UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Science and Ecosystem Support Division
Field Services Branch
980 College Station Road
Athens, Georgia 30605-2720

April 5, 2016

4SESD-EIB

MEMORANDUM

SUBJECT: Grenada Manufacturing Ambient Air Sampling Event – Final Report
Grenada, Mississippi
SESD Project No. 16-0152

FROM: Landon Pruitt, Environmental Engineer
Superfund and Air Section

THRU: Laura Ackerman, Chief
Superfund and Air Section

TO: Brian Bastek, Project Manager
RCRA Division, USEPA Region 4
61 Forsyth St. SW, Atlanta, GA 30303-8960

Attached is the final report for the ambient air and surface water study conducted at the Grenada Manufacturing site in Grenada, MS. The investigation occurred during the week of January 11th, 2016.

If you have any questions or comments please contact me at pruitt.landon@epa.gov or 706-355-8620.

Attachment

United States Environmental Protection Agency
Region 4
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720

Grenada Manufacturing Ambient Air Sampling Event
Final Report

Grenada, Mississippi
January 2016
Report Release April 2016
SESD Project Identification Number: 16-0152

Requestor: Brian Bastek
RCRA Division
61 Forsyth St. SW
Atlanta, Georgia 30303-8960

Project Leader: Landon Pruitt
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720

Title and Approval Sheet

Title: Grenada Manufacturing Ambient Air Sampling Event
Final Report

SESD Approving Official:

Laura Ackerman, Chief
Superfund and Air Section
Field Services Branch

04/05/16
Date

SESD Project Leader:

Landon Pruitt, Environmental Engineer
Superfund and Air Section
Field Services Branch

4/5/2016
Date

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1.0 Introduction

This document was prepared for the purpose of reporting the results of a surface water and ambient air investigation conducted by the USEPA Science and Ecosystem Support Division (SESD) at the Grenada Manufacturing Site in Grenada, MS. The site is an active facility located at 635 Hwy 332, in Grenada, MS. The surface water and ambient air sampling was conducted in January 2016 and the samples were analyzed by the USEPA Analytical Support Branch (ASB).

The sampling event is intended to inform the Project Manager (PM) Brian Bastek, EPA Region 4, of a potential pathway of ambient air contaminants seen in previous sampling events. The data generated by the study and represented in the subsequent sections will be evaluated by the EPA Region 4 PM. Air results will be compared to screening levels calculated by the contractor Arcadis and surface water results will be compared to regional MCLs from June 2015. Decisions for future actions on the site will be made by the PM.

The following personnel participated in the investigation:

Name	Organization	Duties
Landon Pruitt	Reg. 4 EPA/SESD	Project Leader, Sampler, Sample Processing
Tim Slagle	Reg. 4 EPA/SESD	Safety Officer, Sampler

2.0 Site Background

The manufacturing facility was constructed by Lyon in 1961 and sold to Rockwell International Corporation (Rockwell) in 1966. Rockwell's Automotive Division operated a wheel cover manufacturing facility at the site from 1966 to 1985 when the plant and property were sold to Textron Automotive Company (Textron), formerly Randall Textron. The Automotive Division was spun off from Rockwell in 1997 to form Meritor. In 1999, Textron sold the operations and property to Grenada Manufacturing, LLC (Grenada Manufacturing), who continued to operate the wheel cover plant until 2008 when portions of the plant and property were leased to ICE Industries, Inc. (ICE). Throughout most of the site history, the facility was used to manufacture automobile wheel covers. Following ICE's lease of the premises, the facility was converted to a stamping plant, providing stamp-formed parts for various industries.

Since 1989 EPA has been involved with the site and there have been a number of investigations and sampling events to discover and delineate a trichloroethene (TCE) contaminated groundwater plume and possible vapor intrusion and other air quality issues. There are several areas of concern that are potential sources for the contamination including several lagoons, an above ground storage tank (TCE), a below ground storage tank (toluene), an on-site landfill, and a waste water treatment plant.

3.0 Summary

Five ambient air and four surface water samples were collected during this deployment. Two of the surface water samples, in a creek west of the site, were additional late requests from the PM and differ from what was represented in the QAPP. All samples were analyzed for the VOCs represented in Table 2.

Toluene, trichloroethene (TCE), vinyl chloride (VC), cis-1,2 dichloroethene (DCE), and trans-1,2 DCE were detected in both of the surface water samples from the creek, with only TCE and VC detected above EPA maximum contamination levels (MCLs). No VOCs were detected in either the other two surface water samples from the onsite pond.

Several VOCs were detected in each of the ambient air field samples, but only benzene was detected at levels above the screening levels set in the QAPP. There were no detections in either the water or the air trip blanks for this investigation.

4.0 Results and Discussion

4.1 Surface Water Sampling

Field Measurement Parameters

Prior to sample collection, the surface water was monitored for temperature, specific conductance, pH, and turbidity. These data are summarized in Table 3 in Appendix B. In general, the surface water was slightly basic with pH values of 7.03 to 8.07. Conductivity's ranged from 209.8 to 227.1 us/cm. Temperatures ranged from 8.7 to 10.8^{o}C. Turbidity ranged from 7.58 to 21.9 NTUs. These results are typical for surface waters and do not adversely affect the results of the study, especially for volatile organic compound analysis.

Surface Water Analytical Results

Four surface water samples were collected from four stations during this investigation, not including duplicate and trip blank quality assurance (QA) samples. The samples were analyzed for a group of site specific VOCs listed in Table 2 in Appendix B. The sampled stations included GM06, GM07, GM08, and GM09, and can be seen on the map in Figure 1 in Appendix A. The summarized analytical results can be seen in Table 3 in Appendix B with the full analytical report from the lab available in Appendix C.

Four VOCs (Toluene, trichloroethene (TCE), vinyl chloride (VC), cis-1,2 dichloroethene (DCE), and trans-1,2 DCE) were detected in both of the surface water samples from the creek. TCE was detected in the creek above the MCL of 5 ug/L at stations GM08 and GM09 at 6.9 ug/L and 7.8 ug/L, respectively. VC was also detected in the creek above the MCL of 2 ug/L at stations GM08 and GM09 at 10 ug/L and 9.3 ug/L, respectively. No VOCs were detected in either of the two surface water samples from the onsite pond.

4.2 Ambient Air Sampling

Field Observations

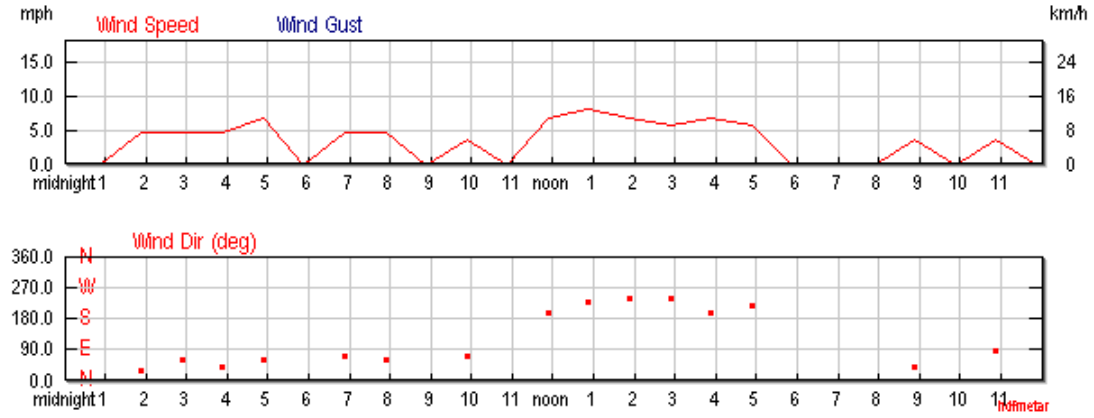
Prior to collecting ambient air samples, four rail car tankers carrying some type of liquid petroleum product, were parked just north of the site and in between the site and the neighborhood. These tankers have pressure release vents that can/will open whenever they are needed. During sampling of the ambient air stations, especially GM01, GM03, and GM05, gravel dump trucks were running up and down a packed gravel road off of Hwy 332 right in front of where the canisters were set up. Diesel and gas combustion byproducts as well as the venting of the tank cars will more than likely show up in the samples, possibly causing minimum reporting limits (MRLs) to be elevated.

Winds were observed mostly out of the south during the sampling events and the notes on this as well as all other field observations can be seen in the logbooks in Appendix C.

Weather Station Data

Data from the National Weather Service (NWS) station KGWO at a nearby airport reported an average wind out of the east for the first day of sampling (1/13/2016) and an average wind out of the south for the final day of sampling (1/14/2016). The samples were started between 09:58 and 10:15 on the 13th and closed roughly 24 hours later. Although the average direction for the initial sampling day was east, viewing the charts below from the NWS information broken down into hourly numbers shows a majority of the winds coming out of the south and southwest for the time in which the canisters were open and sampling.

1/13/2016



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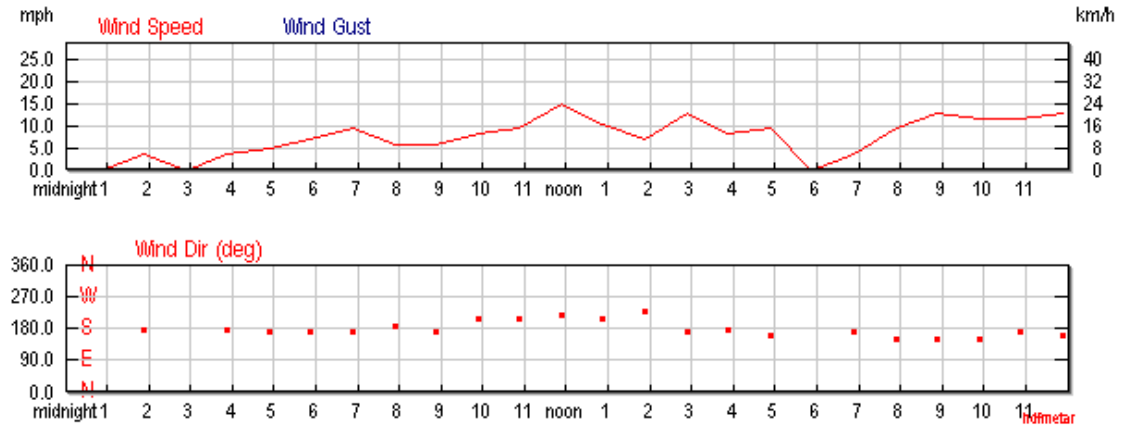

The weather data from NWS can be seen in Table 6 in Appendix B.

Target VOC Analytical Results

Five ambient air samples were collected from five stations during this investigation, not including co-located duplicate and trip blank quality control (QC) samples. The samples were analyzed for a group of site specific VOCs listed in Table 2 in Appendix B. The sampled stations included GM01, GM02, GM03, GM04, and GM05, and can be seen on the map in Figure 1 in Appendix A. The summarized analytical results can be seen in Table 4 in Appendix B with the full analytical report from the lab available in Appendix D.

Several VOCs were detected in each of the ambient air field samples collected for this investigation. Benzene was the only VOC detected at concentrations above the screening levels set in the QAPP at 0.36 ug/m^3. Benzene was detected in all of the samples between 0.90 ug/m^3 and 1.2 ug/m^3. The only detections of chlorinated compounds that would possibly be breakdown products of the target analyte TCE, were two detections of cis-1,2 DCE at stations GM01 and GM04, detected at 0.20 J,O ug/m^3 and 0.30 J,O ug/m^3, respectively. There is no screening level of cis-1,2 DCE to compare these results.

The minimum detection limits (MDLs), which are based on the analyte and the lab equipment, are listed in Table 2 for each analyte and the corresponding media. The minimum reporting limits (MRLs) are included in the analytical results tables in Appendix C for the non-detected target compounds. The "non-detects" are preceded by a "<" and are followed by a "U" (data qualifier) that denotes the analyte was not detected above the listed numerical value. That listed value is the associated MRL and may vary between samples based on the dilutions required to quantify the concentration of the VOC analytes accurately. Some of the MRLs listed for the non-detects may be larger than the screening levels, but if the VOC was detected above the MDL but below the MRL, it will be reported, but flagged as an estimated concentration. Examples of these situations can be seen in Table 4. TCE has an MDL of 0.11 ug/m^3 which is below the

screening level of 0.48 ug/m^3. Although there were no detections, the MRLs ranged between 2.5 and 3.1 ug/m^3. MRLs for benzene were also above the screening levels, but benzene was detected above the MDLs and below the MRLs and therefore was reported, but flagged as an estimated concentration.

5.0 Field Quality Control

Analytical results associated with quality control samples are presented in Appendix B. Trip blank results can be seen in analytical results in Appendix C.

Both air and water trip blanks were prepared by the ASB lab, transported in the sampling vehicles, and handled the same as each air or surface water sample. There were no detections above the MRLs in trip blanks for air or surface water.

A surface water duplicate sample was collected at station GM07. There were no detections in either the primary or the duplicate sample.

A co-located duplicate ambient air sample was collected at station GM01. The same analytes were detected in the primary sample versus the duplicate sample. Absolute values of relative percent difference (RPD) of the two samples were between 0.00 and 8.71 %. The RPD values for splits can be seen in Table 7 in Appendix B. RPDs were calculated using the following equation:

$$RPD = \frac{Split\ Sample\ Result - Primary\ Sample\ Result}{Average\ of\ Split\ and\ Primary\ Sample\ Results} * 100\%$$

The RPDs in the ambient air duplicate samples are relatively low and are not significant enough to adversely affect the outcome of the project.

6.0 Methodology

A Quality Assurance Project Plan (QAPP) previously issued in January, 2016 for SESD Project No. 16-0152 was used to guide site activities. The following SESD procedures and guidance were cited in the QAPP and used in this study:

SESDPROC-303-R4 Ambient Air Sampling
SESDPROC-110-R3 Global Positioning System
SESDPROC-205-R2 Field Equipment Cleaning and Decontamination
SESDPROC-202-R3 Management of Investigation Derived Waste
SESDPROC-100-R3 Field pH Measurement
SESDPROC-101-R5 Field Specific Conductance Measurement
SESDPROC-102-R4 Field Temperature Measurement
SESDPROC-103-R3 Field Turbidity Measurement

SESDPROC-203-R3 Pump Operation
SESDPROC-201-R3 Surface Water Sampling

The specific procedures and processes used are detailed in the subsequent sections. The samples were sent to the EPA Analytical Support Branch (ASB) for analysis.

6.1 Surface Water Sampling

Four surface water stations were sampled for VOCs during this investigation. Two surface water samples collected in a creek west of the site were added to the study by the PM after the QAPP was written. The original two sample locations were in the old excavated and capped equalization pond, now used for storm water retention.

The surface water samples at the pond were collected through a peristaltic pump attached to steel conduit so it could be reached out into the pond where it was possible to place the tubing inlet at a depth of roughly 3 feet below the water surface. A 500 mL bottle was filled to pull the parameters and then the "soda straw" technique was used to fill the 40 mL VOA vials for VOC analysis. To collect the duplicate sample, the tubing was placed back in the pond at the same location and depth and refilled. The same water parameter readings were used for both the primary and duplicate samples at this location. The surface water samples at the creek west of the site were collected in the same manner. The tubing was placed into the main flow of the creek.

All water samples were analyzed in accordance with the *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual*, April 2015 with ASB method # 8260C.

6.2 Ambient Air Sampling

SESD collected 24-hour ambient air samples using 6 liter passivated sampling canisters equipped with flow controlling devices. Ambient air samples were collected in and around the neighborhood as well as between the neighborhood and the site to assess possible migration of contamination.

Analysis of the samples was conducted by the SESD laboratory in accordance with *EPA Compendium Method TO-15, Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*, January 1999. Laboratory QA/QC procedures were conducted in accordance with the guidelines incorporated in the analytical methods.

Meteorological Data

Wind direction and speed as well as temperature, humidity, rainfall and barometric pressure were downloaded from a National Weather Service (NWS) weather station location, KGWO, after returning from the trip. Due to data being unavailable from the

airport weather station written in the QAPP, the data was pulled from the next closest station available. These data were collected online from the Weather Underground operated website displaying summary data from the NWS weather station located at KGWO Greenwood-Leflore Regional Airport at 502-A Airport Rd, Greenwood, MS 38930, roughly 27 miles SW from the site. With the lack of storms observed and the somewhat flat terrain of the area creating laminar wind conditions, the meteorological data pulled from this location is sufficient for this study.

7.0 Conclusions

This project was conducted to inform decisions about the potential risk posed to the residences of a neighborhood just north of the former Grenada Manufacturing facility. Surface water samples in the pond, which was considered to be a possible source of ambient air contamination, detected no VOCs. Surface water samples in the creek west of the site showed TCE and VC above MCLs.

All but one of the analytes detected in the ambient air samples were more than likely from diesel/ gasoline combustion. The BTEX chemicals (benzene, toluene, ethylbenzene, and xylenes) as well as 1,2,4 methylbenzene, which is an additive to gasoline, are all components of vehicle emissions and are likely to be seen at ambient air stations near roadways. The only chlorinated analyte detected in the ambient air samples was cis-1,2 DCE, of which there is no screening level available. Cis-1,2 DCE is a less toxic breakdown component of the site contaminant of concern TCE, and was detected at 0.2 and 0.3 ug/m^3 at stations GM01 and GM04, respectively.

8.0 References

1. Arcadis, DRAFT Report. *Summary of Residential Air Sapling Analytical Results, Grenada Manufacturing Facility, Grenada, MS.* September 2015.
2. EPA Region 4 SESD ASB. *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual*, April 2015.
3. USEPA. *EPA Compendium Method TO-15, Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*, January 1999.
4. EPA Region 4 SESD. *Field Branches Quality System and Technical Procedures (Latest Versions).* http://www.epa.gov/region4/sesd/fbqstp/. Webpage last updated December 14, 2015.
5. USEPA. *Quality Assurance Project Plan for Grenada Manufacturing Ambient Air Sampling Event.* January 2016.
6. USEPA. *Regional Screening Levels Summary Table – November 2015.* https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2015. Webpage last updated March 7, 2016.

Appendix A

Figures

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GM01
GM02
GM03
GM04
GM05
GM06
GM07
GM08
GM09
Site
Past Water Treament Facility
Past Equalization Pond
Current Stormwater Retention
Surface Water Stations
Ambient Air Stations
US EPA SESD
Field Services Branch
980 College Station Road
Athens, GA 30605
Figure 1 - Sample Locations
Grenada Manufacturing Site
SESD Project # 16-0152
N
0
250
500
1,000 Feet

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Appendix B

Tables

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Table 1 – Station and Sample Information

Station ID	Sample ID	Location	Latitude	Longitude	Matrix
GM01	GM01AA0116	Just north of old equalization pond. (duplicate location)	33.805069	-89.800158	Ambient Air
	GM01DAA0116				
GM02	GM02AA0116	Just north of old on-site treatment plant.	33.805195	-89.802452	
GM03	GM03AA0116	West side of neighborhood.	33.805891	-89.801215	
GM04	GM04AA0116	Playgorund, rough middle of neighborhood	33.806509	-89.799741	
GM05	GM05AA0116	Southeast side of neighborhood	33.804825	-89.798133	
GM06	GM06SW0116	Surface water retention pond	33.804383	-89.800084	Surface Water
GM07	GM07SW0116	Surface water retention pond (duplicate location)	33.804434	-89.801003	
	GM07DSW0116				
GM08	GM08SW0116	Stream west of site	33.804893	-89.806516	
GM09	GM09SW0116	Stream west of site	33.803549	-89.80825	
#R4DART#	GMTBW0116	-	-	-	Trip Blank Water
#R4DART#	GMTBA0116	-	-	-	Trip Blank Air

* Names and locations subject to change if more knowledge of site becomes available

Table 2 – VOC Analyte List

Constituent	Indoor Air / Ambient Air Screening Levels (µg/m³)†	Air Minimum Detection Limit (MDLs)* (µg/m³)	Water Minimum Detection Limit (MDLs)* (µg/L)
Benzene	0.36	0.067	0.10
Chloroform	0.12	0.10	0.20
Dichloroethane, 1,2-	0.11	0.11	0.13
Dichloroethene, 1,1-	210	0.078	0.25
Dichloroethene, cis-1,2-	NL	0.083	0.15
Dichloroethene, trans-1,2-	NL	0.087	0.17
Ethylbenzene	1.1	0.092	0.065
Methylene chloride	100	0.077	0.13
Tetrachloroethene	11	0.14	0.15
Toluene	5200	0.08	0.094
Trichlorothane, 1,1,2-	0.18	0.12	0.18
Trichloroethene	0.48	0.11	0.18
Trimethylbenzene, 1,2,4-	7.3	0.11	0.095
Vinyl chloride	0.17	0.053	0.36
m-Xylenes	100	0.19	0.21
o-Xylenes	100	0.093	0.062
p-Xylenes	100	0.19	0.21
Xylenes	100	0.19	0.21

† USEPA VISL Calculator Version 3.4, June 2015 RSLs used to calculate target residential screening levels for indoor air, ambient air, sub-slab vapor and exterior soil gas concentrations based on the lower of either a target cancer risk of 1E-06 or a target hazard index of 1. Screening levels assume 26 year exposure duration, 350 days per year, 24 hours per day.

***** Detection limits are based on the analytical methods and instrumentation used by SESD Analytical Support Branch (ASB) and reported in

Table 3 – Field Parameter Results

Station	Sample	pH (pH Units)	Specific Cond. (us/cm)	Temp. (Deg C)	Turbidity (NTU)
GM06	GM06SW0116	8.07	209.9	8.7	7.58
GM07	GM07SW0116	7.79	209.8	9.2	21.9
	GM07DSW0116				
GM08	GM08SW0116	7.1	227.1	8.6	18.1
GM09	GM09SW0116	7.03	215.6	10.8	17.6

Table 4 – Surface Water VOC Results

Station ID			-	GM06	GM07	GM07	GM08	GM09
Sample ID			GMTBW0116	GM06SW0116	GM07DSW0116	GM07SW0116	GM08SW0116	GM09SW0116
Matrix			Trip Blank - Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sample Date			1/12/2016 8:00	1/12/2016 17:00	1/12/2016 16:30	1/12/2016 16:30	1/13/2016 11:35	1/13/2016 12:15
Analyte	**Units**	**MCL**						
Toluene	ug/L	1000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.15 J,O
Trichloroethene (Trichloroethylene)	ug/L	5	0.50 U	0.50 U	0.50 U	0.50 U	6.9	7.8
Vinyl chloride	ug/L	2	0.50 U	0.50 U	0.50 U	0.50 U	10	9.3
cis-1,2-Dichloroethene	ug/L	70	0.50 U	0.50 U	0.50 U	0.50 U	49	49
trans-1,2-Dichloroethene	ug/L	100	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 J,O

DEFINITIONS OF REGION 4 ANALYTICAL DATA QUALIFIERS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
O	Other qualifiers have been assigned providing additional information. These explanatory qualifiers are included in the printable pdf report and in other columns in the export files.

Detect

Above MCL

Table 5 – Ambient Air VOC Results

Station ID		-	GM01	GM01	GM02	GM03	GM04	GM05
Sample ID		GMTBA0116	GM01AA0116	GM01DAA0116	GM02AA0116	GM03AA0116	GM04AA0116	GM05AA0116
Matrix		Trip Blank Air	Ambient Air	Ambient Air	Ambient Air	Ambient Air	Ambient Air	Ambient Air
Sample Date		1/12/2016 8:00	1/13/2016 10:11	1/13/2016 10:11	1/13/2016 10:15	1/13/2016 10:02	1/13/2016 9:58	1/13/2016 10:09
Analyte	Units	Screening Level *						
(m- and/or p-)Xylene	ug/m3	100	4.8 U	1.1 J,O	1.2 J,O	1.3 J,O	1.6 J,O	1.3 J,O	1.1 J,O
1,1,2-Trichloroethane	ug/m3	0.48	3.0 U	2.6 U	2.6 U	3.2 U	2.7 U	2.6 U	2.6 U
1,1-Dichloroethene (1,1-Dichloroethylene)	ug/m3	210	2.0 U	1.8 U	1.7 U	2.1 U	1.8 U	1.8 U	1.8 U
1,2,4-Trimethylbenzene	ug/m3	7.3	2.7 U	0.81 J,O	0.78 J,O	0.78 J,O	1.7 J,O	0.82 J,O	0.75 J,O
1,2-Dichloroethane	ug/m3	0.11	2.1 U	1.9 U	1.8 U	2.3 U	1.9 U	1.9 U	1.9 U
Benzene	ug/m3	0.36	1.7 U	1.0 J,O	1.0 J,O	0.94 J,O	1.2 J,O	0.98 J,O	0.90 J,O
Chloroform	ug/m3	0.12	2.6 U	2.3 U	2.2 U	2.8 U	2.3 U	2.3 U	2.3 U
Ethyl Benzene	ug/m3	1.1	2.4 U	0.32 J,O	0.32 J,O	0.35 J,O	0.40 J,O	0.37 J,O	0.29 J,O
Methylene Chloride	ug/m3	100	1.8 U	1.6 U	1.5 U	1.9 U	1.6 U	1.6 U	1.6 U
Tetrachloroethene (Tetrachloroethylene)	ug/m3	11	3.6 U	3.2 U	3.1 U	3.9 U	3.3 U	3.2 U	3.2 U
Toluene	ug/m3	5200	2.0 U	1.6 J,O	1.6 J,O	1.2 J,O	1.8 J,O	1.6 J,O	1.3 J,O
Trichloroethene (Trichloroethylene)	ug/m3	0.48	2.9 U	2.5 U	2.5 U	3.1 U	2.6 U	2.5 U	2.6 U
Vinyl chloride	ug/m3	0.17	1.4 U	1.2 U	1.2 U	1.4 U	1.2 U	1.2 U	1.2 U
cis-1,2-Dichloroethene	ug/m3	n/a	2.1 U	0.20 J,O	0.20 J,O	2.3 U	1.9 U	0.30 J,O	1.9 U
o-Xylene	ug/m3	100	2.4 U	0.53 J,O	0.52 J,O	0.59 J,O	0.74 J,O	0.53 J,O	0.46 J,O
trans-1,2-Dichloroethene	ug/m3	n/a	2.2 U	2.0 U	1.9 U	2.4 U	2.0 U	2.0 U	2.0 U

DEFINITIONS OF REGION 4 ANALYTICAL DATA QUALIFIERS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
O	Other qualifiers have been assigned providing additional information. These explanatory qualifiers are included in the printable pdf report and in other columns in the export files.

Detect

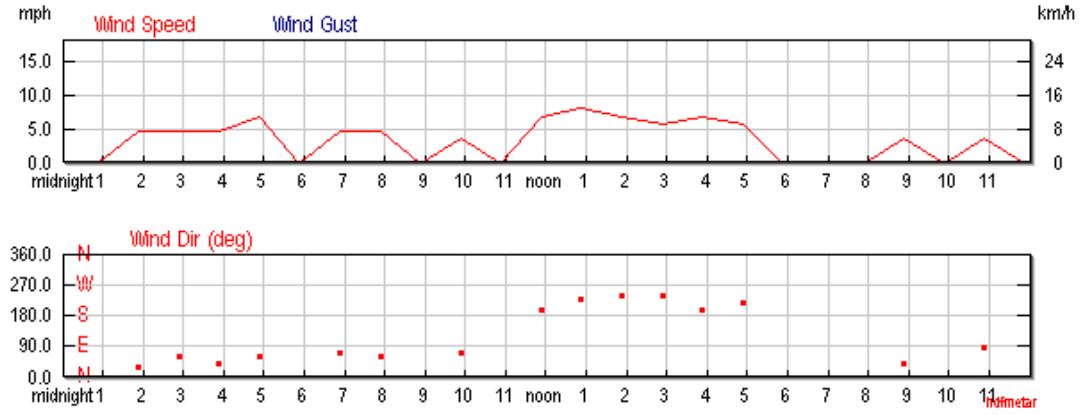
Above Screening Level

* USEPA VISL Calculator Version 3.4, June 2015 RSLs used by Arcadis to calculate target residential screening levels for indoor air/ambient air, based on the lower of either a target cancer risk of 1E-06 or a target hazard index of 1. Screening levels assumes 26 year exposure duration, 350 days per year, 24 hours per day.

Table 5 – NWS Weather Data Set for Nearby Weather Station KGWO

	Wind			Temperature (F)			Humidity (%)				
Date	Avg Speed (mph)	Direction	Max Speed (mph)	Max	Min	Average	Max	Min	Average	Rain Fall (inches)	Barametric Pressure (in Hg, sea level)
1/12/2016	5	SW	14	56	28	42	92	43	68	0	30.24
1/13/2016	3	E	13	60	26	43	92	32	62	0	30.21
1/14/2016	8	S	16	64	31	48	89	43	66	0	29.98
									Total:	0	

1/13/2016



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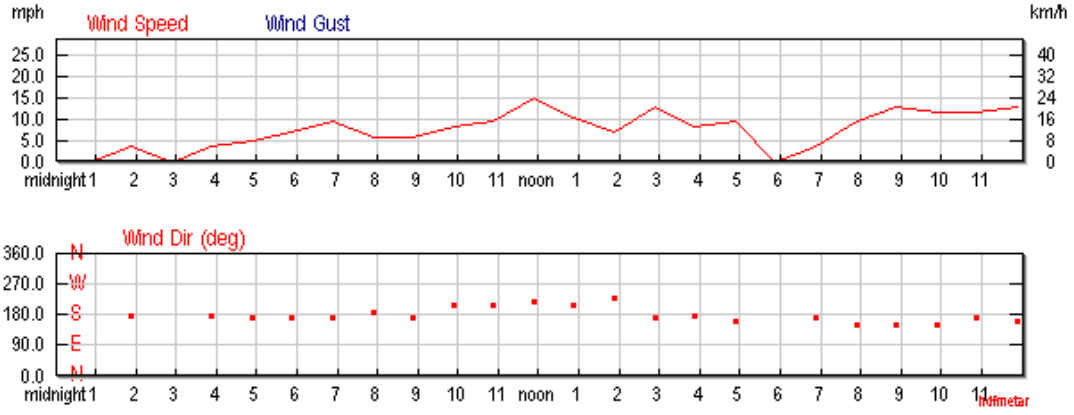

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Table 6 – Co-Located Duplicate Comparisons Ambient Air

Station ID		GM01		
Sample ID		GM01AA0116	GM01DAA0116	Percent Difference
Matrix		Ambient Air	Ambient Air	
Sample Date		1/13/2016 10:11	1/13/2016 10:11	(%)
Analyte	**Units**			
(m- and/or p-)Xylene	ug/m3	1.1	1.2	8.70%
1,1,2-Trichloroethane	ug/m3	-	-	
1,1-Dichloroethene (1,1-Dichloroethylene)	ug/m3	-	-	
1,2,4-Trimethylbenzene	ug/m3	0.81	0.78	-3.77%
1,2-Dichloroethane	ug/m3	-	-	
Benzene	ug/m3	1.0	1.0	0.00%
Chloroform	ug/m3	-	-	
Ethyl Benzene	ug/m3	0.32	0.32	0.00%
Methylene Chloride	ug/m3	-	-	
Tetrachloroethene (Tetrachloroethylene)	ug/m3	-	-	
Toluene	ug/m3	1.6	1.6	0.00%
Trichloroethene (Trichloroethylene)	ug/m3	-	-	
Vinyl chloride	ug/m3	-	-	
cis-1,2-Dichloroethene	ug/m3	0.20	0.20	0.00%
o-Xylene	ug/m3	0.53	0.52	-1.90%
trans-1,2-Dichloroethene	ug/m3	-	-	

Detect

Above Screening Level

* Data Qualifiers were left out of this table for sake of calculations

Appendix D

Attachments

(Each attachments are individually numbered)

FINAL Analytical Report – VOC Surface Water (33 pages)
FINAL Analytical Report – VOC Air (15 pages)
Field Sampling Logbook 1 of 2 (26 pages)
Field Instrument Calibration Logbook 2 of 2 (6 pages)
Air Chain of Custody Delivered 1/14/16 (2 pages)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

January 20, 2016

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 16-0152, Grenada Manufacturing
Resource Conservation and Recovery Act

FROM: Sallie Hale
OCS Analyst

THRU: Floyd Wellborn, Chief
ASB Organic Chemistry Section

TO: Landon Pruitt

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Volatile Organics (VOA)		
Volatile organic compounds	EPA 8260C (Water)	ISO

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

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D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

SAMPLES INCLUDED IN THIS REPORT

Project: 16-0152, Grenada Manufacturing

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
GMTBW0116	E160310-02	Trip Blank - Water	1/12/16 08:00	1/15/16 8:35
GM06SW0116	E160310-09	Surface Water	1/12/16 17:00	1/15/16 8:35
GM07DSW0116	E160310-10	Surface Water	1/12/16 16:30	1/15/16 8:35
GM07SW0116	E160310-11	Surface Water	1/12/16 16:30	1/15/16 8:35
GM08SW0116	E160310-12	Surface Water	1/13/16 11:35	1/15/16 8:35
GM09SW0116	E160310-13	Surface Water	1/13/16 12:15	1/15/16 8:35

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.

ACRONYMS AND ABBREVIATIONS

CAS — Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL — Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL — Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC — Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO — The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR — The EPA Region 4 Laboratory has not requested accreditation for this test.

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D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GMTBW0116 **Lab ID:** E160310-02

Station ID: **Matrix:** Trip Blank - Water

Date Collected: 1/12/16 8:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C

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D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GMTBW0116 **Lab ID:** E160310-02

Station ID: **Matrix:** Trip Blank - Water

Date Collected: 1/12/16 8:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 14:41	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GMTBW0116 **Lab ID:** E160310-02

Station ID: **Matrix:** Trip Blank - Water

Date Collected: 1/12/16 8:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
108-88-3	Toluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
75-01-4	Vinyl chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 14:41	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 14:41	EPA 8260C

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM06SW0116 **Lab ID:** E160310-09

Station ID: GM06 **Matrix:** Surface Water

Date Collected: 1/12/16 17:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM06SW0116 **Lab ID:** E160310-09

Station ID: GM06 **Matrix:** Surface Water

Date Collected: 1/12/16 17:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:07	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM06SW0116 **Lab ID:** E160310-09
Station ID: GM06 **Matrix:** Surface Water

Date Collected: 1/12/16 17:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
108-88-3	Toluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
75-01-4	Vinyl chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:07	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 15:07	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07DSW0116 **Lab ID:** E160310-10
Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07DSW0116 **Lab ID:** E160310-10
Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:33	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07DSW0116 **Lab ID:** E160310-10
Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
108-88-3	Toluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
75-01-4	Vinyl chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:33	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 15:33	EPA 8260C

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07SW0116 **Lab ID:** E160310-11

Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07SW0116 **Lab ID:** E160310-11
Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 15:59	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM07SW0116 **Lab ID:** E160310-11
Station ID: GM07 **Matrix:** Surface Water

Date Collected: 1/12/16 16:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
108-88-3	Toluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
75-01-4	Vinyl chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 15:59	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 15:59	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM08SW0116 **Lab ID:** E160310-12
Station ID: GM08 **Matrix:** Surface Water

Date Collected: 1/13/16 11:35

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM08SW0116 **Lab ID:** E160310-12
Station ID: GM08 **Matrix:** Surface Water

Date Collected: 1/13/16 11:35

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	49		ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:26	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM08SW0116 **Lab ID:** E160310-12
Station ID: GM08 **Matrix:** Surface Water

Date Collected: 1/13/16 11:35

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
108-88-3	Toluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	6.9		ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
75-01-4	Vinyl chloride	10		ug/L	0.50	1/19/16 14:14	1/19/16 16:26	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 16:26	EPA 8260C

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM09SW0116 **Lab ID:** E160310-13
Station ID: GM09 **Matrix:** Surface Water

Date Collected: 1/13/16 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
630-20-6	1,1,1,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
71-55-6	1,1,1-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
79-00-5	1,1,2-Trichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-34-3	1,1-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
563-58-6	1,1-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
87-61-6	1,2,3-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
96-18-4	1,2,3-Trichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
120-82-1	1,2,4-Trichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
95-63-6	1,2,4-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
106-93-4	1,2-Dibromoethane (EDB)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
95-50-1	1,2-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
107-06-2	1,2-Dichloroethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
78-87-5	1,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-67-8	1,3,5-Trimethylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
541-73-1	1,3-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
142-28-9	1,3-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
106-46-7	1,4-Dichlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
594-20-7	2,2-Dichloropropane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
67-64-1	Acetone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
71-43-2	Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-86-1	Bromobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
74-97-5	Bromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM09SW0116 **Lab ID:** E160310-13
Station ID: GM09 **Matrix:** Surface Water

Date Collected: 1/13/16 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
75-27-4	Bromodichloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-25-2	Bromoform	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
74-83-9	Bromomethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-15-0	Carbon disulfide	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
56-23-5	Carbon Tetrachloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-90-7	Chlorobenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-00-3	Chloroethane	2.0	U	ug/L	2.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
67-66-3	Chloroform	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
74-87-3	Chloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
156-59-2	cis-1,2-Dichloroethene	49		ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
10061-01-5	cis-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
110-82-7	Cyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
124-48-1	Dibromochloromethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
74-95-3	Dibromomethane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-71-8	Dichlorodifluoromethane (Freon 12)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
100-41-4	Ethyl Benzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
87-68-3	Hexachlorobutadiene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
98-82-8	Isopropylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
79-20-9	Methyl Acetate	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
591-78-6	Methyl Butyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
78-93-3	Methyl Ethyl Ketone	4.0	U	ug/L	4.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-10-1	Methyl Isobutyl Ketone	1.0	U	ug/L	1.0	1/19/16 14:14	1/19/16 16:52	EPA 8260C
1634-04-4	Methyl T-Butyl Ether (MTBE)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-87-2	Methylcyclohexane	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-09-2	Methylene Chloride	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
104-51-8	n-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
103-65-1	n-Propylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
95-49-8	o-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
95-47-6	o-Xylene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Sallie Hale

Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM09SW0116 **Lab ID:** E160310-13
Station ID: GM09 **Matrix:** Surface Water

Date Collected: 1/13/16 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
106-43-4	p-Chlorotoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
99-87-6	p-Isopropyltoluene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
135-98-8	sec-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
100-42-5	Styrene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
98-06-6	tert-Butylbenzene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
127-18-4	Tetrachloroethene (Tetrachloroethylene)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
108-88-3	Toluene	0.15	J, Q-2	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
156-60-5	trans-1,2-Dichloroethene	0.25	J, Q-2	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
10061-02-6	trans-1,3-Dichloropropene	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
79-01-6	Trichloroethene (Trichloroethylene)	7.8		ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-69-4	Trichlorofluoromethane (Freon 11)	0.50	U	ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
75-01-4	Vinyl chloride	9.3		ug/L	0.50	1/19/16 14:14	1/19/16 16:52	EPA 8260C
Tentatively Identified Compounds:								
R4-0000	Tentatively Identified Compounds	10	U	ug/L	10	1/19/16 14:14	1/19/16 16:52	EPA 8260C

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Blank (1601044-BLK1)				Prepared & Analyzed: 01/19/16						
EPA 8260C										
(m- and/or p-)Xylene	U	1.0	ug/L							U
1,1,1,2-Tetrachloroethane	U	0.50	"							U
1,1,1-Trichloroethane	U	0.50	"							U
1,1,2,2-Tetrachloroethane	U	0.50	"							U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	U	0.50	"							U
1,1,2-Trichloroethane	U	0.50	"							U
1,1-Dichloroethane	U	0.50	"							U
1,1-Dichloroethene (1,1-Dichloroethylene)	U	0.50	"							U
1,1-Dichloropropene	U	0.50	"							U
1,2,3-Trichlorobenzene	U	0.50	"							U
1,2,3-Trichloropropane	U	0.50	"							U
1,2,4-Trichlorobenzene	U	0.50	"							U
1,2,4-Trimethylbenzene	U	0.50	"							U
1,2-Dibromo-3-Chloropropane (DBCP)	U	1.0	"							U
1,2-Dibromoethane (EDB)	U	0.50	"							U
1,2-Dichlorobenzene	U	0.50	"							U
1,2-Dichloroethane	U	0.50	"							U
1,2-Dichloropropane	U	0.50	"							U
1,3,5-Trimethylbenzene	U	0.50	"							U
1,3-Dichlorobenzene	U	0.50	"							U
1,3-Dichloropropane	U	0.50	"							U
1,4-Dichlorobenzene	U	0.50	"							U
2,2-Dichloropropane	U	0.50	"							U
Acetone	U	4.0	"							U
Benzene	U	0.50	"							U
Bromobenzene	U	0.50	"							U
Bromochloromethane	U	0.50	"							U
Bromodichloromethane	U	0.50	"							U
Bromoform	U	1.0	"							U
Bromomethane	U	2.0	"							U
Carbon disulfide	U	2.0	"							U
Carbon Tetrachloride	U	0.50	"							U
Chlorobenzene	U	0.50	"							U
Chloroethane	U	2.0	"							U
Chloroform	U	0.50	"							U
Chloromethane	U	0.50	"							U
cis-1,2-Dichloroethene	U	0.50	"							U
cis-1,3-Dichloropropene	U	0.50	"							U

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Blank (1601044-BLK1)				Prepared & Analyzed: 01/19/16						
Cyclohexane	U	0.50	ug/L							U
Dibromochloromethane	U	0.50	"							U
Dibromomethane	U	0.50	"							U
Dichlorodifluoromethane (Freon 12)	U	0.50	"							U
Ethyl Benzene	U	0.50	"							U
Hexachlorobutadiene	U	0.50	"							U
Isopropylbenzene	U	0.50	"							U
Methyl Acetate	U	1.0	"							U
Methyl Butyl Ketone	U	1.0	"							U
Methyl Ethyl Ketone	U	4.0	"							U
Methyl Isobutyl Ketone	U	1.0	"							U
Methyl T-Butyl Ether (MTBE)	U	0.50	"							U
Methylcyclohexane	U	0.50	"							U
Methylene Chloride	U	0.50	"							U
n-Butylbenzene	U	0.50	"							U
n-Propylbenzene	U	0.50	"							U
o-Chlorotoluene	U	0.50	"							U
o-Xylene	U	0.50	"							U
p-Chlorotoluene	U	0.50	"							U
p-Isopropyltoluene	U	0.50	"							U
sec-Butylbenzene	U	0.50	"							U
Styrene	U	0.50	"							U
tert-Butylbenzene	U	0.50	"							U
Tetrachloroethene (Tetrachloroethylene)	U	0.50	"							U
Toluene	U	0.50	"							U
trans-1,2-Dichloroethene	U	0.50	"							U
trans-1,3-Dichloropropene	U	0.50	"							U
Trichloroethene (Trichloroethylene)	U	0.50	"							U
Trichlorofluoromethane (Freon 11)	U	0.50	"							U
Vinyl chloride	U	0.50	"							U
Tentatively Identified Compounds	U	10	"							U

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
LCS (1601044-BS1)				Prepared & Analyzed: 01/19/16						
EPA 8260C										
(m- and/or p-)Xylene	40.350		ug/L	40.000		101	91.3-117			
1,1,1,2-Tetrachloroethane	20.020		"	20.000		100	76.5-128			
1,1,1-Trichloroethane	19.450		"	20.000		97.2	79.3-126			
1,1,2,2-Tetrachloroethane	19.730		"	20.000		98.6	80.2-118			
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	19.030		"	20.000		95.2	80-124			
1,1,2-Trichloroethane	19.280		"	20.000		96.4	87.1-111			
1,1-Dichloroethane	19.490		"	20.000		97.4	87.8-113			
1,1-Dichloroethene (1,1-Dichloroethylene)	19.450		"	20.000		97.2	85.4-116			
1,1-Dichloropropene	20.370		"	20.000		102	89.4-115			
1,2,3-Trichlorobenzene	20.230		"	20.000		101	85-117			
1,2,3-Trichloropropane	18.700		"	20.000		93.5	83.4-114			
1,2,4-Trichlorobenzene	19.930		"	20.000		99.6	83.9-117			
1,2,4-Trimethylbenzene	20.800		"	20.000		104	86.5-121			
1,2-Dibromo-3-Chloropropane (DBCP)	40.870		"	40.000		102	72.3-136			
1,2-Dibromoethane (EDB)	19.880		"	20.000		99.4	87.3-115			
1,2-Dichlorobenzene	19.770		"	20.000		98.8	86.4-111			
1,2-Dichloroethane	19.720		"	20.000		98.6	83.9-122			
1,2-Dichloropropane	19.740		"	20.000		98.7	88-113			
1,3,5-Trimethylbenzene	20.910		"	20.000		105	86.8-119			
1,3-Dichlorobenzene	19.910		"	20.000		99.6	86.4-112			
1,3-Dichloropropane	20.040		"	20.000		100	87.4-113			
1,4-Dichlorobenzene	19.000		"	20.000		95.0	86.5-110			
2,2-Dichloropropane	19.720		"	20.000		98.6	53.4-154			
Acetone	39.650		"	40.000		99.1	49.7-153			
Benzene	19.620		"	20.000		98.1	89.6-113			
Bromobenzene	19.880		"	20.000		99.4	84.6-112			
Bromochloromethane	18.970		"	20.000		94.8	83.6-117			
Bromodichloromethane	19.840		"	20.000		99.2	80-125			
Bromoform	40.540		"	40.000		101	63.1-142			
Bromomethane	18.260		"	20.000		91.3	49.9-140			
Carbon disulfide	18.540		"	20.000		92.7	81.7-114			
Carbon Tetrachloride	19.020		"	20.000		95.1	68.8-140			
Chlorobenzene	19.430		"	20.000		97.2	88.4-109			
Chloroethane	18.650		"	20.000		93.2	76.7-118			
Chloroform	19.620		"	20.000		98.1	87.9-115			
Chloromethane	18.800		"	20.000		94.0	68.9-118			
cis-1,2-Dichloroethene	19.590		"	20.000		98.0	87.6-115			
cis-1,3-Dichloropropene	19.640		"	20.000		98.2	81-121			

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
LCS (1601044-BS1)				Prepared & Analyzed: 01/19/16						
Cyclohexane	20.400		ug/L	20.000		102	83.5-122			
Dibromochloromethane	19.300		"	20.000		96.5	71.7-133			
Dibromomethane	19.430		"	20.000		97.2	87.3-117			
Dichlorodifluoromethane (Freon 12)	19.300		"	20.000		96.5	63.5-132			
Ethyl Benzene	20.290		"	20.000		101	90-114			
Hexachlorobutadiene	18.700		"	20.000		93.5	80.2-116			
Isopropylbenzene	21.000		"	20.000		105	84.5-120			
Methyl Acetate	41.600		"	40.000		104	75.8-121			
Methyl Butyl Ketone	41.480		"	40.000		104	69.9-136			
Methyl Ethyl Ketone	40.520		"	40.000		101	68.1-135			
Methyl Isobutyl Ketone	42.150		"	40.000		105	77-127			
Methyl T-Butyl Ether (MTBE)	20.310		"	20.000		102	80.1-123			
Methylcyclohexane	20.050		"	20.000		100	82.6-124			
Methylene Chloride	19.360		"	20.000		96.8	81.2-118			
n-Butylbenzene	21.490		"	20.000		107	85.7-121			
n-Propylbenzene	21.040		"	20.000		105	87-117			
o-Chlorotoluene	19.930		"	20.000		99.6	85.8-114			
o-Xylene	20.590		"	20.000		103	88.9-116			
p-Chlorotoluene	19.970		"	20.000		99.8	86.5-114			
p-Isopropyltoluene	21.040		"	20.000		105	86.3-123			
sec-Butylbenzene	20.920		"	20.000		105	86.2-120			
Styrene	21.260		"	20.000		106	89.9-119			
tert-Butylbenzene	20.920		"	20.000		105	85.2-119			
Tetrachloroethene (Tetrachloroethylene)	19.550		"	20.000		97.8	85.1-113			
Toluene	19.800		"	20.000		99.0	87.7-111			
trans-1,2-Dichloroethene	19.740		"	20.000		98.7	86.6-114			
trans-1,3-Dichloropropene	19.720		"	20.000		98.6	77.4-127			
Trichloroethene (Trichloroethylene)	20.040		"	20.000		100	87.8-114			
Trichlorofluoromethane (Freon 11)	19.300		"	20.000		96.5	78-129			
Vinyl chloride	19.550		"	20.000		97.8	78.8-115			

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Matrix Spike (1601044-MS1)	**Source: E160310-09**			Prepared & Analyzed: 01/19/16						
EPA 8260C										
(m- and/or p-)Xylene	24.140		ug/L	20.465	U	118	81.5-138			
1,1,1,2-Tetrachloroethane	11.090		"	10.233	U	108	77.4-127			
1,1,1-Trichloroethane	12.000		"	10.233	U	117	85.6-137			
1,1,2,2-Tetrachloroethane	10.990		"	10.233	U	107	78-121			
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	12.170		"	10.233	U	119	87.8-141			
1,1,2-Trichloroethane	10.610		"	10.233	U	104	83.6-119			
1,1-Dichloroethane	11.920		"	10.233	U	116	87.6-126			
1,1-Dichloroethene (1,1-Dichloroethylene)	12.220		"	10.233	U	119	87.5-133			
1,1-Dichloropropene	11.610		"	10.233	U	113	90.2-132			
1,2,3-Trichlorobenzene	10.840		"	10.233	U	106	69.5-126			
1,2,3-Trichloropropane	9.9900		"	10.233	U	97.6	78.9-120			
1,2,4-Trichlorobenzene	10.780		"	10.233	U	105	67.6-125			
1,2,4-Trimethylbenzene	11.780		"	10.233	U	115	57.5-147			
1,2-Dibromo-3-Chloropropane (DBCP)	21.040		"	20.465	U	103	68.3-125			
1,2-Dibromoethane (EDB)	10.880		"	10.233	U	106	83.4-119			
1,2-Dichlorobenzene	11.160		"	10.233	U	109	78.4-125			
1,2-Dichloroethane	11.640		"	10.233	U	114	83.5-129			
1,2-Dichloropropane	11.690		"	10.233	U	114	85.3-125			
1,3,5-Trimethylbenzene	11.970		"	10.233	U	117	61.9-143			
1,3-Dichlorobenzene	11.850		"	10.233	U	116	79-125			
1,3-Dichloropropane	11.200		"	10.233	U	109	83.6-121			
1,4-Dichlorobenzene	10.950		"	10.233	U	107	78.3-124			
2,2-Dichloropropane	10.220		"	10.233	U	99.9	45.4-163			
Acetone	22.860		"	20.465	U	112	48.2-133			
Benzene	12.020		"	10.233	U	117	88.8-127			
Bromobenzene	10.720		"	10.233	U	105	80.5-121			
Bromochloromethane	12.030		"	10.233	U	118	82.7-126			
Bromodichloromethane	11.460		"	10.233	U	112	81.1-125			
Bromoform	21.430		"	20.465	U	105	50.7-133			
Bromomethane	12.440		"	10.233	U	122	33.6-168			
Carbon disulfide	11.760		"	10.233	U	115	40.9-152			
Carbon Tetrachloride	11.610		"	10.233	U	113	75.4-144			
Chlorobenzene	11.520		"	10.233	U	113	85.5-123			
Chloroethane	11.990		"	10.233	U	117	70.6-150			
Chloroform	11.290		"	10.233	U	110	87.6-128			
Chloromethane	11.320		"	10.233	U	111	67.3-138			
cis-1,2-Dichloroethene	11.800		"	10.233	U	115	85.3-127			
cis-1,3-Dichloropropene	10.880		"	10.233	U	106	73-125			

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Matrix Spike (1601044-MS1)	**Source: E160310-09**			Prepared & Analyzed: 01/19/16						
Cyclohexane	12.340		ug/L	10.233	U	121	85.1-140			
Dibromochloromethane	10.880		"	10.233	U	106	67.1-128			
Dibromomethane	11.180		"	10.233	U	109	83.2-124			
Dichlorodifluoromethane (Freon 12)	11.270		"	10.233	U	110	71.1-152			
Ethyl Benzene	11.670		"	10.233	U	114	85-130			
Hexachlorobutadiene	10.870		"	10.233	U	106	67.2-136			
Isopropylbenzene	11.890		"	10.233	U	116	82.2-134			
Methyl Acetate	21.740		"	20.465	U	106	66.1-122			
Methyl Butyl Ketone	22.900		"	20.465	U	112	66.9-124			
Methyl Ethyl Ketone	21.710		"	20.465	U	106	60.8-127			
Methyl Isobutyl Ketone	22.590		"	20.465	U	110	73.9-125			
Methyl T-Butyl Ether (MTBE)	11.620		"	10.233	U	114	76.5-127			
Methylcyclohexane	12.040		"	10.233	U	118	81.4-144			
Methylene Chloride	11.850		"	10.233	U	116	80.7-129			
n-Butylbenzene	11.710		"	10.233	U	114	74.7-136			
n-Propylbenzene	11.940		"	10.233	U	117	79.7-136			
o-Chlorotoluene	11.480		"	10.233	U	112	80.6-128			
o-Xylene	11.840		"	10.233	U	116	78.6-130			
p-Chlorotoluene	11.770		"	10.233	U	115	79.4-129			
p-Isopropyltoluene	12.040		"	10.233	U	118	76.7-138			
sec-Butylbenzene	12.060		"	10.233	U	118	79-138			
Styrene	12.070		"	10.233	U	118	34.5-158			
tert-Butylbenzene	11.760		"	10.233	U	115	79.5-134			
Tetrachloroethene (Tetrachloroethylene)	11.410		"	10.233	U	112	66.4-149			
Toluene	11.720		"	10.233	U	115	85.6-126			
trans-1,2-Dichloroethene	12.320		"	10.233	U	120	86.8-128			
trans-1,3-Dichloropropene	10.770		"	10.233	U	105	66.9-126			
Trichloroethene (Trichloroethylene)	11.950		"	10.233	U	117	87.2-128			
Trichlorofluoromethane (Freon 11)	12.310		"	10.233	U	120	87.3-147			
Vinyl chloride	12.790		"	10.233	U	125	84.5-135			

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Matrix Spike Dup (1601044-MSD1)	**Source: E160310-09**			Prepared & Analyzed: 01/19/16						
EPA 8260C										
(m- and/or p-)Xylene	24.320		ug/L	20.465	U	119	81.5-138	0.743	10.3	
1,1,1,2-Tetrachloroethane	10.860		"	10.233	U	106	77.4-127	2.10	12.4	
1,1,1-Trichloroethane	11.800		"	10.233	U	115	85.6-137	1.68	10.9	
1,1,2,2-Tetrachloroethane	11.080		"	10.233	U	108	78-121	0.816	13.5	
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	11.660		"	10.233	U	114	87.8-141	4.28	13.6	
1,1,2-Trichloroethane	10.940		"	10.233	U	107	83.6-119	3.06	11.2	
1,1-Dichloroethane	11.580		"	10.233	U	113	87.6-126	2.89	11.3	
1,1-Dichloroethene (1,1-Dichloroethylene)	12.190		"	10.233	U	119	87.5-133	0.246	12.8	
1,1-Dichloropropene	12.290		"	10.233	U	120	90.2-132	5.69	11.1	
1,2,3-Trichlorobenzene	11.080		"	10.233	U	108	69.5-126	2.19	14.2	
1,2,3-Trichloropropane	10.630		"	10.233	U	104	78.9-120	6.21	12.8	
1,2,4-Trichlorobenzene	10.710		"	10.233	U	105	67.6-125	0.651	14.3	
1,2,4-Trimethylbenzene	12.090		"	10.233	U	118	57.5-147	2.60	16.9	
1,2-Dibromo-3-Chloropropane (DBCP)	22.260		"	20.465	U	109	68.3-125	5.64	14.8	
1,2-Dibromoethane (EDB)	11.110		"	10.233	U	109	83.4-119	2.09	10.7	
1,2-Dichlorobenzene	11.470		"	10.233	U	112	78.4-125	2.74	11	
1,2-Dichloroethane	11.240		"	10.233	U	110	83.5-129	3.50	12.1	
1,2-Dichloropropane	11.610		"	10.233	U	113	85.3-125	0.687	13.2	
1,3,5-Trimethylbenzene	11.960		"	10.233	U	117	61.9-143	0.0836	13.7	
1,3-Dichlorobenzene	11.360		"	10.233	U	111	79-125	4.22	11.1	
1,3-Dichloropropane	11.160		"	10.233	U	109	83.6-121	0.358	10.5	
1,4-Dichlorobenzene	10.980		"	10.233	U	107	78.3-124	0.274	10.3	
2,2-Dichloropropane	10.160		"	10.233	U	99.3	45.4-163	0.589	18	
Acetone	25.050		"	20.465	U	122	48.2-133	9.14	18.2	
Benzene	12.210		"	10.233	U	119	88.8-127	1.57	10	
Bromobenzene	11.220		"	10.233	U	110	80.5-121	4.56	12.9	
Bromochloromethane	11.480		"	10.233	U	112	82.7-126	4.68	15.3	
Bromodichloromethane	11.330		"	10.233	U	111	81.1-125	1.14	12.5	
Bromoform	21.160		"	20.465	U	103	50.7-133	1.27	21.1	
Bromomethane	11.760		"	10.233	U	115	33.6-168	5.62	34.4	
Carbon disulfide	11.680		"	10.233	U	114	40.9-152	0.683	39.5	
Carbon Tetrachloride	11.450		"	10.233	U	112	75.4-144	1.39	15.8	
Chlorobenzene	11.340		"	10.233	U	111	85.5-123	1.57	10.6	
Chloroethane	12.000		"	10.233	U	117	70.6-150	0.0834	34.2	
Chloroform	11.730		"	10.233	U	115	87.6-128	3.82	11.4	
Chloromethane	11.670		"	10.233	U	114	67.3-138	3.04	29	
cis-1,2-Dichloroethene	11.600		"	10.233	U	113	85.3-127	1.71	10.8	
cis-1,3-Dichloropropene	11.310		"	10.233	U	111	73-125	3.88	17.1	

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
Matrix Spike Dup (1601044-MSD1)	**Source: E160310-09**			Prepared & Analyzed: 01/19/16						
Cyclohexane	12.380		ug/L	10.233	U	121	85.1-140	0.324	11.5	
Dibromochloromethane	10.520		"	10.233	U	103	67.1-128	3.36	17.7	
Dibromomethane	11.290		"	10.233	U	110	83.2-124	0.979	14.2	
Dichlorodifluoromethane (Freon 12)	11.380		"	10.233	U	111	71.1-152	0.971	21.6	
Ethyl Benzene	11.930		"	10.233	U	117	85-130	2.20	10	
Hexachlorobutadiene	10.280		"	10.233	U	100	67.2-136	5.58	15.7	
Isopropylbenzene	12.110		"	10.233	U	118	82.2-134	1.83	12.7	
Methyl Acetate	21.870		"	20.465	U	107	66.1-122	0.596	11.2	
Methyl Butyl Ketone	22.980		"	20.465	U	112	66.9-124	0.349	13.2	
Methyl Ethyl Ketone	20.940		"	20.465	U	102	60.8-127	3.61	15	
Methyl Isobutyl Ketone	22.550		"	20.465	U	110	73.9-125	0.177	12	
Methyl T-Butyl Ether (MTBE)	11.420		"	10.233	U	112	76.5-127	1.74	11.8	
Methylcyclohexane	12.360		"	10.233	U	121	81.4-144	2.62	12.4	
Methylene Chloride	11.830		"	10.233	U	116	80.7-129	0.169	14.3	
n-Butylbenzene	12.120		"	10.233	U	118	74.7-136	3.44	12.1	
n-Propylbenzene	12.170		"	10.233	U	119	79.7-136	1.91	11.7	
o-Chlorotoluene	11.430		"	10.233	U	112	80.6-128	0.436	11.3	
o-Xylene	12.200		"	10.233	U	119	78.6-130	3.00	10	
p-Chlorotoluene	11.770		"	10.233	U	115	79.4-129	0.00	11.9	
p-Isopropyltoluene	12.280		"	10.233	U	120	76.7-138	1.97	11.1	
sec-Butylbenzene	12.290		"	10.233	U	120	79-138	1.89	10.7	
Styrene	11.930		"	10.233	U	117	34.5-158	1.17	22.6	
tert-Butylbenzene	12.040		"	10.233	U	118	79.5-134	2.35	11.8	
Tetrachloroethene (Tetrachloroethylene)	11.640		"	10.233	U	114	66.4-149	2.00	13.4	
Toluene	11.500		"	10.233	U	112	85.6-126	1.89	10	
trans-1,2-Dichloroethene	12.090		"	10.233	U	118	86.8-128	1.88	11	
trans-1,3-Dichloropropene	10.690		"	10.233	U	104	66.9-126	0.746	18	
Trichloroethene (Trichloroethylene)	11.470		"	10.233	U	112	87.2-128	4.10	15	
Trichlorofluoromethane (Freon 11)	11.680		"	10.233	U	114	87.3-147	5.25	18.7	
Vinyl chloride	11.960		"	10.233	U	117	84.5-135	6.71	14.1	

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
MRL Verification (1601044-PS1)				Prepared & Analyzed: 01/19/16						
EPA 8260C										
(m- and/or p-)Xylene	0.90000		ug/L	1.0000		90.0	71.3-137			MRL-2
1,1,1,2-Tetrachloroethane	0.49000		"	0.50000		98.0	56.5-148			MRL-2
1,1,1-Trichloroethane	0.43000		"	0.50000		86.0	59.3-146			MRL-2
1,1,2,2-Tetrachloroethane	0.47000		"	0.50000		94.0	60.2-138			MRL-2
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	0.54000		"	0.50000		108	60-144			MRL-2
1,1,2-Trichloroethane	0.48000		"	0.50000		96.0	67.1-131			MRL-2
1,1-Dichloroethane	0.50000		"	0.50000		100	67.8-133			MRL-2
1,1-Dichloroethene (1,1-Dichloroethylene)	0.46000		"	0.50000		92.0	65.4-136			MRL-2
1,1-Dichloropropene	0.36000		"	0.50000		72.0	69.4-135			MRL-2
1,2,3-Trichlorobenzene	0.41000		"	0.50000		82.0	65-137			MRL-2
1,2,3-Trichloropropane	0.55000		"	0.50000		110	63.4-134			MRL-2
1,2,4-Trichlorobenzene	0.42000		"	0.50000		84.0	63.9-137			MRL-2
1,2,4-Trimethylbenzene	0.42000		"	0.50000		84.0	66.5-141			MRL-2
1,2-Dibromo-3-Chloropropane (DBCP)	0.76000		"	1.0000		76.0	52.3-156			MRL-2
1,2-Dibromoethane (EDB)	0.47000		"	0.50000		94.0	67.3-135			MRL-2
1,2-Dichlorobenzene	0.46000		"	0.50000		92.0	66.4-131			MRL-2
1,2-Dichloroethane	0.45000		"	0.50000		90.0	63.9-142			MRL-2
1,2-Dichloropropane	0.49000		"	0.50000		98.0	68-133			MRL-2
1,3,5-Trimethylbenzene	0.42000		"	0.50000		84.0	66.8-139			MRL-2
1,3-Dichlorobenzene	0.44000		"	0.50000		88.0	66.4-132			MRL-2
1,3-Dichloropropane	0.50000		"	0.50000		100	67.4-133			MRL-2
1,4-Dichlorobenzene	0.54000		"	0.50000		108	66.5-130			MRL-2
2,2-Dichloropropane	0.49000		"	0.50000		98.0	33.4-174			MRL-2
Acetone	0.0000		"	1.0000			29.7-173			U
Benzene	0.52000		"	0.50000		104	69.6-133			MRL-2
Bromobenzene	0.47000		"	0.50000		94.0	64.6-132			MRL-2
Bromochloromethane	0.48000		"	0.50000		96.0	63.6-137			MRL-2
Bromodichloromethane	0.47000		"	0.50000		94.0	60-145			MRL-2
Bromoform	0.86000		"	1.0000		86.0	43.1-162			MRL-2
Bromomethane	0.53000		"	0.50000		106	29.9-160			
Carbon disulfide	0.74000		"	0.50000		148	61.7-134			
Carbon Tetrachloride	0.52000		"	0.50000		104	48.8-160			MRL-2
Chlorobenzene	0.49000		"	0.50000		98.0	68.4-129			MRL-2
Chloroethane	0.49000		"	0.50000		98.0	56.7-138			
Chloroform	0.51000		"	0.50000		102	67.9-135			MRL-2
Chloromethane	0.55000		"	0.50000		110	48.9-138			MRL-2
cis-1,2-Dichloroethene	0.41000		"	0.50000		82.0	67.6-135			MRL-2
cis-1,3-Dichloropropene	0.46000		"	0.50000		92.0	61-141			MRL-2

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601044 - V 5030B VOA Wtr Prep										
MRL Verification (1601044-PS1)				Prepared & Analyzed: 01/19/16						
Cyclohexane	0.43000		ug/L	0.50000		86.0	63.5-142			MRL-2
Dibromochloromethane	0.44000		"	0.50000		88.0	51.7-153			MRL-2
Dibromomethane	0.43000		"	0.50000		86.0	67.3-137			MRL-2
Dichlorodifluoromethane (Freon 12)	0.52000		"	0.50000		104	43.5-152			MRL-2
Ethyl Benzene	0.47000		"	0.50000		94.0	70-134			MRL-2
Hexachlorobutadiene	0.49000		"	0.50000		98.0	60.2-136			MRL-2
Isopropylbenzene	0.44000		"	0.50000		88.0	64.5-140			MRL-2
Methyl Acetate	0.78000		"	1.0000		78.0	55.8-141			MRL-2
Methyl Butyl Ketone	0.73000		"	1.0000		73.0	49.9-156			MRL-2
Methyl Ethyl Ketone	0.71000		"	1.0000		71.0	48.1-155			
Methyl Isobutyl Ketone	0.79000		"	1.0000		79.0	57-147			MRL-2
Methyl T-Butyl Ether (MTBE)	0.43000		"	0.50000		86.0	60.1-143			MRL-2
Methylcyclohexane	0.46000		"	0.50000		92.0	62.6-144			MRL-2
Methylene Chloride	0.50000		"	0.50000		100	61.2-138			MRL-2
n-Butylbenzene	0.39000		"	0.50000		78.0	65.7-141			MRL-2
n-Propylbenzene	0.41000		"	0.50000		82.0	67-137			MRL-2
o-Chlorotoluene	0.47000		"	0.50000		94.0	65.8-134			MRL-2
o-Xylene	0.42000		"	0.50000		84.0	68.9-136			MRL-2
p-Chlorotoluene	0.45000		"	0.50000		90.0	66.5-134			MRL-2
p-Isopropyltoluene	0.40000		"	0.50000		80.0	66.3-143			MRL-2
sec-Butylbenzene	0.38000		"	0.50000		76.0	66.2-140			MRL-2
Styrene	0.41000		"	0.50000		82.0	69.9-139			MRL-2
tert-Butylbenzene	0.42000		"	0.50000		84.0	65.2-139			MRL-2
Tetrachloroethene (Tetrachloroethylene)	0.46000		"	0.50000		92.0	65.1-133			MRL-2
Toluene	0.48000		"	0.50000		96.0	67.7-131			MRL-2
trans-1,2-Dichloroethene	0.48000		"	0.50000		96.0	66.6-134			MRL-2
trans-1,3-Dichloropropene	0.46000		"	0.50000		92.0	57.4-147			MRL-2
Trichloroethene (Trichloroethylene)	0.50000		"	0.50000		100	67.8-134			MRL-2
Trichlorofluoromethane (Freon 11)	0.50000		"	0.50000		100	58-149			MRL-2
Vinyl chloride	0.46000		"	0.50000		92.0	58.8-135			MRL-2

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
MRL-2	MRL verification for Non-Potable Water matrix

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Floyd Wellborn

January 25, 2016

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 16-0152, Grenada Manufacturing
Resource Conservation and Recovery Act

FROM: Floyd Wellborn
ASB Organic Chemistry Section Chief

THRU: Danny France, Chief
Analytical Support Branch

TO: Landon Pruitt

This data report is being reissued. Some or all of these results were previously reported. Please substitute the corrected results for those results previously reported. Please refer to the Report Narrative for more details.

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Volatile Organics (VOA)		
Volatile organic compounds	EPA TO-15 (Air)	ISO

Report Narrative for Work Order: E160310

1/25/16 FW VOA(Air): These results are reported again in order to include the minimum detection limits. The sample results are unchanged from the previous report. This report replaces E160310 VOA FINAL 01 22 16 1236.

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Floyd Wellborn

SAMPLES INCLUDED IN THIS REPORT

Project: 16-0152, Grenada Manufacturing

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
GMTBA0116	E160310-01	Trip Blank Air	1/12/16 08:00	1/15/16 8:35
GM01AA0116	E160310-03	Ambient Air	1/13/16 10:11	1/15/16 8:35
GM01DAA0116	E160310-04	Ambient Air	1/13/16 10:11	1/15/16 8:35
GM02AA0116	E160310-05	Ambient Air	1/13/16 10:15	1/15/16 8:35
GM03AA0116	E160310-06	Ambient Air	1/13/16 10:02	1/15/16 8:35
GM04AA0116	E160310-07	Ambient Air	1/13/16 09:58	1/15/16 8:35
GM05AA0116	E160310-08	Ambient Air	1/13/16 10:09	1/15/16 8:35

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
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DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GMTBA0116 **Lab ID:** E160310-01

Station ID: **Matrix:** Trip Blank Air

Date Collected: 1/12/16 8:00

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	4.8	U	ug/m3	0.48 / 4.8	1/15/16 13:11	1/19/16 21:56	EPA TO-15
79-00-5	1,1,2-Trichloroethane	3.0	U	ug/m3	0.30 / 3.0	1/15/16 13:11	1/19/16 21:56	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/19/16 21:56	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	2.7	U	ug/m3	0.27 / 2.7	1/15/16 13:11	1/19/16 21:56	EPA TO-15
107-06-2	1,2-Dichloroethane	2.1	U	ug/m3	0.28 / 2.1	1/15/16 13:11	1/19/16 21:56	EPA TO-15
71-43-2	Benzene	1.7	U	ug/m3	0.17 / 1.7	1/15/16 13:11	1/19/16 21:56	EPA TO-15
67-66-3	Chloroform	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/19/16 21:56	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	2.1	U	ug/m3	0.21 / 2.1	1/15/16 13:11	1/19/16 21:56	EPA TO-15
100-41-4	Ethyl Benzene	2.4	U	ug/m3	0.24 / 2.4	1/15/16 13:11	1/19/16 21:56	EPA TO-15
75-09-2	Methylene Chloride	1.8	U	ug/m3	1.8 / 1.8	1/15/16 13:11	1/19/16 21:56	EPA TO-15
95-47-6	o-Xylene	2.4	U	ug/m3	0.24 / 2.4	1/15/16 13:11	1/19/16 21:56	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.6	U	ug/m3	0.36 / 3.6	1/15/16 13:11	1/19/16 21:56	EPA TO-15
108-88-3	Toluene	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/19/16 21:56	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.2	U	ug/m3	0.22 / 2.2	1/15/16 13:11	1/19/16 21:56	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.9	U	ug/m3	0.29 / 2.9	1/15/16 13:11	1/19/16 21:56	EPA TO-15
75-01-4	Vinyl chloride	1.4	U	ug/m3	0.14 / 1.4	1/15/16 13:11	1/19/16 21:56	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM01AA0116 **Lab ID:** E160310-03
Station ID: GM01 **Matrix:** Ambient Air

Date Collected: 1/13/16 10:11

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.1	J, Q-2	ug/m3	0.42 / 4.2	1/15/16 13:11	1/19/16 22:46	EPA TO-15
79-00-5	1,1,2-Trichloroethane	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/19/16 22:46	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.8	U	ug/m3	0.18 / 1.8	1/15/16 13:11	1/19/16 22:46	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	0.81	J, Q-2	ug/m3	0.24 / 2.4	1/15/16 13:11	1/19/16 22:46	EPA TO-15
107-06-2	1,2-Dichloroethane	1.9	U	ug/m3	0.24 / 1.9	1/15/16 13:11	1/19/16 22:46	EPA TO-15
71-43-2	Benzene	1.0	J, Q-2	ug/m3	0.15 / 1.5	1/15/16 13:11	1/19/16 22:46	EPA TO-15
67-66-3	Chloroform	2.3	U	ug/m3	0.23 / 2.3	1/15/16 13:11	1/19/16 22:46	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	0.20	J, Q-2	ug/m3	0.19 / 1.9	1/15/16 13:11	1/19/16 22:46	EPA TO-15
100-41-4	Ethyl Benzene	0.32	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/19/16 22:46	EPA TO-15
75-09-2	Methylene Chloride	1.6	U	ug/m3	1.6 / 1.6	1/15/16 13:11	1/19/16 22:46	EPA TO-15
95-47-6	o-Xylene	0.53	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/19/16 22:46	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.2	U	ug/m3	3.2 / 3.2	1/15/16 13:11	1/19/16 22:46	EPA TO-15
108-88-3	Toluene	1.6	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/19/16 22:46	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/19/16 22:46	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.5	U	ug/m3	0.25 / 2.5	1/15/16 13:11	1/19/16 22:46	EPA TO-15
75-01-4	Vinyl chloride	1.2	U	ug/m3	0.12 / 1.2	1/15/16 13:11	1/19/16 22:46	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM01DAA0116 **Lab ID:** E160310-04
Station ID: GM01 **Matrix:** Ambient Air

Date Collected: 1/13/16 10:11

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.2	J, Q-2	ug/m3	0.41 / 4.1	1/15/16 13:11	1/19/16 23:36	EPA TO-15
79-00-5	1,1,2-Trichloroethane	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/19/16 23:36	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.7	U	ug/m3	0.17 / 1.7	1/15/16 13:11	1/19/16 23:36	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	0.78	J, Q-2	ug/m3	0.23 / 2.3	1/15/16 13:11	1/19/16 23:36	EPA TO-15
107-06-2	1,2-Dichloroethane	1.8	U	ug/m3	0.24 / 1.8	1/15/16 13:11	1/19/16 23:36	EPA TO-15
71-43-2	Benzene	1.0	J, Q-2	ug/m3	0.15 / 1.5	1/15/16 13:11	1/19/16 23:36	EPA TO-15
67-66-3	Chloroform	2.2	U	ug/m3	0.22 / 2.2	1/15/16 13:11	1/19/16 23:36	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	0.20	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/19/16 23:36	EPA TO-15
100-41-4	Ethyl Benzene	0.32	J, Q-2	ug/m3	0.20 / 2.0	1/15/16 13:11	1/19/16 23:36	EPA TO-15
75-09-2	Methylene Chloride	1.5	U	ug/m3	1.5 / 1.5	1/15/16 13:11	1/19/16 23:36	EPA TO-15
95-47-6	o-Xylene	0.52	J, Q-2	ug/m3	0.20 / 2.0	1/15/16 13:11	1/19/16 23:36	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.1	U	ug/m3	3.1 / 3.1	1/15/16 13:11	1/19/16 23:36	EPA TO-15
108-88-3	Toluene	1.6	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/19/16 23:36	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	1.9	U	ug/m3	0.19 / 1.9	1/15/16 13:11	1/19/16 23:36	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.5	U	ug/m3	0.25 / 2.5	1/15/16 13:11	1/19/16 23:36	EPA TO-15
75-01-4	Vinyl chloride	1.2	U	ug/m3	0.12 / 1.2	1/15/16 13:11	1/19/16 23:36	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM02AA0116 **Lab ID:** E160310-05
Station ID: GM02 **Matrix:** Ambient Air

Date Collected: 1/13/16 10:15

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.3	J, Q-2	ug/m3	0.51 / 5.1	1/15/16 13:11	1/20/16 1:17	EPA TO-15
79-00-5	1,1,2-Trichloroethane	3.2	U	ug/m3	0.32 / 3.2	1/15/16 13:11	1/20/16 1:17	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	2.1	U	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 1:17	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	0.78	J, Q-2	ug/m3	0.29 / 2.9	1/15/16 13:11	1/20/16 1:17	EPA TO-15
107-06-2	1,2-Dichloroethane	2.3	U	ug/m3	0.29 / 2.3	1/15/16 13:11	1/20/16 1:17	EPA TO-15
71-43-2	Benzene	0.94	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 1:17	EPA TO-15
67-66-3	Chloroform	2.8	U	ug/m3	0.28 / 2.8	1/15/16 13:11	1/20/16 1:17	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	2.3	U	ug/m3	0.23 / 2.3	1/15/16 13:11	1/20/16 1:17	EPA TO-15
100-41-4	Ethyl Benzene	0.35	J, Q-2	ug/m3	0.25 / 2.5	1/15/16 13:11	1/20/16 1:17	EPA TO-15
75-09-2	Methylene Chloride	1.9	U	ug/m3	1.9 / 1.9	1/15/16 13:11	1/20/16 1:17	EPA TO-15
95-47-6	o-Xylene	0.59	J, Q-2	ug/m3	0.25 / 2.5	1/15/16 13:11	1/20/16 1:17	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.9	U	ug/m3	0.39 / 3.9	1/15/16 13:11	1/20/16 1:17	EPA TO-15
108-88-3	Toluene	1.2	J, Q-2	ug/m3	0.22 / 2.2	1/15/16 13:11	1/20/16 1:17	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.4	U	ug/m3	0.24 / 2.4	1/15/16 13:11	1/20/16 1:17	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	3.1	U	ug/m3	0.31 / 3.1	1/15/16 13:11	1/20/16 1:17	EPA TO-15
75-01-4	Vinyl chloride	1.4	U	ug/m3	0.14 / 1.4	1/15/16 13:11	1/20/16 1:17	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM03AA0116 **Lab ID:** E160310-06
Station ID: GM03 **Matrix:** Ambient Air

Date Collected: 1/13/16 10:02

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.6	J, Q-2	ug/m3	0.43 / 4.3	1/15/16 13:11	1/20/16 2:07	EPA TO-15
79-00-5	1,1,2-Trichloroethane	2.7	U	ug/m3	0.27 / 2.7	1/15/16 13:11	1/20/16 2:07	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.8	U	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 2:07	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	1.7	J, Q-2	ug/m3	0.24 / 2.4	1/15/16 13:11	1/20/16 2:07	EPA TO-15
107-06-2	1,2-Dichloroethane	1.9	U	ug/m3	0.25 / 1.9	1/15/16 13:11	1/20/16 2:07	EPA TO-15
71-43-2	Benzene	1.2	J, Q-2	ug/m3	0.16 / 1.6	1/15/16 13:11	1/20/16 2:07	EPA TO-15
67-66-3	Chloroform	2.3	U	ug/m3	0.23 / 2.3	1/15/16 13:11	1/20/16 2:07	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	1.9	U	ug/m3	0.19 / 1.9	1/15/16 13:11	1/20/16 2:07	EPA TO-15
100-41-4	Ethyl Benzene	0.40	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 2:07	EPA TO-15
75-09-2	Methylene Chloride	1.6	U	ug/m3	1.6 / 1.6	1/15/16 13:11	1/20/16 2:07	EPA TO-15
95-47-6	o-Xylene	0.74	J, Q-2	ug/m3	0.22 / 2.2	1/15/16 13:11	1/20/16 2:07	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.3	U	ug/m3	0.33 / 3.3	1/15/16 13:11	1/20/16 2:07	EPA TO-15
108-88-3	Toluene	1.8	J, Q-2	ug/m3	0.19 / 1.9	1/15/16 13:11	1/20/16 2:07	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/20/16 2:07	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/20/16 2:07	EPA TO-15
75-01-4	Vinyl chloride	1.2	U	ug/m3	0.12 / 1.2	1/15/16 13:11	1/20/16 2:07	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM04AA0116 **Lab ID:** E160310-07
Station ID: GM04 **Matrix:** Ambient Air

Date Collected: 1/13/16 9:58

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.3	J, Q-2	ug/m3	0.42 / 4.2	1/15/16 13:11	1/20/16 2:57	EPA TO-15
79-00-5	1,1,2-Trichloroethane	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/20/16 2:57	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.8	U	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 2:57	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	0.82	J, Q-2	ug/m3	0.24 / 2.4	1/15/16 13:11	1/20/16 2:57	EPA TO-15
107-06-2	1,2-Dichloroethane	1.9	U	ug/m3	0.24 / 1.9	1/15/16 13:11	1/20/16 2:57	EPA TO-15
71-43-2	Benzene	0.98	J, Q-2	ug/m3	0.15 / 1.5	1/15/16 13:11	1/20/16 2:57	EPA TO-15
67-66-3	Chloroform	2.3	U	ug/m3	0.23 / 2.3	1/15/16 13:11	1/20/16 2:57	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	0.30	J, Q-2	ug/m3	0.19 / 1.9	1/15/16 13:11	1/20/16 2:57	EPA TO-15
100-41-4	Ethyl Benzene	0.37	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 2:57	EPA TO-15
75-09-2	Methylene Chloride	1.6	U	ug/m3	1.6 / 1.6	1/15/16 13:11	1/20/16 2:57	EPA TO-15
95-47-6	o-Xylene	0.53	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 2:57	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.2	U	ug/m3	0.32 / 3.2	1/15/16 13:11	1/20/16 2:57	EPA TO-15
108-88-3	Toluene	1.6	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 2:57	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/20/16 2:57	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.5	U	ug/m3	0.25 / 2.5	1/15/16 13:11	1/20/16 2:57	EPA TO-15
75-01-4	Vinyl chloride	1.2	U	ug/m3	0.12 / 1.2	1/15/16 13:11	1/20/16 2:57	EPA TO-15

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Volatile Organics

Project: 16-0152, Grenada Manufacturing

Sample ID: GM05AA0116 **Lab ID:** E160310-08
Station ID: GM05 **Matrix:** Ambient Air

Date Collected: 1/13/16 10:09

CAS Number	Analyte	Results	Qualifiers	Units	MDL / MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	1.1	J, Q-2	ug/m3	0.42 / 4.2	1/15/16 13:11	1/20/16 3:47	EPA TO-15
79-00-5	1,1,2-Trichloroethane	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/20/16 3:47	EPA TO-15
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.8	U	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 3:47	EPA TO-15
95-63-6	1,2,4-Trimethylbenzene	0.75	J, Q-2	ug/m3	0.24 / 2.4	1/15/16 13:11	1/20/16 3:47	EPA TO-15
107-06-2	1,2-Dichloroethane	1.9	U	ug/m3	0.25 / 1.9	1/15/16 13:11	1/20/16 3:47	EPA TO-15
71-43-2	Benzene	0.90	J, Q-2	ug/m3	0.15 / 1.5	1/15/16 13:11	1/20/16 3:47	EPA TO-15
67-66-3	Chloroform	2.3	U	ug/m3	0.23 / 2.3	1/15/16 13:11	1/20/16 3:47	EPA TO-15
156-59-2	cis-1,2-Dichloroethene	1.9	U	ug/m3	0.19 / 1.9	1/15/16 13:11	1/20/16 3:47	EPA TO-15
100-41-4	Ethyl Benzene	0.29	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 3:47	EPA TO-15
75-09-2	Methylene Chloride	1.6	U	ug/m3	1.6 / 1.6	1/15/16 13:11	1/20/16 3:47	EPA TO-15
95-47-6	o-Xylene	0.46	J, Q-2	ug/m3	0.21 / 2.1	1/15/16 13:11	1/20/16 3:47	EPA TO-15
127-18-4	Tetrachloroethene (Tetrachloroethylene)	3.2	U	ug/m3	0.32 / 3.2	1/15/16 13:11	1/20/16 3:47	EPA TO-15
108-88-3	Toluene	1.3	J, Q-2	ug/m3	0.18 / 1.8	1/15/16 13:11	1/20/16 3:47	EPA TO-15
156-60-5	trans-1,2-Dichloroethene	2.0	U	ug/m3	0.20 / 2.0	1/15/16 13:11	1/20/16 3:47	EPA TO-15
79-01-6	Trichloroethene (Trichloroethylene)	2.6	U	ug/m3	0.26 / 2.6	1/15/16 13:11	1/20/16 3:47	EPA TO-15
75-01-4	Vinyl chloride	1.2	U	ug/m3	0.12 / 1.2	1/15/16 13:11	1/20/16 3:47	EPA TO-15

Volatile Organics (VOA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601041 - V TO-15 Air Canister										
Blank (1601041-BLK1)				Prepared: 01/15/16 Analyzed: 01/19/16						
EPA TO-15										
(m- and/or p-)Xylene	U	1.9	ug/m3							U
1,1,2-Trichloroethane	U	1.2	"							U
1,1-Dichloroethene (1,1-Dichloroethylene)	U	0.79	"							U
1,2,4-Trimethylbenzene	U	1.1	"							U
1,2-Dichloroethane	U	0.84	"							U
Benzene	U	0.68	"							U
Chloroform	U	1.0	"							U
cis-1,2-Dichloroethene	U	0.84	"							U
Ethyl Benzene	U	0.93	"							U
Methylene Chloride	0.087399	0.71	"							B-3, Q-2, J
o-Xylene	U	0.94	"							U
Tetrachloroethene (Tetrachloroethylene)	U	1.4	"							U
Toluene	U	0.81	"							U
trans-1,2-Dichloroethene	U	0.88	"							U
Trichloroethene (Trichloroethylene)	U	1.1	"							U
Vinyl chloride	U	0.54	"							U
Blank (1601041-BLK2)				Prepared: 01/15/16 Analyzed: 01/19/16						
EPA TO-15										
(m- and/or p-)Xylene	U	1.9	ug/m3							U
1,1,2-Trichloroethane	U	1.2	"							U
1,1-Dichloroethene (1,1-Dichloroethylene)	U	0.78	"							U
1,2,4-Trimethylbenzene	U	1.0	"							U
1,2-Dichloroethane	U	0.83	"							U
Benzene	U	0.67	"							U
Chloroform	U	1.0	"							U
cis-1,2-Dichloroethene	U	0.83	"							U
Ethyl Benzene	U	0.92	"							U
Methylene Chloride	0.089373	0.70	"							B-3, Q-2, J
o-Xylene	U	0.93	"							U
Tetrachloroethene (Tetrachloroethylene)	U	1.4	"							U
Toluene	U	0.80	"							U
trans-1,2-Dichloroethene	U	0.87	"							U
Trichloroethene (Trichloroethylene)	U	1.1	"							U
Vinyl chloride	U	0.53	"							U

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601041 - V TO-15 Air Canister										
LCS (1601041-BS1)				Prepared: 01/15/16 Analyzed: 01/19/16						
EPA TO-15										
(m- and/or p-)Xylene	4.9540		ppbv	4.4751		111	72-140			
1,1,2-Trichloroethane	2.4314		"	2.2375		109	71-142			
1,1-Dichloroethene (1,1-Dichloroethylene)	2.0214		"	2.0748		97.4	70-140			
1,2,4-Trimethylbenzene	2.5684		"	2.2375		115	66-136			
1,2-Dichloroethane	2.0585		"	2.1358		96.4	71-137			
Benzene	2.3493		"	2.2172		106	70-140			
Chloroform	2.3460		"	2.2172		106	70-141			
cis-1,2-Dichloroethene	2.4723		"	2.2172		112	70-136			
Ethyl Benzene	2.4826		"	2.2375		111	70-137			
Methylene Chloride	1.6225		"	2.1155		76.7	70-142			
o-Xylene	2.4688		"	2.2375		110	72-136			
Tetrachloroethene (Tetrachloroethylene)	2.5038		"	2.2375		112	68-148			
Toluene	2.4362		"	2.2375		109	72-138			
trans-1,2-Dichloroethene	2.1330		"	2.2375		95.3	73-136			
Trichloroethene (Trichloroethylene)	2.4044		"	2.2375		107	69-137			
Vinyl chloride	2.0802		"	2.1968		94.7	62-151			
LCS Dup (1601041-BSD1)				Prepared: 01/15/16 Analyzed: 01/19/16						
EPA TO-15										
(m- and/or p-)Xylene	5.0603		ppbv	4.4751		113	72-140	2.12	25	
1,1,2-Trichloroethane	2.4372		"	2.2375		109	71-142	0.239	25	
1,1-Dichloroethene (1,1-Dichloroethylene)	2.0007		"	2.0748		96.4	70-140	1.03	25	
1,2,4-Trimethylbenzene	2.6065		"	2.2375		116	66-136	1.47	25	
1,2-Dichloroethane	2.1059		"	2.1358		98.6	71-137	2.28	25	
Benzene	2.3757		"	2.2172		107	70-140	1.12	25	
Chloroform	2.3972		"	2.2172		108	70-141	2.16	25	
cis-1,2-Dichloroethene	2.4418		"	2.2172		110	70-136	1.24	25	
Ethyl Benzene	2.5260		"	2.2375		113	70-137	1.73	25	
Methylene Chloride	1.6007		"	2.1155		75.7	70-142	1.35	25	
o-Xylene	2.5371		"	2.2375		113	72-136	2.73	25	
Tetrachloroethene (Tetrachloroethylene)	2.5413		"	2.2375		114	68-148	1.49	25	
Toluene	2.4323		"	2.2375		109	72-138	0.157	25	
trans-1,2-Dichloroethene	2.1245		"	2.2375		94.9	73-136	0.398	25	
Trichloroethene (Trichloroethylene)	2.4987		"	2.2375		112	69-137	3.85	25	
Vinyl chloride	2.0474		"	2.1968		93.2	62-151	1.59	25	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0152
Project: 16-0152, Grenada Manufacturing - Reported by Floyd Wellborn

Volatile Organics (VOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1601041 - V TO-15 Air Canister										
Duplicate (1601041-DUP1)		**Source: E160310-04**		Prepared: 01/15/16 Analyzed: 01/20/16						
EPA TO-15										
(m- and/or p-)Xylene	1.1942	4.1	ug/m3		1.1863			0.667	20	Q-2, J
1,1,2-Trichloroethane	U	2.6	"		U				20	U
1,1-Dichloroethene (1,1-Dichloroethylene)	U	1.7	"		U				20	U
1,2,4-Trimethylbenzene	0.80595	2.3	"		0.77800			3.53	20	Q-2, J
1,2-Dichloroethane	U	1.8	"		U				20	U
Benzene	0.95783	1.5	"		1.0000			4.31	20	Q-2, J
Chloroform	U	2.2	"		U				20	U
cis-1,2-Dichloroethene	U	1.8	"		0.19734				20	U
Ethyl Benzene	0.31412	2.0	"		0.32129			2.26	20	Q-2, J
Methylene Chloride	U	1.5	"		U				20	U
o-Xylene	0.47605	2.0	"		0.52343			9.48	20	Q-2, J
Tetrachloroethene (Tetrachloroethylene)	U	3.1	"		U				18.2	U
Toluene	1.5406	1.8	"		1.5683			1.78	20	Q-2, J
trans-1,2-Dichloroethene	U	1.9	"		U				20	U
Trichloroethene (Trichloroethylene)	U	2.5	"		U				20	U
Vinyl chloride	U	1.2	"		U				20	U
MRL Verification (1601041-PS1)				Prepared: 01/15/16 Analyzed: 01/19/16						
EPA TO-15										
(m- and/or p-)Xylene	0.64541		ppbv	0.44751		144	52-160			MRL-5
1,1,2-Trichloroethane	0.32230		"	0.22375		144	51-162			MRL-5
1,1-Dichloroethene (1,1-Dichloroethylene)	0.26742		"	0.20748		129	50-160			MRL-5
1,2,4-Trimethylbenzene	0.32156		"	0.22375		144	46-156			MRL-5
1,2-Dichloroethane	0.27227		"	0.21358		127	51-157			MRL-5
Benzene	0.32316		"	0.22172		146	50-160			MRL-5
Chloroform	0.31318		"	0.22172		141	50-161			MRL-5
cis-1,2-Dichloroethene	0.31596		"	0.22172		143	50-156			MRL-5
Ethyl Benzene	0.32730		"	0.22375		146	50-157			MRL-5
Methylene Chloride	0.23138		"	0.21155		109	50-162			MRL-5
o-Xylene	0.32281		"	0.22375		144	52-156			MRL-5
Tetrachloroethene (Tetrachloroethylene)	0.32679		"	0.22375		146	48-168			MRL-5
Toluene	0.32125		"	0.22375		144	52-158			MRL-5
trans-1,2-Dichloroethene	0.28985		"	0.22375		130	53-156			MRL-5
Trichloroethene (Trichloroethylene)	0.31782		"	0.22375		142	49-157			MRL-5
Vinyl chloride	0.27436		"	0.21968		125	42-171			MRL-5

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
B-3	Level in blank does not impact data quality
J	The identification of the analyte is acceptable; the reported value is an estimate.
MRL-5	MRL verification for Air matrix
Q-2	Result greater than MDL but less than MRL.

United States Environmental Protection Agency
Region 4
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720

PROJECT NAME: Grenada Manufacturing Ambient Air Study
PROJECT LOCATION: Grenada, Grenada County, MS
PROJECT ID NUMBER: 16-0152
PROJECT LEADER: Landon Pruitt

Surface Water + Ambient Air

LP 3/1/16 ~~Groundwater~~ **Logbook**

Book 1 **of** 2

Inclusive Dates: 1/12/16 – 1/14/16

List of personnel in logbook:

Name	Initials	Duties
Landon Pruitt	LP	Sampler, Team Leader
Tim Slagle	TS	Sampler

Team Leader (Initials) LP Date 3/7/14

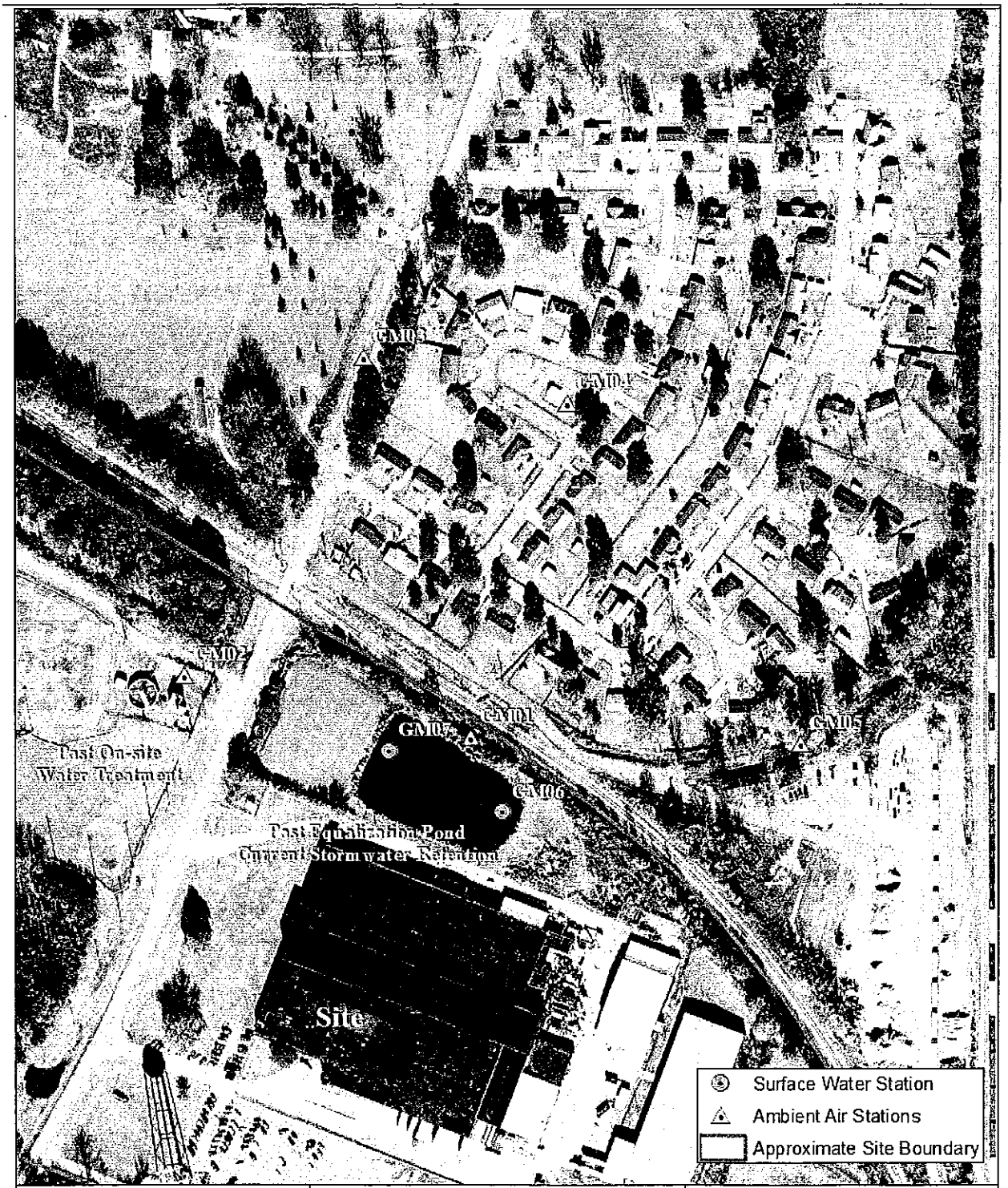


Figure 1 - Sample Locations
Grenada Manufacturing Site
SESD Project # 16-0152

US EPA SESD
Field Services Branch
980 College Station Road
Athens, GA 30605

Team Leader (Initials) _____ Date 3/1/16

TABLE 1 Sample Station Information			
Station ID	**Sample ID**	**Location**	**Matrix**
GM01	GM01AA0116	Just north of old equalization pond. (duplicate location)	Ambient Air
	GM01DAA0116		
GM02	GM02AA0116	Just north of on-site treatment plant.	
GM03	GM03AA0116	West side of neighborhood.	
GM04	GM04AA0116	Rough middle of neighborhood	
GM05	GM05AA0116	Background location. Southeast side of neighborhood	
GM06	GM06SW0116	Surface water retention pond (duplicate location)	Surface Water
GM07	GM07SW0116		
	GM07DSW0116		
#R4DART#	GMTBW0116	-	Trip Blank Water
#R4DART#	GMTBA0116	-	Trip Blank Air

* Names and locations subject to change if more knowledge of site becomes available

General SW Sampling Procedures:

All samples will be collected using the following procedures and methods unless otherwise stated in the field notes:

- SESDPROC-100-R3 - Field pH Measurement
- SESDPROC-101-R5 - Field Specific Conductance Measurement
- SESDPROC-102-R4 - Field Temperature Measurement
- SESDPROC-103-R3 - Field Turbidity Measurement
- SESDPROC-105-R2 - Groundwater Level and Well Depth Measurement
- SESDPROC-202-R3 - Management of Investigation Derived Waste
- SESDPROC-203-R3 - Pump Operation
- SESDPROC-205-R2 - Field Equipment Cleaning and Decontamination
- SESDPROC-201-R3 – Surface Water Sampling

General Sampling Methods:

Surface Water samples will be collected using a stainless steel scoop attached to steel conduit and transferred to pre-preserved 40 mL VOA vials.

Ambient Air samples will be collected using 6L Summa Canisters with a 24 hour flow controller following EPA Method TO-15 for Volatile Organics collection.

Quality Assurance Samples

VOC GW Trip Blank

Station ID: #R4DART#
Sample ID: GMTBW0116
Sample Date: 1/13/16
Sample Time: 1230
Collected by: Tim Sigle

VOC Air Trip Blank

Station ID: #R4DART#
Sample ID: GMTBA0116
Sample Date: 1/12/16
Sample Time: 0800
Collected by: Tim Sigle
Can# 3910

Team Leader (Initials) _____ Date 3/1/16

Date: 1/12/16 **Station ID:** GW07 **Sample ID:** GW07SW0116 **Notes (Initial):** ~~TS~~

Sample Team:	Initials	Duties
	TS	

GPS Coordinates: *Latitude:* 33.86411 N *Longitude* -89.86101 W

Garmin [✓] Serial Number 03C111-04417 Accuracy ± 5' feet

Trimble [ ] Garmin [ ] SESD Instrument #: ~~1/12/16~~ Logged? Y or N

File name and back-up location (laptop, thumb drive, etc.) _____

Description of sample location:

west side of pond, roughly 3' via surface

GPS Operator Initials: TS

SESD Operating Procedures: *Check, as appropriate*

Measurement Procedures:

SESDPROC-100-R2, Field pH Measurement [✓]
SESDPROC-101-R2, Field Specific Conductance Measurement [✓]
SESDPROC-102-R2, Field Temperature Measurement [✓]
SESDPROC-103-R2, Field Turbidity Measurement [✓]
SESDPROC-110-R2, Global Positioning System [✓]

Environmental/Waste Sampling Procedures:

SESDPROC-201-R1, Surface Water Sampling ✓

Other Procedures, if applicable:

none

Specific Sampling Procedure/Method (including equipment ID, as appropriate):

peristaltic pump, tether tubing roughly 3' below surface

Description of Media/Sample:

slightly turbid, no odor,

Other pertinent information (weather conditions, etc.):

cool, clear

SAMPLE COLLECTION TIME: 1630 **COLLECTED BY (INITIALS):** TS

Filtered Sample: *Yes or* (No) **If yes, Filter Type:** _____, _____ **um (size)**

If Filtered, Filtered By (Initials): _____

Field Split: (Yes) *or No* **Split Sample ID, Date and Time:** GW07DSW0116 1/12/16 1635

In-situ measurements: ***IN-SITU* MEASUREMENT BY (INITIALS):** TS

pH (SUs)	Spec. Cond. (umhos/cm)	Temperature (° Cent.)	Turbidity (NTUs)			
7.79	1,109.8	9.3	21.9			

(Continued on next page)

Team Leader (Initials) TS Date 3/1/16

Continuation of sample GM07SW0116

Instrument Nos (i.e., #1, #2, #3, etc):

pH 1 Conductivity 1 Temperature 1 Turbidity 2

NOTE: Key to instrument numbers, instrument calibration and field distribution information maintained in separate instrument calibration logbook.

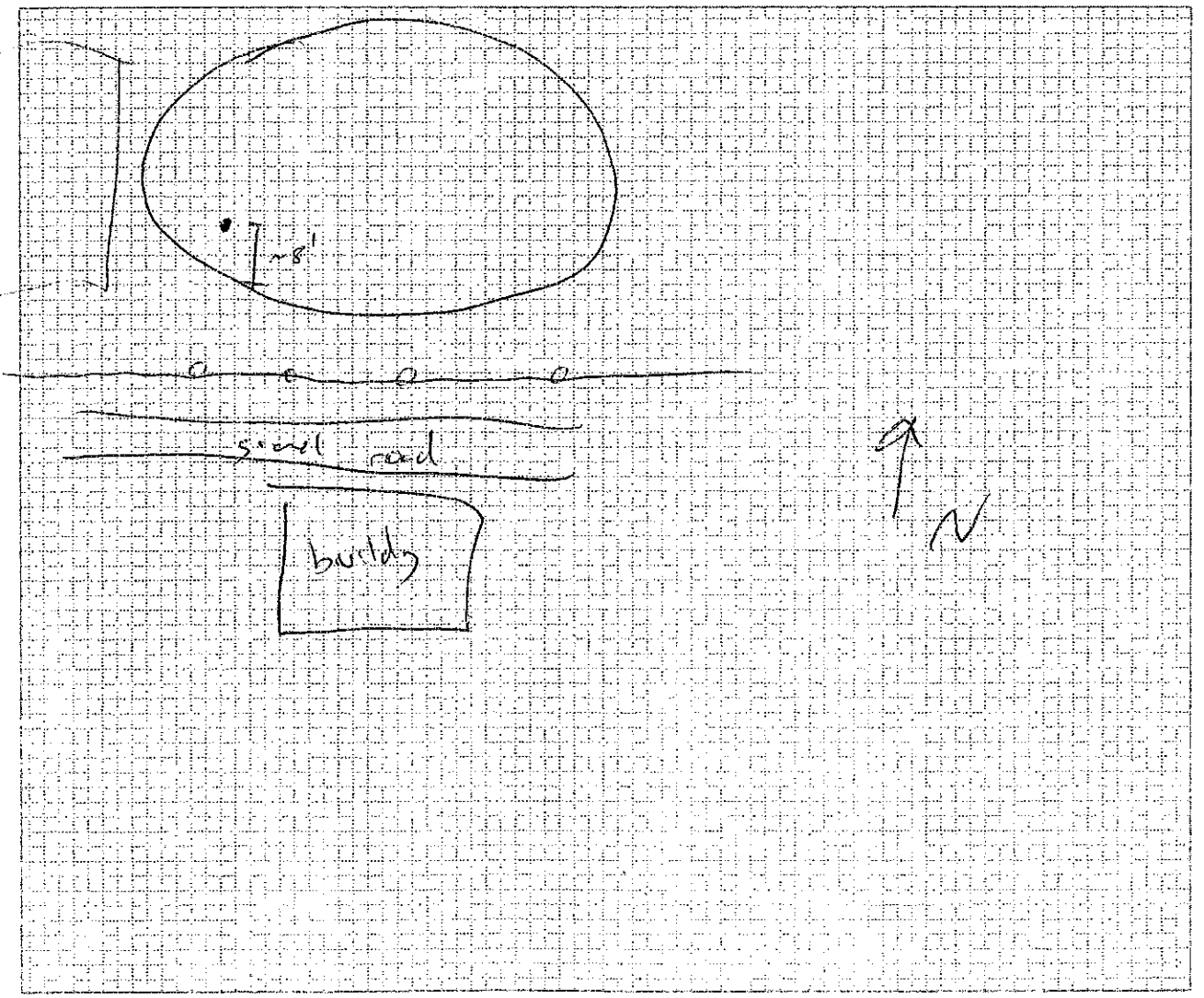
Laboratory Analyses and containers (continue on grid below, if necessary):

Analyses	Container Type	Number of Containers	Preservation
VOC	VOA 40mL	3 (+3 dup)	HCl

MS/MSD? Y or N [ ] All samples placed on ice/cooler checked for ice/water

Condition of Ice / Time Observed / Initials of Observer				

Grid for sketch, continuations, photo logs, etc.



Team Leader (Initials) _____ Date 3/1/16

Date: 1/12/16 **Station ID:** GM06 **Sample ID:** GM06SW0116 **Notes (Initial):** [illegible]

Sample Team:	Initials	Duties
	[illegible]	
	TS	
	[illegible] 1/12/16	[illegible]

GPS Coordinates: *Latitude:* 33.80439 N *Longitude* -89.80107 [illegible] 1/12/16 W

Garmin [✓] Serial Number OSC 111 - 17 Accuracy ± 8 feet

Trimble [ ] Garmin [ ] SESD Instrument #: ______ Logged? Y or N

File name and back-up location (laptop, thumb drive, etc.) ______

Description of sample location:

east side of pond, roughly 3' below surface

GPS Operator Initials: [illegible]

SESD Operating Procedures: *Check, as appropriate*

Measurement Procedures:

SESDPROC-100-R2, Field pH Measurement [✓]
SESDPROC-101-R2, Field Specific Conductance Measurement [✓]
SESDPROC-102-R2, Field Temperature Measurement [✓]
SESDPROC-103-R2, Field Turbidity Measurement [✓]
SESDPROC-110-R2, Global Positioning System [✓]

Environmental/Waste Sampling Procedures:

SESDPROC-201-R1, Surface Water Sampling ✓

Other Procedures, if applicable:

______

Specific Sampling Procedure/Method (including equipment ID, as appropriate):

______

Description of Media/Sample:

slightly turbid, no odor

Other pertinent information (weather conditions, etc.):

clear, cool

SAMPLE COLLECTION TIME: 1700 **COLLECTED BY (INITIALS):** [illegible]

Filtered Sample: *Yes or (No)* **If yes, Filter Type:** ______, ______ **um (size)**

If Filtered, Filtered By (Initials): –

Field Split: *Yes or (No)* **Split Sample ID, Date and Time:** ______

In-situ measurements: ***IN-SITU* MEASUREMENT BY (INITIALS):** ______

pH (SUs)	Spec. Cond. (umhos/cm)	Temperature (° Cent.)	Turbidity (NTUs)	–	–	–
8.07	309.9	8.7 °C	7.58			

(Continued on next page)

Continuation of sample GM06 SW0116

Instrument Nos (i.e., #1, #2, #3, etc):

pH 1 Conductivity 1 Temperature 1 Turbidity 2

NOTE: Key to instrument numbers, instrument calibration and field distribution information maintained in separate instrument calibration logbook.

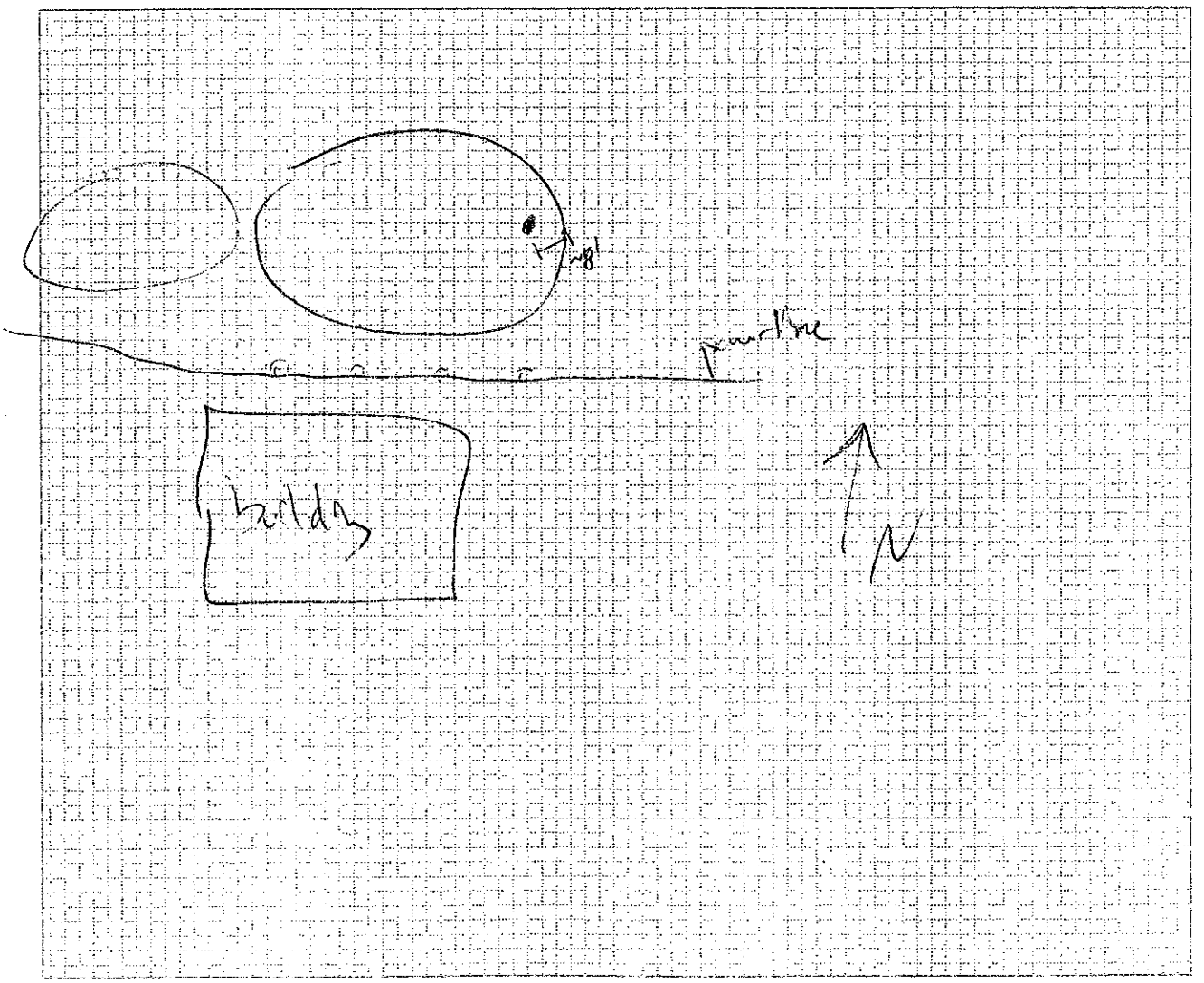
Laboratory Analyses and containers (continue on grid below, if necessary):

Analyses	Container Type	Number of Containers	Preservation
VOC	40mL VOA	6	HCl

MS/MSD? (Y) or N [ ] All samples placed on ice/cooler checked for ice/water

Condition of Ice / Time Observed / Initials of Observer				

Grid for sketch, continuations, photo logs, etc.



Team Leader (Initials) [signature] Date 3/1/16

Date: 1/13/16 **Station ID:** GM08 **Sample ID:** GM08SW0119 **Notes (Initial):** ZP

Sample Team:	Initials	Duties
	ZP	
	TS	

GPS Coordinates: *Latitude:* 33.80489 N *Longitude* 89.80649 W

Garmin [✓] Serial Number 080111-17 Accuracy ±9 feet

Trimble [ ] Garmin [ ] SESD Instrument #: _____ Logged? Y or N

File name and back-up location (laptop, thumb drive, etc.) _____

Description of sample location:

stream east of site, just west of PRB ZP 1/13/16

GPS Operator Initials: ZP

SESD Operating Procedures: *Check, as appropriate*

Measurement Procedures:

SESDPROC-100-R2, Field pH Measurement [✓]
SESDPROC-101-R2, Field Specific Conductance Measurement [✓]
SESDPROC-102-R2, Field Temperature Measurement [✓]
SESDPROC-103-R2, Field Turbidity Measurement [✓]
SESDPROC-110-R2, Global Positioning System [✓]

Environmental/Waste Sampling Procedures:

SESDPROC-201-R1, Surface Water Sampling ✓

Other Procedures, if applicable:

none

Specific Sampling Procedure/Method (including equipment ID, as appropriate):

peristaltic pump/teflon tubby, soda straw technique to fill VOAs

Description of Media/Sample:

slightly turbid, no odor

Other pertinent information (weather conditions, etc.):

clear, sunny

SAMPLE COLLECTION TIME: 1135 **COLLECTED BY (INITIALS):** _____

Filtered Sample: *Yes or* (No) **If yes, Filter Type:** _____, _____ **um (size)**

If Filtered, Filtered By (Initials): _____

Field Split: *Yes or* (No) **Split Sample ID, Date and Time:** _____

In-situ measurements: ***IN-SITU* MEASUREMENT BY (INITIALS):** _____

pH (SUs)	Spec. Cond. (umhos/cm)	Temperature (° Cent.)	Turbidity (NTUs)			
7.10	227.1	8.6	18.1			

(Continued on next page)

Continuation of sample GM08SW-0119

Instrument Nos (i.e., #1, #2, #3, etc):

pH 1 Conductivity 1 Temperature 1 Turbidity 2

NOTE: Key to instrument numbers, instrument calibration and field distribution information maintained in separate instrument calibration logbook.

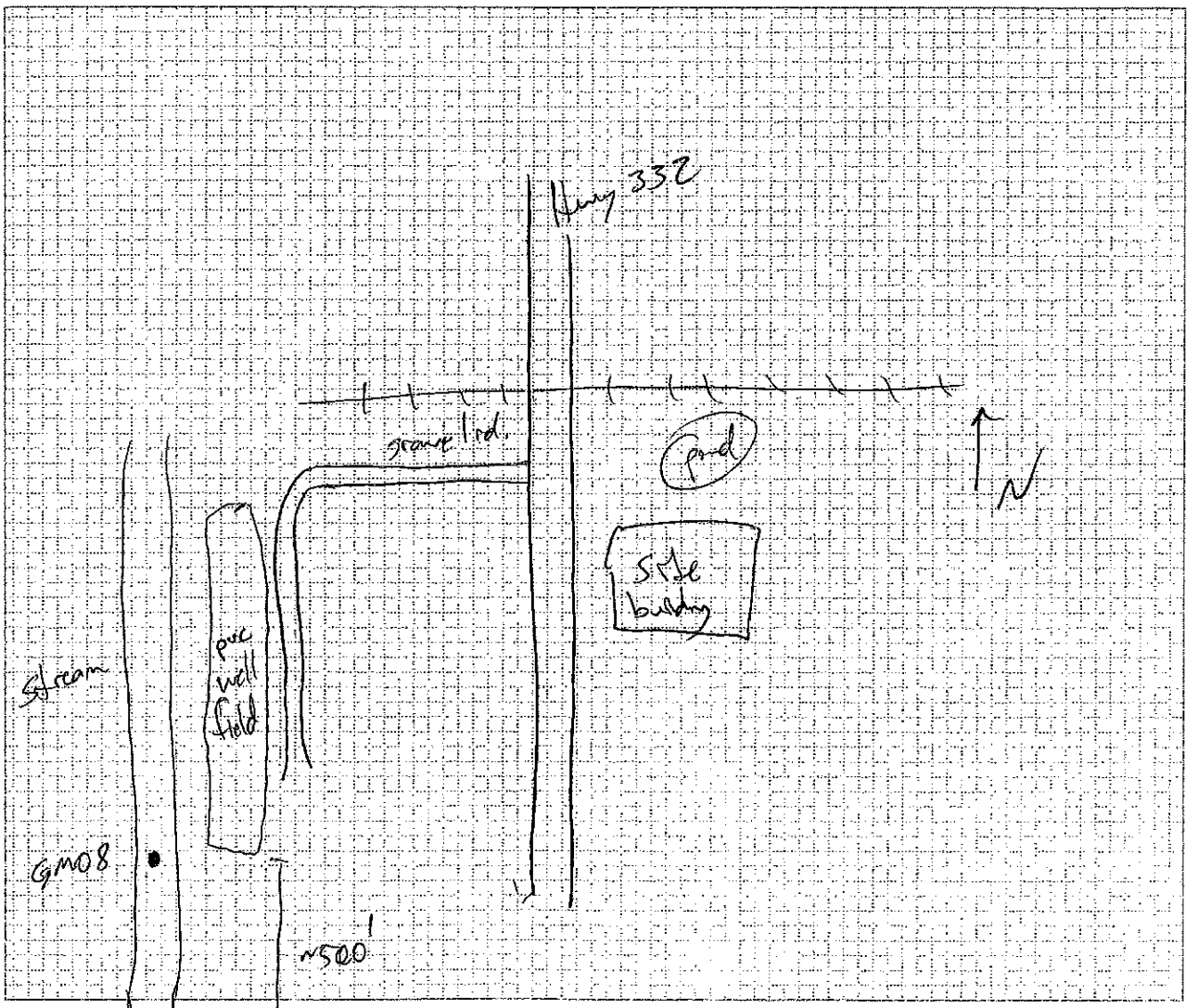
Laboratory Analyses and containers (continue on grid below, if necessary):

Analyses	Container Type	Number of Containers	Preservation
VOC	40 mL VOA	3	HCl

MS/MSD? Y or (N) [✓] All samples placed on ice/cooler checked for ice/water

Condition of Ice / Time Observed / Initials of Observer				

Grid for sketch, continuations, photo logs, etc.



Team Leader (Initials) _____ Date 3/1/16

Date: 1/13/16 Station ID: GM09 Sample ID: GM09SW0119 Notes (Initial): ZP

Sample Team:	Initials	Duties
	ZP	
	TS	

GPS Coordinates: *Latitude:* 33.80359 N *Longitude* 89.80844 W

Garmin [✓] Serial Number C80111-17 Accuracy ± 10 feet

Trimble [ ] Garmin [ ] SESD Instrument #: _____ Logged? Y or N

File name and back-up location (laptop, thumb drive, etc.) _____

Description of sample location:

stream, west of stk, ~500' downstream of GM08

GPS Operator Initials: ZP

SESD Operating Procedures: *Check, as appropriate*

Measurement Procedures:

SESDPROC-100-R2, Field pH Measurement [✓]
SESDPROC-101-R2, Field Specific Conductance Measurement [✓]
SESDPROC-102-R2, Field Temperature Measurement [✓]
SESDPROC-103-R2, Field Turbidity Measurement [✓]
SESDPROC-110-R2, Global Positioning System [✓]

Environmental/Waste Sampling Procedures:

SESDPROC-201-R1, Surface Water Sampling ✓

Other Procedures, if applicable:

none

Specific Sampling Procedure/Method (including equipment ID, as appropriate):

peristaltic pump/teflon tubing sonde flow technique

Description of Media/Sample:

slightly turbid, no odor

Other pertinent information (weather conditions, etc.):

sunny, cool

SAMPLE COLLECTION TIME: 1715 **COLLECTED BY (INITIALS):** ZP

Filtered Sample: *Yes* or (No) **If yes, Filter Type:** _____, _____ **um (size)**

If Filtered, Filtered By (Initials): _____

Field Split: *Yes* or (No) **Split Sample ID, Date and Time:** _____

In-situ measurements: ***IN-SITU* MEASUREMENT BY (INITIALS):** _____

pH (SUs)	Spec. Cond. (umhos/cm)	Temperature (° Cent.)	Turbidity (NTUs)	_____	_____	_____
7.03	215.6	10.8	17.6	"	"	"

(Continued on next page)

Team Leader (Initials) ZP Date 3/1/16

Continuation of sample GM095W0119

Instrument Nos (i.e., #1, #2, #3, etc):

pH 1 Conductivity 1 Temperature 1 Turbidity 2

NOTE: Key to instrument numbers, instrument calibration and field distribution information maintained in separate instrument calibration logbook.

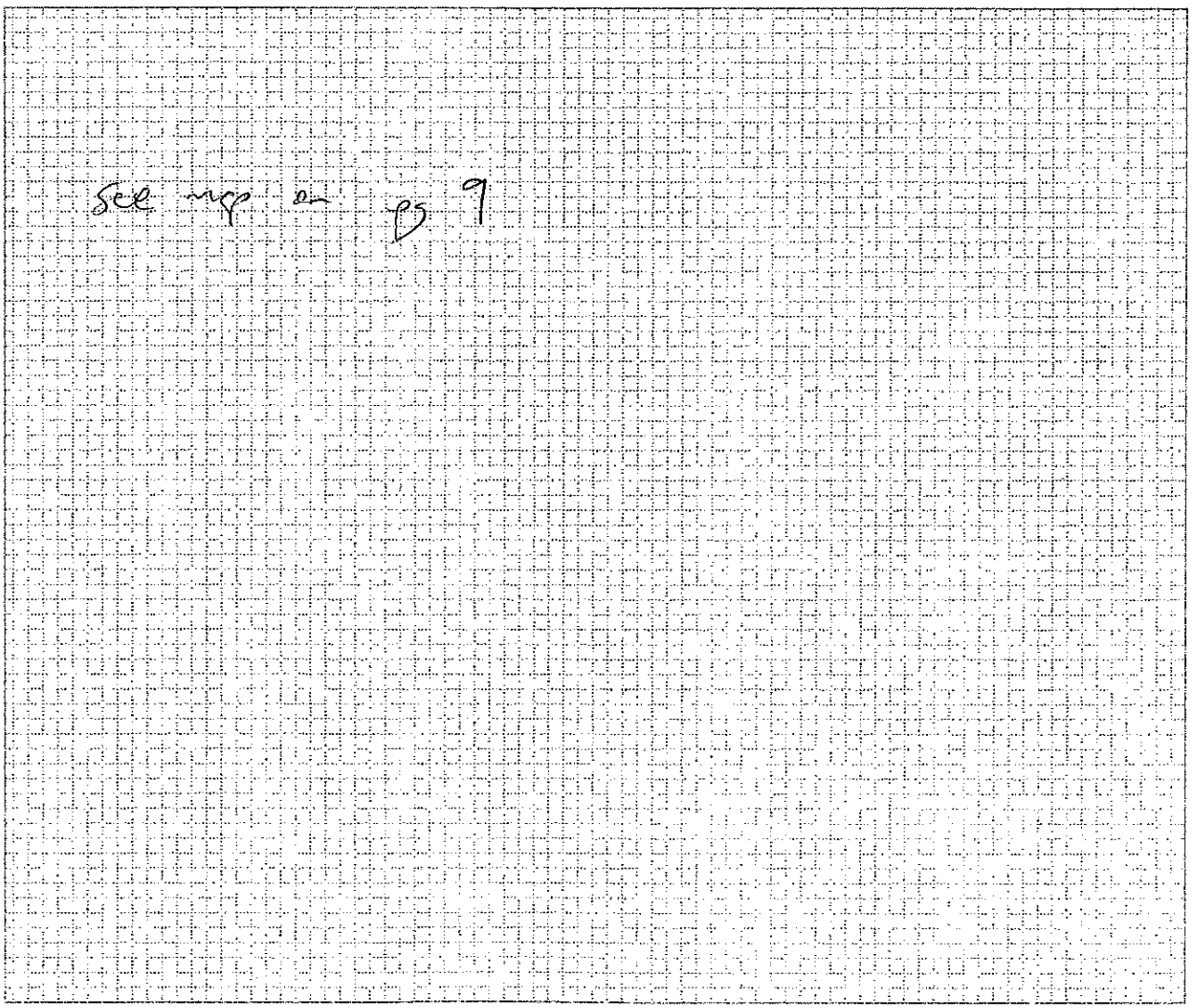
Laboratory Analyses and containers (continue on grid below, if necessary):

Analyses	Container Type	Number of Containers	Preservation
VOC	40mL VOA	3	HCl

MS/MSD? Y or (N) [✓] All samples placed on ice/cooler checked for ice/water

Condition of Ice / Time Observed / Initials of Observer				

Grid for sketch, continuations, photo logs, etc.



Team Leader (Initials) [illegible] Date 3/1/16

Date: _____ **Station ID:** _____ **Sample ID:** _____ **Notes (Initial):** _____

Sample Team:	**Initials**	**Duties**

GPS Coordinates: *Latitude:* _____ N *Longitude* _____ W

Garmin [ ] Serial Number _____ Accuracy _____ feet

Trimble [ ] Garmin [ ] SESD Instrument #: _____ Logged? Y or N

File name and back-up location (laptop, thumb drive, etc.) _____

Description of sample location:

_____

GPS Operator Initials: _____

SESD Operating Procedures: *Check, as appropriate*

no info JP 3/25/16

Measurement Procedures:

SESDPROC-100-R2, Field pH Measurement [ ]
SESDPROC-101-R2, Field Specific Conductance Measurement [ ]
SESDPROC-102-R2, Field Temperature Measurement [ ]
SESDPROC-103-R2, Field Turbidity Measurement [ ]
SESDPROC-110-R2, Global Positioning System [ ]

Environmental/Waste Sampling Procedures:

SESDPROC-201-R1, Surface Water Sampling

Other Procedures, if applicable:

_____

Specific Sampling Procedure/Method (including equipment ID, as appropriate):

_____

Description of Media/Sample:

_____

Other pertinent information (weather conditions, etc.):

_____

SAMPLE COLLECTION TIME: _____ **COLLECTED BY (INITIALS):** _____

Filtered Sample: *Yes or No* **If yes, Filter Type:** _____, _____ **um (size)**

If Filtered, Filtered By (Initials): _____

Field Split: *Yes or No* **Split Sample ID, Date and Time:** _____

In-situ measurements: ***IN-SITU* MEASUREMENT BY (INITIALS):** _____

pH (SUs)	Spec. Cond. (umhos/cm)	Temperature (° Cent.)	Turbidity (NTUs)	_____	_____	_____

(Continued on next page)

Continuation of sample _____

Instrument Nos (i.e., #1, #2, #3, etc):

pH _____ Conductivity _____ Temperature _____ Turbidity _____

NOTE: Key to instrument numbers, instrument calibration and field distribution information maintained in separate instrument calibration logbook.

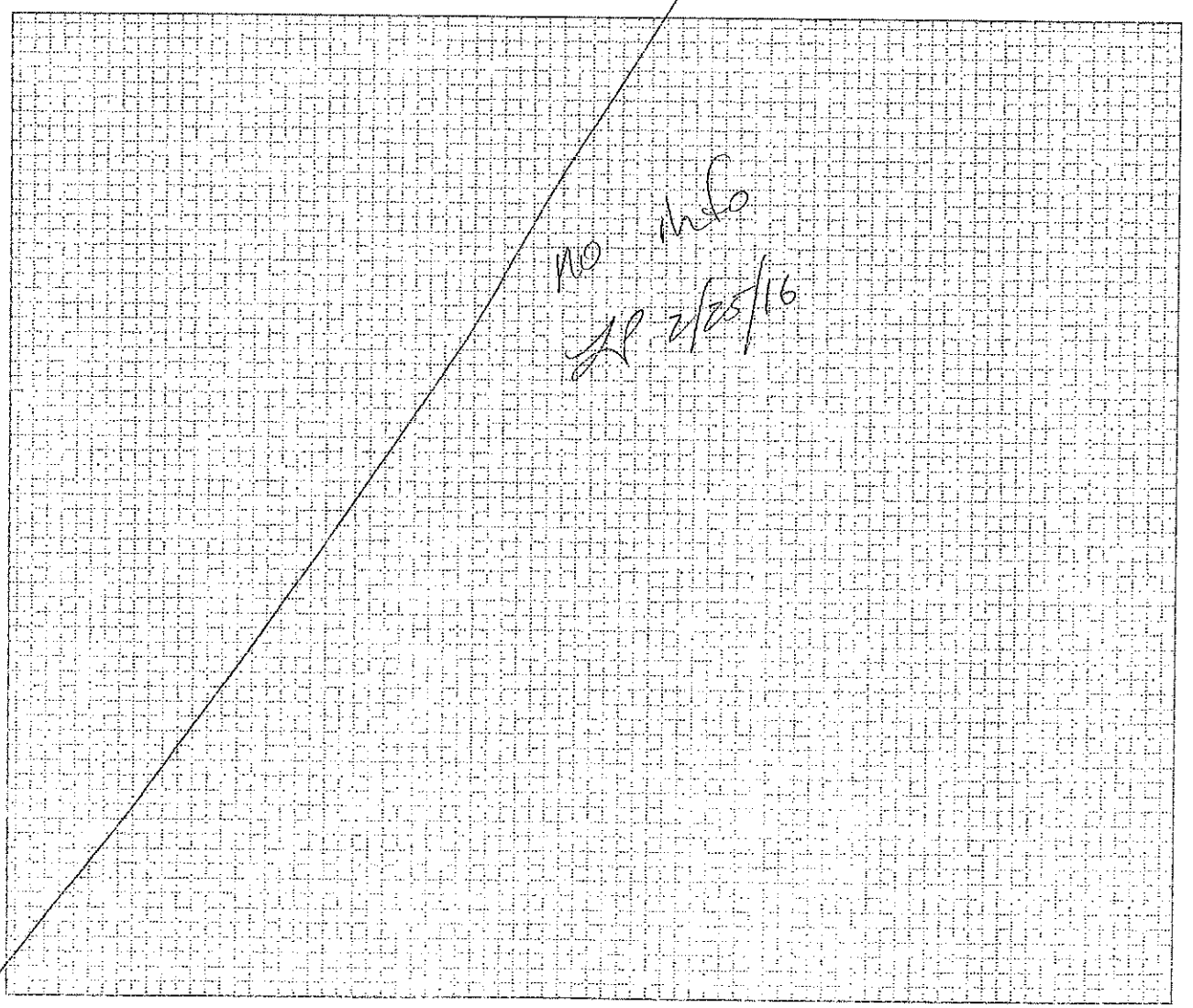
Laboratory Analyses and containers (continue on grid below, if necessary):

Analyses	Container Type	Number of Containers	Preservation

MS/MSD? Y or N [ ] All samples placed on ice/cooler checked for ice/water

Condition of Ice / Time Observed / Initials of Observer				

Grid for sketch, continuations, photo logs, etc.



Team Leader (Initials) _____ Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM01 Sample I.D. GM01AA0116
<Station ID>/<media code>/<Date>

GPS Location 33.80508, -89.80012 (±7') Garmin 080111-17

Street Address –

Site Description duplicate location (primary sample), north of pond, right of way on gravel road

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth – Orifice or Flow Controller # 3

Canister # 3939

Name of Person Collecting Sample Tim Slagle

Start Date 1/13/16 Start Time 1011 30" Hg

Stop Date 10/14/16 Stop Time 1024 3" Hg

S wind @ 1425

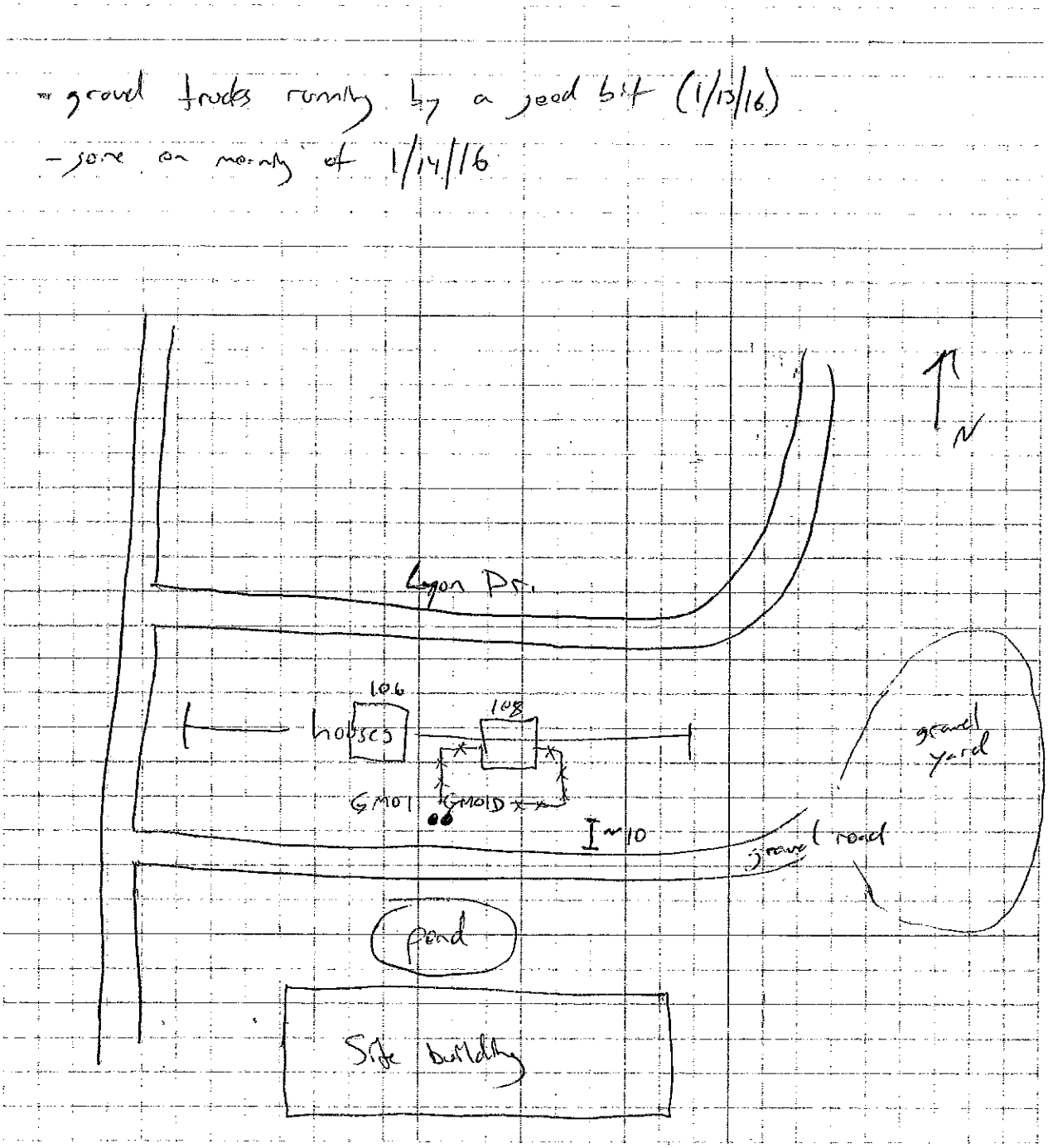
Notes: (other measurements)

(liquid petrol)
~4 rail car tankers were sitting just ~40' S of this location on the night of 1/12/16; were gone when we showed up morning of 1/13/16; 1/14/16 looks like they moved to gravel yard

Continued next page

Continuation of field record for sample GM01 AA0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____

Team Leader (Initials) _____ Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM01 Sample I.D. GM01DAA0116
<Station ID>/<media code>/<Date>

GPS Location see pg 14

Street Address —

Site Description see pg 14

duplicate

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth — Orifice or Flow Controller # 4

Canister # 3927

Name of Person Collecting Sample Tim Slagle

Start Date 1/13/16 Start Time 1011 30" Hg

Stop Date 1/14/16 Stop Time 1024 3" Hg

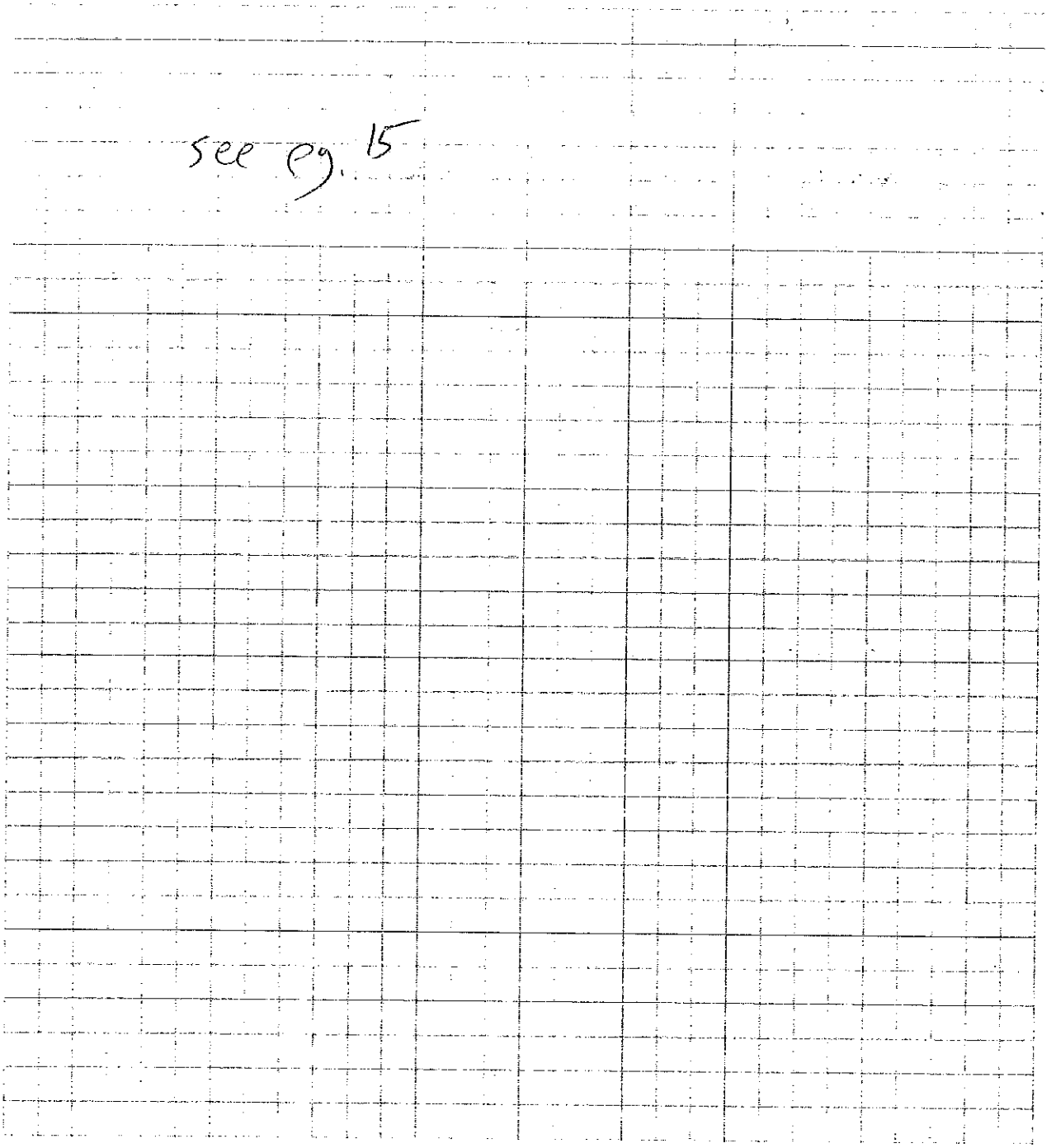
see pg 14

Notes: (other measurements)

Continued next page

Continuation of field record for sample GM01DAA0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____

Team Leader (Initials) AP Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM05 Sample I.D. GM05AA0116
<Station ID>/<media code>/<Date>

GPS Location 33.80485, -89.79810 Garmin 080111-17 (±9')

Street Address —

Site Description up old spur/rail like near yard yard, east side of neighborhood

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth — Orifice or Flow Controller # 1

Canister # 3928

Name of Person Collecting Sample Tim Slagle

Start Date 1/13/16 Start Time 1009 30" Hg

Stop Date 1/14/16 Stop Time 1016 3" Hg

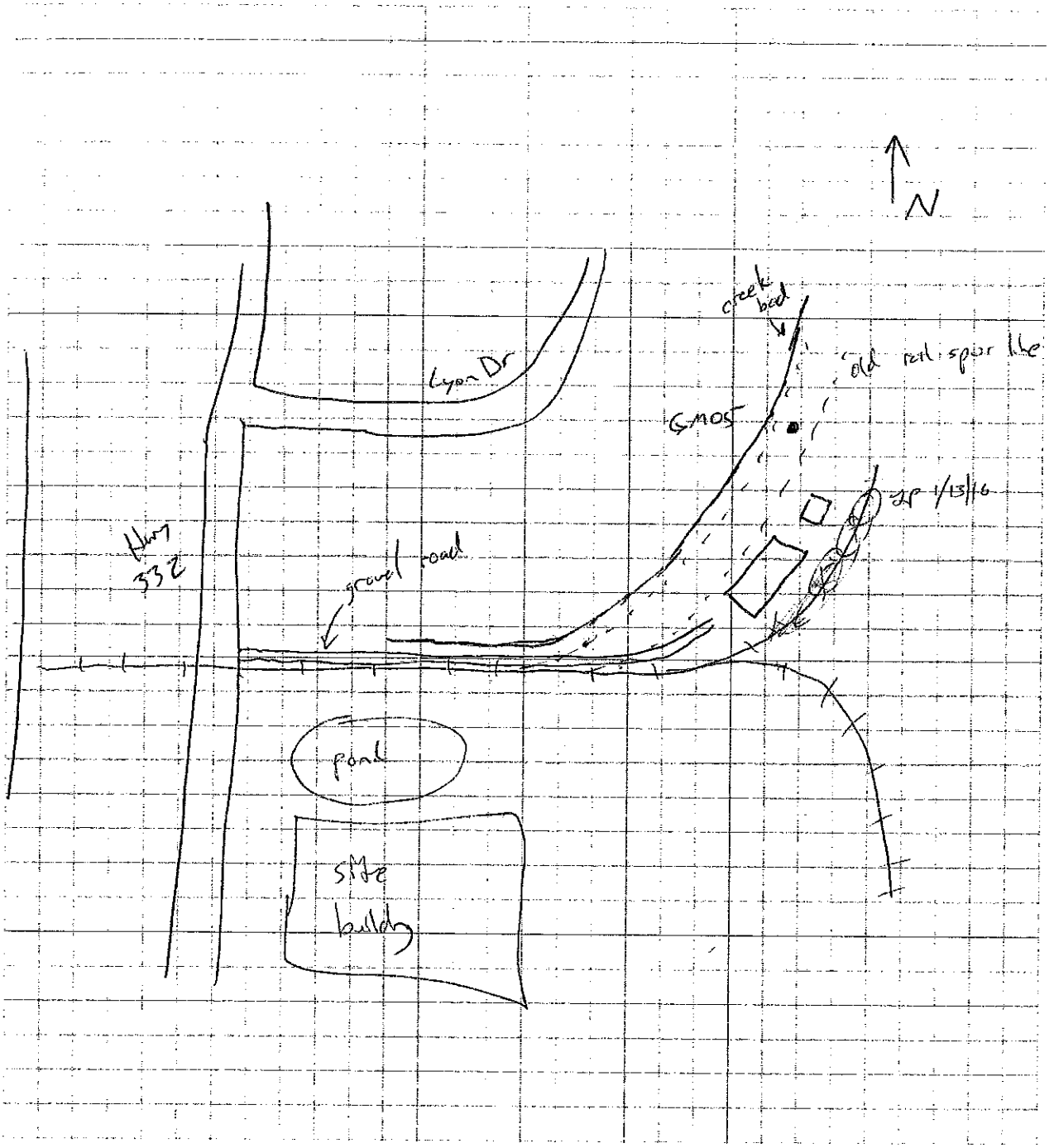
slight S wind @ 1410

Notes: (other measurements)

Continued next page

Continuation of field record for sample GM05AA0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____

Team Leader (Initials) _____ Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM02 Sample I.D. GM02AA0116
<Station ID>/<media code>/<Date> zp 1/15/16

GPS Location 33.80521, -89.80247 (± 8') Garmin 080111-017

Street Address —

Site Description just north-west of old wastewater treatment facility on site

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth — Orifice or Flow Controller # 2

Canister # 5935

Name of Person Collecting Sample Tim Slagle

Start Date 1/13/16 Start Time 1015 30" Hg

Stop Date 1/14/16 Stop Time ~~1016~~ 1030 8" Hg (on calibrated mark)
zp 1/14/16

S wind @ 1945 (1/13/16); S wind @ 1030 (1/14/16)

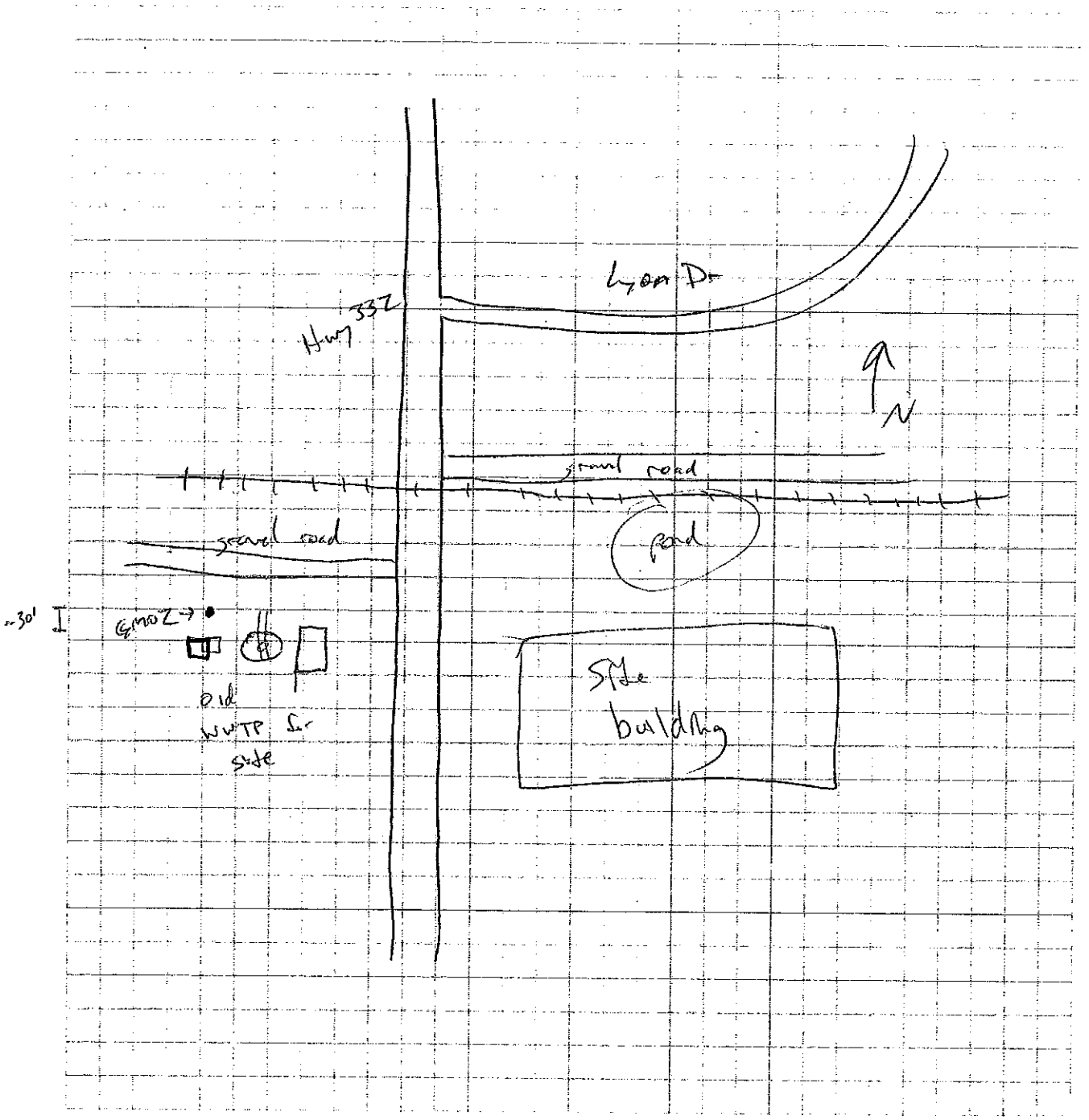
Notes: (other measurements)

Continued next page

Team Leader (Initials) ZP Date 3/1/16

Continuation of field record for sample GM02AA0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____

Team Leader (Initials) _____ Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM03 Sample I.D. GM03 AA 0116
<Station ID>/<media code>/<Date>

GPS Location 33.80584, -89.80123 (±10')

Street Address —

Site Description on road right-away, south west side (corner) of neighborhood; Hwy 332 & Lyon Dr.

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth — Orifice or Flow Controller # 5

Canister # 9394

Name of Person Collecting Sample Tim Slyke

Start Date 1/13/16 Start Time 1002 30" Hg

Stop Date 1/14/16 Stop Time 1003 6X" Hg
3P 1/14/16

slight wind out of N @ 1000, out of S @ 1400

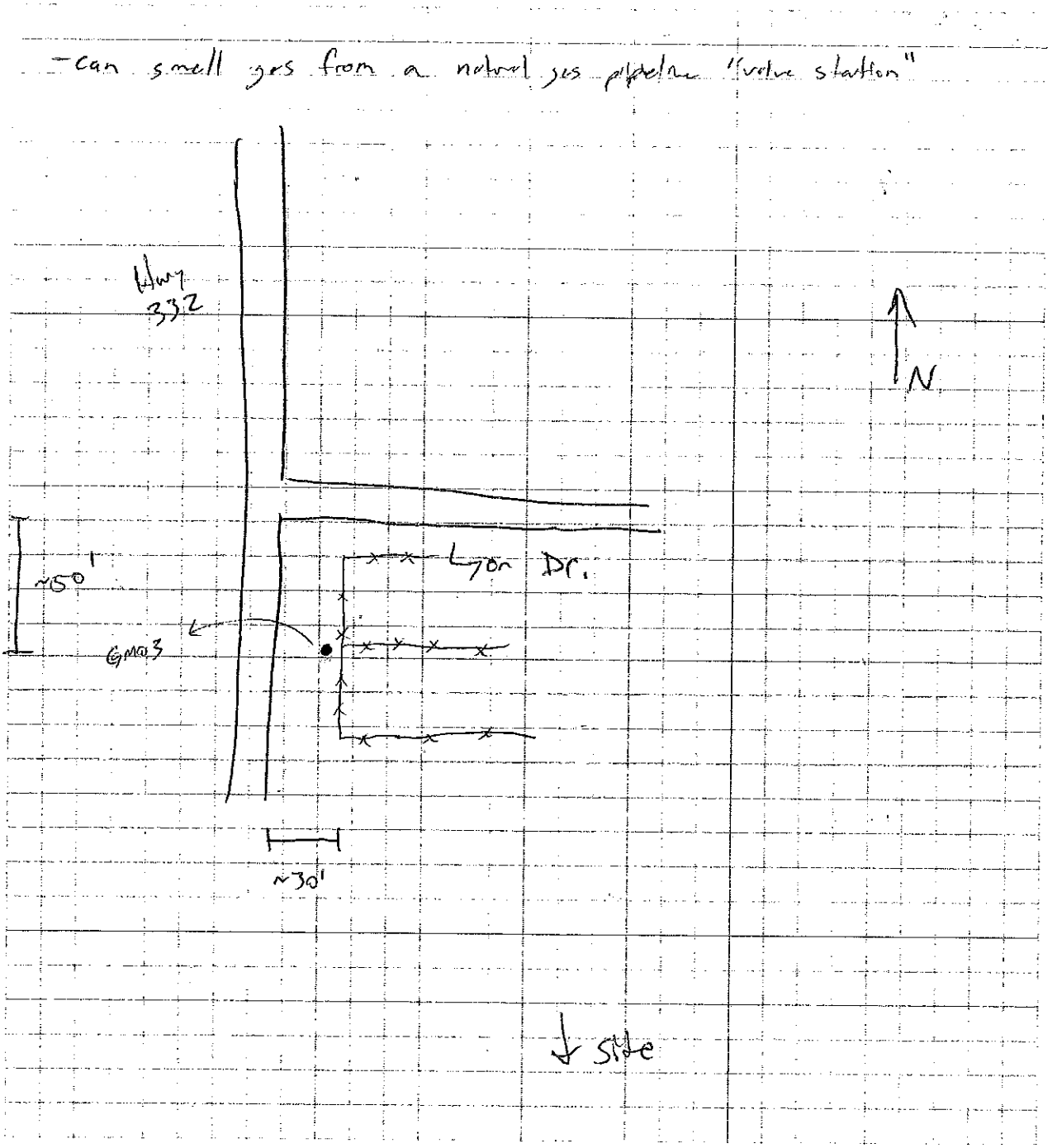
Notes: (other measurements)

Continued next page

Team Leader (Initials) JT Date 3/1/16

Continuation of field record for sample GM03AA0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____

Team Leader (Initials) ____ Date 3/1/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. GM04 Sample I.D. GM04 AA 0116
<Station ID>/<media code>/<Date>

GPS Location 33.80659, -89.79977 (±9') Garmin 080111-17

Street Address on Tallahoma Circle (playground)

Site Description playground, middle of neighborhood

Type of sample: (Air Sample) Soil Gas Sample

Sampling Depth — Orifice or Flow Controller # 6

Canister # 4476

Name of Person Collecting Sample Tim Slagle

Start Date 1/13/16 Start Time 0958 30" Hg

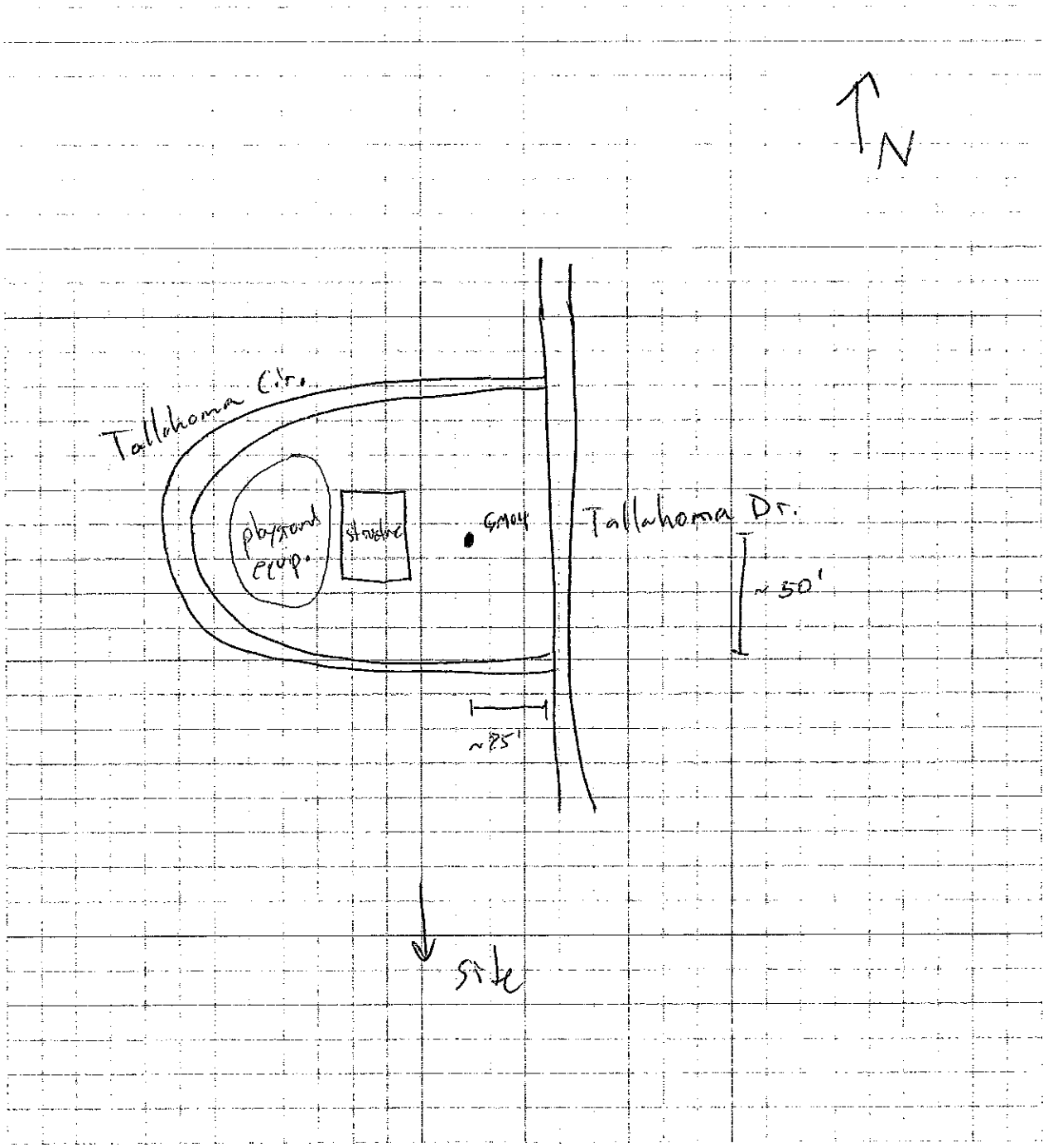
Stop Date 1/14/16 Stop Time 0957 4" Hg

Notes: (other measurements) wind slight out of N @ 1000, slight out of S @ 1400 (1/13/16)

Continued next page

Continuation of field record for sample GM04 AA 0116

Other Notes/Sketch (Include North and Scale)



Sample Team Leader/Sampler Signature/Date _____ 1/13/16

Team Leader (Initials) _____ Date 1/13/16

US EPA Region 4
Grenada Manufacturing Ambient Air Study
Grenada, Grenada County, Mississippi
SESD Project ID NO: 16-0152
January 2016

Station I.D. _____ Sample I.D. _____
<Station ID>/<media code>/<Date >

GPS Location _____

Street Address _____

Site Description _____

_____

Type of sample: Air Sample Soil Gas Sample

Sampling Depth _____ Orifice or Flow Controller #_____

Canister # _____

Name of Person Collecting Sample_____

Start Date _____ Start Time _____

Stop Date _____ Stop Time _____

_____

Notes: (other measurements)

end of logbook
JH 3/1/16

Continued next page

United States Environmental Protection Agency
Region 4
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720

Grenada Manufacturing Ambient Air Study

SESD Project ID# 16-0152
Landon Pruitt, Project Leader

Field Instrument Calibration Logbook

Book 2 **of** 2

Inclusive Dates: 1/12/16 – 1/13/16

List of personnel:

Name/Affiliation	Initials
Landon Pruitt, EPA	

Notes:

blank

3/1/16

Instrument Calibration Log

Date/Time 1/12/16 **Calibrator's Initials.** [signature]

Instrument #	SESD ID#	pH	SC	Turbidity	Temp.	DO	ORP
1	020314-06	✓	✓		✓		
2	090310-07			✓			
3							
4							
5							
6							
7							
8							
9							

Calibration Standards:

Standard	Value	Manufacturer	Lot #	Expiration
pH	4	Oakton / Thermo	~~35653-01 01100710~~	~~11/2016~~ 11/2016 [signature] 1/12/16
pH	7	Oakton / Thermo	35653-02	09/2016
pH	10	Oakton / Thermo	35653-03	10/2016
Conductivity	1413µS	Thermo Orion	01100710	11/2016
Turbidity set # 10		Hach	A5154	9/2016
Turbidity set # 20		Hach	A5170	9/2016
Turbidity set # 100		~~A5169~~ Hach	A5169	9/2016
Turbidity set # 800		2nd 1/12/16 Hach	A5169	9/2016
NIST Thermometer	Temperature Dependent	Fisher		
NIST Thermometer	Temperature Dependent	Fisher		
NIST Thermometer	Temperature Dependent	Fisher		
ORP – Zobell Solution	Temperature Dependent	YSI		
ORP – Zobell Solution	Temperature Dependent	YSI		

Instrument Distribution Information

Instrument #: 1, 2 Sample Team Leader : Pruitt, L

Instrument #: _____ Sample Team Leader : _____

Instrument #: _____ Sample Team Leader : _____

Calibration: Date 1/12/16 **Time** 1515 1545 **End Check Time** 1730 **Calibrator's Initials** JP

Instrument #	Parameter	Standard Value	Pre-cal Reading	Calibration/ Verification/Slope	Post-cal Reading	End of Day Check
	pH	4	4.04	97.8%	3.98	3.99
	pH	7	7.04	"	7.06	7.02
	pH	10	9.91	"	10.06	10.11
	Cond	1413µS	1384	0.472	1436	1468
	Temp	NIST: 19.9 Instr: 19.8		—	—	NIST: 19.6 13.8 Instr:: 19.5 13.3
	Turbidity	10		9.92	—	9.91
	Turbidity	20		19.3	—	19.6
	Turbidity	100		99.0	—	98.1
	Turbidity	800		782	—	789
	DO					
	ORP					
	Temp.					NIST: Instr:
	pH	4				
	pH	7				
	pH	10				
	Cond	1413µS				
	Temp	NIST: Instr:				NIST: Instr::
	Turbidity	10				
	Turbidity	20				
	Turbidity	100				
	Turbidity	800				
	DO					
	ORP					
	Temp.					NIST: Instr::
	pH	4				
	pH	7				
	pH	10				
	Cond	1413µS				
	Temp	NIST: Instr:				NIST: Instr::
	Turbidity	10				
	Turbidity	20				
	Turbidity	100				
	Turbidity	800				
	DO					
	ORP					
	Temp.					NIST: Instr::

1/12/16 JP

Ambient temperature during calibration:

Ambient temperature end of day check:

Calibration: Date 1/13/16 **Time** 1040 **End Check Time** 1300 **Calibrator's Initials.** JC

Instrument #	Parameter	Standard Value	Pre-cal Reading	Calibration/ Verification/Slope	Post-cal Reading	End of Day Check
	pH	4	3.95	–	3.98	3.99
	pH	7	7.05	97.7%	7.02	7.07
	pH	10	10.09	–	10.10	10.09
	Cond	1413µS	1353	0.523	1482	1603
	Temp	NIST: 7.9 Instr: 8.2				NIST: 19.6 Instr:: 19.3
	Turbidity	10		–	9.71	9.71
	Turbidity	20		–	18.9	19.1
	Turbidity	100		–	97.4	97.8
	Turbidity	800		–	789	~~778~~ 797
	DO					JC 1/13/16
	ORP					
	Temp.					NIST: Instr:
	pH	4				
	pH	7				
	pH	10				
	Cond	1413µS				
	Temp	NIST: Instr:				NIST: Instr::
	Turbidity	10				
	Turbidity	20				
	Turbidity	100				
	Turbidity	800				
	DO					
	ORP					
	Temp.					NIST: Instr::
	pH	4				
	pH	7				
	pH	10				
	Cond	1413µS				
	Temp	NIST: Instr:				NIST: Instr::
	Turbidity	10				
	Turbidity	20				
	Turbidity	100				
	Turbidity	800				
	DO					
	ORP					
	Temp.					NIST: Instr::

Ambient temperature during calibration:

Ambient temperature end of day check:

Additional Notes, if needed:

end of logbook

3/11/16

E160310

USEPA Region 4 COC (REGION COPY)

DateShipped: 1/14/2016
CarrierName: GOV Carrier
AirbillNo:

CHAIN OF CUSTODY RECORD

Grenada Manufacturing/MS
Project Number: 16-0152
Cooler #:

No: 01/13/16-0003

Lab: Region 4 Lab
Lab Contact: Mike Beall
Lab Phone: 706-355-8856

	Sample Identifier	CLP Sample No.	Media/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
-04	GM01DAA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM01	01/13/2016 10:11	Field Duplicate
-05	GM02AA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM02	01/13/2016 10:15	Field Sample
-06	GM03AA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM03	01/13/2016 10:02	Field Sample
-07	GM04AA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM04	01/13/2016 09:58	Field Sample
-08	GM05AA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM05	01/13/2016 10:09	Field Sample
-09	GM06SW0116		Surface Water/ Pruitt, Landon	Grab	VOA	A (HCl pH <2) (3) 6	GM06	01/12/2016 17:00	Field Sample
-10	GM07DSW0116		Surface Water/ Pruitt, Landon	Grab	VOA	A (HCl pH <2) (3) 2	GM07	01/12/2016 16:30	Field Duplicate
-12	GM08SW0116		Surface Water/ Pruitt, Landon	Grab	VOA	A (HCl pH <2) (3) ✓	GM08	01/13/2016 11:35	Field Sample
-13	GM09SW0116		Surface Water/ Pruitt, Landon	Grab	VOA	A (HCl pH <2) (3) ✓	GM09	01/13/2016 12:15	Field Sample
-03	GM01AA0116		Ambient Air/ Slagle, Tim	Comp.	VOA	A (1) ✓	GM01	01/13/2016 10:11	Field Sample

Sample(s) to be used for Lab QC: GM06SW0116 Tag A - Special Instructions: GM01=can# 3939, GM01D=can#3927, GM05=can# 3928, GM02=can# 5935, GM03=can# 4394, GM04=can#4476, GM TBA = can # 3910 SP 1/13/16

Analysis Key: VOA=(VOA) Volatile Organics

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	SESD	1/14/16 19:44	RMBeall EPA SESD ASB	1-15-16 0835	Good

E160310

USEPA Region 4 COC (REGION COPY)

DateShipped: 1/14/2016
CarrierName: GOV Carrier
AirbillNo:

CHAIN OF CUSTODY RECORD

Grenada Manufacturing/MS
Project Number: 16-0152
Cooler #:

No: 01/13/16-0003

Lab: Region 4 Lab
Lab Contact: Mike Beall
Lab Phone: 706-355-8856

	Sample Identifier	CLP Sample No.	Media/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
-11	GM07SW0116		Surface Water/ Pruitt, Landon	Grab	VOA	A (HCl pH <2) (3) ✓	GM07	01/12/2016 16:30	Field Sample
-01	GMTBA0116		Trip Blank Air/ Slagle, Tim	Grab	VOA	A (1) ✓	#R4DART#	01/12/2016 08:00	Trip Blank
-02	GMTBW0116		Trip Blank Water/ Slagle, Tim	Grab	VOA	A (HCl pH <2) (2) ✓	#R4DART#	01/12/2016 08:00	Trip Blank

Special Instructions: GM01=can# 3939, GM01D=can#3927, GM05=can# 3928, GM02=can# 5935, GM03=can# 4394, GM04=can#4476

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: VOA=(VOA) Volatile Organics

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature] SESD	1/14/16 17:44	RMBeall EPA SESD ASB	1-15-16 0835	Good

END OF REPORT