VOC STD 12/22/20	IS&S 11/13/20	22 Dec 20 22:09
12	1	1223T16.D	1	25ug/mL BFB STD 12/9/20	IS&S 11/13/20	23 Dec 20 16:05
13	4	1223T19.D	1	201223A CCV/LCS 10ug/L	IS&S 11/13/20	23 Dec 20 17:28
14	5	1223T20.D	1	201223A LCSD 10ug/L	IS&S 11/13/20	23 Dec 20 17:56
15	6	1223T21.D	1	201223A BLK	IS&S 11/13/20	23 Dec 20 18:24
16	7	1223T22.D	1	BA23607W01	IS&S 11/13/20	23 Dec 20 18:52
17	23	1223T38.D	1	BA23604W01	IS&S 11/13/20	24 Dec 20 2:16
18	24	1223T39.D	1	BA23605W01	IS&S 11/13/20	24 Dec 20 2:44
19	25	1223T40.D	1	BA23606W01	IS&S 11/13/20	24 Dec 20 3:12
20	28	1223T43.D	1	Ending CCV 10ug/L 12/23/20	IS&S 11/13/20	24 Dec 20 4:36

INORGANIC ANALYSIS
Calibration and Raw Data

TSS

Batch: QCG 201222-T004574

Initials FJR

Date: 12/28/20 21:36

Sample	Container	Volume (mL)	Pan (g)	Pan+Dry 1 (g)	Pan+Dry 2 (g)	TDS / TSS (mg/L)	Comments
BA23602		1000	44.5063 12/28/20 21:36	44.5078 12/29/20 17:07	44.5080 12/29/20 19:10	**1.7000**	N64
LCS		1000	41.9961 12/28/20 21:37	42.0058 12/29/20 17:11	42.0055 12/29/20 19:12	**9.4000**	21
BA23603		1000	40.9363 12/28/20 21:37	40.9363 12/29/20 17:08	40.9361 12/29/20 19:12	**-0.2000**	7
LCSD		1000	42.7904 12/28/20 21:38	42.7993 12/29/20 17:12	42.7990 12/29/20 19:13	**8.6000**	02
Blank1		1000	42.4070 12/28/20 21:38	42.4066 12/29/20 17:08	42.4067 12/29/20 19:11	**-0.3000**	Blk

Date/Time @104ºC	Date/Time inDessicator	Date/Time Weighed	Date/Time @104ºC	Date/Time inDessicator	Date/Time Weighed
12/28/20 9:50:00 PM	12/29/20 3:00:00 PM	12/29/20 5:00:00 PM	12/29/20 5:25:00 PM	12/29/20 6:00:00 PM	12/29/20 7:10:00 PM

Mid Level Solids Standard

Prep Date: 08/10/20

Exp Date: 07/31/22

Prep'd By (Initials): FJR

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Mid Level Solids Standard	NSI	QCI-055	1000	200729-50552	07/31/22	NA	100ml	NA	100mg/L

FPM Remediations, Inc.
Data Verification and Usability Report
Moses Lake, Washington
Moses Lake South Plume

Contract No. W912DQ-16-D-3004
FPM Project No. 1055-18-03

APPL Job # 94541

Laboratory:	APPL Labs, Inc.
Sample Matrix:	Groundwater
Number of Samples:	6
Analytical Protocol:	DOD Quality Systems Manual (QSM) Version 5.3, as per project-specific UFP QAPP
Data Reviewer:	Connie van Hoesel
Sample Date:	December 21, 2020

LIST OF DATA VERIFICATION SAMPLES

This verification report pertains to the environmental samples and corresponding QC samples as listed in Table 1.

DELIVERABLES

The data deliverable report was per requirements of the DOD QSM, Version 5.3, as specified in the project-specific QAPP (FPM, 2019). The report consisted of the following major sections: lab attachment letter, case narrative, chain-of-custody, lab qualifier definitions, analytical results (sheet 2) based on analytical batch, calibration summaries, method blank summaries, laboratory control sample summaries, matrix spike/matrix spike duplicate summaries, holding time forms, performance checks, surrogate and internal standard recoveries, as applicable.

ANALYTICAL METHODS

The analytical test methods and QA/QC requirements used for the sample analyses were per methods as specified in the DOD QSM, Version 5.3, with project-specific modifications as listed in the project-specific QAPP. The analytical methods employed included SW-846 volatile organic compounds (VOCs) by Method SW8260B and Total Suspended Solids (TSS) by Method SM2540D.

TABLE 1
SUMMARY OF SAMPLE ANALYSES
MOSES LAKE SOUTH PLUME

Sample ID[(1)]	Sample Date	Sample Matrix/ Sample Type	APPL Lab ID	SW8260B VOCs	SM2540 TSS	Data Usable[(2)]
SDG 94541						
ML00-BVFF2B-1220	12/21/20	WG/N	BA23602		X	Yes
ML00-BVTW3-1220	12/21/20	WG/N	BA23603		X	Yes
ML00-BVLG13-1220	12/21/20	WG/N	BA23604	X		Yes
ML00-BVLG15-1220	12/21/20	WG/N	BA23605	X		Yes
ML00-BVLG17-1220	12/21/20	WG/N	BA23606	X		Yes
TRIP BLANK	12/21/20	WQ/TB	BA23607	X		Yes

Notes:
WG = groundwater, WQ=water quality, TB=trip blank, AB=ambient blank, MS/MSD=matrix spike/matrix spike duplicate, N=normal, FD=field duplicate.
(1) "Sample ID" as shown on COC.
(2) "Yes"- Sample analysis considered valid and usable.

VERIFICATION GUIDANCE

The analytical work was performed by APPL Labs, Inc. in accordance with the DOD QSM, Version 5.3, and QC requirements of the respective analytical methods and of the project-specific QAPP. The data usability analysis was based on the reviewer's professional judgment and on an assessment of how this data would fare with respect to the DOD QSM, Version 5.3, and the criteria as listed in the project-specific QAPP.

QA/QC CRITERIA

The following QA/QC criteria were reviewed for the VOCs analyses, as applicable:

- Method limits of detection and quantitation (LOD, LOQ)
- Holding times
- GC/MS tune performance
- Initial and Continuing calibration summaries
- Method blanks
- Field duplicate results
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Surrogate spike recoveries
- Internal standard areas counts and retention times
- Laboratory control samples (LCS)
- Results reported between LOD and LOQ (J-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The following QA/QC criteria were reviewed for the wet chemistry analyses, as applicable:

- Limits of detection and quantitation (LOD, LOQ)
- Holding times
- Initial and Continuing calibration summaries
- Method blanks
- Field duplicate results
- Matrix spike/matrix duplicate (MS/MD) analysis
- Laboratory control samples (LCS)
- Results reported between method detection limit (DL) and LOQ (J-flag)
- Sample storage and preservation
- Data system printouts
- Qualitative and quantitative compound identification
- Chain-of-custody (COC)
- Case narrative and deliverables compliance

The items listed above were in compliance with DOD QSM, Version 5.3, and project-specific QAPP criteria and protocols with exceptions discussed in the text below. The data have been verified according to the procedures outlined above and qualified accordingly.

GENERAL NOTES:

BLANKS

Whenever blanks, including method, ambient, equipment, and trip, contained low levels of contaminants (between LOD and LOQ), the laboratory qualified the subject results with a "J" flag. Since no qualification of associated field samples are required for blank concentrations less than half the LOQ, no further action was taken in such instances.

VOCs

- According to the case narrative, the VOA vials for sample TRIP BLANK were received by the laboratory with air bubble(s) greater than 6 mm in diameter present (i.e., larger than pea size). **Corrective Action:** Since the results may be biased low, using professional judgment, the results for these samples are deemed usable, albeit estimated. The "UJ" qualifier was assigned to all non-detect associated results for sample TRIP BLANK. Since these bottles are provided by the laboratory, no corrective action could be taken by the field sampling team.

- The response of the instrument indicated the %D for continuing calibration verifications outside QC limits for individual analytes. The following table summarizes the exceedances:

Type of Calibration Exceedance Affected Analytes	%D	Method QC Limit	Flag Applied	Rationale
VOCs, CCV 1223T19.D				
Dichlorodifluoromethane	***25***	±20%	None	%D > upper control limit (UCL); associated sample results ND
Trichlorofluoromethane	***26***	±20%	None	%D > UCL; associated sample results ND

Corrective Action: No qualifiers were applied to the associated results since the %D was greater than the upper control limit and associated results were non-detect.

WET CHEMISTRY (TSS)

- There were no quality control exceedances for the TSS analyses.

DATA USABILITY RESULTS

For each analysis performed, the following data parameters were assessed:

- laboratory analytical precision,
- accuracy,
- representativeness,
- completeness, and
- comparability (PARCC).

Data qualifier results from this review are summarized in Table 2.

VOCs

Based on the evaluation of all information in the analytical data groups, the results for VOCs are usable with the data qualifiers as noted. Using the verification approach as presented above, the results for all above samples are 100% usable. PARCC requirements were met overall.

WET CHEMISTRY

Based on the evaluation of all information in the analytical data groups, the results for TSS are usable with the data qualifiers as noted. Using the verification approach as presented above, the results for all above samples are 100% usable. PARCC requirements were met overall.

DATA USABILITY SUMMARY

All data in Job # 94541 are valid and usable with qualifications as noted in the data review.

Signed: Concordia van Hoesel Date: 1/9/21

ATTACHMENTS

- Chain of Custody
- Laboratory's Case Narrative
- Qualified final data verification results on annotated Lab Sheet 2s

TABLE 2
SUMMARY OF QUALIFIED DATA
MOSES LAKE SOUTH PLUME

Sample ID	Lab Sample ID	Analyte	Lab Flag	Validation Flag	Reason
TRIP BLANK	BA23607	All VOCs	U	UJ	Samples contained bubbles greater than 6 mm

Notes:
*Data Usability Qualifier based on project QAPP data validation and data usability considerations.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description	Prep DateTime	Analysis DateTime
94541	12/22/20	ML00-BVFF2B-1220	BA23602	12/21/20 8:20:00 AM	WATER	SM2540DLL	SM2540D TSS LOW LEVEL	12/28/20 9:00:00 PM	12/28/20 9:00:00 PM
94541	12/22/20	ML00-BVTW3-1220	BA23603	12/21/20 8:25:00 AM	WATER	SM2540DLL	SM2540D TSS LOW LEVEL	12/28/20 9:00:00 PM	12/28/20 9:00:00 PM
94541	12/22/20	ML00-BVLG13-1220	BA23604	12/21/20 8:40:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 2:16:00 AM	12/24/20 2:16:00 AM
94541	12/22/20	ML00-BVLG15-1220	BA23605	12/21/20 9:20:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 2:44:00 AM	12/24/20 2:44:00 AM
94541	12/22/20	ML00-BVLG17-1220	BA23606	12/21/20 9:30:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/24/20 3:12:00 AM	12/24/20 3:12:00 AM
94541	12/22/20	TRIP BLANK	BA23607	12/21/20 10:00:00 AM	WATER	EPA 8260B	EPA 8260B WATER	12/23/20 6:52:00 PM	12/23/20 6:52:00 PM

94541

APPL LABS

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 49077

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: EPM Remediations Phone: 315-336-7721	Company Name: Same Phone:
Address: 181 Kenwood Ave, Oneida, NY 13421 Fax:	Address: Fax:
Attn: Michael Grifasi	Attn:

Project Name/Number: 1055-13-03
Sampler (Print): Angela Stenhouse
Purchase Order Number:
Sampler (Signature): [signature]

Date Shipped:
Carrier:
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Aq	Sed.	Soil		TSS	VOC 8260B	Comments
ML00-BVFF2B-1220	Moses Lake	12/21/20	0820	PST	1	X				X		pH 6.72 14.6°C
ML00-BVTW3-1220	Moses Lake	12/21/20	0825	PST	1	X				X		pH 6.67 13.9°C
ML00-BVLG13-1220	Moses Lake	12/21/20	0840	PST	3	X					X	
ML00-BVLG15-1220	Moses Lake	12/21/20	0920	PST	3	X					X	
ML00-BVLG17-1220	Moses Lake	12/21/20	0930	PST	3	X					X	
Trip Blank	Moses Lake	12/21/20	1000	PST	1	X					X	

Shuttle Temperature: IRB @ 5.1/5.2°C

Turnaround Requested: Check one
☒ Standard 2-3 wk (NO) ☒ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☐ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	12/21/20	1048					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12/22/20	1330	[signature]

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVLG13-1220

Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541

APPL ID: BA23604

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T38
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVLG13-1220

Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541

APPL ID: BA23604

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	16	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.2	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	101	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T38
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG15-1220
Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541
APPL ID: BA23605
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T39
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVLG15-1220

Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541

APPL ID: BA23605

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	4.6	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	104	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.1	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.4	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T39
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi
Project: 1055-13-03 Moses Lake
Sample ID: ML00-BVLG17-1220
Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541
APPL ID: BA23606
QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/24/20	12/24/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/24/20	12/24/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/24/20	12/24/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/24/20	12/24/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/24/20	12/24/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/24/20	12/24/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/24/20	12/24/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/24/20	12/24/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T40
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVLG17-1220

Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541

APPL ID: BA23606

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/24/20	12/24/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/24/20	12/24/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/24/20	12/24/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/24/20	12/24/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/24/20	12/24/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/24/20	12/24/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/24/20	12/24/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/24/20	12/24/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/24/20	12/24/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/24/20	12/24/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/24/20	12/24/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/24/20	12/24/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	12/24/20	12/24/20

Quant Method: T1222W.M
Run #: 1223T40
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 1055-13-03 Moses Lake

ARF: 94541

Sample ID: TRIP BLANK

APPL ID: BA23607

Sample Collection Date: 12/21/20

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,1-TRICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.30 U	1.0	0.30	0.10	ug/L	12/23/20	12/23/20
EPA 8260B	1,1,2-TRICHLOROETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROETHENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	1,1-DICHLOROPROPENE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,3-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,3-TRICHLOROPROPANE	1.00 U	3.0	1.00	0.39	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	1,2,4-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.00 U	5.0	1.00	0.50	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DIBROMOETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	1,2-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,3,5-TRIMETHYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	1,3-DICHLOROBENZENE	0.30 U	1.0	0.30	0.11	ug/L	12/23/20	12/23/20
EPA 8260B	1,3-DICHLOROPROPANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	1,4-DICHLOROBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	2,2-DICHLOROPROPANE	0.50 U	1.0	0.50	0.22	ug/L	12/23/20	12/23/20
EPA 8260B	2-BUTANONE	20.00 U	100.0	20.00	6.00	ug/L	12/23/20	12/23/20
EPA 8260B	2-CHLOROTOLUENE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	2-HEXANONE	2.00 U	5.0	2.00	0.92	ug/L	12/23/20	12/23/20
EPA 8260B	4-CHLOROTOLUENE	0.30 U	1.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	4-METHYL-2-PENTANONE	5.00 U	5.0	5.00	1.90	ug/L	12/23/20	12/23/20
EPA 8260B	ACETONE	20.00 U	100.0	20.00	9.50	ug/L	12/23/20	12/23/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	BROMODICHLOROMETHANE	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOFORM	0.30 U	1.0	0.30	0.14	ug/L	12/23/20	12/23/20
EPA 8260B	BROMOMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
EPA 8260B	CARBON DISULFIDE	0.50 U	2.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	CARBON TETRACHLORIDE	0.30 U	2.0	0.30	0.10	ug/L	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T22
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

1/4/2021

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B WATER

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: TRIP BLANK

Sample Collection Date: 12/21/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 94541

APPL ID: BA23607

QCG: #86BMC-AT201223-259950

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	CHLOROBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROETHANE	0.50 U	2.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROFORM	0.30 U	1.0	0.30	0.07	ug/L	12/23/20	12/23/20
EPA 8260B	CHLOROMETHANE	0.50 U	2.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	CIS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	DIBROMOCHLOROMETHANE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	DIBROMOMETHANE	0.50 U	1.0	0.50	0.20	ug/L	12/23/20	12/23/20
EPA 8260B	DICHLORODIFLUOROMETHANE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	12/23/20	12/23/20
EPA 8260B	HEXACHLOROBUTADIENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	ISOPROPYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	M,P-XYLENE	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	5.0	0.52	0.26	ug/L	12/23/20	12/23/20
EPA 8260B	METHYLENE CHLORIDE	1.00 U	5.0	1.00	0.35	ug/L	12/23/20	12/23/20
EPA 8260B	N-BUTYLBENZENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	N-PROPYLBENZENE	0.50 U	1.0	0.50	0.21	ug/L	12/23/20	12/23/20
EPA 8260B	NAPHTHALENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	O-XYLENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	P-ISOPROPYLTOLUENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	SEC-BUTYLBENZENE	0.30 U	1.0	0.30	0.12	ug/L	12/23/20	12/23/20
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	12/23/20	12/23/20
EPA 8260B	TERT-BUTYL ALCOHOL	9.00 U	10.0	9.00	4.50	ug/L	12/23/20	12/23/20
EPA 8260B	TERT-BUTYLBENZENE	0.30 U	50.0	0.30	0.13	ug/L	12/23/20	12/23/20
EPA 8260B	TETRACHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TOTAL XYLENES	0.30 U	2.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRANS-1,3-DICHLOROPROPENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRICHLOROETHENE	0.30 U	1.0	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	TRICHLOROFLUOROMETHANE	0.50 U	2.0	0.50	0.24	ug/L	12/23/20	12/23/20
EPA 8260B	VINYL CHLORIDE	0.30 U	1.5	0.30	0.15	ug/L	12/23/20	12/23/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.6	85-114			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	102	80-119			%	12/23/20	12/23/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.8	89-112			%	12/23/20	12/23/20

Quant Method: T1222W.M
Run #: 1223T22
Instrument: Thor
Sequence: 201222
Dilution Factor: 1
Initials: DG

Printed: 12/29/20 1:36:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVFF2B-1220

Sample Collection Date: 12/21/20

APPL ID: BA23602

ARF: 94541

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM2540DLL	TOTAL SUSPENDED SOLIDS	1.7	1.0	0.80	0.40	mg/L	1	12/28/20	12/28/20

Printed: 12/30/20 1:46:26 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Mike Grifasi

Project: 1055-13-03 Moses Lake

Sample ID: ML00-BVTW3-1220

APPL ID: BA23603

Sample Collection Date: 12/21/20

ARF: 94541

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
SM2540DLL	TOTAL SUSPENDED SOLIDS	0.80 U	1.0	0.80	0.40	mg/L	1	12/28/20	12/28/20

Printed: 12/30/20 1:46:26 PM

APPL-F1-SC-NoMC-REG MDLs

Name: Christopher Atik

Signature: [signature]

CENTRAL TREAMENT PLANT LOG

12/17/2020 Local Date

5:10 PM Local Time

HMI

	Flow Setpoint GPM	Flow GPM	Freq Hz	Current Total Gallons	Prev Year Total Gallons	Hours	Transducer Head Feet WC	Transducer GW Elevation Feet
EW01	Off	0.0	-0.1	858	858	0.0	96.0	1,070.9
EW02	30.0	30.2	53.4	16,319,081	599,487	7,801.2	33.6	1,001.0
EW03	2.3	2.3	46.9	1,295,839	42,140	7,892.9	34.2	1,014.0
EW04	12.0	11.7	42.2	7,060,151	299,755	7,375.7	43.6	1,015.3
EW05	14.0	13.8	41.7	10,265,377	361,319	7,815.1	43.7	1,018.6
Combined Flow (FIT-CF)		59.2	Total:	34,941,306	1,303,559	Hours	Freq Hz	
Feed Flow (FIT-FF)	80.0	79.2	BF-1 Total:	11,895,684	0	FP1) 2748.8	FP1) -0.0	
			BF-2 Total:	15,399,701	0	FP2) 3010.5	FP2) 33.8	
Discharge Flow (FIT-DISCS)		79.1					Transducer Head Feet WC	
Infiltration Trench-1 (IT-1) LEAD or LAG (Circle one)			Total:	19,814,308	0		0.1	LIT-IT-1A (Inside)
							0.0	LIT-IT-1B (Bedding)
Infiltration Trench-2 (IT-2) LEAD or LAG (Circle one)			Total:	8,889,169	0		0.0	LIT-IT2-2A (Inside)
						Hours	0.0	LIT-IT2-2B (Bedding)
Backwash Flow	off	0.0	Total:	3,568	0	0.0	Lead Vessel	
LGAC-1 Skid IN SERVICE / BACKUP (Circle one)			Total:	33,519,996	0		1A or 1B	(Circle one)
LGAC-2 Skid IN SERVICE / BACKUP (Circle one)			Total:	2,294	0		2A or 2B	(Circle one)

Bag/Cartridge Filters Pressure		LGAC Presssure		Tank Levels		Temperature	
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	Tank	Feet	Central Treatment Plant	
BF1- IN	10.8	PIT-P-201A	7.8	T-1	2.7	Inside	55.6
BF1- DP	0.0	PIT-P-201B	6.3	T-2	2.7	Outside	53.6
BF1- OUT	10.8	PIT-P-201C	2.7	T-3	2.7	Control Room	
BF2- IN	11.3	PIT-P-202A	-0.4	T-4	5.7	Inside	66.8
BF2-DP	0.4	PIT-P-202B	0.4	T-5	3.0	NEST	
BF2- OUT	10.9	PIT-P-202C	1.3			East CTP	54
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	West CTP	54

CTP Gauges

PI-EW1-2	NM	PI-CF-1	NM	PI-LG1-1	NM	Control Room	65
PI-EW2-2		PI-FF-1A		PI-LG1-2		Humidity	
PI-EW3-2		PI-FF-1B		PI-LG1-3		Central Treatment Plant	
PI-EW-4-2		PI-SF-1		PI-LG2-1		Outside	84.1
PI-EW-5-2		PI-SF-2		PI-LG2-2		NEST	
		PI-BW-1		PI-LG2-3		East CTP -Inside	54
						West CTP- Inside	55
						Control Rm - Inside	36
						Bags on site:	51
						Cartridges on site:	20

Notes:

EW4 flow rate changed from 12.6 to 12 gpm due to low level alarm

NM- not measured

Name: Christopher Atik

Signature: _____

CENTRAL TREAMENT PLANT LOG

12/24/2020 Local Date

12:40 PM Local Time

		Flow Setpoint GPM	Flow GPM	Freq Hz	Current Total Gallons	Prev Year Total Gallons	Hours	Transducer Head Feet WC	Transducer GW Elevation Feet
HMI	EW01	Off	0.0	-0.1	858	858	0.0	95.9	1,070.8
	EW02	30.0	29.9	53.4	16,610,702	599,487	7,964.8	33.1	1,000.5
	EW03	2.3	2.3	47.2	1,318,330	42,140	8,056.5	31.5	1,011.3
	EW04	12.0	12.2	42.1	7,176,050	299,755	7,539.4	43.6	1,015.3
	EW05	13.0	13.1	41.3	10,395,597	361,319	7,978.5	45.8	1,020.6
	Combined Flow (FIT-CF)		58.9	Total:	35,501,537	1,303,559	Hours	Freq Hz	
	Feed Flow (FIT-FF)	80.0	79.6	BF-1 Total:	11,895,684	0	FP1) 2748.8	FP1) -0.0	
				BF-2 Total:	15,820,372	0	FP2) 3128.7	FP2) 34.6	
	Discharge Flow (FIT-DISCS)		80.1					Transducer Head Feet WC	
	Infiltration Trench-1 (IT-1) LEAD or LAG (Circle one)			Total:	20,580,974	0		0.1	LIT-IT-1A (Inside)
								0.0	LIT-IT-1B (Bedding)
	Infiltration Trench-2 (IT-2) LEAD or LAG (Circle one)			Total:	8,889,169	0		0.0	LIT-IT2-2A (Inside)
							Hours	0.0	LIT-IT2-2B (Bedding)
	Backwash Flow	off	0.0	Total:	3,568	0	0.0	Lead Vessel	
	LGAC-1 Skid IN SERVICE / BACKUP (Circle one)			Total:	33,554,440	0		1A or 1B	(Circle one)
	LGAC-2 Skid IN SERVICE / BACKUP (Circle one)			Total:	2,294	0		2A or 2B	(Circle one)

Bag/Cartridge Filters Pressure		LGAC Presssure		Tank Levels		Temperature	
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	Tank	Feet	Central Treatment Plant	
BF1- IN	11.0	PIT-P-201A	7.8	T-1	2.6	Inside	51.6
BF1- DP	-0.3	PIT-P-201B	6.5	T-2	2.5	Outside	45.4
BF1- OUT	11.3	PIT-P-201C	2.7	T-3	2.5	Control Room	
BF2- IN	11.7	PIT-P-202A	-0.7	T-4	5.7	Inside	64.8
BF2-DP	0.6	PIT-P-202B	0.3	T-5	3.0	NEST	
BF2- OUT	11.1	PIT-P-202C	0.9			East CTP	50
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	West CTP	50
PI-EW1-2	NM	PI-CF-1	NM	PI-LG1-1	NM	Control Room	63
PI-EW2-2		PI-FF-1A		PI-LG1-2		Humidity	
PI-EW3-2		PI-FF-1B		PI-LG1-3		Central Treatment Plant	
PI-EW-4-2		PI-SF-1		PI-LG2-1		Outside	81.1
PI-EW-5-2		PI-SF-2		PI-LG2-2		NEST	
		PI-BW-1		PI-LG2-3		East CTP -Inside	34
						West CTP- Inside	36
						Control Rm - Inside	29
						Bags on site:	51
						Cartridges on site:	20

CTP Gauges

Notes:

EW5 flow rate changed from 14 to 13 gpm due to low level alarm on 12/19/2020

NM- not measured

Name: Christopher Atik

Signature: [signature]

CENTRAL TREAMENT PLANT LOG

11:59:59 PM Local Date

12/31/2020 Local Time

		Flow Setpoint GPM	Flow GPM	Freq Hz	Current Total Gallons	Prev Year Total Gallons	Hours	Transducer Head Feet WC	Transducer GW Elevation Feet
HMI	EW01	Off	0.0	-0.1	858	858	0.0	95.8	1,070.8
	EW02	30.0	30.1	53.4	16,930,639	599,487	8,144.3	32.2	1,000.5
	EW03	2.3	2.3	47.2	1,343,294	42,140	8,235.8	27.8	1,011.3
	EW04	12.0	12.0	42.1	7,297,935	299,755	7,718.9	42.8	1,015.3
	EW05	13.0	13.1	41.3	10,535,429	361,319	8,158.0	43.7	1,020.6
	Combined Flow (FIT-CF)		58.9	Total:	36,108,155	1,303,559	Hours	Freq Hz	
	Feed Flow (FIT-FF)	80.0	0.1	BF-1 Total:	11,895,684	0	FP1) 2748.8	FP1) -0.0	
				BF-2 Total:	16,278,187	0	FP2) 3257.4	FP2) -0.0	
	Discharge Flow (FIT-DISCS)		80.1					Transducer Head Feet WC	
	Infiltration Trench-1 (IT-1) LEAD or LAG (Circle one)			Total:	20,580,974	0		0.1	LIT-IT-1A (Inside)
								0.0	LIT-IT-1B (Bedding)
	Infiltration Trench-2 (IT-2) LEAD or LAG (Circle one)			Total:	8,889,169	0		0.0	LIT-IT2-2A (Inside)
							Hours	0.0	LIT-IT2-2B (Bedding)
	Backwash Flow	off	0.0	Total:	3,568	0	0.0	Lead Vessel	
	LGAC-1 Skid IN SERVICE / BACKUP (Circle one)			Total:	33,554,464	0		1A or 1B	(Circle one)
	LGAC-2 Skid IN SERVICE / BACKUP (Circle one)			Total:	2,294	0		2A or 2B	(Circle one)

Bag/Cartridge Filters Pressure		LGAC Presssure		Tank Levels		Temperature	
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	Tank	Feet	Central Treatment Plant	
BF1- IN	5.8	PIT-P-201A	1.7	T-1	2.7	Inside	64.5
BF1- DP	-0.2	PIT-P-201B	1.9	T-2	2.6	Outside	51.6
BF1- OUT	6.0	PIT-P-201C	2.1	T-3	2.6	Control Room	
BF2- IN	5.6	PIT-P-202A	-0.9	T-4	5.4	Inside	64.8
BF2-DP	-0.3	PIT-P-202B	0.0	T-5	2.1	NEST	
BF2- OUT	5.9	PIT-P-202C	1.0			East CTP	52
PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	PRESSURE READINGS	PSIG	West CTP	51
PI-EW1-2	NM	PI-CF-1	NM	PI-LG1-1	NM	Control Room	63
PI-EW2-2		PI-FF-1A		PI-LG1-2		Humidity	
PI-EW3-2		PI-FF-1B		PI-LG1-3		Central Treatment Plant	
PI-EW-4-2		PI-SF-1		PI-LG2-1		Outside	81.1
PI-EW-5-2		PI-SF-2		PI-LG2-2		NEST	
		PI-BW-1		PI-LG2-3		East CTP -Inside	52
						West CTP- Inside	54
						Control Rm - Inside	33
						Bags on site:	51
						Cartridges on site:	20

CTP Gauges

Notes:

EW5 flow rate changed from 14 to 13 gpm due to low level alarm on 12/19/2020

NM- not measured