ERM

The Towers at Wildwood
3200 Windy Hill Road, Suite 1500W
Atlanta, GA
30339

Telephone: +1 678 486 2700
Fax: +1 404 745 0103

www.erm.com

February 13, 2019

Mr. Jason Metzger, Project Manager
Response and Remediation Program
Environmental Protection Division
Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr. SE
Suite 1054 East
Atlanta, Georgia 30334-9000

Reference: 0190949

Subject: VRP 2nd Semiannual Progress Report Murata Electronics, N.A., HSI #10771

Dear Mr. Kloet:

Please find enclosed one (1) hard copy and two (2) electronic copies of the 2nd Semiannual Progress Report for the Murata site located in Rockmart, Georgia.

Please do not hesitate to call if you have any questions or concerns regarding this Progress Report.

Yours sincerely



Nicolas Vrey
Project Manager

Cc: Kevin Crampsie, Murata Electronics

ERM

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Mr. Jason Metzger, Project Manager
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Environmental Protection Division
Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr. SE
Suite 1054 East
Atlanta, Georgia 30334-9000

Reference: 0190949

Subject: Transmittal of Electronic Version of 2nd Semiannual Progress Report
Murata Electronics, N.A.
308 Prospect Road
Rockmart, Polk County, Georgia
HSI Site No. 10771

I have enclosed electronic versions of Transmittal of Electronic version 2nd Semiannual Progress Report Murata Electronics, N.A.308 Prospect Road Rockmart, Polk County, Georgia HSI Site No. 10771pdf files on Compact Disc to accompany the hard copy report. This certification states that the electronic copy is complete, identical to the paper copy and virus free.

I, Holly H. McDonald, on February 13, 2019 made a complete electronic copy of the following document:
Transmittal of Electronic Version of the Submittal of the
2nd Semiannual Progress Report
Murata Electronics, N.A.
308 Prospect Road
Rockmart, Polk County, Georgia
HSI Site No. 10771
then confirmed that the electronic copies did not contain a virus utilizing Symantec antivirus software.

You can contact me at 678.486.2700 with any questions or comments.

Best regards,

Holly H. McDonald

Office Manager, ERM Atlanta



Murata Electronics, N.A

2nd Semiannual Progress Report

Murata, Rockmart, Georgia HSI No. 10771

February 20, 2019

Project No.: 0190949

The business of sustainability

ERM

Signature Page

February 20, 2019

2nd Semiannual Progress Report

Murata, Rockmart, Georgia HSI No. 10771

Hunter Sartain	Nicolas Vrey
Partner-In-Charge	Project Manager

ERM Southeast, Inc.
The Towers at Wildwood
3200 Windy Hill Road, SE
Suite 1500W
Atlanta, Georgia 30339
(678) 486-2700

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Acronyms and Abbreviations

Name	Description
AES	Analytical Environmental Services, Inc.
bgs	Below ground surface
cDCE	cis-1,2-Dichloroethene
COI	Contaminant of Interest
EPC	Exposure Point Concentration
EPD	Environmental Protection Division
ERM	ERM Group, Inc.
HSI	Hazardous Site Inventory
ISCO	In-Situ Chemical Oxidation
ITRC	Interstate Technical Regulatory Council
Murata	Murata Electronics N.A., Inc.
OSWER	Office of Solid Waste and Emergency Response
PCE	Tetrachloroethene
PDB	Passive Diffusion Bag
PID	Photoionization Detector
POD	Point of Demonstration
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RRS	Risk Reduction Standard
Site	308 Prospect Road, Rockmart, Polk County, Georgia
TCE	Trichloroethene
UCL	Upper Confidence Limit
UEC	Uniform Environmental Covenant
USEPA	United States Environmental Protection Agency
VI	Vapor Intrusion
VIRP	Voluntary Investigation and Remediation Plan
VISL	Vapor Intrusion Screening Level
VOC	Volatile Organic Compound
VRP	Voluntary Remediation Program

1. INTRODUCTION

This *2nd Semiannual Progress Report* is being submitted by Environmental Resources Management (ERM) on behalf of Murata Electronics N.A., Inc. (Murata). The Murata facility is located at 308 Prospect Road, Rockmart, Polk County, Georgia (Figure 1-1) (Site). The Site is a former electronics manufacturing facility that was closed in June 1998 and has been used as a warehouse and distribution facility since that time. The Site includes a 9.8-acre area located near the intersection of Prospect Road and Nathan Dean By-Pass and a 56,000 sq. ft. one-story brick building (Figure 1-2). Access to the Site is gained from both Prospect Road and Industrial Drive. The Site is enclosed by a 6-foot chain link fence and access gained from Prospect Road. Adjacent property owners along with the relevant tax IDs, as obtained from the qPublic.net online GIS system is identified in Figure 1-2.

The Site is listed on the Georgia Environmental Protection Division (EPD) Hazardous Site Inventory (HSI) Site Number 10771. Murata has performed a series of investigations and implemented several EPD approved corrective actions and has addressed the unsaturated and saturated materials on several parcels of the Site. A complete Site history, conceptual site model, and a description of previous investigations and corrective actions are summarized in the *Voluntary Investigation and Remediation Plan* (VIRP), ERM, March 31, 2017.

Murata submitted an application to enter the Georgia Voluntary Remediation Program (VRP) along with the VIRP to EPD in March 2017. The Site was accepted into the VRP on February 20, 2018.

Under the VRP, the schedule for submittal of progress reports is February and August semiannually. The purpose of this report is to provide EPD with an update of activities completed since submittal of the *1st Semiannual Progress Report* in August 2018. In addition, the progress report describes upcoming planned activities.

2. ACTIVITIES COMPLETED SINCE 1ST SEMIANNUAL PROGRESS REPORT

This section describes all activities that have been completed since the *1st Semiannual Progress Report* was submitted in August 2018.

2.1 Groundwater Monitoring

The sampling procedure used at the Site was switched from passive diffusion bag (PDB) sampling techniques to low flow/low volume techniques in November 2017 per EPD request. Groundwater samples were collected in October 2018 in accordance with Region 4 United States Environmental Protection Agency (USEPA) Groundwater Sampling Operating Procedure (SESDPROC-301-R1).

Groundwater samples were analyzed for volatile organic compounds (VOCs) by USEPA SW-846 Method 8260B, 1,4-dioxane by method USEPA SW-846 Method 8260B-SIM, and total Resource Conservation and Recovery Act (RCRA) metals plus iron by USEPA SW-846 Method 6010D (Tables 2-1, and 2-2). The groundwater sampling log sheets are included as Appendix A. The analytical reports for the 2018 annual groundwater sampling event are included in Appendix B.

Trip blank samples prepared by the analytical laboratory – Analytical Environmental Services, Inc. (AES) of Atlanta, Georgia – accompanied each batch of water samples collected for VOC analysis. One trip blank sample was collected for each cooler containing VOC samples for the lab.

Prior to sampling activities, ERM personnel measured water levels. The water level elevations calculated for the October 2018 event are provided in Table 2-3. Groundwater level measurements recorded during the event were used to prepare a potentiometric surface map (Figure 2-1). Interpretation of the potentiometric surface shows a groundwater mound in the central area of the Site near MW-28 extending to the southwest with an overall flow generally towards the east. During low-flow purging of each well, water quality parameters were recorded before sampling. These parameters are presented in Table 2-4.

During the sampling event, ERM attempted to locate all monitoring wells on the off-Site properties. ERM was able to locate all off-Site monitoring wells except MW-15, MW-A-1, MW-A-2, and MW-A-3, which were destroyed and/or buried due to recent off-Site grading work and were not sampled. Three on-site wells (MW-1, MW-2, MW-10, and MW-13) and one off-site well (MW-14) were dry during the sampling event and therefore not sampled. On-site well MW-28 was also not sampled due to damage.

Groundwater samples were collected for the analysis of VOCs to determine current Site conditions. The results of the VOC analyses are detailed in Table 2-1. Overall concentrations of the contaminants of concern remain largely decreased since the 2011 semiannual sampling events. PCE, TCE, and benzene were the only VOCs detected above Type 4 RRS during the October 2018 groundwater sampling event.

Figure 2-2 illustrates the October 2018 concentrations of tetrachloroethene (PCE) detected in groundwater. PCE exceeded the Type 4 Risk Reduction Standard (RRS) of 98.1 µg/L in samples collected from two wells during the October 2018 sampling event. PCE was also detected in the sample collected from a third well at a concentration below the Type 4 RRS (Table 2-1).

- MW-8: PCE was detected at 210 µg/L
- MW-29: PCE was detected at 910 µg/L
- MW-22: PCE was detected at 5.9 µg/L

Figure 2-3 illustrates the October 2018 concentrations of trichloroethene (TCE) detected in groundwater. TCE exceeded the Type 4 RRS of 5.24 µg/L in one well during the October 2018 sampling event (Table 2-1).

- MW-29: TCE was detected at 26 µg/L

Benzene, which is not a chemical used by Murata, was detected in off-site well MW-A-5 at 3,600 µg/L during the October 2018 event. MW-A-5 is located hydraulically downgradient of a compromised secondary containment structure for above ground petroleum storage tanks in the center of the Hematite Holdings (formerly Albea) property. On April 26, 2013, Murata and ERM personnel noted that the drain valve for the containment structure was broken and observed stained soil/gravel around the valve, a large crack in the concrete containment wall, and beneath a waste-oil containing tote located outside of the metal building.

1,4-Dioxane was included in the October 2018 sampling event per EPD request for the second straight event. 1,4-Dioxane was detected in two wells during the October 2018 event (MW-8 at 15 µg/L and MW-29 at 9.3 µg/L). All detections for 1-4-dioxane were below its Type 4 RRS of 104 µg/L. Concentrations of 1,4-dioxane are completely delineated to background at the Site. Figure 2-3 illustrates the October 2018 concentrations of 1,4-dioxane detected in groundwater. Murata will discontinue sampling of 1-4-dioxane since the 2017 and 2018 sampling events demonstrate that there are no Type 4 RRS concentration exceedances at the Site and 1-4-dioxane is completely delineated to background.

Groundwater samples were collected for analysis of RCRA metals and iron to determine whether the in-situ chemical oxidation (ISCO) injections were affecting the solubility/mobility of these metals into groundwater. The RCRA groundwater metals results from December 2006 were collected before ISCO injections were conducted and are used to establish baseline RCRA metals concentrations. All metals analytical results are shown in Table 2-2.

On Table 2-2, the baseline sample results are shown in blue. Sample results in which an increase from background are observed are shown in yellow. Sample results in which an increase from background is observed and which exceed the EPD Type 4 RRS are shown in red. Sample results which exceed the EPD Type 4 RRS, but no baseline samples were analyzed for comparison, are shown in orange. When inspecting the data in Table 2-2, the following should be noted:

- Full-scale ISCO began in October 2007.
- ISCO Pilot Test began in March 2007. Only MW-5, MW-8, MW-18, and MW-20 were affected by this pilot test. Therefore, metals samples collected after March 2007 for these wells are not considered baseline.

Historically, the only wells that show increasing trends of metals in groundwater since the beginning of ISCO injections are MW-3, MW-5, MW-12, MW-16, MW-19, and MW-20. Lead has been the only metal significantly increasing in each of these six wells. Other metals have fluctuated in value, but have been generally decreasing since ISCO injections began.

Type 4 RRS exceedances for lead were in samples collected from MW-3, MW-12, MW-19, MW-20, and MW-27; however, concentrations in these wells were consistent with historical results.

Chromium was detected above the Type 4 RRS in only the sample collected from MW-19. Chromium has decreased in MW-3, MW-7, MW-9, MW-12, MW-17, MW-20, and MW-23, but has increased slightly in wells MW-18, MW-19, and MW-27 compared to 2017.

During 2018, no metals in proposed point-of-demonstration wells exceeded Type 4 RRS. The only wells with metals Type 4 exceedances were in wells located on the Murata property that were used as injection wells. No wells used as monitoring only wells had a Type 4 exceedance for any of the metals. There appears to be no migration of increased metals concentrations as a result of ISCO activities. Following the completion of ISCO activities, metals concentrations appear to be generally returning to baseline conditions.

The analytical results of duplicates and equipment rinse blanks that were collected during the annual sampling event are shown in Table 2-2. The equipment rinse blank and trip blank results were below

reporting limits for all analytes. The duplicates results indicate that the analytical variability from sample collection is minimal.

2.2 Vapor Intrusion Assessment

An initial "summer" vapor intrusion (VI) sampling assessment was conducted in accordance with the Vapor Intrusion Assessment Work Plan (Work Plan) submitted as Appendix G of the VIRP. Prior to conducting sampling, sub-surface clearance activities were conducted prior to installation of sub-slab soil vapor sampling points. Georgia 811 was contacted in accordance with local regulations. Additionally, ERM retained a private utility locator to conduct geophysical surveys utilizing ground penetrating radar (GPR) and cable avoidance tools (CAT) to evaluate potential subsurface utilities in the areas where sub-slab soil vapor sampling points were to be installed. No underground utilities below the concrete floor were identified in the sampling areas. As-built/utility drawings of the warehouse were not available to review.

The June 2018 sampling event was completed on June 9 and 11, 2018. Six Vapor Pins™ were installed and allowed to equilibrate overnight. The approximate sampling locations are shown on Figure 2-5. Prior to sampling, leak checks were performed including water dam and shut-in tests. No leaks were observed in the 6 sub-slab sampling locations. Prior to sub-slab sampling, a PID was used to purge the sample location of ambient air and as a general check for the presence of potential domestic sources of VOC vapors in the vicinity of the sampling location. Upon completion of soil vapor sample collection, sub-slab sampling points were capped and left in place with a secured metal flush-mounted cover.

Differential pressure readings (i.e., sub-slab pressure relative to indoor air pressure) were collected before each sub-slab soil vapor sampling event. Readings at each sub-slab location ranged from 0.0000 inches of water column (inWC) pressure to -0.0002 inWC. Differential pressure measurements recorded little to no positive pressure in the sub-surface as compared to indoor air. Advective air flow moves from areas of higher pressure to areas of lower pressure. The collected data in the building support the indication that there is not a significant preference for air to flow from the subsurface to the indoor air.

Samples were analyzed by Alpha Analytical Laboratory of Mansfield, Massachusetts, which is approved by Georgia through the National Environmental Laboratory Accreditation Program (NELAP). Samples were analyzed for VOCs using USEPA Method TO-15. The analytical results are summarized in Table 2-5.

Analytical results for sub-slab soil vapor and indoor air were compared to USEPA VISLs. Screening levels for the assessment were derived using the USEPA VISL Calculator (Appendix C). A commercial exposure scenario was selected within the VISL calculator. A 1x10-5 target risk for carcinogens was selected and a target hazard quotient of 1.0 was used for non-carcinogens. The derived values for the VISLs for each site-specific VOC and sample media are included in the analytical results tables (Table 2-5). Sample results are summarized on Figure 2-6.

The June 2018 sub-slab soil vapor analytical results are summarized as follows:

- PCE was detected above its VISL in sub-slab sample SG-1, SG-2, SG-4, SG-5, and SG-6; and
- TCE was detected above its VISL in SG-1

VOCs in sub-slab soil vapor above VISLs at five of the sub-slab soil vapor sampling locations indicated the potential for VI and that further assessment activities were required to confirm the initial results, as well as obtain indoor air analytical data to evaluate whether there is currently an unacceptable VI risk to workers. This additional sampling was performed July 13, 2018 and included re-sampling the 6 original sub-slab points, the collection of 6 corresponding indoor air samples, and one outdoor air sample collected upwind of the building. The sub-slab results are presented below:

- PCE was detected above its VISL in SG-4 and SG-5

The July 2018 indoor/outdoor ambient air analytical results are summarized as followed:

- No VOCs were detected above their VISLs at any indoor location.

These results indicate that VOCs detected in the sub-slab soil vapor samples do not currently present an unacceptable VI risk to workers in the warehouse. The results of sub-slab soil vapor samples show variability in VOC concentrations between the June and July events.

A third “winter” sampling event was performed November 30, 2018 to confirm these results and to account for possible seasonal variability. Collocated sub-slab and indoor air samples were collected from the same six (6) locations as the previous sampling events (Figure 2-6).

Prior to sub-slab sampling, leak checks were performed including water dam and shut-in tests. No leaks were observed in the six (6) sub-slab sampling locations. Prior to sub-slab sampling, a PID was used to purge the sample location of ambient air and as a general check for the presence of potential domestic sources of VOC vapors in the vicinity of the sampling location. Sampling information including quality control information was recorded on the air sampling data sheet (Appendix D) including starting and ending vacuum reading of each canister. Upon completion of soil vapor sample collection, sub-slab sampling points were capped and left in place with a secured metal flush-mounted cover.

Differential pressure readings (i.e., sub-slab pressure relative to indoor air pressure) were collected before each sub-slab soil vapor sample was collected. Similar to the “summer” events, readings at each sub-slab location ranged from 0.0000 inches of water column (inWC) pressure to -0.0002 inWC. Differential pressure measurements recorded little to no positive pressure in the sub-surface as compared to indoor air. The collected data in the building support the indication that there is not a significant preference for air to flow from the subsurface to the indoor air in either season.

Samples were analyzed by Alpha Analytical Laboratory of Mansfield, Massachusetts, which is accepted by Georgia EPD through the National Environmental Laboratory Accreditation Program (NELAP). Samples were analyzed for VOCs using USEPA Method TO-15. The analytical results are summarized in Table 2-5. Laboratory reports are included as Appendix E. Sample results are summarized on Figure 2-6.

The November 30, 2018 sub-slab soil vapor analytical results are summarized as follows:

- PCE was detected above its VISL in sub-slab sample SG-1, SG-2, SG-4, SG-5, and SG-6; and
- TCE was detected above its VISL in SG-1

The November 2018 indoor/outdoor ambient air analytical results are summarized as followed:

- No VOCs were detected above their VISLs at any indoor location.

The results of sub-slab soil vapor samples show some variability in VOC concentrations between the June, July, and August 2018 events; however, the November 2018 indoor air results were consistent with the July 2018 concentrations. These results indicate limited seasonal variability in indoor air results and that VOCs detected in the sub-slab soil vapor samples do not currently present an unacceptable VI risk to workers in the warehouse. Results of the VI assessment indicate that no further assessment of the Murata warehouse is warranted at this time.

2.3 Uniform Environmental Covenants

Murata has submitted draft uniform environmental covenants (UECs) to EPD on January 30, 2019 for groundwater use restrictions to the Beary Properties Inc. property and the Hematite Holdings property (Figure 1-2).

2.4 Registered Professional Supporting Documentation

To document the direct oversight of the development of the VIRP, implementation of corrective action and long-term monitoring, a monthly summary of hours invoiced and description of services provided by Hunter Sartain, P.E. (Georgia No. 032318) to the VRP participant since the previous submittal to EPD is shown in the table below:

Month	Hours Invoiced	Work Completed
September 2018	1.5	Oversight of the work summarized in this report
October 2018	2.5	
November 2018	3.0	
December 2018	3.0	
January 2019	3.5	
February 2019	10	

3. PLANNED CORRECTIVE ACTIONS AND INVESTIGATIONS

The following sections describe corrective actions and investigations that are planned to be initiated and/or completed during the next monitoring period. Planned activities will follow the VIRP Projected Milestone Schedule as presented in Figure 3-1.

3.1 Groundwater Monitoring

As part of the VRP, Murata will perform groundwater monitoring in accordance with the schedule provided in Table 3-1. Groundwater monitoring will be performed to assess plume stability. Point of demonstration (POD) groundwater monitoring will be performed to continue to demonstrate no groundwater impacts to parcels not included in the VRP that have no groundwater use deed restrictions.

The next scheduled event will be a POD sampling event in July 2019 (nine months after the last annual event performed October 2018). Groundwater wells will be sampled using low flow/low volume techniques for sample monitoring and will be conducted with laboratory evaluation for VOCs and RCRA metals with iron (total and dissolved). In the event the presence of contaminants of interest (COIs) are identified in the proposed POD Wells, and confirmed with a second sampling event, additional actions will be considered.

3.2 Vapor Intrusion Assessment

Results of the VI assessment indicate that no further assessment of the Murata warehouse is warranted at this time. Should Site conditions change (i.e. observed crack formation in the concrete pad); the need for additional sampling will be assessed.

3.3 Asset Removal

Murata initially plans to abandon the following wells which are usually dry (MW-1, MW-2, MW-13, and MW-14), were used as injection wells (MW-3, MW-5, MW-9, MW-10, MW-11, MW-12, MW-16, MW-17, MW-19, MW-20, MW-23, MW-27, MW-29, MW-A-2), or are no longer necessary to be included in the monitoring well network (MW-14, MW-25, MW-A-4, and MW-B-2) following approval from EPD. The proposed groundwater monitoring network is included as Table 3-1 and Figure 3-2. MW-15 was buried during regrading activities on the Hematite Holdings Property and was removed as a proposed POD well. No other changes were made to the proposed groundwater monitoring network in Figure 4-1 of the VIRP. Once the final CSR has been approved all the remaining wells will be abandoned in accordance well decommissioning procedures detailed in U.S. Environmental Protection Agency Region 4 Science and Ecosystem Support Division (SESD) January 29, 2013 Design and Installation of Monitoring Wells.

3.4 Uniform Environmental Covenants

Upon EPD approval of the draft UECs, Murata will attempt to execute the UECs with a groundwater use deed restriction for Beary Properties Inc. and Hematite Holdings LLC (Figure 1-2). Copies of the draft UECs have been included as Appendix F.

Murata will attempt to execute an UEC on the Murata property upon EPD approval of the VRP soil standards proposed in the *1st Semiannual Progress Report*.

3.5 Plume Stability Demonstration

Murata will perform a plume stability demonstration through the use of empirical data and/or groundwater modeling of the dissolved phase plume. The purpose of demonstration is show that the plume is stable and that there is no potential for migration of the plume beyond the properties included in the VRP.

TABLES

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-1	04/18/01	05/18/01	United Consulting			BRL	< 3.2			BRL		BRL		BRL		NR		NR						
		06/15/01	United Consulting			BRL	< 3.3			BRL	**6.4**			BRL		NR		NR						
		07/12/01	United Consulting			dry		dry		dry		dry		dry		dry		dry						
		11/25/03	United Consulting			dry		dry		dry		dry		dry		dry		dry						
		06/09/05	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/12/06	ERM			dry		dry		dry		dry		dry		dry		dry						
		06/25/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/03/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		06/04/08	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/15/08	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/09/10	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/19/11	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/16/11	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/06/12	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/06/12	ERM			dry		dry		dry		dry		dry		dry		dry						
		08/02/13	ERM	Bailer	< 5.0		< 5.0		12		< 5.0		41		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		
		11/28/17	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-2	04/18/01	07/18/11	ERM			dry				dry		dry		dry		dry		dry						
		12/15/11	ERM			dry				dry		dry		dry		dry		dry						
		07/06/12	ERM			dry				dry		dry		dry		dry		dry						
		12/06/12	ERM			dry				dry		dry		dry		dry		dry						
		07/22/13	ERM			dry				dry		dry		dry		dry		dry		dry				
		03/06/14	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		
		11/30/17	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-3	04/18/01	04/24/01	United Consulting		8.6		10		**1,100**		**80**		**370**				NR		NR					
		06/15/01	United Consulting		7.4		10		**3,100**		**54**		**210**				NR		NR					
		07/12/01	United Consulting			dry				dry		dry		dry		dry		dry						
		11/25/03	United Consulting			dry				dry		dry		dry		dry		dry						
		06/09/05	ERM		< 2.0		6		**3,000**		**120**		**630**		7		< 2.0							
		12/12/06	ERM			dry				dry		dry		dry		dry		dry						
		06/25/07	ERM			dry				dry		dry		dry		dry		dry						
		12/03/07	ERM			dry				dry		dry		dry		dry		dry						
		06/11/08	ERM		< 5.0		< 50		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/08	ERM			dry				dry		dry		dry		dry		dry						
		06/29/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/23/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/19/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		1.8		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/17/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-4	06/12/01	06/15/01	United Consulting			BRL			**130**		**5.4**			BRL		NR		NR						
		07/12/01	United Consulting			NA				NA		NA		NA		NR		NR						
		11/25/03	United Consulting		< 5.0		< 5.0		< 5.0		< 5.0		18		< 5.0			NR						
		06/09/05	ERM		< 2.0		< 2.0		4		< 2.0		7		< 2.0		< 2.0							
		12/19/06	ERM		< 5.0		< 5.0		7		< 5.0		5		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 5.0		7		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/07	ERM		< 5.0		< 5.0		12		< 5.0		< 5.0		< 5.0		< 2.0							
		06/09/08	ERM		< 5.0		< 5.0		7.1		< 5.0		< 5.0		< 5.0		< 2.0							
		12/17/08	ERM		< 5.0		< 5.0		10		< 5.0		< 5.0		< 5.0		< 2.0							
		06/18/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry				dry		dry		dry		dry		dry						
		08/20/10	ERM		< 5.0		< 5.0		11		< 5.0		< 5.0		< 5.0		< 2.0							
		12/08/10	ERM		< 5.0		< 5.0		9.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/27/11	ERM		< 5.0		< 5.0		8.5		< 5.0		< 5.0		< 5.0		< 2.0							
		07/27/11 DUP	ERM		< 5.0		< 5.0		7.6		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/11	ERM		< 5.0		< 5.0		6.8		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/11 DUP	ERM		< 5.0		< 5.0		5.5		< 5.0		< 5.0		< 5.0		< 2.0							
		07/10/12	ERM	Low-Flow	< 5.0				4.3	J	< 5.0		0.57	J	< 5.0		< 2.0							
		07/10/12 DUP	ERM	Low-Flow	< 5.0				4.2	J	< 5.0		0.68	J	< 5.0		< 2.0							
		12/04/12	ERM	Low-Flow	< 5.0				5.8		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/12 DUP	ERM	Low-Flow	< 5.0				5.8		< 5.0		< 5.0		< 5.0		< 2.0							
		07/24/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/24/13 DUP	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/1/2018	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0.0		< 5.0		< 5.0	
MW-5	06/12/01	04/24/01	United Consulting			BRL			**1,700**		**22**		33			NR		NR						
		06/15/01	United Consulting		< 5.0		< 5.0		**1,800**		**110**		74			NR		NR						
		11/25/03	ERM		< 2.0		< 2.0		**1,200**		**71**		56		< 2.0		< 2.0							
		06/10/05	ERM		< 5.0		< 5.0		**1,100**		**24**		21		< 5.0		< 5.0							
		12/12/06	ERM			NS		NS		NS		NS		NS		NS		NS						
		06/26/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/07	ERM		< 500		< 500		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/05/08	ERM		< 50		< 50		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/05/08 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/18/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/25/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/19/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/10/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/19/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/19/11	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/17/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/01/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		11/30/2017 DUP	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/01/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-6	6/12/2001	04/24/01	United Consulting			NA		NA		NA		NA		NA		NR		NR						
		06/12/01	United Consulting			BRL		BRL		BRL		BRL		BRL		NR		NR						
		07/12/01	United Consulting		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0			NR						
		11/25/03	ERM		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0							
		06/10/05	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/06	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/26/07 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/07 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/10/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/17/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/17/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/08/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/11	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/10/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-7	04/14/05	04/24/12	ERM		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0							
		06/09/05	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 2.0							
		12/15/06	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/27/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/10/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/18/08	ERM		< 5.0		< 5.0		6.3		< 5.0		< 5.0		< 5.0		< 2.0							
		06/11/09	ERM		< 5.0		< 5.0		5.8		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/09	ERM		< 5.0		< 5.0		5.6		< 5.0		< 5.0		< 5.0		< 2.0							
		03/26/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		09/15/10	ERM		< 5.0		< 5.0		7.6		< 5.0		< 5.0		< 5.0		< 2.0							
		12/07/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/11	ERM		< 5.0		< 5.0		8.5		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/11	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/10/12	ERM	Low-Flow	< 5.0				12		< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/23/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/01/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		12/01/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-8	04/27/05	06/09/05	ERM		< 2.0		< 2.0		55		< 2.0		< 2.0		< 2.0		< 2.0							
		12/18/06	ERM		< 5.0		< 5.0		**1200**		< 5.0		< 5.0		< 5.0		< 2.0							
		12/18/06DUP	ERM		< 5.0		< 5.0		**1300**		< 5.0		< 5.0		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 5.0		42		< 5.0		< 5.0		< 5.0		< 2.0							
		12/03/07	ERM		< 5.0		< 5.0		9.6		< 5.0		< 5.0		< 5.0		< 2.0							
		06/09/08	ERM		< 5.0		< 5.0		**510**		< 5.0		< 5.0		< 5.0		< 2.0							
		12/23/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/18/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/17/09	ERM		< 5.0		< 5.0		19		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10	ERM		< 5.0		< 5.0		**190**		< 5.0		< 5.0		< 5.0		< 2.0							
		12/07/10	ERM		< 5.0		< 5.0		87		< 5.0		< 5.0		< 5.0		< 2.0							
		07/27/11	ERM		< 5.0		< 5.0		120		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/11	ERM		< 5.0		< 5.0		53		< 5.0		< 5.0		< 5.0		< 2.0							
		07/18/12	ERM	Low-Flow	< 5.0				15		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		9.3		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		8.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		40		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/2015 DUP	ERM	PDB	< 5.0		< 5.0		42		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		5.6		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/2016 DUP	ERM	PDB	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		**140**		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		**210**		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		15	
		10/3/2018 DUP	ERM	Low-Flow	< 5.0		< 5.0		**200**		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		15	
MW-9	04/19/05	06/09/05	ERM		< 2.0		< 2.0		**900**		**17**		< 2.0		< 2.0		< 2.0							
		12/13/06	ERM		< 5.0		< 5.0		**230**		**27**		66		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 2.0		**460**		**12**		18		< 5.0		< 2.0							
		12/03/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/05/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/18/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/24/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry				dry		dry		dry		dry		dry						
		08/19/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/10/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/17/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/29/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		**100**		**5.3**		18		< 5.0		< 2.0		< 5.0			NA		
		11/24/2015 DUP	ERM	PDB	< 5.0		< 5.0		**110**		**5.4**		18		< 5.0		< 2.0		< 5.0			NA		
		01/23/16	ERM	PDB	< 5.0		< 5.0		92		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		1/23/2016 DUP	ERM	PDB	< 5.0		< 5.0		82		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		11/01/16	ERM	PDB	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		11/1/2016 DUP	ERM	PDB	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		31		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/01/18	ERM	Low-Flow	< 5.0		< 5.0		20		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-10	04/21/05	06/10/05	ERM		< 2.0		< 2.0		51		**17**		7		< 2.0		< 2.0							
		12/18/06	ERM		< 2.0		< 2.0		8		< 2.0		91		< 2.0		< 2.0							
		06/25/07	ERM			dry				dry		dry		dry		dry		dry						
		12/03/07	ERM			dry				dry		dry		dry		dry		dry						
		06/04/08	ERM			NS				NS		NS		NS		NS		NS						
		12/15/08	ERM			dry				dry		dry		dry		dry		dry						
		12/16/09	ERM			dry				dry		dry		dry		dry		dry						
		12/09/10	ERM			dry				dry		dry		dry		dry		dry						
		07/19/11	ERM			dry				dry		dry		dry		dry		dry						
		12/16/11	ERM			dry				dry		dry		dry		dry		dry						
		07/06/12	ERM			dry				dry		dry		dry		dry		dry						
		12/06/12	ERM			dry				dry		dry		dry		dry		dry						
		07/22/13	ERM			dry				dry		dry		dry		dry		dry						
		03/06/14	ERM			dry				dry		dry		dry		dry		dry		dry		dry		
		11/23/15	ERM			dry				dry		dry		dry		dry		dry		dry		dry		
		11/30/17	ERM			dry				dry		dry		dry		dry		dry		dry		dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-11	04/18/05	06/12/05	ERM		< 2.0		< 2.0		25		**8**		3		< 2.0		< 2.0							
		12/12/06	ERM			dry				dry		dry		dry		dry		dry						
		06/25/07	ERM			dry				dry		dry		dry		dry		dry						
		12/03/07	ERM			dry				dry		dry		dry		dry		dry						
		06/04/08	ERM			dry				dry		dry		dry		dry		dry						
		01/22/09	ERM		< 5.0		< 5.0		**500**		**350**		**220**		< 5.0		**6.9**							
		03/09/09	ERM		< 5.0		< 5.0		**580**		**400**		**250**		< 5.0		< 2.0							
		12/16/09	ERM			dry				dry		dry		dry		dry		dry						
		12/09/10	ERM			dry				dry		dry		dry		dry		dry						
		07/19/11	ERM			dry				dry		dry		dry		dry		dry						
		12/16/11	ERM			dry				dry		dry		dry		dry		dry						
		07/06/12	ERM			dry				dry		dry		dry		dry		dry						
		12/06/12	ERM			dry				dry		dry		dry		dry		dry						
		08/02/13	ERM	Bailer	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM			dry				dry		dry		dry		dry		dry		dry		dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-12	05/02/05	06/13/05	ERM		< 2.0		< 2.0		46		**28**		< 2.0		4		< 2.0							
		12/20/06	ERM		< 5.0		< 5.0		30		**1200**		28		160		< 2.0							
		06/26/07	ERM		< 5.0		< 5.0		6		**81**		< 5.0		10		< 2.0							
		12/05/07	ERM		< 5.0		< 5.0		< 5.0		**60**		11		17		< 2.0							
		06/10/08	ERM		< 5.0		< 5.0		< 5.0		**76**		< 5.0		14		< 2.0							
		12/23/08	ERM		< 5.0		< 5.0		< 5.0		**65**		< 5.0		8.7		< 2.0							
		06/30/09	ERM		< 5.0		< 5.0		< 5.0		**88**		6		15		< 2.0							
		12/22/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/24/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/24/10 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/09/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/30/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		
		12/01/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

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Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-13	05/02/05	07/18/11	ERM			dry				dry		dry		dry		dry		dry						
		12/15/11	ERM			dry				dry		dry		dry		dry		dry						
		07/06/12	ERM			dry				dry		dry		dry		dry		dry						
		12/06/12	ERM			dry				dry		dry		dry		dry		dry						
		08/02/13	ERM	Bailer	< 5.0		< 5.0		**470**		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		21		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		37		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM			dry				dry		dry		dry		dry		dry				dry		
		11/30/17	ERM			dry				dry		dry		dry		dry		dry				dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-14	05/02/05	07/28/05	ERM		< 2.0		< 2.0		< 5.0		< 2.0		< 2.0		< 2.0		< 2.0							
		12/12/06	ERM			dry		dry		dry		dry		dry		dry		dry						
		06/25/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/03/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		06/04/08	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/15/08	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/19/11	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/16/11	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/06/12	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/06/12	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/22/13	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		
		03/06/14	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		
		11/30/17	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		10/02/18	ERM			dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
MW-15	11/15/05	11/15/05	ERM		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0		< 2.0							
		12/22/06	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/25/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		12/03/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		06/12/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/17/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		08/24/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/19/11	ERM			dry		dry		dry		dry		dry		dry	< 2.0	dry						
		12/16/11	ERM			dry		dry		dry		dry		dry		dry	< 2.0	dry						
		07/11/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/06/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL
		10/02/18	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL
MW-16	12/02/06	12/18/06	ERM		< 5.0		7		**1800**		**42**		54		< 5.0		< 2.0							
		06/25/07	ERM		< 5.0		3		**810**		**21**		51		< 5.0		< 2.0							
		12/03/07	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/07/08	ERM		< 5.0		< 5.0		**190**		< 5.0		< 5.0		< 5.0		< 2.0							
		12/23/08	ERM		< 5.0		< 5.0		**130**		< 5.0		< 5.0		< 5.0		< 2.0							
		06/26/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/28/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/11	ERM		< 5.0		0.56	J*	< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/18/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/29/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		03/06/14	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		
		11/23/15	ERM			dry		dry		dry		dry		dry		dry		dry		dry				
		11/30/17	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS
		10/02/18	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS

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Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-17	12/20/06	12/12/06	ERM			dry				dry		dry		dry		dry		dry						
		06/25/07	ERM			dry				dry		dry		dry		dry		dry						
		12/04/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/06/08	ERM		< 500.0		< 500.0		< 500.0		< 500.0		< 500.0		< 500.0		< 200.0							
		12/30/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/29/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/29/09DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		08/25/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/18/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/30/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		3/7/2014 DUP	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		01/21/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0					NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-18	12/05/06	12/13/06	ERM		< 5.0		< 5.0		**100**		**8**		25		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 2.0		**360**		**9**		21		< 5.0		< 2.0							
		12/03/07	ERM		< 5.0		< 5.0		8.4		< 5.0		22		< 5.0		< 2.0							
		06/06/08	ERM		< 5.0		< 5.0		61		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/08	ERM		< 5.0		< 5.0		50		< 5.0		5.8		< 5.0		< 2.0							
		06/24/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/09	ERM		< 5.0		< 5.0		12		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		34		3.6	J*	2.0	J*	< 5.0		< 2.0							
		07/11/12	ERM	Bailer	< 5.0		< 5.0		16		1.1	J	0.74	J	< 5.0		< 2.0							
		12/05/12	ERM	Bailer	< 5.0				19		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14 DUP	ERM	PDB	< 5.0		< 5.0		< 5.0		**6.5**		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		5.2		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.1		< 5.1			NA		
		9/25/2014 DUP	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-19	11/30/06	12/21/06	ERM		< 5.0		< 5.0		< 5.0		< 5.0		7.0		< 5.0		< 2.0							
		06/26/07	ERM		< 5.0		< 5.0		25		< 5.0		17.0		< 5.0		< 2.0							
		12/05/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/11/08	ERM		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 20.0							
		12/30/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/25/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		08/25/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/21/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM			dry		dry		dry		dry		dry		dry		dry						
		07/19/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/30/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		9.1					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		16		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		5.6			NA		
		11/24/15	ERM	PDB	< 5.0		< 5.0		11		< 5.0		10		< 5.0		< 2.0		7.4			NA		
		11/28/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 50		< 50		< 50		< 50		< 50		< 50		< 20		< 50		< 50		< 50	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-20	11/30/06	12/16/06	ERM		< 5.0		< 5.0		**220**		< 5.0		< 5.0		< 5.0		< 2.0							
		06/26/07	ERM			NS		NS		NS		NS		NS		NS		NS						
		12/04/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/11/08	ERM		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 20.0							
		12/30/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/30/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/09	ERM						11															
		08/26/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/09/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/21/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/19/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/31/13	ERM	Low-Flow	< 5.0		< 5.0		56		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		31		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		26		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM	PDB	< 5.0		< 5.0		36		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16 DUP	ERM	PDB	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		7.1	
		10/03/18	ERM	Low-Flow	< 100		< 100		< 100		< 100		< 100		< 100		< 40		< 100		< 100		< 100	
MW-22	08/23/07	12/05/07	ERM		< 5.0		< 5.0		20		< 5.0		< 5.0		< 5.0		< 2.0							
		06/09/08	ERM		< 5.0		< 5.0		< 5.0		< 2.0		< 2.0		< 2.0		< 2.0							
		12/30/08	ERM		< 5.0		< 5.0		9.1		< 5.0		< 5.0		< 5.0		< 2.0							
		12/30/08 DUP	ERM		< 5.0		< 5.0		8.1		< 5.0		< 5.0		< 5.0		< 2.0							
		06/25/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM			dry		dry		dry		dry		dry		dry		dry						
		08/25/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/10 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/01/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		7.2		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		5.9		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/3/2018 DUP	ERM	Low-Flow	< 5.0		< 5.0		5.7		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-23	09/14/07	12/05/07	ERM		< 5.0		43		**3400**		**560**		**2000**		18		**1700**							
		06/11/08	ERM		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 50.0		< 20.0							
		12/18/08	ERM		< 100.0		< 100.0		< 100.0		< 100.0		< 100.0		< 100.0		< 40.0							
		06/30/09	ERM		< 5.0		< 5.0		8.3		< 5.0		< 5.0		< 5.0		< 2.0							
		12/23/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/20/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/19/11	ERM		< 5.0		2.4 J*		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/12	ERM	Bailer	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/31/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		5.3	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-24	05/07/10	06/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/19/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		2.1	J*	< 5.0		< 5.0		< 5.0		< 2.0							
		07/06/12	ERM			NA				NA		NA		NA		NA		NA						
		12/05/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		3/6/2014 DUP	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		12/15/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		11/29/2017 DUP	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-25	05/08/10	06/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/19/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		2.1	J*	< 5.0		< 5.0		< 5.0		< 2.0							
		07/06/12	ERM			NA		NA		NA		NA		NA		NA		NA						
		12/05/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/24/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		<5.0			
		12/15/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-26	05/06/09	06/10/09	ERM		< 5.0		< 5.0		8.9		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/09 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/07/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/15/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/11/12	ERM	Low-Flow	< 5.0				3.0	J	< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/23/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		12/01/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
MW-27	05/05/09	06/19/09	ERM		< 5.0		13		**3000**		**2800**		**4500**		26		**110**							
		12/16/09	ERM		< 5.0		5.6		**1400**		**1900**		**4100**		16		**31**							
		08/24/10	ERM		< 5.0		7.0		**1800**		**2000**		**3300**		15		**31**							
		12/08/10	ERM		< 5.0		< 5.0		**1100**		**1000**		**2300**		8.9		**16**							
		07/28/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/21/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/19/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/31/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/23/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/28/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		27	
		10/03/18	ERM	Low-Flow	< 100		< 100		< 100		< 100		< 100		< 100		< 40		< 100		< 100		< 100	

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-28	3/24/2011 Destroyed	07/29/11	ERM		< 5.0		< 5.0		**210**		**130**		35		< 5.0		**21**							
		12/20/11	ERM		< 5.0		< 5.0		**110**		**96**		120		< 5.0		**20**							
		07/11/12	ERM	Low-Flow	< 5.0				**240**		**500**		**1100**		7.8		**28**							
		12/07/12	ERM	Low-Flow	< 5.0				37		**150**		**300**		< 5.0		**12**							
		08/02/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		9/25/14 DUP	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		11/30/17	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS
		10/02/18	ERM			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS
MW-29	03/25/11	07/28/11	ERM		< 5.0		< 5.0		**4900**		**14**		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 250		< 250		**7800**		**1000**		**1500**		< 250		< 2.0							
		07/11/12	ERM	Bailer	< 5.0				**2000**		**390**		**880**		9.8		**34**							
		12/06/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/30/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM	PDB	< 5.0		< 5.0		18		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM			dry		dry		dry		dry		dry		dry		dry		dry		NA		
		01/22/16	ERM	PDB	< 5.0		< 5.0		**97**		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		10/31/16	ERM	PDB	< 5.0		<5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		<5.0			NA		
		11/29/17	ERM	Low-Flow	< 5.0		<5.0		**960**		< 5.0		< 5.0		< 5.0		< 2.0		<5.0		<5.0		<5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		**870**		**20**		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		8.8	
		10/3/2018 DUP	ERM	Low-Flow	< 5.0		< 5.0		**910**		**26**		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		9.3	
MW-A-1	9/6/2011 Destroyed	09/08/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/17/12	ERM	Low-Flow	< 5.0		< 5.0		2.8	J	< 5.0		< 5.0		< 5.0		< 2.0							
		07/24/13	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			CNL
		11/30/17	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL
		10/02/18	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		
MW-A-2	09/12/11	09/30/11	ERM		< 5.0		< 5.0		**220**		**15**		26		< 5.0		< 2.0							
		12/20/11	ERM		< 5.0		< 5.0		**560**		**31**		43		< 5.0		< 2.0							
		07/16/12	ERM	Low-Flow	< 5.0				**580**		**55**		**76**		< 5.0		< 2.0							
		12/06/12	ERM	Low-Flow	< 5.0				**400**		**27**		42		< 5.0		< 2.0							
		07/24/13	ERM	Low-Flow	< 5.0		< 5.0		81		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM	PDB	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM	PDB	< 5.0		< 5.0		17		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		01/21/16	ERM	PDB	< 5.0		< 5.0		28		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		CNL
		11/30/17	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL
		10/02/18	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		
MW-A-3	09/12/11	09/30/11	ERM		< 5.0		< 5.0		**140**		< 5.0		9.4		< 5.0		< 2.0							
		12/20/11	ERM		< 5.0		< 5.0		66		3.0	J*	5.2		< 5.0		< 2.0							
		07/16/12	ERM	Low-Flow	< 5.0				79		< 5.0		5.8		< 5.0		< 2.0							
		12/07/12	ERM	Low-Flow	< 5.0				40		< 5.0		< 5.0		< 5.0		< 2.0							
		07/24/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		3/6/2014 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM		< 5.0		< 5.0		5.8		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/23/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		CNL
		11/30/17	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL
		10/02/18	ERM			CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
MW-A-4	03/27/12	03/27/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/28/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/16/12	ERM	Low-Flow	< 5.0				3.5	J	< 5.0		< 5.0		< 5.0		< 2.0							
		12/07/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		<5.0			
		11/24/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		11/24/2015 DUP	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0				< 5.0	
		11/28/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
MW-A-5	03/27/12	03/28/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/28/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/17/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/11/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		**950**			
		03/06/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		**210**			
		11/24/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA	< 5.0	
		11/30/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		**1800**		< 5.0	
		11/30/2017 DUP	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		**1800**		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		**3600**			
MW-B-1	09/07/11	09/09/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/19/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/12/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/25/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/23/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA	< 5.0	
		11/28/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
MW-B-2	09/14/11	09/28/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/19/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/12/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		11/23/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA	< 5.0	
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
MW-B-3	09/15/11	09/29/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/11/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/07/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		<5.0			
		09/25/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/23/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA	< 5.0	
		11/29/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
MW-B-4	09/20/11	09/29/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/19/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/12	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/11/12	ERM	Low-Flow	< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/26/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		01/22/16	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA	< 5.0	
		11/28/17	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			

TABLE 2-1
Groundwater VOC Concentrations (µg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HSI No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Sample Method	1,1,1 Trichloroethane	Qualifier	1,1-Dichloroethene	Qualifier	Tetrachloroethene	Qualifier	Trichloroethene	Qualifier	cis-1,2-Dichloroethene	Qualifier	trans-1,2-Dichloroethene	Qualifier	Vinyl Chloride	Qualifier	1,1-Dichloroethane	Qualifier	Benzene	Qualifier	1,4-Dioxane	Qualifier
RRS Type 4					**13,600**		**524**		**98.1**		**5.24**		**204**		**2,040**		**3.27**		**46.4**		**8.72**		**104**	
Trip Blank	-	07/20/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/27/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/29/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		09/30/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/22/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/28/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		03/28/12	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/11/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/18/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/20/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/05/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/06/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/07/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/13/12	ERM		< 5.0				< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/24/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/25/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/29/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/30/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		07/31/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		08/02/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		03/06/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
		09/25/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0			NA		
		11/24/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		12/15/15	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		01/22/16	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					NA
		12/01/17	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			NA
		10/03/18	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
Equipment Blank	-	06/10/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/27/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/06/07	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		06/05/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/17/08	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/13/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/09	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/18/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/19/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/20/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/23/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/24/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/25/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		08/26/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/14/10	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/28/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/16/11	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		12/04/12	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0							
		07/23/13	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0					
		01/22/16	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0				< 5.0	
		11/30/17	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/02/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0		< 5.0	
		10/03/18	ERM	Low-Flow	< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			
Water Blank	-	03/07/14	ERM		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 5.0		< 2.0		< 5.0		< 5.0			

Notes:

MW-2 and MW-13 are dry wells.

Bolded values indicate concentrations above the applicable RRS

CNL - Could Not Locate
NA - Not Analyzed
NS - Not Sampled
J - Estimated level of VOC detected below Reporting Limit

Prepared By: Qiqi Liang 11/19/2017

Checked By:

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Qualifier	Dissolved Arsenic	Qualifier	Total Barium	Qualifier	Dissolved Barium	Qualifier	Total Cadmium	Qualifier	Dissolved Cadmium	Qualifier	Total Chromium	Qualifier	Dissolved Chromium	Qualifier	Total Copper	Qualifier	Dissolved Copper	Qualifier	Total Iron	Qualifier	Dissolved Iron	Qualifier	Total Lead	Qualifier	Dissolved Lead	Qualifier	Total Mercury	Qualifier	Dissolved Mercury	Qualifier	Total Selenium	Qualifier	Dissolved Selenium	Qualifier	Total Silver	Qualifier	Dissolved Silver	Qualifier
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
MW-1	4/18/2001	12/12/06	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/4/08	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/15/08	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/29/09	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/22/09	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/12/10	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		8/2/13	ERM	<0.0500		<0.0500		0.0532		0.0278		<0.0050		<0.0050		<0.0100		<0.0100		NS		NS		5.09		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/28/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
MW-2	4/18/2001	7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/22/13	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		11/30/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
MW-3	4/18/2001	12/12/06	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/11/08	ERM	< 0.5		< 0.5		0.534		0.332		< 0.005		< 0.005		**0.156**		**0.241**		NA		NA		8.12		< 0.1		**0.0355**		**0.226**		**0.0254**		**0.025**		0.221		0.371		0.0196		0.0462	
		12/15/08	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/29/09	ERM	< 0.5			NA	0.083			NA	< 0.005			NA	0.0944			NA		NA			NA	2.25			NA	**0.0225**			NA	**0.0105**			NA	0.146			NA	0.0106			NA
		12/22/09	ERM	< 0.25			NA	< 0.1			NA	< 0.025			NA	**0.166**			NA		NA			NA	3.5			NS	**0.05**			NA	**0.00331**			NA	0.133			NA	< 0.05			NA
		8/23/10	ERM	< 0.5		< 0.5		0.021		0.02		< 0.005		< 0.005		**0.125**		**0.132**		NA		NA		1.48		< 0.1		**0.0153**		**0.029**		**0.00618**		**0.00613**		0.0582		0.205		0.0255		0.0202	
		12/13/10	ERM	< 0.5		**2.5**		< 0.21		1.00		< 0.005		< 0.025		0.062		< 0.5		NA		NA		4.12		< 0.05		**0.0282**		< 0.05		**0.00361**		**0.00383**		0.217		<10		0.0176		< 0.05	
		7/19/11	ERM	< 0.25		< 0.5		< 0.1		< 0.2		< 0.02		< 0.05		**0.129**		< 0.1		NA		NA		6.76		< 0.1		**0.0742**		< 0.1		0.00186		0.00017		0.472		< 0.277		< 0.05		< 0.1	
		12/16/11	ERM	< 0.5			NS	0.0432			NS	0.0016			NS	0.0986			NS		NA			NA	25.2			NS	**0.0406**			NS	0.00139			NS	0.318			NS	0.0197		< 0.03	NS
		7/17/2012	ERM	< 0.05		< 0.05		0.101		< 0.02		1.29J		< 0.05		< 0.01		**0.641**	J	NA	NA	NA		NA	< 0.01		< 0.1		< 0.01		**1.02**		**0.00511**		0.00081		< 0.01		**2.82**		< 0.05		< 0.01	
		12/12/12	ERM	< 0.5			NA	7.3900			NA	< 0.05			NA	**0.208**			NA		NA			NA	1090			NA	**0.279**			NA	**0.00778**			NA	**0.858**			NA	< 0.1			NA
		7/26/13	ERM	<0.0500		<2.50		<0.0200		<1.00		<0.0050		<0.250		0.0871		<0.500		NA		NA		0.238		<5.00		**0.0349**		<0.500		0.00058		0.00051		0.250		<1.00		0.0181		<0.500	
		11/29/17	ERM	<0.0500			NA	0.1810			NA	<0.0050			NA	0.0764			NA		NA			NA	73.000			NA	**0.0851**			NA	0.00113			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.0423			NA	< 0.0050			NA	0.0733			NA		NA			NA	27.8			NA	**0.0276**			NA	0.0005			NA	0.0293			NA	< 0.0100			NA
MW-4	6/12/2001	12/19/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		6/26/07	ERM	< 0.03		< 0.03		0.17		0.16		< 0.01		< 0.01		**1.2**		< 0.01		NA		NA		6.6		0.93		< 0.025		< 0.025		< 0.005		< 0.005		< 0.04		< 0.04		< 0.0		< 0.0	
		12/4/07	ERM	< 0.05		< 0.05		0.176		0.159		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		0.117		< 0.01		< 0.1		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/9/08	ERM	< 0.05			NA	0.181			NA	< 0.005			NA	< 0.01			NA		NA			NA	< 0.01			NA	< 0.1			NA	< 0.002			NA	< 0.02			NA	< 0.01			NA
		12/17/08	ERM	< 0.05		< 0.05		0.182		0.175		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		< 0.01		< 0.01		< 0.1		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/18/09	ERM	< 0.05			NA	0.167			NA	< 0.005			NA	0.0541			NA		NA			NA	1.08			NA	< 0.1			NA	< 0.002			NA	< 0.02			NA	< 0.01			NA
		8/20/10	ERM	< 0.05			NA	0.208			NA	< 0.005			NA	< 0.01			NA		NA			NA	< 1.51			NA	< 0.1			NA	< 0.002			NA	0.024			NA	< 0.01			NA
		12/8/10	ERM	< 0.05		< 0.05		0.183		0.173		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		< 0.309		< 0.1		< 0.1		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/27/11	ERM	< 0.05		< 0.05		0.145		0.148		< 0.005		< 0.005		< 0.01		< 0.01						0.124		< 0.1		< 0.1		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/27/11 DUP	ERM	< 0.05		< 0.05		0.15		0.15		< 0.005		< 0.005		< 0.01		< 0.01						0.163		< 0.1		< 0.1		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/15/11	ERM	< 0.05		< 0.05		0.173	NS			< 0.005			NS	0.0079			NS	NA		NA		0.335			NS	< 0.1			NS	< 0.002			NS	< 0.02			NS	< 0.01			NS
		12/15/11 DUP	ERM	< 0.05		< 0.05		0.174	NS			< 0.005			NS	0.0063			NS	NA		NA		0.480			NS	0.0007			NS	< 0.002			NS	0.0082			NS	< 0.01			NS
		7/10/12	ERM	< 0.05		< 0.05		0.185		0.179		< 0.005		< 0.005		0.0007	J	< 0.01		NA		NA		0.109		< 0.1		< 0.1		< 0.1		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/10/2012 DUP	ERM	< 0.05		< 0.05		0.185		0.178		< 0.005		< 0.005		0.0008	J	< 0.01		NA		NA		0.147		< 0.1		< 0.1		< 0.1		< 0.0002		< 0.0002		< 0.02		0.005	J	< 0.01		< 0.01	
		12/4/12	ERM	< 0.05			NA	0.170			NA	< 0.005			NA	< 0.010			NA		NA			NA	< 0.10			NA	< 0.01			NA	< 0.0002			NA	< 0.20			NA	< 0.01			NA
		12/4/12 DUP	ERM	< 0.05			NA	0.174			NA	< 0.005			NA	< 0.01			NA		NA			NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/24/13	ERM	<0.0500			NA	0.178			NA	<0.0050			NA	<0.0100			NA		NA			NA	0.120			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		7/24/13 DUP	ERM	<0.0500			NA	0.183			NA	<0.0050			NA	<0.0100			NA		NA			NA	0.134			NA	<0.0100			NA	<0.00020			NA	< 0.0200			NA	< 0.0100			NA
		11/30/17	ERM	<0.0500			NA	0.15			NA	<0.0050			NA	<0.0100			NA		NA			NA	0.257			NA	<0.0100			NA	<0.00020			NA	< 0.0200			NA	< 0.0100			NA
		10/01/18	ERM	< 0.0500			NA	0.185			NA	< 0.0050			NA	< 0.0100			NA		NA			NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-5	6/12/2001	12/12/06	ERM	< 0.03		< 0.03		0.04		0.04		< 0.01		< 0.01		< 0.01		< 0.01		< 0.02		< 0.02		0.09		< 0.04		< 0.025		< 0.025					NA			< 0.04		< 0.04			NA	
		6/26/07	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			NS			NS		NS		NS		NS	
		12/5/07	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		**0.1040**		0.0270		NA		NA		0.43		< 0.1		**0.0701**		< 0.01		< 0.0002		< 0.0002		0.470		< 0.02		0.05		< 0.01	
		6/5/08	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0640			NA		NA			NA	< 0.1			NA	**0.0457**			NA	< 0.0002			NA	0.317			NA	0.0306			NA
		6/5/08DUP	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	**0.0649**			NA		NA			NA	< 0.1			NA	**0.0485**			NA	< 0.0002			NA	**0.336**			NA	0.0283			NA
		12/18/08	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		0.0249		0.0281		NA		NA		0.148		< 0.1		< 0.1		< 0.01		< 0.0002		< 0.0002		0.031		< 0.02		< 0.01		< 0.01	
		6/25/09	ERM	< 0.25			NA	2.4			NA	< 0.025			NA	**0.2370**			NA		NA			NA	13.5			NA	**0.1790**			NA	0.00168			NA	**1.140**			NA	0.0796			NA
		12/22/09	ERM	< 0.25		< 0.05		< 0.1		< 0.02		< 0.025		0.015		**0.44**		**0.536**		NA		NA		< 0.5		< 0.1		**0.1930**		**0.3420**		< 0.0002		< 0.0002		**1.170**		**1.980**		0.178		0.311	
		8/19/10	ERM	< 0.05		< 0.05		< 0.2		< 0.2		< 0.05		< 0.05		**0.2900**		**0.2660**		NA		NA		< 0.1		< 0.1		< 0.1		< 0.1		< 0.0002		< 0.0002		0.266		0.248		< 0.1		< 0.1	
		12/10/10	ERM	< 0.05		**2.5**		< 0.02		< 0.1		< 0.005		< 0.25		0.0946		< 0.5						0.195		< 0.5		**0.0497**		< 0.5		< 0.0002		< 0.0002		0.421		<10.0		0.0326		< 0.5	
		7/19/11	ERM	< 0.25		< 0.5		< 0.1		< 0.2		< 0.025		< 0.05		**0.2840**		**0.185**		NA		NA		< 0.5		<1.0		**0.1200**		< 0.1		< 0.0002		< 0.0002		**0.901**		**0.581**		0.0618		< 0.1	
		12/19/11	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0035	J*	0.031		0.0829		**0.409**		NA		NA		0.2		0.0254	J*	**0.0602**		**0.430**		0.00002	J*	< 0.0002		0.486		**3.49**		0.0308		0.201	
		7/17/12	ERM	< 0.05		< 0.05		< 0.1		< 0.1		**0.207**	J	< 0.005		< 0.01		< 0.01		NA		NA		< 0.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		**2.55**	J	< 0.01		< 0.01	
		12/4/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0450			NA		NA			NA	< 0.1			NA	**0.0288**			NA	< 0.0002			NA	0.197			NA	0.0101			NA
		8/1/13	ERM	<0.0500		<25.0		<0.0200		<10.0		<0.0050		<2.50		0.0677		<5.00		NA		NA		< 0.100		<50.0		**0.0410**		<5.00		<0.00020		<0.00020		0.292		<10		0.0194		<5.00	
		11/30/17	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	<0.0100			NA		NA			NA	< 0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/01/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA			NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-6	6/12/2001	12/14/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		6/26/07	ERM	< 0.03			NA	0.01			NA	< 0.01			NA	< 0.01			NA		NA			NA	0.39			NA	< 0.025			NA	< 0.0005			NA	< 0.04			NA	< 0.01			NA

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Qualifier	Dissolved Arsenic	Qualifier	Total Barium	Qualifier	Dissolved Barium	Qualifier	Total Cadmium	Qualifier	Dissolved Cadmium	Qualifier	Total Chromium	Qualifier	Dissolved Chromium	Qualifier	Total Copper	Qualifier	Dissolved Copper	Qualifier	Total Iron	Qualifier	Dissolved Iron	Qualifier	Total Lead	Qualifier	Dissolved Lead	Qualifier	Total Mercury	Qualifier	Dissolved Mercury	Qualifier	Total Selenium	Qualifier	Dissolved Selenium	Qualifier	Total Silver	Qualifier	Dissolved Silver	Qualifier
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
		6/26/07DUP	ERM	< 0.03			NA	0.02			NA	< 0.01			NA	< 0.01			NA		NA		NA	0.29			NA	< 0.025			NA	< 0.0005			NA	< 0.04			NA	< 0.01			NA
		12/5/07	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.372			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/5/07DUP	ERM	< 0.05			NA	0.0312			NA	< 0.005			NA	< 0.01			NA		NA		NA	4.89			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		6/10/08	ERM	< 0.05			NA	0.0239			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.149			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/15/08	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01				NA		NA	< 0.1		0.45		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/17/09	ERM	< 0.05			NA	0.0206			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.492			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/17/09	ERM	< 0.05		< 0.05		0.0531		< 0.02		< 0.005		< 0.005		0.0107		< 0.01				NA		NA	8.41		< 0.1		0.011		0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		8/18/10	ERM	< 0.05		< 0.05		0.0241		.0212		< 0.005		< 0.005		< 0.01		< 0.01				NA		NA	0.933		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		8/18/10 DUP	ERM	< 0.05		< 0.05		.025		.0208		< 0.005		< 0.005		< 0.01		< 0.01				NA		NA	0.96		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/8/10	ERM	< 0.05		NA		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01				NA		NA	1.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/20/11	ERM	< 0.05		< 0.05		< 0.056		< 0.02		< 0.005		< 0.005		< 0..013		< 0.01				NA		NA	12.1		< 0.1		< 0.021		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/15/11	ERM	< 0.05			NA	0.015			NA	< 0.005			NA	0.0012			NA		NA		NA	0.616			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/10/12	ERM	< 0.05			NA	0.018	J		NA	0.0004	J		NA	0.0019	J		NA		NA		NA	0.362			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/4/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.665			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/23/13	ERM	<0.0500		<0.0500		0.0442		<0.0200		<0.0050		<0.0050		0.0107		<0.0100				NA		NA	10.8		<0.100		0.0121		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/30/17	ERM	<0.0500			NA	0.0215			NA	<0.0050			NA	< 0.01			NA		NA		NA	0.538			NA	< 0.01			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.642			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-7	4/14/2005	12/15/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*
		6/27/07	ERM	< 0.03			NA	0.08			NA	< 0.01			NA	< 0.01			NA		NA		NA	0.97			NA	< 0..025			NA	< 0.0005			NA	< 0.04			NA	< 0.01			NA
		12/4/07	ERM	0.133		< 0.05		0.67		0.0502		< 0.005		< 0.005		1.15		< 0.01				NA		NA	377		< 0.1		0.203		< 0.01		0.00112		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/10/08	ERM	< 0.05			NA	0.117			NA	< 0.005			NA	0.167			NA		NA		NA	28.3			NA	0.0216			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/18/08	ERM	< 0.05		< 0.05		0.0463		0.0455		< 0.005		< 0.005		< 0.01		< 0.01				NA		NA	1.03		0.482		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/11/09	ERM	< 0.05		< 0.05		0.0749		0.0739		< 0.005		< 0.005		0.0246		< 0.01							5.54		<< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/21/09	ERM	< 0.25		< 0.05		0.124		0.0659		< 0.005		< 0.005		< 0.05		< 0.01				NA		NA	5.01		< 0.1		< 0.005		< 0.01		< 0.0002		< 0.0002		< 0.1		< 0.02		< 0.05		< 0.01	
		12/7/10	ERM	< 0.05			NA	0.0813			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.258			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/26/11	ERM	< 0.05		< 0.05		0.0833		0.0417		< 0.005		< 0.005		< 0.028		< 0.01				NA		NA	7.8		0.47		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/15/11	ERM	< 0.05			NA	0.0779			NA	< 0.005			NA	0.002			NA		NA		NA	0.525			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/10/12	ERM	< 0.05		< 0.05		0.0859		0.0839		< 0.005		< 0.005		0.0014	J	< 0.01				NA		NA	0.271		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		<0.02		< 0.01		< 0.01	
		12/5/12	ERM	< 0.05			NA	0.0609			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.389			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/23/13	ERM	<0.0500			NA	0.0796			NA	< 0.0050			NA	<0.0100			NA		NA		NA	0.278			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		12/1/17	ERM	<0.0500			NA	<0.0200			NA	< 0.0050			NA	0.095			NA		NA		NA	0.137			NA	<0.0100			NA	0.00128			NA	<0.0200			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	0.0856			NA		NA		NA	0.916			NA	< 0.0100			NA	0.00069			NA	0.0202			NA	< 0.0100			NA
MW-8	4/27/2005	12/18/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*
		6/26/07	ERM	< 0.03		< 0.03		0.15		0.09		< 0.01		< 0.01		0.06		0.05				NA		NA	7.4		< 0.04		< 0.02		< 0.025		0.0042		0.004		<.04		<.04		< 0.01		< 0.01	
		12/4/07	ERM	< 0.05			NA	0.0923			NA	< 0.005			NA	0.0396			NA		NA		NA	0.367			NA	< 0.01			NA	0.00231			NA	< 0.02			NA	< 0.01			NA
		6/9/08	ERM	< 0.05			NA	0.0519			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.171			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/23/08	ERM	< 0.05			NA	0.0677			NA	< 0.005			NA	0.105			NA		NA		NA	< 0.1			NA	< 0.01			NA	0.00131			NA	0.0395			NA	0.0141			NA
		6/18/09	ERM	< 0.05		< 0.05		0.103		0.048		< 0.005		< 0.005		0.0416		0.037				NA		NA	3.64		< 0.1		< 0.01		< 0.01		0.00122		0.00110		0.0266		< 0.02		< 0.01		< 0.01	
		12/18/09	ERM	< 0.05			NA	0.0335			NA	< 0.005			NA	< 0.01			NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0..00002			NA	< 0.02			NA	< 0.01			NA
		8/18/10	ERM	< 0.05			NA	0.0328			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.146			NA	< 0.01			NA	< 0.00002			NA	< 0.02			NA	< 0.01			NA
		12/7/10	ERM	< 0.05			NA	0.0411			NA	< 0.005			NA	0.0169			NA		NA		NA	< 0.1			NA	< 0.01			NA	0.00124			NA	< 0.02			NA	< 0.01			NA
		7/27/11	ERM	< 0.05		< 0.05		0.0416		0.0357		< 0.005		< 0.005		0.0114		< 0.01							< 0.138		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/21/11	ERM	< 0.05		NA	NA	0.0613		NA	NA	< 0.005		NA	NA	0.0126		NA	NA	NA	NA	NA	NA	NA	0.08	J*	NA	NA	< 0.01		NA	NA	0.00024		NA	NA	0.008	J*	NA	NA	< 0.01		NA	NA
		7/18/2012	ERM	< 0.05				0.04				0.0003J				0.0018	J							0.10				< 0.01				< 0.0002				<2.0				<1.0			
		12/12/12	ERM	< 0.05			NA	0.0491			NA	< 0.005			NA	0.0128			NA		NA		NA	< 0.1			NA	< 0.01			NA	0.00027			NA	< 0.02			NA	< 0.01			NA
		7/26/13	ERM	<0.0500			NA	0.0384			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.18			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/30/17	ERM	<0.0500			NA	0.0358			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.217			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.049			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.237			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
		10/3/2018 DUP	ERM	< 0.0500			NA	0.0481			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.184			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-9	4/19/2005	12/13/06	ERM	0.12		< 0.03		1.4		0.07		< 0.01		< 0.01		0.21		< 0.01		0.13		< 0.02		160		2.4		0.16		< 0.025			NA			NA	< 0.04		< 0.04			NA		NA
		6/26/07	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*
		12/3/07	ERM	< 0.05		< 0.025		0.0734		< 0.02		< 0.005		< 0.005		0.2150		0.2160				NA		NA	4.30		< 0.1		0.0272		0.0119		0.0194		0.0199		0.1540		0.0671		0.0165		0.0206	
		6/5/08	ERM	< 0.05			NA	0.0361			NA	< 0.005			NA	0.205			NA		NA		NA	0.671			NA	0.0169			NA	0.00691			NA	0.115			NA	< 0.01			NA
		12/18/08	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		0.203		0.1980				NA		NA	< 0.1		< 0.1		< 0.01		< 0.01		0.003		0.00309		0.041		0.0233		< 0.01		< 0.01	
		6/24/09	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		0.216		0.2200				NA		NA	0.140		< 0.1		< 0.01		< 0.01		0.00399		0.00299		0.066		0.0355		< 0.01		< 0.01	
		8/19/10	ERM	< 0.05		< 0.05		< 0..2		< 0..2		< 0.005		< 0.05		0.203		0.1960				NA		NA	< 0.1		< 0.1		< 0.1		< 0.1		0.00116		0.00113		0.251		0.2630		< 0.1		< 0.1	
		12/10/10	ERM	< 0.05			NA	0.385		NA		< 0.005		NA		0.132		NA				NA		NA	8.04				0.0745			NA	0.00812			NA	0.584			NA	0.0521			NA
		7/22/11	ERM	< 0.05		< 0.05		0.845		< 0..2		< 0.005		< 0.05		0.118		< 0.1				NA		NA	13.80		< 0.1		0.0687		< 0.1		0.00824		0.00123		0.519		< 0.2		0.0401		< 0.1	
		12/16/11	ERM	< 0.05			NA	0.0084			NA	0.0008			NA	0.0947			NA		NA		NA	0.47			NA	0.0205			NA	0.00052			NA	0.168			NA	0.0086			NA
		7/17/2012	ERM	< 0.05		< 0.05		0.101		< 0.02		0.565		< 0.05		0.0665		0.0956		NA	NA	NA	NA	NA	2.21		< 0.1		< 0.01		0.101		0.00167		0.00028		< 0.01		0.319		0.04		< 0.01	
		12/12/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0706			NA		NA		NA	< 0.1			NA	0.0232			NA	0.00024			NA	0.183			NA	0.0100			NA
		7/29/13	ERM	<0.0500		<1.00		<0.0200		<0.400		<0.0050		<0.100		0.0645		<0.200				NA		NA	0.552		<2.00		0.0182		<0.200		<0.00020		<0.00020		0.122		<0.400		<0.0100		<0.200	
		11/30/17	ERM	<0.0500			NA	0.1630			NA	<0.0050			NA	0.0188			NA		NA		NA	6.160			NA	<0.0100			NA	0.00024			NA	<0.0200			NA	<0.0100			NA
		10/01/18	ERM	< 0.0500			NA	0.0441			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.541			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-10	4/21/2005	12/18/06	ERM	< 0.03		< 0.03		0.12		0.02		< 0.01		< 0.01		0.02		< 0.01		0.03		< 0.02		28		< 0.04		0.051		< 0.025			NA			NA	< 0.04		< 0.04			NA		NA
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		6/4/08	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS
		12/15/08	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		12/9/10	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		7/22/13	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		11/30/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Qualifier	Dissolved Arsenic	Qualifier	Total Barium	Qualifier	Dissolved Barium	Qualifier	Total Cadmium	Qualifier	Dissolved Cadmium	Qualifier	Total Chromium	Qualifier	Dissolved Chromium	Qualifier	Total Copper	Qualifier	Dissolved Copper	Qualifier	Total Iron	Qualifier	Dissolved Iron	Qualifier	Total Lead	Qualifier	Dissolved Lead	Qualifier	Total Mercury	Qualifier	Dissolved Mercury	Qualifier	Total Selenium	Qualifier	Dissolved Selenium	Qualifier	Total Silver	Qualifier	Dissolved Silver	Qualifier
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
MW-11	4/18/2005	12/12/06	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		6/4/08	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		1/22/09	ERM	< 0.05		< 0.05		0.105		< 0.02		< 0.005		< 0.005		0.0346		0.0194		NA		NA		6.55		< 0.1		**0.01900**		< 0.01		0.00165		0.00128		< 0.02		< 0.02		< 0.01		< 0.01	
		12/9/10	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		8/2/13	ERM	<0.0500		<0.0500		0.0695		<0.0200		<0.0050		<0.0050		0.0517		0.0402		NA		NA		18.4		<0.100		**0.03130**		<0.0100		0.00024		0.0002		<0.0200		<0.0200		<0.0100		<0.0100	
		11/30/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
MW-12	5/2/2005	12/20/06	ERM	< 0.03		< 0.03		0.66		0.06		< 0.01		< 0.01		0.03		< 0.01		< 0.02		< 0.02		8.9		< 0.04		<0.025		< 0.025				NA		< 0.04		< 0.04				NA	NA
		6/26/07	ERM	< 0.03			NA	0.02			NA	< 0.01			NA	< 0.01			NA		NA		NA	1.6			NA	**0.06**			NA	< 0.005			NA	< 0.04			NA	< 0.01			NA
		12/5/07	ERM	< 0.05		< 0.05		0.0478		0.0573		< 0.005		< 0.005		< 0.1		< 0.1				NA		0.457		< 0.1		0.0127		< 0.1		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/10/08	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.1		< 0.1				NA		0.0379		< 0.01		**0.0414**		0.0127		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/23/08	ERM	< 0.05			NA	0.203			NA	< 0.005			NA	< 0.1			NA		NA		NA	0.89			NA	**0.0648**			NA	0.00031			NA	< 0.02			NA	< 0.01			NA
		6/30/09	ERM	< 0.05			NA	0.0464			NA	< 0.005			NA	< 0.1			NA		NA		NA	0.993			NA	**0.0309**			NA	< 0.002			NA	< 0.02			NA	< 0.01			NA
		12/22/09	ERM	< 0.05			NA	< 0.1			NA	< 0.025			NA	**0.542**			NA		NA		NA	< 0.5			NA	**0.1800**			NA	< 0.002			NA	**1.140**			NA	0.164			NA
		8/24/10	ERM	< 0.05		< 0.5		< 0.02		< 0.2		< 0.005		< 0.05		0.0681		**0.513**				NA		< 0.1		<1.0		0.0135		**0.195**		< 0.002		< 0.002		0.116		**1.43**		0.0153		0.1770	
		8/24/10 DUP	ERM	< 0.05		< 0.05		< 0.02		< 0.2		< 0.005		< 0.05		0.0647		**0.597**						< 0.1		<1.0		**0.0162**		**0.204**		< 0.002		< 0.002		0.126		**1.48**		0.0146		0.1800	
		12/9/10	ERM	< 0.05		**2.50**		< 0.02		<1.0		< 0.005		< 0.25		0.0813		**0.525**				NA		< 0.1		<5.0		**0.0448**		< 0.5		< 0.002		< 0.002		0.361		**10**		0.0275		< 0.5	
		7/26/11	ERM	< 0.05		< 0.05		< 0.05		< 0.2		< 0.005		< 0.05		0.0730		**0.421**						< 0.1		<1.0		**0.025**		**0.239**		< 0.002		< 0.002		0.191		**1.77**		0.0161		< 0.133	
		12/22/11	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0046	J*	0.0309		**0.105**		**0.401**		NA	NA	NA	NA	0.111		< 0.1		**0.0584**		**0.429**		< 0.002		< 0.002		0.451		**3.50**		0.0281		0.203	
		7/13/12	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0046	J	< 0.05		**0.109**		**0.605**	J	NA	NA	NA	NA	0.185		< 0.1		**0.0625**		< 0.5		< 0.002		0.00007		0.478		**3.95**		0.0315		< 0.01	
		12/12/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0574			NA		NA		NA	< 0.1			NA	**0.0516**			NA	< 0.0002			NA	0.398			NA	0.0249			NA
		7/30/13	ERM	<0.0500		<50.0		<0.0200		<20.0		<0.0050		<5.00		0.0916		<10.0				NA		<0.100		<100		**0.0525**		<10.0		<0.00020		<0.00020		0.374		<20.0		0.0247		<10.0	
		12/1/17	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	0.0378			NA		NA		NA	0.217			NA	**0.0287**			NA	<0.00020			NA	<0.100			NA	0.0156			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	18.1			NA	**0.101**			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-13		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		8/2/13	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	NS
		11/30/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
MW-14		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/6/12	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/22/13	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		11/30/17	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		10/2/18	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
MW-15		12/22/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	NS*
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		6/12/08	ERM	< 0.05			NA	< 0.05			NA	< 0.005			NA	0.0116		NA				NA		4.58			NA	< 0.01			NA	< 0.002			NA	< 0.02			NA	< 0.01			NA
		12/17/08	ERM	< 0.05		< 0.05		< 0.05		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01				NA		4.18		< 0.1		< 0.01		< 0.01		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/14/10	ERM	< 0.05		< 0.05		< 0.05		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		1.35		< 0.1		< 0.01		< 0.01		< 0.002		< 0.002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/10/12	ERM	0.0075	J	0.0019	J	0.0373		0.0104	J	< 0.005		<0.005		0.0156		<0.01				NA		17.7		0.0631	J	**0.0176**		<0.01		0.00017	J	< 0.0002		<0.02		<0.02		<0.01		<0.01	
		12/6/12	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01				NA		2.65		0.244		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/23/13	ERM	<0.0500		<0.0500		<0.0200		<0.0200		<0.0050		<0.0050		<0.0100		<0.0100				NA		6.66		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/30/17	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL	CNL
		10/2/18	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL	CNL
MW-16	12/2/2006	12/18/06	ERM	< 0.03		< 0.03		0.07		0.07		< 0.01		< 0.01		< 0.01		< 0.01		< 0.02		< 0.02		< 0.04		< 0.04		< 0.025		< 0..025				NA		< 0.04		< 0.04				NA	NA
		6/25/07	ERM	< 0.03		< 0.03		0.11		0.1		< 0.01		< 0.01		< 0.01		< 0.01				NA		2.1		< 0.04		< 0.025		< 0.025		< 0.0005		< 0.0005		< 0.04		< 0.04		< 0.01		< 0.01	
		12/3/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	.	dry		dry	< 0.01	dry		dry		dry		dry		dry		dry		dry	dry
		7/7/08	ERM	< 0.05		< 0.05		0.0672		< 0.02		< 0.005		0.0427		0.055		< 0.01				NA		0.458		< 0.01		< 0.01		< 0.01		0.00153		0.00172		< 0.02		< 0.02		< 0.01		< 0.01	
		12/23/08	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0384			NA		NA		NA	< 0.1			NA	< 0.01			NA	0.00104			NA	< 0.02			NA	< 0.01			NA
		6/26/09	ERM	< 0.25			NA	0.164			NA	< 0.025			NA	**0.215**			NA		NA		NA	1.34			NA	**0.1440**			NA	0.00027			NA	**1**			NA	0.0695			NA
		12/21/09	ERM	< 0.25		< 0.05		< 0.1		< 0.04		< 0.025		0.0256		**0.568**		**0.782**				NA		< 0.5		< 0.1		**0.2070**		**0.5560**		< 0.0002		< 0.0002		**1.320**		**3.210**		0.189		**0.522**	
		12/14/10	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	dry
		7/28/11	ERM	< 0.05		< 0.5		< 0.036		< 0.2		< 0.005		< 0.05		0.0748		**0.115**				NA		1.34		< 0.1		**0.0259**		< 0.1		0.00065		0.00063		0.186		0.4		0.0142		< 0.1	
		12/22/11	ERM	< 0.05		< 0.5		0.0393		<.02		0.0029	J*	0.0138		**0.11**		**0.23**		NA	NA	NA	NA	1.45		< 0.1		**0.0526**		**0.208**		0.00059		0.00053		0.42		**1.67**		0.027		0.107	
		7/18/12	ERM	< 0.05				0.0095				< 0.005				0.01						NA		0.273				< 0.01				**0.00211**				0.0324				0.0023	J		
		12/13/12	ERM	< 0.05			NA	0.0226			NA	< 0.005			NA	0.0733			NA		NA		NA	0.512			NA	0.0145			NA	**0.00179**			NA	0.102			NA	< 0.01			NA
		7/29/13	ERM	<0.0500		<1.00		0.0378		<0.400		<0.0050		<0.100		0.0749		<0.200				NA		1.72		<2.00		**0.0171**		<0.200		0.00059		0.00024		0.1		<0.400		<0.0100		<0.200	
		11/30/17	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	NS
		10/2/18	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	NS

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Q	Dissolved Arsenic	Q	Total Barium	Q	Dissolved Barium	Q	Total Cadmium	Q	Dissolved Cadmium	Q	Total Chromium	Q	Dissolved Chromium	Q	Total Copper	Q	Dissolved Copper	Q	Total Iron	Q	Dissolved Iron	Q	Total Lead	Q	Dissolved Lead	Q	Total Mercury	Q	Dissolved Mercury	Q	Total Selenium	Q	Dissolved Selenium	Q	Total Silver	Q	Dissolved Silver	Q
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
MW-17**	12/20/2006	12/12/06	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		6/25/07	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/4/07	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		**0.280**		**0.251**						NA		NA		< 0.1		< 0.1		**0.0746**		< 0.1		0.00038		0.00059		0.505		0.0336		0.0535		< 0.1	
		6/6/08	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	**0.131**			NA	NA				NA		NA		< 0.1			NA	**0.0455**			NA	< 0.0002			NA	0.312			NA	0.0264			NA
		12/30/08	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.017			NA	NA				NA		NA		0.130			NA	< 0.1			NA	0.00022			NA	< 0.02			NA	< 0.1			NA
		6/29/09	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.039			NA	NA				NA		NA		0.525			NA	**0.0182**			NA	< 0.0002			NA	0.094			NA	< 0.1			NA
		6/29/2009DUP	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.030			NA	NA				NA		NA		0.348			NA	**0.0163**			NA	< 0.0002			NA	0.099			NA	< 0.1			NA
		8/25/10	ERM	< 0.05		<1.0		< 0.02		< 0.4		< 0.005		< 0.1		0.0582		**1.600**						NA		NA		< 0.1		<2.0		< 0.1		**0.485**		0.00045		< 0.0002		0.0317		**3.9000**		0.0173		**0.612**	
		12/14/10	ERM	< 0.05		< 0.25		< 0.02		<1.0		< 0.005		< 0.25		0.0336		< 0.5						NA		NA		< 0.1		<5.0		**0.0215**		< 0.5		< 0.0002		< 0.0002		0.167		<1.0		0.0116		< 0.5	
		7/20/11	ERM	< 0.25		< 0.25		< 0.1		< 0.1		< 0.025		< 0.05		**0.455**		**0.152**										< 0.5		<1.0		**0.1350**		< 0.1		< 0.0002		< 0.0002		**0.996**		< 0.27		< 0.0599		< 0.01	
		12/22/11	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0031	J*	0.0424		0.0739		**0.536**		NA	NA	NA	NA	NA		0.0273	J*	0.0464	J*	**0.0562**		**0.6030**		< 0.0002		< 0.0002		0.455		**4.79**		0.0281		0.300	
		7/18/12	ERM	< 0.05		< 0.25		< 0.02		< 0.1		< 0.005		< 0.025		< 0.1		< 0.5								< 0.1		<5.0		< 0.1		< 0.5		< 0.0002		< 0.0002		< 0.2		0.4800	J	< 0.5		< 0.1	
		12/13/12	ERM	< 0.05		<50		< 0.02		<20		< 0.005		<5.0		0.0425		<10.0						NA		NA		< 0.1		<100		**0.0511**		<10.0		< 0.0002		< 0.0002		0.395		<20.0		0.0227		<10.0	
		7/30/13	ERM	<0.0500		<50.0		<0.0200		<20.0		<0.0050		<5.00		0.0423		<10.0						NA		NA		<0.100		<100		**0.0500**		<10.0		<0.00020		<0.00020		0.360		<20.0		0.0243		<10.0	
		11/30/17	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	0.0161			NA	NA				NA		<0.100			NA	< 0.1			NA	<0.00020			NA	< 0.2			NA	0.0128			NA
		10/02/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA	NA				NA		< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-18	12/5/2006	12/13/06	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		6/26/07	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		12/3/07	ERM	< 0.05		< 0.05		0.0209		< 0.02		< 0.005		< 0.005		0.0198		0.0293						NA		1.07		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/6/08	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0441			NA	NA				NA		1.21			NA	< 0.01			NA	0.00024			NA	< .02			NA	< 0.01			NA
		12/16/08	ERM	< 0.05		< 0.05		0.0377		0.0257		< 0.005		< 0.005		< 0.01		< 0.01						NA		1.92		< 0.1		< 0.01		< 0.01			NA			NA		< 0.02		< 0.02		< 0.01		< 0.01	
		6/24/09	ERM	< 0.05		< 0.05		0.0304		< 0.02		< 0.005		< 0.005		0.0115		< 0.01						NA		1.5		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/21/09	ERM	< 0.25		< 0.05		< 0.1		0.0337		< 0.005		< 0.005		< 0.05		< 0.01						NA		1.14		< 0.1		< 0.5		< 0.01		< 0.0002		< 0.0002		< 0.1		< 0.02		< 0.05		< 0.01	
		8/18/10	ERM	< 0.05		< 0.05		0.182		< 0.02		< 0.005		< 0.005		0.04		< 0.01						NA		31.3		< 0.1		**0.0338**		< 0.01		0.00046		< 0.0002		< 0.02		< 0.02		< .01		< 0.01	
		12/10/10	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		< 0.01	dry		dry
		7/20/11	ERM	< 0.05		< 0.05		0.032		< 0.02		< 0.005		< 0.005		0.02		< 0.01						NA		3.07		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/16/11	ERM	< 0.05			NA	0.0184			NA	< 0.005			NA	0.01			NA	NA				NA		0.281			NA	< 0.01			NA	< 0.0002			NA	0.0057			NA	< 0.01			NA
		7/10/12	ERM	0.0242J		< 0.05		0.484		0.0093J		< 0.005		<0.005		**0.169**		<0.01						NA		95.2		0.0507	J	**0.1020**		<0.01		0.00013	J	< 0.0002		0.0466		< 0.02		0.0071	J	<0.01	
		12/5/12	ERM	< 0.05		< 0.05		0.0683		< 0.02		< 0.005		< 0.005		0.0164		< 0.01						NA		7.61		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/25/13	ERM	<0.0500		<0.0500		0.0262		<0.0200		<0.0050		<0.0050		0.0422		0.0494						NA		0.124		<0.100		<0.0100		<0.0100		0.0009		0.00073		0.0386		<0.0200		<0.0100		<0.0100	
		11/29/17	ERM	<0.0500			NA	0.0223			NA	<0.0050			NA	0.0222			NA	NA				NA		0.171			NA	<0.0100			NA	< 0.0002			NA	< 0.02			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.287			NA	< 0.0050			NA	0.0312			NA	NA				NA		13.7			NA	0.0118			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-19	11/30/2006	12/21/06	ERM	< 0.03		< 0.03		0.14		0.13		< 0.01		< 0.01		< 0.01		< 0.01		< 0.02		< 0.02		1.2		< 0.04		< 0.025		< 0.025			NA		NA	< 0.04	< 0.04	< 0.04			NA		NA
		6/26/07	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		12/5/07	ERM		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*		NS*	
		6/11/08	ERM	< 0.05		< 0.05		1.790				< 0.005		0.0069		**0.138**		**0.329**						NA		5.21		< 0.1		**0.0423**		**0.224**		**0.0251**		**0.0240**		0.256		**1.02**		0.0211		0.131	
		12/30/08	ERM	< 0.05			NA	0.136			NA	< 0.005			NA	**0.222**			NA	NA				NA		< 0.1			NA	**0.0218**			NA	**0.0164**			NA	0.124			NA	0.0359			NA
		6/25/09	ERM	< 0.025			NA	1.010			NA	< 0.005			NA	**0.311**			NA	NA				NA		2.44			NA	**0.108**			NA	**0.0106**			NA	**0.695**			NA	0.0539			NA
		8/25/10	ERM	< 0.05		< 0.1		0.219		< 0.4		< 0.005		< 0.1		**0.138**		**0.338**						NA		< 0.1		<2.0		**0.0171**		<2.0		**0.00789**		**0.0079**		0.0721		< 0.4		0.0344		< 0.2	
		12/14/10	ERM	< 0.05		<2.5		0.235		<1.0		< 0.005		< 0.25		**0.109**		< 0.5						NA		< 0.1		<5.0		**0.0256**		<5.0		**0.0105**		**0.0097**		0.202		<1.0		0.0174		< 0.5	
		40745.00	ERM	< 0.05		< 0.5		0.25		< 0..2		< 0.005		< 0.05		**0.11**		**0.21**						NA		< 0.1		< 0.1		**0.0265**		< 0.1		**0.0076**		**0.0075**		0.21		**0.60**		0.01		< 0.1	
		12/15/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		7/19/2012	ERM	< 0.05				0.43	J			< 0.005				< 0.1										< 0.1				< 0.01				**0.00624**				**<2.0**				<1.0			
		12/12/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	**0.156**			NA	NA				NA		< 0.1			NA	**0.0349**			NA	**0.00631**			NA	0.269			NA	0.017			NA
		7/30/13	ERM	<0.0500		<2.50		<0.0200		<1.00		<0.0050		<0.250		**0.122**		<0.500						NA		<0.100		<5.00		**0.0258**		<0.500		0.00137		0.0014		0.177		<1.00		0.0123		<0.500	
		11/28/17	ERM	<0.0500			NA	0.349			NA	<0.0050			NA	**0.157**			NA	NA				NA		2.00			NA	0.0121			NA	**0.00237**			NA	<0.1			NA	0.0108			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	**0.176**			NA	NA				NA		< 0.100			NA	**0.0177**			NA	0.00162			NA	0.0677			NA	0.017			NA
MW-20	11/30/2006	12/16/06	ERM	< 0.03		< 0.3		0.12		0.1		< 0.01		< 0.01		< 0.01		< 0.01		< 0.02		< 0.02		4.1		< 0.025		< 0.025		< 0.025			NA		NA	< 0.04		< 0.04			NA		NA
		6/26/07	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
		12/4/07	ERM	< 0.05		< 0.05		0.529		0.104		< 0.005		< 0.005		**0.2300**		**0.1530**						NA		10.7		< 0.1		**0.0710**		< 0.1		**0.0127**		**0.0128**		0.4830		< 0.2		0.0571		< 0.1	
		6/11/08	ERM	< 0.05			NA	0.114			NA	< 0.005			NA	**0.1620**			NA	NA				NA		0.536			NA	**0.0426**			NA	**0.00412**			NA	0.2950			NA	0.0253			NA
		12/30/08	ERM	<1.0		<1.0		< 0.2		< 0.4		< 0.05		< 0.05		**0.3800**		**0.3620**						NA		< 0.1		< 0.1		**0.2120**		< 0.2		**0.00205**		0.0018		**0.9460**		**0.830**		< 0.1		< 0.1	
		6/30/09	ERM	< 0.05			NA	0.102			NA	< 0.005			NA	**0.1030**			NA	NA				NA		< 0.1			NA	**0.0267**			NA	0.00179			NA	0.1820			NA	0.0133			NA
		12/22/09	ERM	< 0.25			NA	< 0.1			NA	< 0.025			NA	< 0.05			NA	NA				NA		< 0.1			NA	< 0.0			NA	0.00022			NA	< 0.1			NA	< 0.05			NA
		8/26/10	ERM	< 0.5		< 0.5		< 0.2		< 0.2		< 0.05		< 0.05		**0.1090**		**0.1250**						NA		< 0.1		< 0.1		< 0.1		<1.0		0.00072		0.00082		0.2270		0.474		< 0.1		< 0.1	
		12/9/10	ERM	< 0.05		**2.5**		< 0.02		<1.0		< 0.005		< 0.25		**0.1220**		< 0.5						NA		0.172		<5.0		**0.0443**		< ..5		0.00028		0.00041		0.3730		<10.0		< 0.1		< 0.5	
		7/21/11	ERM	< 0.05		< 0.5		0.0384		< 0.2		< 0.005		< 0.05		**0.1100**		**0.297**						NA		< 0.1		< 0.1		**0.0235**		< 0.1		0.00143		0.00042		0.1960		0.433		0.0100		< 0.1	
		12/16/11	ERM	< 0.05			NA	0.0605			NA	0.0026			NA	0.0893			NA	NA				NA		0.912			NA	**0.0452**			NA	0.00028			NA	0.3750			NA	0.0237			NA
		7/19/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.05			NA	NA				NA		< 0.1			NA	< 0.1			NA	0.00127			NA	< 0.2			NA	< 0.1			NA
		12/12/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0558			NA	NA				NA		< 0.1			NA	**0.0464**			NA	< 0.00020			NA	0.3590			NA	0.0240			NA
		7/31/13	ERM	<0.0500			NA	0.0225			NA	<0.0050			NA	0.0108			NA	NA				NA		<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/29/17	ERM	<0.0500			NA	0.78			NA	<0.0050			NA	0.0875			NA	NA				NA		1.180			NA	**0.0178**			NA	0.00062			NA	<0.0200			NA	0.0186			NA
		10/03/18	ERM	< 0.0500			NA	0.221			NA	< 0.0050			NA	0.0726			NA	NA				NA		1.52			NA	**0.0223**			NA	0.00029			NA	0.0938			NA	0.0246			NA
MW-21	Abandoned	7/18/11	ERM		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
		12/15/11	ERM		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
		7/6/12	ERM		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Q	Dissolved Arsenic	Q	Total Barium	Q	Dissolved Barium	Q	Total Cadmium	Q	Dissolved Cadmium	Q	Total Chromium	Q	Dissolved Chromium	Q	Total Copper	Q	Dissolved Copper	Q	Total Iron	Q	Dissolved Iron	Q	Total Lead	Q	Dissolved Lead	Q	Total Mercury	Q	Dissolved Mercury	Q	Total Selenium	Q	Dissolved Selenium	Q	Total Silver	Q	Dissolved Silver	Q
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
MW-22	8/23/2007	10/17/07	ERM	< 0.03		< 0.03		0.09		0.08		< 0.01		< 0.01		< 0.01		< 0.01					NA		NA	2.9		< 0.04		< 0.025		< 0.025		< 0.0005		< 0.0005		< 0.04		< 0.04		< 0.01		< 0.01	
		6/9/08	ERM	< 0.05		< 0.05		0.0966		0.0773		< 0.005		< 0.005		0.0867		0.0881					NA		NA	0.242		< 0.01		< 0.01		< 0.01		**0.0101**		**0.00999**		< 0.02		< 0.02		< 0.01		< 0.01	
		12/30/08	ERM	< 0.05			NA	0.0441			NA	< 0.005			NA	0.0298			NA				NA		NA	0.238			NA	< 0.01			NA	0.00143			NA	< 0.02			NA	< 0.01			NA
		12/60/08 DUP	ERM	< 0.05			NA	0.042			NA	< 0.005			NA	0.0295			NA				NA		NA	0.253			NA	< 0.01			NA	0.00152			NA	< 0.02			NA	< 0.01			NA
		6/25/09	ERM	< 0.05			NA	0.107			NA	< 0.005			NA	0.0326			NA				NA		NA	4.81			NA	< 0.01			NA	0.00138			NA	< 0.02			NA	< 0.01			NA
		8/25/10	ERM	< 0.05			NA	0.0533			NA	< 0.005			NA	0.0480			NA				NA		NA	0.209			NA	< 0.01			NA	0.00092			NA	0.0439			NA	0.0142			NA
		12/14/10	ERM	< 0.05		< 0.05		0.0284		< 0.02		< 0.005		< 0.005		0.0183		0.0206					NA		NA	< 0.1		< 0.1		< 0.01		< 0.01		0.00054		0.00051		< 0.02		< 0.02		< 0.01		< 0.01	
		12/22/10 DUP	ERM	< 0.05		< 0.05		0.0306		< 0.02		< 0.005		< 0.005		0.0165		0.019					NA		NA	< 0.105		< 0.1		< 0.01		< 0.01		0.00048		0.00045		< 0.02		< 0.02		< 0.01		< 0.01	
		7/22/11	ERM	< 0.05		< 0.05		0.0354		0.0299		< 0.005		< 0.005		0.0158		0.0162					NA		NA	0.116		< 0.1		< 0.01		< 0.01		0.00061		0.00066		< 0.02		< 0.02		< 0.01		< 0.01	
		12/21/11	ERM	< 0.05			NA	0.0369			NA	< 0.005			NA	0.0158			NA				NA		NA	0.111			NA	0.0023	J*		NA	0.00052			NA	0.0172	J*		NA	< 0.01			NA
		7/20/12	ERM	< 0.05			NA	0.0567			NA	< 0.005			NA	0.0133			NA				NA		NA	0.631			NA	< 0.01			NA	0.00044			NA	< 0.0157			NA	0.001			NA
		12/31/12	ERM	< 0.05		< 0.5		0.0413		< 0.2		< 0.005		< 0.05		0.0294		< 0.1					NA		NA	0.483		<1.0		< 0.01		< 0.1		0.00069		0.00084		0.0522		< 0.2		< 0.01		< 0.1	
		8/1/13	ERM	<0.0500		<0.0500		0.0505		0.03		<0.0050		<0.0050		0.0130		0.0126					NA		NA	0.79		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/30/17	ERM	<0.0500			NA	0.0442			NA	<0.0050			NA	< 0.01			NA				NA		NA	0.19			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.0525			NA	< 0.0050			NA	< 0.0100			NA				NA		NA	0.217			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
		10/3/2018 DUP	ERM	< 0.0500			NA	0.053			NA	< 0.0050			NA	< 0.0100			NA				NA		NA	0.142			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-23	9/14/2007	10/16/07	ERM	< 0.03			NA	0.34			NA	< 0.01			NA	0.07			NA				NA		NA	0.08			NA	< 0.025			NA	< 0.0005			NA	< 0.04			NA	< 0.01			NA
		6/11/08	ERM	< 0.05			NA	0.446			NA	< 0.005			NA	0.0995			NA				NA		NA	< 0.1			NA	**0.0424**			NA	< 0.0002			NA	0.300			NA	0.0259			NA
		12/18/08	ERM	< 0.25		< 0.1		0.921		0.798		< 0.025		< 0..01		**0.408**		**0.221**					NA		NA	18.3		< 0.2		**0.108**		< 0.2		0.00027		0.00024		0.417		0.0473		0.0542		< 0.002	
		6/30/09	ERM	< 0.05			NA	0.0744			NA	< 0.005			NA	0.0227			NA				NA		NA	0.843			NA	**0.0236**			NA	< 0.0002			NA	< 0.0			NA	< 0.01			NA
		12/23/09	ERM	< 0.25		< 0.05		1.19		0.568		< 0.025		< 0.005		**0.455**		**0.18**					NA		NA	< 0.5		< 0.1		**0.136**		**0.0537**		< 0.0002		< 0.0002		**0.644**		0.313		0.098		0.0447	
		8/20/10	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	**0.114**			NA				NA		NA	< 0.1			NA	**0.0159**			NA	< 0.0002		NA		0.0727		NA		0.0343		NA	
		12/13/10	ERM	< 0.05		**2.5**		< 0.02		<1.0		< 0.005		< 0.25		0.0603		**0.792**					NA		NA	< 0.1		<5.0		**0.0307**		< 0.5		< 0.0002		< 0.0002		0.2400		**10.000**		0.0191		< 0.5	
		7/25/11	ERM	< 0.5		< 0.5		< 0.02		< 0.02		< 0.005		< 0.005		0.0819		**0.445**								<1.0		<1.0		**0.23**		< 0.021		< 0.0002		< 0.0002		0.1710		**1.780**		0.0122		0.14	
		12/19/11	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0035	J*	0.0258		**0.127**		**0.382**		NA	NA	NA	NA		NA	< 0.1		0.153		**0.059**		**0.367**		0.00003	J*	0.00004	J*	0.4710		**2.980**		0.0298		0.189	
		7/20/12	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01		NA	NA	NA	NA		NA	< 0.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		0.0298		0.189	
		12/13/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	0.0999			NA				NA		NA	< 0.1			NA	**0.0500**			NA	< 0.0002			NA	0.3670			NA	0.0211			NA
		7/31/13	ERM	<0.0500		<25.0		<0.200		<10.0		<0.0050		<2.50		0.0839		<5.00					NA		NA	<0.100		<50.0		**0.0538**		<5.00		<0.00020		<0.00020		0.3880		<10.0		0.0292		<5.00	
		11/30/17	ERM	<0.0500			NA	0.29			NA	<0.0050			NA	0.0558			NA				NA		NA	0.31			NA	**0.0348**			NA	<0.00020			NA	0.0782			NA	0.0284			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	0.0342			NA				NA		NA	0.11			NA	< 0.0100			NA	< 0.00020			NA	0.0295			NA	< 0.0100			NA
MW-24	5/7/2010	8/19/10	ERM	< 0.5			NA	< 0.2			NA	< 0.05			NA	< 0.1			NA				NA		NA	<1.0			NA	< 0.1		NA		0.00029			NA	< 0.2			NA	< 0.1			NA
		12/15/10	ERM	< 0.05		< 0.05		0.0746		0.0565		< 0.005		< 0.005		< 0.01		< 0.01					NA		NA	1.04		< 0.1		< 0.01		< 0..01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/18/11	ERM		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry		dry	
		12/16/11	ERM	< 0.05			NA	0.0643			NA	< 0.005			NA	0.0011			NA				NA		NA	0.383			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/6/12	ERM		NS				NS				NS				NS						NS			NS			NA				NS				NS				NS			
		12/5/12	ERM	< 0.05			NA	0.0603			NA	< 0.005			NA	< 0.01			NA				NA		NA	0.115			NA	< 0.01			NS	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/23/13	ERM	**0.0528**		<0.0500		0.886		0.0482		<0.0050		<0.0050		0.0419		<0.0100					NA		NA	84.1		<0.100		**0.0477**		<0.0100		0.00038		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/29/17	ERM	<0.0500			NA	0.0772			NA	<0.0050			NA	<0.0100			NA				NA		NA	1.29			NA	<0.01			NA	<0.0002			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.0691			NA	< 0.0050			NA	< 0.0100			NA				NA		NA	1.39			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-25	5/8/2010	8/19/10	ERM	< 0.5		< 0.5		< 0.2		< 0.2		< 0.05		< 0.05		**0.499**		**0.411**					NA		NA	<1.0		<1.0		<1.0	<1.0	<1.0		< 0.0002		< 0.0002		**0.542**		< 0.2		< 0.1		< 0.1	
		12/15/10	ERM	< 0.05		< 0.05		0.0273		0.0205		< 0.005		< 0.005		**0.373**		**0.347**					NA		NA	0.21		< 0..1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/25/11	ERM	< 0.05		< 0.05		0.0257		0.024		< 0.005		< 0.005		**0.244**		**0.252**								< 0..1		< 0..1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/16/11	ERM	0.007			NA	0.0387			NA	< 0.005			NA	**0.156**			NA		NA		NA		NA	0.0361			NA	< 0.01			NA	< 0.0002			NA	0.0068			NA	< 0.01			NA
		7/6/12	ERM		NS				NS				NS				NS						NS			NS			NA				NS				NS				NS			
		12/5/12	ERM	< 0.05			NA	0.0413			NA	< 0.05			NA	0.094			NA		NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/24/13	ERM	<0.0500			NA	0.0584			NA	<0.0050			NA	0.0261			NA		NA		NA		NA	<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/29/17	ERM	<0.0500			NA	0.193			NA	<0.0050			NA	<0.0100			NA		NA		NA		NA	1.9200			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.0467			NA	< 0.0050			NA	< 0.0100			NA		NA		NA		NA	0.753			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-26	5/6/2009	6/10/09	ERM	< 0.05				0.1				< 0.005				< 0.01										0.328				< 0.01				< 0.0002				< 0.2				< 0.01			
		7/13/09	ERM	< 0.05		< 0.05		0.103		0.101		< 0.005		< 0.005		< 0.01		< 0.01					NA		NA	< 0.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.2		0.0224		< 0.01		< 0.01	
		7/13/09DUP	ERM	< 0.05		< 0.05		0.104		0.0997		< 0.005		< 0.005		< 0.01		< 0.01					NA		NA	1.8		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		0.0226		0.0226		< 0.01		< 0.01	
		12/16/09	ERM	< 0.05			NA	0.097			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	0.341			NA	< 0.01			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		12/16/2009 DUP	ERM	< 0.05			NA	0.098			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	0.375			NA	< 0.01			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		8/18/10	ERM	< 0.05		< 0.05		0.0983		0.0948		< 0.005		< 0.005		< 0.01		< 0.01					NA		NA	0.129		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.2		< 0.2		< 0.01		< 0.01	
		12/7/10	ERM	< 0.05			NA	0.0979			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		7/26/11	ERM	< 0.05		< 0.05		0.086		0.0885		< 0.005		< 0.005		< 0.01		< 0.01								< 0.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.2		< 0.2		< 0.01		< 0.01	
		12/15/11	ERM	< 0.05			NA	0.0919			NA	< 0.005			NA	0.0039			NA		NA		NA		NA	0.105			NA	< 0.01			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		7/11/12	ERM	< 0.05			NA	0.097			NA	< 0.005			NA	0.0144			NA		NA		NA		NA	0.0556J			NA	< 0.01			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		12/5/12	ERM	< 0.05			NA	0.0971			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/25/13	ERM	<0.0500			NA	0.0915			NA	<0.0050			NA	<0.0100			NA		NA		NA		NA	<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		12/1/17	ERM	<0.0500			NA	0.0557			NA	<0.0050			NA	<0.0100			NA		NA		NA		NA	0.243			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.0787			NA	< 0.0050			NA	< 0.0100			NA		NA		NA		NA	0.724			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-27	5/5/2009	6/19/09	ERM	< 0.05			NA	0.0341			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	0.211			NA	< 0.1			NA	< 0.0002			NA	< 0.2			NA	< 0.01			NA
		12/16/09	ERM	< 0.05			NA	0.0256			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	0.739			NA	< 0.1			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		8/24/10	ERM	< 0.05		< 0.05		0.038		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01					NA		NA	1.01		< 0.1		< 0.1		< 0.1		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/8/10	ERM	< 0.05			NA	0.0371			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	0.225			NA	< 0.1			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/28/11	ERM	< 0.05		< 0.05		0.04		< 0.2		< 0.005		< 0.05		< 0.097		**0.130**								1.28		<1.0		< 0.024		< 0.1		**0.00244**		**0.0031**		0.171		0.374		< 0.01		< 0.1	
		12/21/11	ERM	< 0.05		< 0.05		< 0.02		< 0.02		0.0019	J*	0.0262		0.0610		**0.323**								1.68		< 0.1		**0.037**		**0.359**		0.0004		0.00149		0.305		**2.950**		0.0167		0.187	
		7/19/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA		NA	1.81			NA	< 0.1			NA	0.00069			NA	< 0.02			NA	< 0.01			NA
		12/13/12	ERM	< 0.05		<2.5		< 0.02		<1.0		< 0.005		< 0.250		0.0865		< 0.5					NA		NA	< 0.1		<5.0		**0.0295**		< 0.5		**0.00351**		**0.00308**		0.227		<1.0		0.0150		< 0.5	
		7/31/13	ERM	<0.0500		<5.00		<0.0200		<2.00		<0.0050		<0.500		0.0790		<1.00					NA		NA	0.594		<10.0		**0.0391**		<1.00		**0.00287**		**0.00292**		0.277		<2.00		0.0183		<1.00	
		11/28/17	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	0.0185			NA		NA		NA		NA	0.175			NA	<0.0100			NA	< 0.0002			NA	< 0.0002			NA	0.0104			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	0.0256			NA		NA		NA		NA	0.614			NA	**0.0362**			NA	< 0.00020			NA	0.147			NA	0.0158			NA

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Q	Dissolved Arsenic	Q	Total Barium	Q	Dissolved Barium	Q	Total Cadmium	Q	Dissolved Cadmium	Q	Total Chromium	Q	Dissolved Chromium	Q	Total Copper	Q	Dissolved Copper	Q	Total Iron	Q	Dissolved Iron	Q	Total Lead	Q	Dissolved Lead	Q	Total Mercury	Q	Dissolved Mercury	Q	Total Selenium	Q	Dissolved Selenium	Q	Total Silver	Q	Dissolved Silver	Q
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
MW-28	3/24/2011 Destroyed	7/29/11	ERM	< 0.05		< 0.05		0.0294		0.0215		< 0.005		< 0.005		< 0.01		< 0.01			NA		NA	21.8		5.33		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/20/11	ERM	< 0.05		< 0.05		0.0161	J*	0.0119	J*	< 0.005		0.0002	J*	< 0.01		0.0026	J*	NA	NA	NA	NA	2.84		< 0.1		0.0021	J*	< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/11/12	ERM	0.0056		< 0.05		0.0935		0.0449		< 0.005		< 0.005		**0.578**		< 0.01		NA	NA	NA	NA	26.7		0.0447		0.0136		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/7/12	ERM	< 0.05			NA	0.0267			NA	< 0.005			NA	< 0.01			NA		NA		NA	2.84			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		8/2/13	ERM	<0.0500		<0.0500		<0.0200		<0.0200		<0.0050		<0.0050		0.0107		<0.0100			NA		NA	6.86		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
MW-29	3/25/2011	7/28/11	ERM	< 0.05		< 0.05		0.0206		< 0.2		< 0.005		< 0.005		0.03		0.0259			NA		NA	1.49		< 0.1		< 0.01		< 0.01		0.0011		0.0015		< 0.02		< 0.02		< 0.01		< 0.01	
		12/16/11	ERM	< 0.05				0.0202				< 0.005				0.027								0.512				< 0.01				0.00067				< 0.02				< 0.01			
		7/11/12	ERM	**0.0233**	J	< 0.05		0.348		0.0094	J	< 0.005		< 0.005		0.0648		0.0253			NA		NA	62.2		0.0174	J	**0.054**		< 0.01		0.00063		< 0.0002		0.0072	J	< 0.02		0.001	J	< 0.01	
		12/6/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	**0.226**			NA		NA		NA	0.378			NA	**0.046**			NA	**0.0178**			NA	0.33			NA	0.0173			NA
		7/30/13	ERM	<0.0500		<0.250		<0.0200		<0.100		<0.0050		<0.0250		0.064		0.0638			NA		NA	0.338		<0.500		<0.0100		<0.0500		0.0013		0.00095		0.0268		<0.100		<0.0100		<0.0500	
		11/29/17	ERM	<0.0500			NA	0.0306			NA	<0.0050			NA	0.0472			NA		NA		NA	0.64			NA	<0.0100			NA	0.00092			NA	<0.02			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.0818			NA	< 0.0050			NA	0.0459			NA		NA		NA	3.63			NA	< 0.0100			NA	0.0005			NA	< 0.0200			NA	< 0.0100			NA
		10/03/18 DUP	ERM	< 0.0500			NA	0.0837			NA	< 0.0050			NA	0.0509			NA		NA		NA	3.85			NA	< 0.0100			NA	0.00047			NA	< 0.0200			NA	< 0.0100			NA
MW-A-1	9/6/2011 Destroyed	9/8/11	ERM	< 0.05		< 0.05		0.0324		0.0215		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		3.12		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/20/11	ERM	< 0.05		< 0.05		0.0208		0.0208		< 0.005		0.0001	J*	0.0006	J*	< 0.01		NA		NA		0.422		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/17/12	ERM	< 0.05		< 0.05		0.0232		0.0193J		< 0.005		< 0.005		0.0008		< 0.01			NA		NA	0.451		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/6/12	ERM		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			NS		NS		NS		NS		NS		NS
		7/24/13	ERM	<0.0500		<0.0500		0.038		0.0241		<0.0050		<0.0050		0.0117		<0.0100			NA		NA	8.21		0.128		**0.0155**		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
MW-A-2	9/12/2011	9/30/11	ERM	< 0.05		< 0.05		0.0899		0.0267		< 0.005		< 0.005		0.0174		< 0.01		NA		NA		16.2		< 0.1		0.0143		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/20/11	ERM	< 0.05		< 0.05		0.0415		0.0385		< 0.005		< 0.005		0.0041	J*	< 0.01		NA		NA		1.44		< 0.1		0.0018	J*	< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/16/12	ERM	< 0.05			NA	0.0378			NA	< 0.005			NA	0.004	J		NA		NA		NA	0.617			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/6/12	ERM	< 0.05			NA	0.0428			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.488			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/24/13	ERM	<0.0500		<0.0500		0.0738		<0.0200		<0.0050		<0.0050		**0.102**		0.0821			NA		NA	1.47		0.461		<0.0100		<0.0100		**0.00679**		**0.00567**		<0.0200		<0.0200		<0.0100		<0.0100	
		11/30/17	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL			CNL		CNL		CNL		CNL		CNL		CNL
		10/2/18	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL			CNL		CNL		CNL		CNL		CNL		CNL
MW-A-3	9/12/2011 Destroyed	9/30/11	ERM	< 0.05		< 0.05		0.0205		< 0.02		< 0.005		< 0.005		0.0425		0.0385		NA		NA		4.38		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/20/11	ERM	< 0.05		< 0.05		0.0095	J*	0.0099	J*	< 0.005		0.0001	J*	0.0126		0.0057	J*	NA		NA		0.177		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/16/12	ERM	< 0.05		0.0016	J	0.0209		0.0157	J	< 0.005		0.0004	J	0.004	J	0.0011	J		NA		NA	1.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/7/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.702			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/24/13	ERM	<0.0500		<0.0500		<0.0200		<0.0200		<0.0050		<0.0050		**0.216**		**0.937**			NA		NA	1.37		0.966		<0.0100		<0.0100		**0.0081**		**0.00659**		0.0694		0.0572		<0.0100		<0.0100	
		11/30/17	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL			CNL		CNL		CNL		CNL		CNL		CNL
		10/2/18	ERM		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL		CNL			CNL		CNL		CNL		CNL		CNL		CNL
MW-A-4	3/27/2012	3/27/12	ERM	< 0.05		< 0.05		0.0874		0.0860		< 0.005		< 0.005		< 0.01		< 0.01			NA		NA	0.357		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/28/12	ERM	< 0.05		< 0.05		0.118		0.0901		< 0.005		< 0.005		**0.158**		< 0.01			NA		NA	4.74	B	< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/16/12	ERM	**0.0876**		< 0.05		0.887		0.0883		< 0.005		< 0.005		**0.989**		< 0.01			NA		NA	265		< 0.1		**0.185**		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/7/12	ERM	< 0.05		< 0.05		0.111		0.0923		< 0.005		< 0.005		0.0127		< 0.01			NA		NA	3.35		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/25/13	ERM	<0.0500			NA	0.101			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.985			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/28/17	ERM	<0.0500			NA	0.0863			NA	<0.0050			NA	<0.0100			NA		NA		NA	<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.0845			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-A-5	3/27/2012	3/28/12	ERM	< 0.05		< 0.05		0.304		0.287		< 0.005		< 0.005		< 0.01		< 0.01			NA		NA	1.92		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		6/28/12	ERM	**0.104**		< 0.05		10.1		0.245		0.0074		< 0.005		**6.3**		< 0.01			NA		NA	1310		0.151		**0.791**		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/17/12	ERM	**0.0163**		< 0.05		0.784		0.464		< 0.005		< 0.005		0.0928		< 0.01			NA		NA	44.1		< 0.1		**0.026**		< 0.01		0.00011		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/11/12	ERM	< 0.05		< 0.05		0.562		0.468		< 0.005		< 0.005		0.0177		< 0.01			NA		NA	14.5		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/25/13	ERM	<0.0500			NA	0.27			NA	<0.0050			NA	<0.0100			NA		NA		NA	3.15			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/30/17	ERM	<0.0500			NA	0.645			NA	<0.0050			NA	<0.0100			NA		NA		NA	5.94			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/03/18	ERM	< 0.0500			NA	0.464			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	8.84			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-B-1	9/7/2011	9/9/11	ERM	< 0.05		< 0.05		0.053		0.0469		< 0.005		< 0.005		0.0744		0.0641			NA		NA	1.55		< 0.01		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/19/11	ERM	< 0.05		< 0.05		0.0423		0.0444		< 0.005		< 0.005		0.0012	J*	< 0.0100			NA		NA	0.629		< 0.01		0.0006	J*	< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/12/12	ERM	< 0.05			NA	0.0422			NA	< 0.005			NA	0.0009	J		NA		NA		NA	0.142			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/12/12	ERM	< 0.05			NA	0.0442			NA	< 0.005			NA	< 0.01			NA		NA		NA	0.531			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/25/13	ERM	<0.0500			NA	0.0331			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.155			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		11/28/17	ERM	<0.0500			NA	0.0432			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.155			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.0387			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.181			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-B-2	9/14/2011	9/9/11	ERM	< 0.05			NA	0.0287			NA	< 0.005			NA	**0.13**			NA		NA		NA	5.6			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/19/11	ERM	< 0.05			NA	0.0197	J*		NA	< 0.005			NA	0.0016	J*		NA		NA		NA	0.0367	J*		NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/13/12	ERM	**0.0033**		**0.004**		0.0295		0.0281		< 0.005		< 0.005		0.0059		< 0.0100			NA		NA	0.705		< 0.01		< 0.01		< 0.01		< 0.0002		< 0.0002		0.009		0.0079J		< 0.01		< 0.01	
		12/12/12	ERM	< 0.05		< 0.05		0.0411		0.0304		< 0.005		< 0.005		< 0.01		< 0.01			NA		NA	0.605		0.102		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/26/13	ERM	<0.0500		<0.0500		0.0347		0.0333		<0.0050		<0.0050		<0.0100		<0.0100			NA		NA	0.285		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/29/17	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.545			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	1.55			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-B-3	9/15/2011	9/29/11	ERM	< 0.05			NA	0.0263			NA	< 0.005			NA	0.0224			NA		NA		NA	3.66			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/20/11	ERM	< 0.05			NA	0.029			NA	< 0.005			NA	0.0012	J*		NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	0.0058	J*		NA	< 0.01			NA
		7/13/12	ERM	**0.0025**			NA	0.0335			NA	< 0.005			NA	0.0665			NA		NA		NA	2			NA	< 0.01			NA	< 0.0002			NA	0.0056	J		NA	< 0.01			NA
		12/11/12	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		7/26/13	ERM	<0.0500		<0.0500		0.0513		0.0551		<0.0050		<0.0050		<0.0100		<0.0100			NA		NA	0.206		0.104		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/29/17	ERM	<0.0500			NA	< 0.02			NA	<0.0050			NA	<0.0100			NA		NA		NA	0.441			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	0.669			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
MW-B-4	9/20/2011	9/29/11	ERM	< 0.05			NA	0.0212			NA	< 0.005			NA	< 0.01			NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		12/19/11	ERM	< 0.05		< 0.05		0.0242		0.0233		< 0.005		< 0.005		0.0009	J*	< 0.01			NA		NA	0.126		< 0.1		0.0017	J*	< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/13/12	ERM	**0.006**		**0.0063**		0.106		0.0087		< 0.005		< 0.005		0.0203		< 0.01			NA		NA	4.76		< 0.1		0.0047	J*	< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/11/12	ERM	< 0.05		< 0.05		0.19		0.462		< 0.005		< 0.005		< 0.01		< 0.01			NA		NA	< 0.1		< 0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/26/13	ERM	<0.0500		<0.0500		0.595		0.472		<0.0050		<0.0050		<0.0100		<0.0100			NA		NA	<0.100		<0.100		<0.0100		<0.0100		<0.00020		<0.00020		<0.0200		<0.0200		<0.0100		<0.0100	
		11/28/17	ERM	<0.0500			NA	0.312			NA	<0.0050			NA	<0.0100			NA		NA		NA	<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	0.695			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA

TABLE 2-2
Groundwater Metals Concentrations (mg/L)
2nd Semiannual Progress Report
Murata Electronics N. A., Inc. (HIS No. 10771)
Rockmart, Georgia

Well No.	Installation Date	Sampling Date	Collected By	Total Arsenic	Qualifier	Dissolved Arsenic	Qualifier	Total Barium	Qualifier	Dissolved Barium	Qualifier	Total Cadmium	Qualifier	Dissolved Cadmium	Qualifier	Total Chromium	Qualifier	Dissolved Chromium	Qualifier	Total Copper	Qualifier	Dissolved Copper	Qualifier	Total Iron	Qualifier	Dissolved Iron	Qualifier	Total Lead	Qualifier	Dissolved Lead	Qualifier	Total Mercury	Qualifier	Dissolved Mercury	Qualifier	Total Selenium	Qualifier	Dissolved Selenium	Qualifier	Total Silver	Qualifier	Dissolved Silver	Qualifier
GA EPD RRS Type 4				0.01		0.01		20.44		20.44		0.1022		0.1022		0.1		0.1		4.088		4.088		NA		NA		0.015		0.015		0.002		0.002		0.511		0.511		0.511		0.511	
Equipment Blank		6/27/07	ERM	< 0.05			NA	< 0.01			NA	< 0.01			NA	< 0.01			NA		NA		NA	< 0.04			NA	< 0.025			NA	< 0.0005			NA	< 0.04			NA	< 0.01			NA
		12/17/2008	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		6/12/2009	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01						< 0.1		0.119		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/13/2009	ERM	< 0.05				< 0.02				< 0.005				< 0.01								< 0.1				< 0.01				< 0.0002				< 0.02				< 0.01			
		12/16/2009	ERM	< 0.05			NA	< 0.02			NA	< 0.005			NA	< 0.01			NA		NA		NA	< 0.1			NA	< 0.01			NA	< 0.0002			NA	< 0.02			NA	< 0.01			NA
		8/18/2010	ERM	< 0.05				< 0.02				< 0.005				< 0.01								0.123				< 0.01				< 0.0002				< 0.02				< 0.01			
		7/28/2011	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01						< 0.1		<0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		12/4/2012	ERM	< 0.05		< 0.05		< 0.02		< 0.02		< 0.005		< 0.005		< 0.01		< 0.01		NA		NA		< 0.1		<0.1		< 0.01		< 0.01		< 0.0002		< 0.0002		< 0.02		< 0.02		< 0.01		< 0.01	
		7/23/2013	ERM	<0.0500			NA	<0.0200			NA	<0.0050			NA	<0.0100			NA		NA		NA	<0.100			NA	<0.0100			NA	<0.00020			NA	<0.0200			NA	<0.0100			NA
		10/02/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA
		10/03/18	ERM	< 0.0500			NA	< 0.0200			NA	< 0.0050			NA	< 0.0100			NA		NA		NA	< 0.100			NA	< 0.0100			NA	< 0.00020			NA	< 0.0200			NA	< 0.0100			NA

Notes:
J* - Estimated level of VOC Below Reporting Limit
MW-2 and MW-13 are dry wells.
Ground water metals samples were not collected at the site before the December 2006 sampling event.
NA - Not Analyzed
NS - Not Sampled
NS* - Insufficient water for sampling. Only VOCs sampled.
CNL - Could Note Locate
MW-17** - MW-17 was a dry well when installed. It is suspected that the liquid sampled during sampling events was residual injection fluid instead of ground water.
Full scale ISCO began in October 2007.
ISCO Pilot Test began in March 2007. MW-5, MW-8, MW-18, and MW-20 were affected by this pilot test. Therefore, metals samples collected after March 2007 for these wells are not considered baseline.
ISCO Full scale injections began October 2007. Therefore metals samples collected after October 2007 are not considered baseline.
Indicates baseline sampling result before ISCO in ISCO area wells.
Indicates increase in concentration from baseline sampling result.
Indicates increase in concentration from baseline sampling result and an exceedance of the GA EPD Type 4 RRS
Indicates an exceedance of the GA EPD Type 4 RRS, but no baseline sampling performed.
Bold concentration indicates an exceedance of the applicable GA EPD Type 4 Risk Reduction Standard (RRS).
When samples are turbid (>10 NTUs) two samples are collected, one field filtered (dissolved), and one unfiltered (total). In these cases, only the dissolved sample result is considered for compliance. In this case, the total result is for comparison purposes only.

Prepared By: Qiqi Liang 11/19/2018 Checked By:

Table 2-3
Monitoring Well Groundwater Elevations
October 1, 2018
2nd Semiannual Status Report
Murata Electronics, N.A.
Rockmart, GA

Monitor Well	Top of Casing (ft MSL)	Screen Interval (ft)	October, 1, 2018	
			Depth to Groundwater (ft)	Groundwater Elevation (ft MSL)
MW-1	497.96	36.50-56.50	Dry	NM
MW-2	493.44	26.50-36.50	Dry	NM
MW-3	491.85	32.50-47.50	39.73	452.12
MW-4	481.74	49.50-69.50	46.14	435.60
MW-5	490.00	48.50-73.50	51.52	438.48
MW-6	499.83	50.50-80.50	64.71	435.12
MW-7	489.98	63.45-73.45	52.45	437.53
MW-8	491.64	62.00-72.00	55.98	435.66
MW-9	491.20	49.00-59.00	53.90	437.30
MW-10	488.76	63.50-73.50	Dry	NM
MW-11	492.77	54.00-64.00	52.52	440.25
MW-12	497.66	160-200.5*	3.25	494.41
MW-13	497.66	15.50-55.50	Dry	NM
MW-14	469.86	29.00-39.00	Dry	NM
MW-15	476.85	34.50-44.50	Destroyed	NM
MW-16	497.63	61.94-75.66	NM	NM
MW-17	492.75	65.11-75.11	45.69	447.06
MW-18	490.46	50.10-60.10	57.78	432.68
MW-19	497.72	53.20-63.20	61.95	435.77
MW-20	493.85	52.30-62.30	58.07	435.78
MW-22	496.60	60.00-80.00	59.60	437.00
MW-23	491.84	53.00-73.00	35.79	456.05
MW-24	485.86	58.00-68.00	54.00	431.86
MW-25	481.08	69.30-79.30	48.80	432.28
MW-26	499.94	74.00-89.00	43.61	456.33
MW-27	492.68	59.20-69.20	35.75	456.93
MW-28	491.36	51.00-68.00*	Damaged	NM
MW-29	494.70	56.20-66.20	60.23	434.47
MW-A-1	477.72	63.20-73.20	Destroyed	NM
MW-A-2	478.41	69.10-79.10	CNL	NM
MW-A-3	479.02	63.50-73.50	Destroyed	NM
MW-A-4	478.14	38.43-48.43	43.49	434.65
MW-A-5	477.32	50.80-60.80	44.25	433.07
MW-B-1	484.30	64.30-74.30	41.94	442.36
MW-B-2	491.40	79.10-91.10	53.82	437.58
MW-B-3	480.11	79.00-99.00	46.91	433.20
MW-B-4	483.25	79.30-99.30	49.42	433.83

Notes:
Elevation data represents survey completed on October 5, 2011 completed by Williams, Sweitzer and Barnum, Inc.
NM= Not Measured
DRY= Monitoring well is dry, no water in well
CNL = Can not locate
Monitoring Well MW-16 is a slanted well with screening under the building.
* Open Borehole

Table 2-4
Field Groundwater Quality Parameters
2nd Semiannual Status Report
Murata Electronics, N.A.
Rockmart, GA

	Location ID	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-12	MW-17
	Sample Date	2-Oct-18	1-Oct-18	1-Oct-18	2-Oct-18	3-Oct-18	3-Oct-18	1-Oct-18	3-Oct-18	2-Oct-18
	Unit									
Field Groundwater Quality Parameters										
Temperature	°C	NM	21.55	24.24	19.74	NM	20.62	NM	28.11	22.72
Specific Conductivity	mS/cm	NM	731.30	520.60	278.90	NM	607.70	NM	136.60	157.20
Dissolved Oxygen	mg/L	NM	0.30	5.98	5.52	NM	4.98	NM	0.07	0.61
pH	pH units	NM	7.38	7.51	7.17	NM	7.48	NM	10.76	9.42
Oxidation-Reduction Potential	mV	NM	53.00	112.40	180.30	NM	448.50	NM	-27.50	365.60
Turbidity	NTU	NM	4.25	8.80	9.87	0.35	6.47	NM	35.30	3.91

	Location ID	MW-18	MW-19	MW-20	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
	Sample Date	3-Oct-18	3-Oct-18	3-Oct-18	3-Oct-18	3-Oct-18	2-Oct-18	2-Oct-18	2-Oct-18	2-Oct-18
	Unit									
Field Groundwater Quality Parameters										
Temperature	°C	NM	NM	NM	21.60	NM	22.30	28.14	20.93	NM
Specific Conductivity	mS/cm	NM	NM	NM	575.80	NM	539.00	594.40	763.90	NM
Dissolved Oxygen	mg/L	NM	NM	NM	3.83	NM	2.81	0.50	1.28	NM
pH	pH units	NM	NM	NM	7.27	NM	7.12	7.35	7.83	NM
Oxidation-Reduction Potential	mV	NM	NM	NM	475.10	NM	106.20	52.00	131.00	NM
Turbidity	NTU	NM	-0.14	NM	9.92	1.71	38.80	32.10	6.23	0.01

	Location ID	MW-29	MW-A-4	MW-A-5	MW-B-1	MW-B-2	MW-B-3	MW-B-4
	Sample Date	3-Oct-18	3-Oct-18	3-Oct-18	2-Oct-18	2-Oct-18	2-Oct-18	2-Oct-18
	Unit							
Field Groundwater Quality Parameters								
Temperature	°C	NM	24.82	21.82	19.44	22.40	21.44	27.53
Specific Conductivity	mS/cm	NM	586.60	621.50	255.80	112.20	123.50	387.10
Dissolved Oxygen	mg/L	NM	3.79	0.16	1.06	0.26	4.60	3.12
pH	pH units	NM	7.08	7.08	6.25	7.10	8.77	11.13
Oxidation-Reduction Potential	mV	NM	-13.00	-139.80	115.80	469.80	63.60	105.80
Turbidity	NTU	18.70	1.44	8.71	7.64	16.60	1.88	1.34

NM = Not Measured due to Permanganate in well
OR = Out of Range

Table 2-5
Vapor Intrusion Assessment - Murata Warehouse
2nd Semiannual Status Report
Murata Electronics, N.A.
Rockmart, Georgia

	Soil Gas	Murata Warehouse										
	EPA VISLs Sub-Slab Soil Gas R=10^{-5}, HI=1 Commercial Exposure, [µg/m^3]											
LOCATION		**SG-1**			**SG-2**					**SG-3**		
							DUP					
SAMPLING DATE		**11-Jun-18**	**13-Jul-18**	**30-Nov-18**	**11-Jun-18**	**13-Jul-18**	**13-Jul-18**	**30-Nov-18**	**30-Nov-18**	**11-Jun-18**	**13-Jul-18**	**30-Nov-18**
Tetrachlorothene	5,820	**719,000**	314	**943,000**	**410,000**	21.1	542.0	**7,390,000**	**7,190,000**	4,380	1,410	1,920
Trichloroethene	292	**4,900**	3.24	**5,860**	< 1,580	< 1.07	< 1.07	< 26,900	< 26,900	< 15.4	< 5.37	< 7.20

	Soil Gas	Murata Warehouse									
	EPA VISLs Sub-Slab Soil Gas R=10^{-5}, HI=1 Commercial Exposure, [µg/m^3]										
LOCATION		**SG-4**				**SG-5**			**SG-6**		
			DUP								
SAMPLING DATE		**11-Jun-18**	**11-Jun-18**	**13-Jul-18**	**30-Nov-18**	**11-Jun-18**	**13-Jul-18**	**30-Nov-18**	**11-Jun-18**	**13-Jul-18**	**30-Nov-18**
Tetrachlorothene	5,820	**41,500**	**41,800**	**43,900**	**13,300**	**11,300**	**30,600**	**31,200**	**20,800**	6.33	**29,600**
Trichloroethene	292	< 127	< 126	< 107	< 31.4	< 31.4	< 109	< 61.8	< 62.9	< 1.07	< 61.3

	Indoor Air	Murata Warehouse													
	EPA VISLs Indoor Air R=10^{-5}, HI=1 Commercial Exposure, [µg/m^3]														
LOCATION		**IA-1**		**IA-2**			**IA-3**			**IA-4**		**IA-5**		**IA-6**	
					DUP				**DUP**						
SAMPLING DATE		**13-Jul-18**	**30-Nov-18**	**13-Jul-18**	**13-Jul-18**	**30-Nov-18**	**13-Jul-18**	**30-Nov-18**	**30-Nov-18**	**13-Jul-18**	**30-Nov-18**	**13-Jul-18**	**30-Nov-18**	**13-Jul-18**	**30-Nov-18**
Tetrachlorothene	175	8.21	6.08	13.4	14.3	6.85	1.34	1.17	1.04	2.33	1.73	6.27	5.51	6.85	5.94
Trichloroethene	8.76	0.210	0.231	0.188	0.215	0.145	< 0.107	< 0.107	< 0.107	< 0.107	< 0.107	0.177	0.107	0.167	0.199

	Outdoor Ambient	
LOCATION	**OA-01**	
SAMPLING DATE	**13-Jul-18**	**30-Nov-18**
Tetrachlorothene	0.346	4.26
Trichloroethene	< 0.107	0.239

Notes:
Bold and highlighted - exceeds relevant EPA VISL screening level.
Results reporting in µg/m$^{3.}$
µg/m^3 = micrograms per cubic meter.
DUP = duplicate sample

Table 3-1
Groundwater Monitoring Schedule
2na Semiannual Status Report
Murata Electronics, N.A.
Rockmart, GA

Well ID	Total Depth (ft bgs)	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Screened Interval (ft bgs)	Top of Rock (ft bgs)	Schedule	Reason to Abandon
MW-1	57.00	498.19	497.96	36.5-56.5	56.50	Gauge and Abandon	Dry
MW-2	37.00	493.8	493.44	26.5-36.5	NA	Gauge and Abandon	Dry
MW-3	48.00	492.2	491.85	32.5-47.5	NA	Gauge and Abandon	Injection Well
MW-4	70.00	482.05	481.74	49.5-69.5	24.50	18 mos.	NA
MW-5	74.00	490.16	490.00	48.5-73.5	31.50	Gauge and Abandon	Injection Well
MW-6	81.00	500.22	499.83	50.5-80.5	11.50	POD - 9 mos.	NA
MW-7	74.05	490.16	489.98	63.45-73.45	50.00	POD - 9 mos.	NA
MW-8	72.50	491.80	491.64	62-72	31.00	18 mos.	NA
MW-9	59.50	491.33	491.20	49-59	24.00	Gauge and Abandon	Injection Well
MW-10	73.80	488.47	488.76	63.5-73.5	34.00	Gauge and Abandon	Injection Well
MW-11	56.50	492.94	492.77	54-64	41.50	Gauge and Abandon	Injection Well
MW-12	200.50	497.84	497.66	160-200.5*	55.00	Gauge and Abandon	Injection Well
MW-13	57.00	497.89	497.66	15.5-55.5	52.50	Gauge and Abandon	Dry
MW-14	39.50	470.33	469.86	29-39	39.50	Gauge and Abandon	Dry
MW-15	45.00	477.15	476.85	34.5-44.5	41.00	Destroyed	Destroyed
MW-16	77.80	497.70	497.63	61.94-75.66	42.00	Gauge and Abandon	Injection Well
MW-17	87.50	493.11	492.75	65.11-75.11	51.00	Gauge and Abandon	Injection Well
MW-18	60.15	490.86	490.46	50.1-60.1	NA	18 mos.	NA
MW-19	68.78	497.81	497.72	53.2-63.2	38.00	Gauge and Abandon	Injection Well
MW-20	63.55	494.07	493.85	52.3-62.3	34.00	Gauge and Abandon	Injection Well
MW-22	81.00	496.84	496.60	60-80	54.00	18 mos.	NA
MW-23	109.00	492.08	491.84	53-73	16.00	Gauge and Abandon	Injection Well
MW-24	68.00	483.18	485.86	58-68	51.00	POD - 9 mos.	NA
MW-25	80.00	477.90	481.08	69.3-79.3	37.00	Gauge and Abandon	No longer needed
MW-26	90.50	500.28	499.94	74-89	45.00	POD - 9 mos.	NA
MW-27	70.00	492.79	492.68	59.2-69.2	56.40	Gauge and Abandon	Injection Well
MW-28	140.00	492.41	491.36	51-68**	28.00	18 mos.	NA
MW-29	67.00	491.40	494.70	56.2-66.2	53.00	Gauge and Abandon	Injection Well
MW-A-1	74.00	478.09	477.72	63.2-73.2	37.50	Destroyed	Destroyed
MW-A-2	80.00	478.91	478.41	69.1-79.1	57.00	Gauge and Abandon	Injection Well
MW-A-3	75.00	479.55	479.02	63.5-73.5	60.00	Destroyed	Destroyed
MW-A-4	49.00	478.63	478.14	48.43-38.43	38.00	Gauge and Abandon	No longer needed
MW-A-5	61.00	477.82	477.32	50.8-60.8	16.00	POD - 9 mos.	NA
MW-B-1	75.00	484.65	484.30	64.3-74.3	60.00	POD - 9 mos.	NA
MW-B-2	100.00	491.40	491.40	79.1-91.1	45.00	Gauge and Abandon	No longer needed
MW-B-3	100.00	480.39	480.11	79-99	40.00	18 mos.	NA
MW-B-4	100.00	483.52	483.25	79.3-99.3	33.00	18 mos.	NA

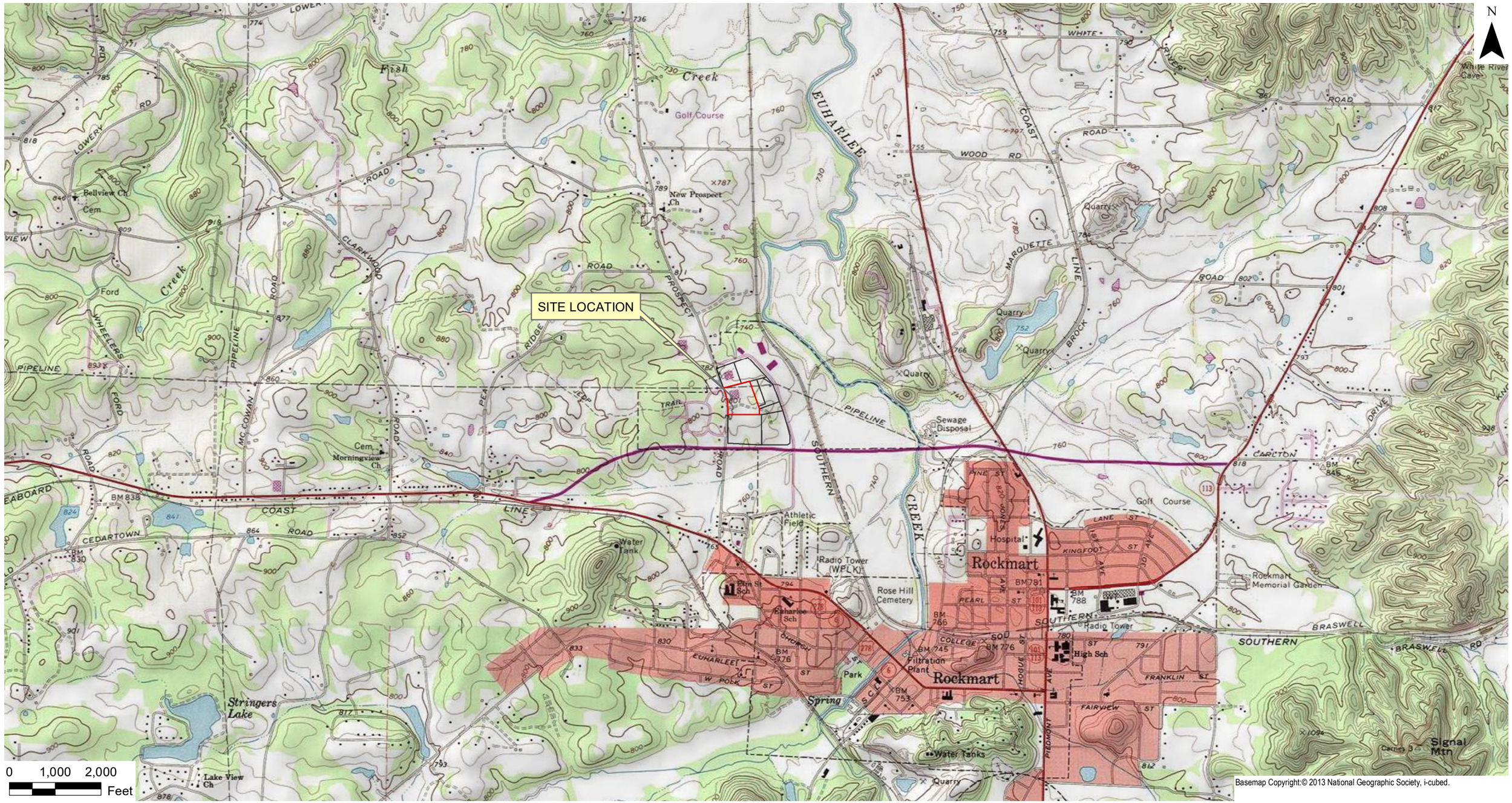
NOTES:

*Monitor well MW-12 installed as a double-cased, 4-inch, open hole well completed in rock at a depth interval from 160 feet to 200.5 feet.

**Monitor well MW-28 installed as a double-cased, 2-inch, open hole well completed in rock at a depth interval from 51 feet to 68 feet.

NA - Not Applicable

FIGURES



Environmental Resources Management

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DATE:	2/5/2019	SCALE:	AS SHOWN	REVISION:	0

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FIGURE F-1
SITE LOCATION MAP

2nd VRP Progress Report

Murata Electronics N.A., Inc.

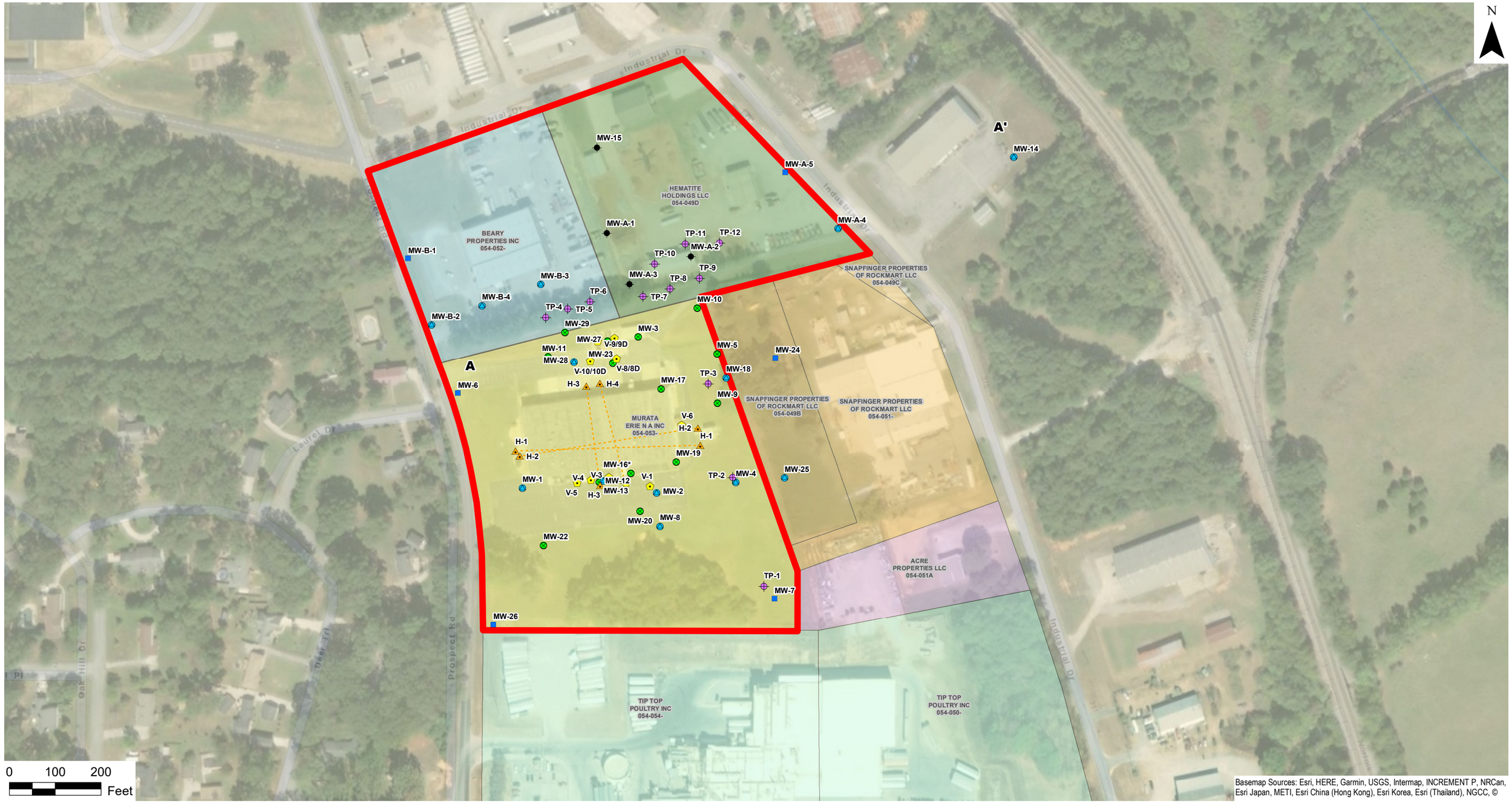
Rockmart, Georgia

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

ERM



Basemap Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, ©

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FIGURE F 1-2 - SITE LAYOUT & PROPERTY OWNERSHIP MAP

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

- Monitoring Well Location
- Injection Well Location
- Temporary Injection Well Location
- SVE Horizontal Well Location
- SVE Vertical Well Location
- Point of Demonstration Monitoring Well Location
- Destroyed Monitoring Well Location
- Horizontal SVE Well Line Location
- APPLICANT & QUALIFYING PROPERTIES

APPLICANT & QUALIFYING PROPERTIES

- BEARY PROPERTIES INC 054-052-
- HEMATITE HOLDINGS LLC 054-049D
- MURATA ERIE N A INC 054-053-

ADJOINING PROPERTIES

- ACRE PROPERTIES LLC 054-051A
- SNAPFINGER PROPERTIES OF ROCKMART LLC 054-049C
- SNAPFINGER PROPERTIES OF ROCKMART LLC 054-051-
- SNAPFINGER PROPERTIES OF ROCKMART LLC 054-049B
- TIP TOP POULTRY INC 054-050-
- TIP TOP POULTRY INC 054-054-

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FIGURE 2-1 - POTENTIOMETRIC SURFACE MAP - October 1, 2018

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

- Monitoring Well Location
- Injection Well Location
- Point of Demonstration Monitoring Well Location
- Potentiometric Surface Contour
- Dashed where inferred
- Apparent Groundwater Flow Direction

Notes:
NM = Not Measured
CNL = Can Not Locate
*MW-16 is 45° well with screening under building
**MW-12 ia a deep bedrock monitoring well not used in contouring

ERM



Basemap Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, ©

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FIGURE 2-2
PCE IN GROUNDWATER
October 2018

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

- Monitoring Well Location
- Injection Well Location
- Point of Demonstration Monitoring Well Location
- Destroyed Monitoring Well Location
- PCE Groundwater Contour
- (140) PCE Concentration

Notes:
PCE = Tetrachloroethene
NS = Not Sampled
CNL = Could Not Locate

ERM



Basemap Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, ©

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FIGURE 2-2
TCE IN GROUNDWATER
October 2018

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

- Monitoring Well Location
- Injection Well Location
- Point of Demonstration Monitoring Well Location
- Destroyed Monitoring Well Location
- TCE Groundwater Contour
- (36) TCE Concentration

Notes:
TCE = Trichloroethene
NS = Not Sampled
CNL = Could Not Locate

ERM



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FIGURE 2-4
1,4-DIOXANE IN GROUNDWATER
October 2018

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

- Monitoring Well Location
- Injection Well Location
- Point of Demonstration Monitoring Well Location
- Destroyed Monitoring Well Location
- 1,4-Dioxane Groundwater Contour
- (15) 1,4-Dioxane Concentration

Notes:
NM = Not Sampled
CNL = Could Not Locate

ERM



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FILE: P:\Projects\0190949 Murata Electronics Annual O&M 2016.NV\05 - ERM Outputs\MurataGIS\MXD\2018\October\Figure 2-6 Vapor Intrusion Assessment102018.mxd

FIGURE 2-5 - VAPOR INTRUSION ASSESSMENT SAMPLE LOCATION MAP

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

▲ Sub-Slab Soil Gas Sample Location

Soil Above RRS

⬟ Outdoor Air Sample Location

Wind Direction July 13, 2018 and November 30, 2018

SG = Soil Gas

IA = Indoor Air

OA = Outdoor Air

ERM

	SG-6 / IA-6						
	Sub-slab				Indoor Air		
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	20,800	6.33	**29,600**	175	6.85	5.94
TCE	292	< 62.9	< 1.07	< 61.3	8.76	0.167	0.199

	SG-5 / IA-5						
	Sub-slab				Indoor Air		
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	**11,300**	**30,600**	**31,200**	175	6.27	5.51
TCE	292	< 31.4	< 109	< 61.8	8.76	0.177	0.107

	SG-4 / IA-4						
	Sub-slab				Indoor Air		
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	**41,800**	**43,900**	**13,300**	175	2.33	1.73
TCE	292	< 126	< 107	< 31.4	8.76	< 0.107	< 0.107

	OA-01	
	13-Jul-18	30-Nov-18
PCE	0.346	4.26
TCE	< 0.107	0.239

	SG-1 / IA-1						
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	**719,000**	314	**943,000**	175	8.21	6.08
TCE	292	**4,900**	3.24	**5,860**	8.76	0.210	0.231

	SG-2 / IA-2						
	Sub-slab				Indoor Air		
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	**410,000**	542	**7,390,000**	175	14.3	6.85
TCE	292	< 1,580	< 1.07	< 26,900	8.76	0.215	0.145

	SG-3 / IA-3						
	Sub-slab				Indoor Air		
	VISL	11-Jun-18	13-Jul-18	30-Nov-18	VISL	13-Jul-18	30-Nov-18
PCE	5,820	4,380	1,410	1,920	175	1.34	1.17
TCE	292	< 15.4	< 5.37	< 7.20	8.76	< 0.107	< 0.107

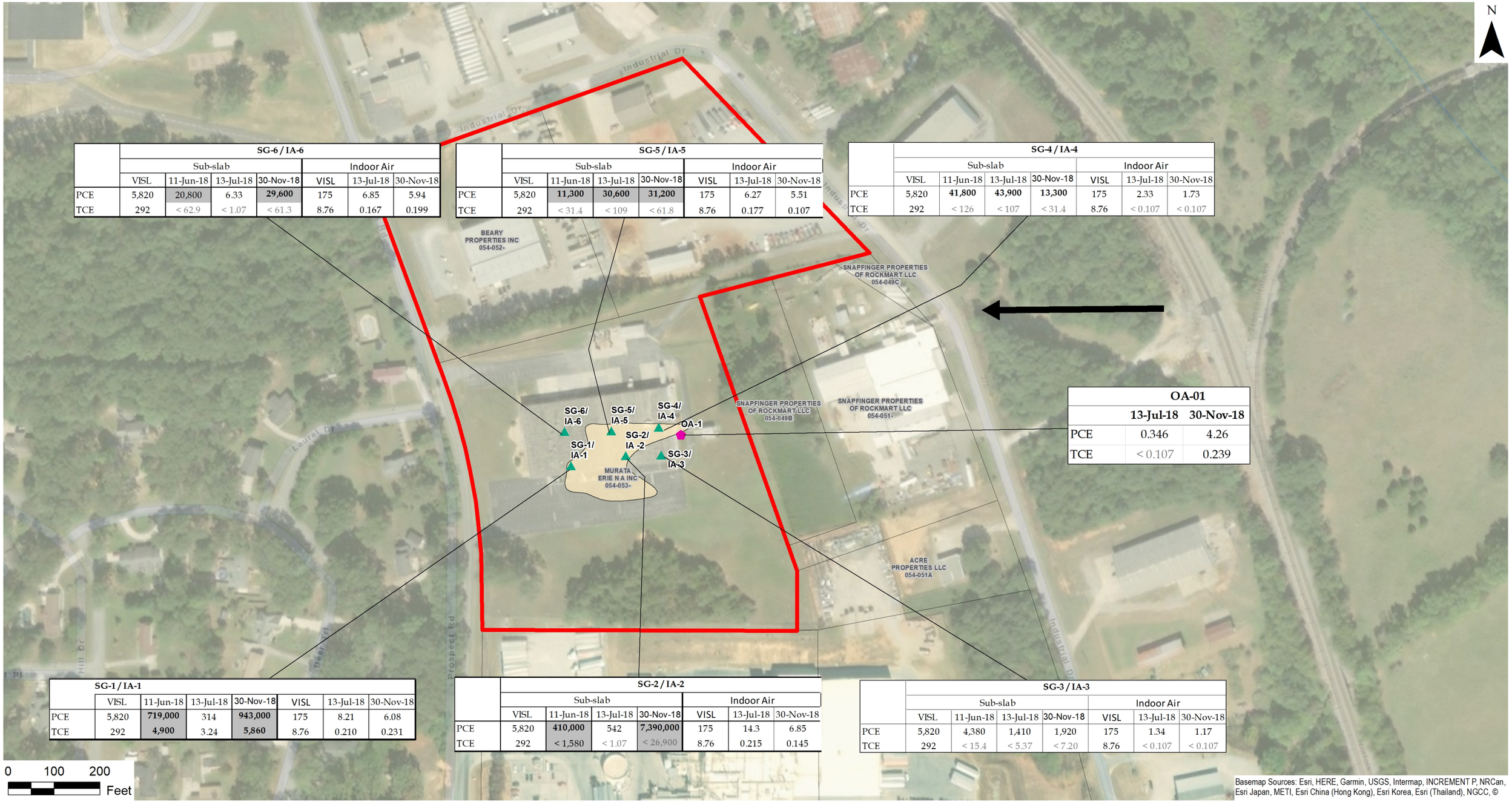

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FIGURE 2-6 - VAPOR INTRUSION SAMPLE RESULTS

2nd VRP Progress Report

Murata Electronics N.A., Inc.

Rockmart, Georgia

▲ Sub-Slab Soil Gas Sample Location

Soil Above RRS

⬟ Outdoor Air Sample Location

Wind Direction July 13, 2018 and November 30, 2018

SG = Soil Gas

IA = Indoor Air

OA = Outdoor Air

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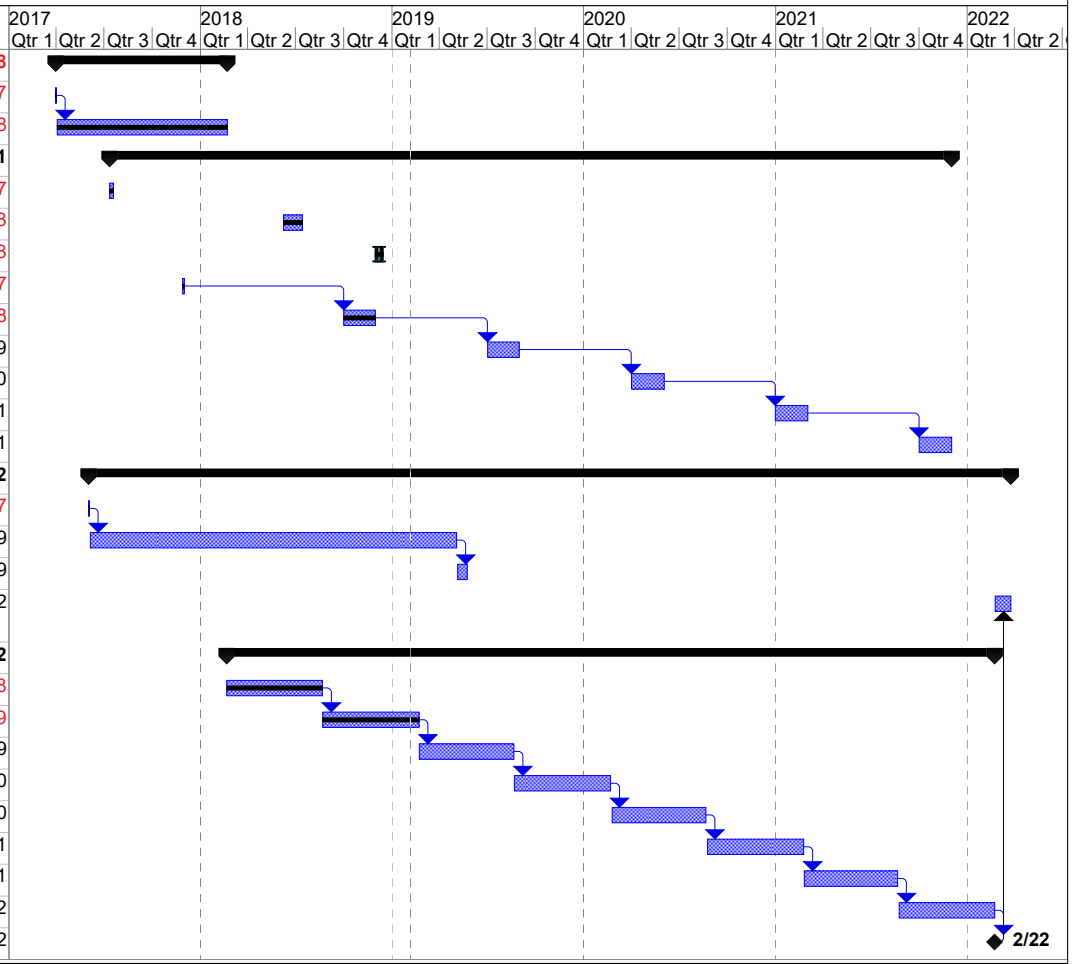
Figure 3-1 Project Schedule
Murata Electronics North America
Rockmart, GA
HSI Site 10771

ID	Task Name	Duration	Start	Finish
1	**VIRP/VRP Application**	**233 days**	**Fri 3/31/17**	**Tue 2/20/18**
2	Submit VIRP/VRP Application	1 day	Fri 3/31/17	Fri 3/31/17
3	Site Accepted in VRP/EPD Comments	232 days	Mon 4/3/17	Tue 2/20/18
4	**Sampling Activities**	**1146 days**	**Wed 7/12/17**	**Wed 12/1/21**
5	Soil Sampling	5 days	Wed 7/12/17	Tue 7/18/17
6	VI Sampling "Summer"	26 days	Fri 6/8/18	Fri 7/13/18
7	VI Sampling "Winter"	11 days	Fri 11/30/18	Fri 12/14/18
8	GW Sampling Event 1	3 days	Tue 11/28/17	Thu 11/30/17
9	GW Sampling Event 2	44 days	Mon 10/1/18	Thu 11/29/18
10	GW Sampling Event 3 (POD only)	44 days	Tue 7/2/19	Fri 8/30/19
11	GW Sampling Event 4	44 days	Wed 4/1/20	Mon 6/1/20
12	GW Sampling Event 5 (POD only)	44 days	Thu 12/31/20	Tue 3/2/21
13	GW Sampling Event 6	44 days	Fri 10/1/21	Wed 12/1/21
14	**Equipment Activities**	**1255 days**	**Fri 6/2/17**	**Thu 3/24/22**
15	Cease SVE Operation	1 day	Fri 6/2/17	Fri 6/2/17
16	Decomission Equipment	500 days	Mon 6/5/17	Fri 5/3/19
17	Initial Well Abandonment	14 days	Mon 5/6/19	Thu 5/23/19
18	Final Equipment Removal and Well Abandonment	22 days	Wed 2/23/22	Thu 3/24/22
19	**VRP Reporting**	**1045 days**	**Tue 2/20/18**	**Mon 2/21/22**
20	2018 Semi-Annual Report H2	130 days	Tue 2/20/18	Mon 8/20/18
21	2019 Semi-Annual Report H1	131 days	Wed 8/22/18	Wed 2/20/19
22	2019 Semi-Annual Report H2	128 days	Fri 2/22/19	Tue 8/20/19
23	2020 Semi-Annual Report H1	131 days	Thu 8/22/19	Thu 2/20/20
24	2020 Semi-Annual Report H2	129 days	Mon 2/24/20	Thu 8/20/20
25	2021 Semi-Annual Report H1	131 days	Mon 8/24/20	Mon 2/22/21
26	2021 Semi-Annual Report H2	128 days	Wed 2/24/21	Fri 8/20/21
27	2022 Semi-Annual Report H1	130 days	Tue 8/24/21	Mon 2/21/22
28	**GA EPD - H.S.I. Delisting**	1 day	Tue 2/22/22	Tue 2/22/22



Project: Figure 3-1 VIRP Schedule - M
Date: Tue 2/5/19

Task	Inactive Task	Manual Summary
Split	Inactive Task	Start-only
Milestone	Inactive Milestone	Finish-only
Summary	Inactive Summary	Progress
Project Summary	Manual Task	Deadline
External Tasks	Duration-only	
External Milestone	Manual Summary Rollup	

APPENDIX A GROUNDWATER SAMPLING FIELD SHEETS

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/1/18

Site/Location: Rockmart, GA | Sampler's Name: D. GRIFFETH

Well ID: ~~MW-5~~ ~~MW-7~~ MW-4 | Pump Type/Model: QED Bladder | Sample Collection Time: 1629

Total Depth (ft)[a]: 70ft | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 46.13 | Pump Intake Depth (ft): 69 | Sample ID: MW-4-WG-20181001

Well Diameter (in): 2 | Purge Method: LOW FLOW | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 14.8 L | Start/Stop Purge Time: ~~1555~~ 1555 / 1620 | QA/QC I.D. —

Purge Rate (L/min)[b]: 0.100 | Total Purge Volume (L): 2.5 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: Good / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: Yes / No | Well Bolted: Yes / No | Bolts Needed: Yes / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1600	21.91	755.80	0.51	7.38	59.90	10.32	0.5	47.05	
1605	21.70	750.30	0.41	7.39	56.40	6.44	0.5	47.65	Excessive drawdown, well volumes
1610	21.77	744.50	0.36	7.39	54.90	2.53	0.5	47.95	too large for multiple well volume
1615	21.69	744.40	0.34	7.39	54.20	6.32	0.5	48.03	purge method
1620	21.35	736.50	0.32	7.38	53.50	4.25	0.5	48.56	
1625	21.55	781.30	0.30	7.38	53.00		0.5		* STABLE @ 1620
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

PARAMETERS STABLE @ 1620

SAMPLED @ 1629

T.D.: 70.0 ft BTOC

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since initial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUND WATER SAMPLING LOG SHEET

ERM

Client: Murata | Project No.: 190949 | Sampling Date: 10-1-2018

Site/Location: Rockmart, GA | Sampler's Name: Austin Smith

(71.94 - 51.65) = 20.29 x 0.163 = 3.307 gal | Well ID: MW-5 | Pump Type/Model: QED Bladder | Sample Collection Time: ~~1400~~ 1600

Total Depth (ft)[a]: 71.94 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 100 mL/min

~~20.29 x 3.785 = 76.79~~ | Depth to Water (ft): 51.65 | Pump Intake Depth (ft): 65.00 | Sample ID: MW-5-WG-20181001

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: ~~3.307 Liters~~ 3.307 gal | Start/Stop Purge Time: 1425 / 1550 | QA/QC I.D. NA

3.307 ~~3.101~~ x 3.785 = 12.52 | 12.5 Liter well volumes | Purge Rate (L/min)[b]: 200 mL/min, 500 mL/min, 100 mL/min | Total Purge Volume (L): 17.5 | Laboratory Analyses: VOCs, Metals + Fe and Hg, VOCs SIMS

Well Type: (Flush) Stick Up | Sampling Method: ☐ soda straw (check all that apply) ☒ pump head discharge ☐ Bailer (only used if necessary) — Bladder pump

Well Cap Condition: (Good) / Replace / Other

Well Lock: Yes (No) | Well Bolted: Yes (No) | Bolts Needed: (Yes) / No

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1430	23.05	526.40	4.37	7.53	83.30	26.8	~~2.00~~ 1	51.74	
1435	22.03	535.00	4.22	7.58	83.30	25.9	~~2.00~~	51.82	
1440	26.48	536.00	4.23	7.57	83.90	28.3	3	51.90	
1445	24.01	541.10	4.32	7.55	84.20	29.8	4	51.93	
1450	25.74	540.20	4.38	7.52	84.00	24.7	5	51.99	
1455	23.48	528.40	4.44	7.56	85.90	23.5	6	51.99	purge rate reduced to 100mL/min
1500	22.45	518.20	4.58	7.57	88.80	27.2	6.5	52.00	
1505	22.71	532.50	4.56	7.56	96.40	29.02	7.0	52.06	
1510	24.04	534.30	4.55	7.54	99.30	25.2	7.5	52.11	purge rate increased to 500mL/min 3 well volume purge started
—	—	—	—	—	—	—	—	—	
~~1530~~							~~10.0~~		~~1st well volume~~
	*	original well volume calculation incorrect - well volumes exceed 10L. (12.5 Liters) 3 well volume purge not completed - impractical due to time constraints. Continue purging @ 100 mL/min. 7.5 liters purged.							
1530	20.83	516.30	6.08	7.54	102.50	17.2	15.0	53.68	purging @ 100 mL/min
1535	24.27	517.10	5.85	7.51	105.30	15.3	15.5	53.68	
1540	24.27	516.70	5.82	7.51	107.30	12.78	16.0	53.73	
1545	24.02	517.60	5.82	7.51	109.70	10.45	17.0	53.75	
1550	24.24	520.60	5.98	7.51	112.40	8.80	17.5	53.80	
			parameters stable - well sampled @ ~~1400~~ 1600						
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since iiitial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

Client:	Murata	Project No.:	190949	Sampling Date:	10/2/2018
Site/Location:	Rockmart, GA			Sampler's Name:	T. Payne
Well ID:	MW-6	Pump Type/Model:	QED Bladder	Sample Collection Time:	16:30
Total Depth (ft):	78.82	Tubing Material:	LDPE	Sample Purge Rate (mL/min)[2,3]:	250
Depth to Water (ft):	64.71	Pump Intake Depth (ft):	70	Sample ID:	MW-6-WG-20191002
Well Diameter (in):	2	Start/Stop Purge Time:	15:17/16:17	Laboratory Analyses:	see COC
Well Volume (L) = gal * 3.785:	8.8	Purge Rate (mL/min)[1]:	100/250		
		Total Purge Volume (L):	10		
d = well diameter (inches) h = length of water column (feet)		Purge Method:	Low Flow	QA/QC Collected?	No
		Sampling Method[3]:	Pump Discharge Other:	QA/QC I.D.	

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] **Yes**

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
15:22	23.90	265.6	3.55	7.22	362	1091.00	100	0.50	64.85	
15:27	20.70	259.7	4.19	7.11	371.8	742.00	250	1.75	64.85	
15:32	20.15	272.4	5.61	7.15	356	94.30	250	2.50	64.85	
15:37	19.63	273.8	5.67	7.21	331.4	60.00	250	3.25	64.85	
15:42	20.10	273.8	5.55	7.20	301.1	53.90	250	4.00	64.85	
15:47	20.26	275.0	5.35	7.16	269.5	42.70	250	4.75	64.85	
15:52	20.28	277.2	5.37	7.18	242.9	36.90	250	5.50	64.85	
15:57	20.21	277.4	5.41	7.17	226	29.70	250	6.25	64.85	
16:02	20.24	276.3	5.35	7.21	215.7	25.60	250	7.00	64.85	
16:07	20.06	277.2	5.37	7.16	268.3	21.50	250	7.75	64.85	
16:12	20.01	277.6	5.43	7.18	197.6	17.80	250	8.50	64.85	
16:17	19.85	278.2	5.46	7.16	190.4	13.30	250	9.25	64.85	
16:22	19.74	278.9	5.52	7.17	180.3	9.87	250	10.00	64.85	
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less

(2) - Sample rate to be 0.25 lpm or less

(3) - Collect sample from pump discharge without tubing contacting sample container

(4) - Field parameter measurements to be recorded every 3 to 5 minutes.

(5) - Stabilization criteria based on three most recent consecutive measurements.

(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.

(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed

(8) - Preserve all samples as appropriate immediately following collection

GROUNDWATER SAMPLING LOG SHEET

Client: Murata
Site/Location: Rockmart, GA
Well ID: MW-7
Total Depth (ft): 64.6
Depth to Water (ft): 52.45
Well Diameter (in): 2
Well Volume (L) = gal * 3.785: 7.5

d = well diameter (inches) h = length of water column (feet)

Project No.: 190949
Pump Type/Model: QED Bladder
Tubing Material: LDPE
Pump Intake Depth (ft): 60
Start/Stop Purge Time: 09:40/10:25
Purge Rate (mL/min)[1]: 500
Total Purge Volume (L): 22.5
Purge Method: Well Volume
Sampling Method[3]: Pump Discharge Other:

Sampling Date: 10/3/2018
Sampler's Name: T. Payne
Sample Collection Time: 10:30
Sample Purge Rate (mL/min)[2,3]: 200
Sample ID: MW-7-WG-20191003
Laboratory Analyses: see COC
QA/QC Collected? No
QA/QC I.D.

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] Yes

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
9:55	--	--	--	--	--	0.55	500	7.5	52.68	1st well volume
10:15	--	--	--	--	--	0.42	500	15.0	52.68	2nd well volume
10:25	--	--	--	--	--	0.35	500	22.5	52.68	3rd well volume
										Permanganate present.
Stabilizing Criteria[4,5]		+/- 3%		+/- 0.1 SU		< 10 NTUs or +/- 10%	> 100 mL < 250 mL	> 3L	< 0.33 ft[6,7]	

(1) - Purge rate to be 0.5 lpm or less
(2) - Sample rate to be 0.25 lpm or less
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER S[illegible]LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-8 | Pump Type/Model: QED Bladder | Sample Collection Time: 1440

Total Depth (ft)[a]: 72 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 56.37 | Pump Intake Depth (ft): 67 | Sample ID: MW-8_WG_20181003

Well Diameter (in): 2 | Purge Method: LOW-FLOW | QA/QC Collected? YES

*Well Volume (gal) = 0.041d²h: 9.7 L | Start/Stop Purge Time: 1227 / 1432 | QA/QC I.D. FD-2_WG_20181003

Purge Rate (L/min)[b]: 0.1/0.2 | Total Purge Volume (L): 22 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: (Yes) / No | Well Bolted: Yes (No) | Bolts Needed: (Yes) / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1232	25.05	349.40	2.13	7.79	86.40	13.25	0.5	56.37	~100 mL/min
1237	23.64	363.10	2.39	7.74	96.80	12.9	0.5	56.37	
1242	23.25	390.20	2.85	7.69	126.20	13.6	0.5	56.37	
1247	22.86	407.90	3.08	7.66	171.20	17.9	0.5	56.37	~200 mL/min
1252	21.91	404.40	3.37	7.64	189.40	23.4	1	56.37	
1257	21.57	409.30	3.75	7.63	194.70	20.9	1	56.37	
1302	21.55	411.60	3.91	7.62	191.30	22.1	1	56.37	
1307	20.97	407.50	4.47	7.62	209.20	22.3	1	56.37	
1312	21.37	422.50	4.32	7.60	260.80	21.0	1	56.37	
1317	21.41	433.10	4.36	7.58	308.80	19.4	1	56.37	
1322	21.38	451.90	4.42	7.56	367.90	17.8	1	56.37	
1327	21.60	466.40	4.56	7.54	391.70	16.6	1	56.37	
1332	21.52	478.10	4.65	7.54	353.20	15.6	1	56.37	
1337	21.33	478.70	4.60	7.53	298.00	15.6	1	56.37	
1342	21.37	499.80	4.71	7.51	307.20	13.6	1	56.39	
1347	21.42	519.60	4.79	7.50	320.30	13.43	1	56.39	
1352	21.33	537.80	4.90	7.49	328.50	12.8	1	56.39	
1357	21.04	551.30	4.90	7.49	391.90	11.3	1	56.39	
1402	20.85	566.80	4.93	7.49	358.30	12.98	1	56.39	
1407						12.37	1	56.39	NO MEASUREMENT TAKEN BY SMARTROLL
PURGE RESTART → 1412									PURGE CONTINUED ON PAGE 2
1417	21.46	592.70	4.88	7.48	412.40	11.57	1	56.39	
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/-10% (see note below)[g]	+/- 0.1 unit	+/-10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ilitial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-8 | Pump Type/Model: QED Bladder | Sample Collection Time: 1440

Total Depth (ft)[a]: 72 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 56.37 | Pump Intake Depth (ft): 67 | Sample ID: MW-8_WG_20181003

Well Diameter (in): 2 | Purge Method: LOW-FLOW | QA/QC Collected? YES

*Well Volume (gal) = 0.041d²h: 9.7L | Start/Stop Purge Time: 1227 / 1432 | QA/QC I.D. FD-2_WG_20181003

Purge Rate (L/min)[b]: 0.1/0.2 | Total Purge Volume (L): 22 | Laboratory Analyses: METALS, VOCs

Well Type: Flush / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: Good / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: Yes / No | Well Bolted: Yes / No | Bolts Needed: Yes / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1422	21.42	598.10	4.86	7.47	411.70	11.65	1	56.39	FLOW CELL CLEANED OUT
1427	20.79	608.30	4.84	7.48	433.30	10.89	1	56.39	
1432	20.62	607.70	4.98	7.48	448.50	6.47	1	56.39	TURB < 10 NTUs
			PARAMETERS STABLE @ 1432						
			SAMPLED @ 1440						
			T.D. 71.23 FT BTOC						
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER S. LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/1/18

Site/Location: Rockmart, GA | Sampler's Name: BRAD GRIFFETH

Well ID: MW-9 | Pump Type/Model: QED Bladder | Sample Collection Time: 1450

Total Depth (ft)[a]: 59.0 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.200

Depth to Water (ft): 53.88 | Pump Intake Depth (ft): 58 | Sample ID: MW-9_WG_20181001

Well Diameter (in): 2 | Purge Method: X WELL VOLUMES | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 3.18 L | Start/Stop Purge Time: 1420 / 1444 | QA/QC I.D.: —

Purge Rate (L/min)[b]: 0.400 mL/min | Total Purge Volume (L): 9.6 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: Good / Replace / Other *DOESN'T CLOSE | (check all that apply) ☑ pump head discharge

Well Lock: Yes / (No) | Well Bolted: Yes (No) | Bolts Needed: (Yes) / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1428							3.2L	54.45	1ST WELL VOLUME
1436							3.2L	54.66	2ND WELL VOLUME
1444							3.2L	54.65	3RD WELL VOLUME
			SAMPLED @ 1450						*PERMANGANATE PRESENT -LIGHT PURPLE
			TD: 59.0 FT BTOC						
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER S[illegible]LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 12/13/18

Site/Location: Rockmart, GA | Sampler's Name: A. Smith

Well ID: MW-12 | Pump Type/Model: QED Bladder | Sample Collection Time: 1732

Total Depth (ft)[a]: 200 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 3.25 | Pump Intake Depth (ft): 100 | Sample ID: MW-12

Well Diameter (in): 4 | Purge Method: Low Flow | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 129.1 | Start/Stop Purge Time: 1545 / 1730 | QA/QC I.D. ———

Purge Rate (L/min)[b]: 0.1 / 0.5 / 0.2 | Total Purge Volume (L): 19.5 | Laboratory Analyses: See COC

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☒ pump head discharge Bladder pump

Well Lock: Yes / (No) | Well Bolted: Yes (No) | Bolts Needed: Yes / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1545	— Pumped for 10 minutes while disconnected								
	from SmartTrou to check for								
1555	→ no permanganate observed, attaching SmartTrou — (5 liters purged) - Decreased purge rate to 100 mL/min								
1600	29.63	136.4	0.12	10.64	-10.20	52.1	5.5	4.00	
1605	30.96	136.8	0.13	10.63	-9.10	49.7	6.0	4.15	
1610	31.29	136.1	0.14	10.63	-6.90	49.7	6.5	4.26	Increased purge rate to 200 mL/min
1615	29.35	135.0	0.09	10.70	-3.60	52.8	7.5	4.50	
1620	28.69	136.4	0.08	10.73	-2.20	55.1	8.5	4.76	3 well volume purge not
1625	26.17	135.9	0.06	10.81	1.50	48.1	9.5	5.00	completed - not feasible
1630	27.50	137.1	0.07	10.77	0.60	48.5	10.5	5.51	due to the size of
1635	— iSitu app froze, no readings —					47.7	11.5	5.82	well volumes
	→ iSitu app restarted —								
1645	27.76	137.1	0.07	10.76	0.10	43.7	13.5	6.36	
1650	28.17	137.90	0.06	10.75	-0.80	39.6	14.5	6.62	
1655	29.13	138.20	0.08	10.71	-2.50	34.1	15.5	6.71	
1700	30.05	140.50	0.18	10.67	-6.30	—	15.5	6.75	Pump stopped due to dead
	——— Pump stopped, no purging ———								car battery
1715	28.97	136.5	0.07	10.73	-15.20	39.1	16.5	7.21	
1720	28.50	137.1	0.07	10.75	-21.20	32.4	17.5	7.44	
1725	28.24	136.8	0.07	10.75	-23.70	30.3	18.5	7.68	
1730	28.11	136.6	0.07	10.76	-27.50	35.3	19.5	7.91	PARAMETERS STABLE @ 1730
						Sample	collected @		1732
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since illitial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

Client: Murata
Project No.: 190949
Sampling Date: 10/2/2018

Site/Location: Rockmart, GA
Sampler's Name: T. Payne

Well ID: MW-17
Pump Type/Model: QED Bladder
Sample Collection Time: 14:30

Total Depth (ft): 75.11
Tubing Material: LDPE
Sample Purge Rate (mL/min)[2,3]: 100

Depth to Water (ft): 45.69
Pump Intake Depth (ft): 70
Sample ID: MW-17-WG-20191002

Well Diameter (in): 2
Start/Stop Purge Time: 13:25/14:24
Laboratory Analyses: see COC

Well Volume (L) = gal * 3.785: 18.3
Purge Rate (mL/min)[1]: 550/100

Total Purge Volume (L): 21.2

d = well diameter (inches) h = length of water column (feet)

Purge Method: Well Volume/ Low Flow
QA/QC Collected? No

Sampling Method[3]: Pump Discharge Other:
QA/QC I.D.

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] Yes

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
13:59	--	--	--	--	--	8.11	550	18.7	48.53	Permanganate present. 1st well volume
14:04	22.96	143.5	0.84	9.34	311.7	6.61	100	19.2	48.55	Permanganate no longer present after 1 well volume. Switch
14:09	22.64	149.5	0.79	9.40	369.7	6.36	100	19.7	48.55	to low flow
14:14	22.60	156.2	0.68	9.45	360.7	5.62	100	20.2	48.55	
14:19	22.64	157.3	0.64	9.44	358.9	4.30	100	20.7	48.55	
14:24	22.74	157.6	0.61	9.42	365.6	3.91	100	21.2	48.55	
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less

(2) - Sample rate to be 0.25 lpm or less

(3) - Collect sample from pump discharge without tubing contacting sample container

(4) - Field parameter measurements to be recorded every 3 to 5 minutes.

(5) - Stabilization criteria based on three most recent consecutive measurements.

(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.

(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed

(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-19 | Pump Type/Model: QED Bladder | Sample Collection Time: 1648

Total Depth (ft)[a]: 68.70 (170.90) | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 62.45 | Pump Intake Depth (ft): 66 | Sample ID: MW-19_WG-20181003

Well Diameter (in): ~3 | Purge Method: ~~LOW FLOW~~ X WELL VOL. | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 3.9 L | Start/Stop Purge Time: 1620 / | QA/QC I.D. /

Purge Rate (L/min)[b]: 0.5 | Total Purge Volume (L): 12 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: Yes / (No) | Well Bolted: Yes / (No) | Bolts Needed: (Yes) / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1628						~0.44	4L	62.48	1ST WELL VOLUME
1636						~0.11	4	62.48	2ND WELL VOLUME
1644						~0.14	4	62.53	3RD WELL VOLUME
									PURGE RATE REDUCED TO 200mL/min FOR SAMPLING
			PURGE COMPLETE @ 1644						
			SAMPLED @ 1648						
			T.D.: 170.90						* PERMANGANATE PRESENT
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[f]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

ERM

Client:	Murata	Project No.:	190949	Sampling Date:	10/3/2018
Site/Location:	Rockmart, GA			Sampler's Name:	T. Payne
Well ID:	MW-20	Pump Type/Model:	QED Bladder	Sample Collection Time:	9:00
Total Depth (ft):	63.05	Tubing Material:	LDPE	Sample Purge Rate (mL/min)[2,3]:	200
Depth to Water (ft):	58.07	Pump Intake Depth (ft):	63	Sample ID:	MW-20-WG-20191003
Well Diameter (in):	2	Start/Stop Purge Time:	08:20/08:30	Laboratory Analyses:	see COC
Well Volume (L) = gal * 3.785:	3.1	Purge Rate (mL/min)[1]:	500		
		Total Purge Volume (L):	3		
d = well diameter (inches) h = length of water column (feet)		Purge Method:	Well Volume	QA/QC Collected?	No
		Sampling Method[3]:	Pump Discharge Other:	QA/QC I.D.	

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] **Yes**

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
8:30	--	--	--	--	--	--	--	--	--	Dry at 08:30
										Permanganate present.
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less

(2) - Sample rate to be 0.25 lpm or less

(3) - Collect sample from pump discharge without tubing contacting sample container

(4) - Field parameter measurements to be recorded every 3 to 5 minutes.

(5) - Stabilization criteria based on three most recent consecutive measurements.

(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.

(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed

(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER S. LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-22 | Pump Type/Model: QED Bladder | Sample Collection Time: 1055

Total Depth (ft)[a]: 80 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 60.06 | Pump Intake Depth (ft): 70 | Sample ID: MW-22-WG-20181003

Well Diameter (in): 2 | Purge Method: Low-Flow | QA/QC Collected? YES

*Well Volume (gal) = 0.041d²h: 12.38 L | Start/Stop Purge Time: 1005/ | QA/QC I.D. FD-1-WG-20181003

Purge Rate (L/min)[b]: 0.1/0.2 | Total Purge Volume (L): 7.5 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: Yes / (No) | Well Bolted: Yes (No) | Bolts Needed: (Yes) No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1010	24.38	573.60	4.13	7.36	104.80	~~85~~ 82.5	0.5	60.09	=100 mL/min
1015	24.48	578.70	3.85	7.32	116.20	77.8	0.5	60.09	
1020	23.24	581.80	3.74	7.30	152.00	75.0	0.5	60.09	=200 mL/min
1025	21.64	577.50	3.48	7.31	206.50	67.0	1	60.09	
1030	21.60	575.60	3.49	7.30	248.40	50.8	1	60.09	
1035	21.62	561.10	3.73	7.30	338.60	28.2	1	60.10	
1040	21.64	569.50	3.85	7.28	432.20	16.8	1	60.10	
1045	21.64	571.50	3.84	7.28	474.50	11.9	1	60.10	
1050	21.60	575.80	3.83	7.27	475.10	9.92	1	60.10	
		PARAMETERS STABLE @ 1050							
		SAMPLED @ 1055							
		T.D: 79.70							
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/-10% (see note below)[g]	+/- 0.1 unit	+/-10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

Client: Murata
Site/Location: Rockmart, GA
Well ID: MW-23
Total Depth (ft): 71.9
Depth to Water (ft): 35.79
Well Diameter (in): 2
Well Volume (L) = gal * 3.785: 22.4

d = well diameter (inches) h = length of water column (feet)

Project No.: 190949
Pump Type/Model: QED Bladder
Tubing Material: LDPE
Pump Intake Depth (ft): 65
Start/Stop Purge Time: 10:55/11:55
Purge Rate (mL/min)[1]: 500
Total Purge Volume (L): 30
Purge Method: Well Volume
Sampling Method[3]: Pump Discharge Other:

Sampling Date: 10/3/2018
Sampler's Name: T. Payne
Sample Collection Time: 12:00
Sample Purge Rate (mL/min)[2,3]: 200
Sample ID: MW-23-WG-20191003
Laboratory Analyses: see COC
QA/QC Collected? No
QA/QC I.D.

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] Yes

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
11:15	--	--	--	--	--	1.58	500	10.0	44.51	Permanganate present.
11:35	--	--	--	--	--	1.88	500	20.0	44.59	Due to large well volume, 3 well volume method is not feasable.
11:55	--	--	--	--	--	1.11	500	30.0	44.59	Purge for 1 hour then sample.
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less
(2) - Sample rate to be 0.25 lpm or less
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER S. .ING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/2/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-24 | Pump Type/Model: QED Bladder | Sample Collection Time: 1700

Total Depth (ft)[a]: 68 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 54.06 | Pump Intake Depth (ft): 63 | Sample ID: MW-24_WG_20181002

Well Diameter (in): 2 | Purge Method: LOW-FLOW | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 8.65 L | Start/Stop Purge Time: ~~1524~~ / 1605 / | QA/QC I.D. /

Purge Rate (L/min)[b]: 0.1 | Total Purge Volume (L): 5.5 | Laboratory Analyses: METALS, VOCs

Well Type: Flush / (Stick Up) | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: (Yes) / No | Well Bolted: (Yes) / No | Bolts Needed: Yes / (No) | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1529							0.5		PVC EXTENSION ADDED TO WELL
									DUE TO GRADING WORK AROUND WELL.
		* BLADDER PUMP MISSING AIR INTAKE/OUTTAKE GAUGE							DEPTH TO H_2O TAKEN FROM 4" ABOVE TOC
		GAUGE REPLACED, LOW FLOW RESTARTED @ 1605							
1610	21.69	528.40	2.77	7.44	98.50	22.5	0.5	54.12	
1615	21.37	520.70	2.62	7.37	99.10	19.2	0.5	54.12	
1620	20.97	520.80	2.57	7.32	99.90	17.3	0.5	54.12	
1625	20.72	519.70	2.55	7.28	100.40	17.0	0.5	54.12	PARAMETERS STABLE, PUMP INTAKE RAISED TO
1630	20.45	529.60	2.70	7.28	106.70	46.3	0.5	54.12	REDUCE TURBIDITY
1635	21.58	585.60	3.52	7.21	112.70	71.7	0.5	54.12	
1640	19.72	566.60	3.42	7.22	111.20	52.4	0.5	54.12	
1645	21.91	561.10	3.19	7.18	107.80	48.5	0.5	54.12	
1650	22.19	547.00	2.97	7.16	107.00	42.0	0.5	54.12	
1655	22.02	543.60	2.91	7.14	106.20	39.7	0.5	54.12	
1700	22.30	539.00	2.81	7.12	106.20	38.8	0.5	54.12	TURBIDITY W/IN 10%
		PARAMETERS STABLE @ 1700							
		SAMPLED @ 1700							T.D. NOT TAKEN
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/-10% (see note below)[f]	+/- 0.1 unit	+/-10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER [illegible]LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: ~~A Smith~~ 10/2/18

Site/Location: Rockmart, GA | Sampler's Name: A. Smith

Well ID: MW-25 | Pump Type/Model: QED Bladder | Sample Collection Time: 1648

Total Depth (ft)[a]: 80 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: ~~100~~ 0.1 mL/min

Depth to Water (ft): 39.24 | Pump Intake Depth (ft): 75/65 | Sample ID: MW-25

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 6.69 | Start/Stop Purge Time: 1508 / 1643 | QA/QC I.D.: —

Purge Rate (L/min)[b]: 0.1/0.2 | Total Purge Volume (L): 11 | Laboratory Analyses: See COC

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: ~~OK~~ / Replace / (Other) - See notes | (check all that apply) ☒ pump head discharge Bladder pump

Well Lock: Yes / (No) | Well Bolted: (Yes) / No | Bolts Needed: (Yes) No 1 bolt needed | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1513	25.69	768.40	0.85	8.02	92.7	52.8	0.5	39.49	
1518	24.57	777.2	0.52	7.79	85.4	47.8	1.0	39.74	
1523	27.18	761.87	0.44	7.67	78.1	43.2	1.5	40.17	3 well volume collection not
1528	26.56	742.8	0.44	7.62	72.1	37.8	2.0	40.60	feasible due to size of
1533	25.74	714.70	0.39	7.60	66.7	39.5	2.5	40.96	well volumes
1538	25.02	694.20	0.37	7.58	62.5	40.4	3.0	41.51	
1543	25.42	687.4	0.35	7.54	58.70	39.8	3.5	42.00	Well encased by sheet Metal
1548	25.78	675.6	0.33	7.52	55.3	39.6	4.0	~~42~~ 42.47	due to regrading work -
1553	22.64	609.0	0.27	7.55	51.8	45.7	5.0	43.70	TOC level has not been
1558	23.03	595.9	0.23	7.49	50.7	40.2	6.0	45.19	affected - well pad in worn
1603	23.00	585.7	0.23	7.47	51.5	49.7	7.0	~~40.2~~ 46.18	condition
1608	23.93	591.6	0.25	7.43	51.2	44.6	7.5	47.20	
1613	24.58	600.2	0.33	7.37	50.2	36.0	8.0	47.43	1548 - intake moved to 65 ft
1618	28.55	595.0	0.40	7.36	50.1	39.4	8.5	47.67	and purge rate increased to
1623	28.44	590.0	0.45	7.37	51.00	32.3	9.0	47.92	200 mL/min due to turbidity
1628	27.89	587.9	0.48	7.38	51.8	36.8	9.5	48.24	
1633	27.49	587.5	0.49	7.38	52.1	33.5	10.0	48.40	1603 - Purge rate lowered back
1638	27.30	587.4	0.50	7.37	52.4	30.8	10.5	48.74	to 100 mL/min
1643	28.14	564.40	0.50	7.35	52.0	32.1	11.0	48.94	
					Parameters Stable at			1643	
					Sample Collected at			1648	
					Total Depth = Not			Confirmed	due to time constraints
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since initial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER S[illegible]LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/2/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-26 | Pump Type/Model: QED Bladder | Sample Collection Time: 1358

Total Depth (ft)[a]: 90 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 43.5 | Pump Intake Depth (ft): 80 | Sample ID: MW-26-INC.20181002

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 28.66 L | Start/Stop Purge Time: 1321/1356 | QA/QC I.D. /

Purge Rate (L/min)[b]: 0.1 | Total Purge Volume (L): 3.5 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: (Yes) / No | Well Bolted: Yes / (No) | Bolts Needed: (Yes) / No | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1326	23.48	769.80	0.89	7.79	140.90	9.74	0.5	44.50	EXCESSIVE DRAWDOWN, WELL VOLUME
1331	22.49	771.00	0.83	7.79	137.50	11.86	0.5	45.88	TOO LARGE FOR MULTIPLE WELL VOL. PURGE,
1336	22.77	771.80	0.82	7.79	135.90	11.21	0.5	46.20	LOW-FLOW CONTINUED
	PARAMETERS STABLE, WAITING ON TURBIDITY								
1341	22.60	772.50	0.93	7.79	134.70	11.02	0.5	47.06	
1346	20.10	~~774.40~~ 759.90 →	1.13	7.83	134.60	7.65	0.5	49.00	TURBIDITY <10 NTUs, WAITING ON TEMP
1351	20.95	767.40	1.31	7.83	133.00	6.89	0.5	50.02	
1356	20.93	763.90	1.28	7.83	131.00	6.23	0.5	50.64	
		PARAMETERS STABLE @ 1356							
		SAMPLED @ 1358							
		T.D: 90.1' BTOC							
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since initial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

Client: Murata
Site/Location: Rockmart, GA
Well ID: MW-27
Total Depth (ft): 66.5
Depth to Water (ft): 35.15
Well Diameter (in): 2
Well Volume (L) = gal * 3.785: 10.8

d = well diameter (inches) h = length of water column (feet)

Project No.: 190949
Pump Type/Model: QED Bladder
Tubing Material: LDPE
Pump Intake Depth (ft): 60
Start/Stop Purge Time: 14:00/15:00
Purge Rate (mL/min)[1]: 550
Total Purge Volume (L): 30
Purge Method: Well Volume
Sampling Method[3]: Pump Discharge Other:

Sampling Date: 10/3/2018
Sampler's Name: T. Payne
Sample Collection Time: 15:05
Sample Purge Rate (mL/min)[2,3]: 200
Sample ID: MW-27-WG-20191003
Laboratory Analyses: see COC
QA/QC Collected? No
QA/QC I.D.

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] Yes

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
14:20	--	--	--	--	--	100.00	550	11.0	37.59	1st well volume
14:40	--	--	--	--	--	0.81	550	22.0	38.56	2nd well volume
15:00	--	--	--	--	--	0.01	550	33.0	39.56	3rd well volume
										Permanganate present.
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less
(2) - Sample rate to be 0.25 lpm or less
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection

GROUNDWATER SAMPLING LOG SHEET

Client: Murata
Site/Location: Rockmart, GA
Well ID: MW-29
Total Depth (ft): 65.7
Depth to Water (ft): 60.23
Well Diameter (in): 2
Well Volume (L) = gal * 3.785: 3.4

d = well diameter (inches) h = length of water column (feet)

Project No.: 190949
Pump Type/Model: QED Bladder
Tubing Material: LDPE
Pump Intake Depth (ft): 63
Start/Stop Purge Time: 16:55/17:26
Purge Rate (mL/min)[1]: 500
Total Purge Volume (L): 10.5
Purge Method: Well Volume
Sampling Method[3]: Pump Discharge Other:

Sampling Date: 10/3/2018
Sampler's Name: T. Payne
Sample Collection Time: 17:20
Sample Purge Rate (mL/min)[2,3]: 200
Sample ID: MW-29-WG-20191003
Laboratory Analyses: see COC
QA/QC Collected? Yes
QA/QC I.D. FD-03

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] Yes

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
17:02	--	--	--	--	--	19.80	500	3.5	60.85	1st well volume
17:09	--	--	--	--	--	18.90	500	7.0	60.95	2nd well volume
17:16	--	--	--	--	--	18.10	500	10.5	60.95	3rd well volume
										Permanganate present
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less
(2) - Sample rate to be 0.25 lpm or less
(3) - Collect sample from pump discharge without tubing contacting sample container
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: A. Smith

Well ID: MW-A-4 | Pump Type/Model: QED Bladder | Sample Collection Time: 1415

Total Depth (ft)[a]: 49 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 43.55 | Pump Intake Depth (ft): 46 | Sample ID: MW-A-4

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? ND

*Well Volume (gal) = 0.041d²h: 0.694 | Start/Stop Purge Time: 1335 / 1410 | QA/QC I.D. —

Purge Rate (L/min)[b]: 0.1 | Total Purge Volume (L): 3.5 | Laboratory Analyses: Sic COC

Well Type: (Flush) / Stick Up

Well Cap Condition: (Good) / Replace / Other

Well Lock: Yes / (No)

Well Bolted: (Yes) / No

Bolts Needed: Yes / (No)

Sampling Method: (check all that apply) ☐ soda straw ☒ pump head discharge ☐ Bailer (only used if necessary) Bladder Pump

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1340	35.13	588.2	5.39	7.08	-22.8	74.6	0.5	43.57	
1345	30.57	587.3	4.21	7.07	-26.2	34.1	1.0	43.56	
1350	30.32	596.9	4.09	7.05	-25.4	20.1	1.5	43.57	
1355	26.25	577.3	3.83	7.10	-19.3	12.27	2.0	43.57	
1400	25.01	583.1	3.84	7.09	-16.6	6.02	2.5	43.57	
1405	24.80	586.7	3.83	7.08	-14.7	3.74	3.0	43.57	
1410	24.82	586.6	3.79	7.08	-13.0	1.44	3.5	43.57	
			Parameters stable @ 1410						
			Sampled @ 1415						
			Total depth = 48.88						
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since itiitial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER S.. LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/3/18

Site/Location: Rockmart, GA | Sampler's Name: A. Smith

Well ID: MW-A-5 | Pump Type/Model: QED Bladder | Sample Collection Time: 1140

Total Depth (ft)[a]: 61 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.2

Depth to Water (ft): 44.28 | Pump Intake Depth (ft): 56 | Sample ID: MW-A-5

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 2.74 = 10.37L | Start/Stop Purge Time: 1026 / 1136 | QA/QC I.D. ——

Purge Rate (L/min)[b]: 0.1 / 0.2 | Total Purge Volume (L): 12.5 | Laboratory Analyses: See COC

Well Type: (Flush) / Stick Up

Well Cap Condition: (Good) / Replace / Other

Well Lock: Yes / (No) | Well Bolted: (Yes) / ~~No~~ | Bolts Needed: Yes / (No)

Sampling Method: ☐ soda straw
(check all that apply) ☒ pump head discharge Bladder Pump
☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1031	23.11	604.3	1.24	6.92	28.5	177	0.5	44.30	
1036	23.20	619.6	0.82	6.85	4.30	171	1.0	44.30	
1041	23.30	623.7	0.63	6.86	-21.50	168	1.5	44.30	Purge rate increased to 200 mL/min
1046	21.86	617.2	0.39	6.90	-67.30	153	2.5	44.32	
1051	21.33	618.2	0.30	6.92	-94.60	117	3.5	44.35	
1056	21.34	611.7	0.30	6.94	-108.0	91.0	4.5	44.35	
1101	21.84	606.2	0.30	6.91	-121.4	44.0	5.5	44.34	
1106	21.87	606.5	0.30	6.92	-127.5	33.7	6.5	44.36	
1111	22.01	609.1	0.26	6.95	-133.90	21.8	7.5	44.36	
1116	21.76	611.6	0.24	6.99	-137.0	18.0	8.5	44.37	
1121	21.85	613.4	0.21	7.02	-138.8	14.6	9.5	44.37	
1126	21.69	615.7	0.19	7.04	-139.4	14.37	10.5	44.37	
1131	21.78	619.6	0.17	7.06	-139.8	12.16	11.5	44.39	
1136	21.82	621.5	0.16	7.08	-139.8	8.71	12.5	44.39	
			Parameters stable @				1136		
			Sampled @ 1140						
			Total Vol = 61.49						
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[f]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	
2 in	

ERM

GROUND WATER S. .LING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/2/18

Site/Location: Rockmart, GA | Sampler's Name: A. Smith

Well ID: MW-B-1 | Pump Type/Model: QED Bladder | Sample Collection Time: 1035

Total Depth (ft)[a]: 75. | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 51.10 | Pump Intake Depth (ft): 65 | Sample ID: MW-B-1

Well Diameter (in): 2 | Purge Method: Low Flow | QA/QC Collected? No

*Well Volume (gal) = 0.041d²h: 3.92 | Start/Stop Purge Time: 936 / 1031 | QA/QC I.D. ——

Purge Rate (L/min)[b]: 0.1 | Total Purge Volume (L): 7.5 | Laboratory Analyses: Six CDC

Well Type: Flush / Stick Up

Well Cap Condition: Good / Replace / Other

Well Lock: Yes / No | Well Bolted: Yes / No | Bolts Needed: Yes / No 4 bolts needed

Sampling Method: ☐ soda straw (check all that apply) ☒ pump head discharge ☐ Bailer (only used if necessary) Bladder pump

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
941	22.00	147.3	4.04	6.41	125.8	12.38	0.5	51.10	
946	21.77	169.9	3.16	6.14	118.0	11.98	1.0	51.10	
951	21.88	164.0	2.60	6.08	114.8	11.85	1.5	51.10	
956	22.00	193.1	2.32	6.08	114.3	14.70	2.0	51.10	
1001	22.09	208.3	2.09	6.09	114.4	15.59	2.5	51.10	
1006	22.60	225.1	1.86	6.12	114.6	14.92	3.0	51.10	
1011	24.64	237.2	1.72	6.13	115.5	16.66	3.5	51.10	
1016	22.13	243.7	1.28	6.21	116.2	11.2	4.5	51.18	Purge rate raised to 200 mL/min
1021	19.58	253.9	1.18	6.25	116.0	11.23	5.5	51.18	
1026	19.63	260.2	1.09	6.26	115.3	8.40	6.5	51.18	
1031	19.44	255.8	1.06	6.25	115.8	7.64	7.5	51.18	
									Parameters Stable @ 1031
									Begin sampling @ 1035
									Total depth = 77.40
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Murata | Project No.: 190949 | Sampling Date: 10/2/18

Site/Location: Rockmart, GA | Sampler's Name: B. GRIFFETH

Well ID: MW-B-2 | Pump Type/Model: QED Bladder | Sample Collection Time: 1118

Total Depth (ft)[a]: ~~MW-1~~ 100 | Tubing Material: LDPE | Sample Purge Rate (L/min)[c]: 0.1

Depth to Water (ft): 54.02 | Pump Intake Depth (ft): EC | Sample ID: MW-B-2-WG-20181002

Well Diameter (in): 2 | Purge Method: LOW FLOW | QA/QC Collected? NO

*Well Volume (gal) = 0.041d²h: 28.5L | Start/Stop Purge Time: 0935 / 1115 | QA/QC I.D.

Purge Rate (L/min)[b]: 0.1 | Total Purge Volume (L): 14.5 | Laboratory Analyses: METALS, VOCs

Well Type: (Flush) / Stick Up | Sampling Method: ☐ soda straw

Well Cap Condition: (Good) / Replace / Other | (check all that apply) ☑ pump head discharge

Well Lock: Yes / (No) | Well Bolted: (Yes) / No | Bolts Needed: Yes / (No) | ☐ Bailer (only used if necessary)

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
0940	19.61	328.20	0.98	8.12	36.20	281	0.5	54.78	Excessive drawdown, multiple well volume method not feasible, low flow purge continued
0945	19.42	315.20	0.89	8.21	39.80	297	0.5	55.43	
0950	19.01	288.40	0.74	8.26	37.00	250	0.5	57.63	
0955	18.66	237.40	0.44	8.18	25.30	68.5	1.25	59.60	
1000	19.82	205.80	0.49	8.02	26.10	55.9	1.25	60.35	
1005	20.13	171.10	0.46	7.88	24.10	42.7	1.25	61.13	
1010	19.42	136.60	0.32	7.74	22.10	26.5	1.25	62.45	
1015	19.47	123.10	0.22	7.59	24.00	21.4	1.25	64.34	
1020	19.22	118.80	0.19	7.50	27.20	17.1	1.25	66.24	PURGE RATE SLOWED TO 100 mL/min TO REDUCE DRAWDOWN
1025	20.17	119.20	0.20	7.42	27.60	15.3	0.5	67.42	
1030	21.11	116.70	6.22	7.35	28.20	19.7	0.5	68.25	
1035	21.35	116.60	0.23	7.31	33.30	18.7	0.5	68.99	
1040	21.06	114.20	0.23	7.27	48.90	15.7	0.5	69.70	PARAMETERS STABLE, WAITING ON TURBIDITY
1045	21.24	113.50	0.23	7.24	67.10	16.5	0.5	70.45	
1060	21.48	113.70	0.22	7.20	79.00	13.9	0.5	71.34	
1055	22.00	113.00	0.21	7.18	89.10	11.7	0.5	72.05	
1100	22.20	112.10	0.22	7.15	116.90	13.1	0.5	72.80	
1105	22.40	111.90	0.23	7.13	182.40	16.1	0.5	73.54	
1110	22.35	112.30	0.24	7.12	316.40	17.0	0.5	74.43	
1115	22.40	112.20	0.26	7.10	469.80	16.6	0.5	75.03	TURBIDITY w/in 10%
		PARAMETERS STABLE @ 1115							
		SAMPLED @ 1118							T.D. 100' BTOC
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[f]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since initial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

GROUNDWATER SAMPLING LOG SHEET

ERM

Client:	Murata	Project No.:	190949	Sampling Date:	10/2/2018
Site/Location:	Rockmart, GA			Sampler's Name:	T. Payne
Well ID:	MW-B-3	Pump Type/Model:	QED Bladder	Sample Collection Time:	11:00
Total Depth (ft):	100	Tubing Material:	LDPE	Sample Purge Rate (mL/min)[2,3]:	100
Depth to Water (ft):	46.91	Pump Intake Depth (ft):	90	Sample ID:	MW-B-3-WG-20191002
Well Diameter (in):	2	Start/Stop Purge Time:	10:10/10:50	Laboratory Analyses:	see COC
Well Volume (L) = gal * 3.785:	33.0	Purge Rate (mL/min)[1]:	100		
		Total Purge Volume (L):	4		
d = well diameter (inches) h = length of water column (feet)		Purge Method:	low flow	QA/QC Collected?	No
		Sampling Method[3]:	Pump Discharge Other:	QA/QC I.D.	

All sample containers requiring chemical preservation properly preserved prior to demob from well?[8] **Yes**

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H_2O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
10:15	22.27	126.4	4.23	8.28	78.2	5.21	100	0.5	47.38	Initial significant drawdown but water level stabalized at 10:35
10:20	22.60	128.2	4.30	8.57	71.7	5.34	100	1.0	48.15	Pump shut off at 10:30. Restarted at 10:40
10:25	24.53	128.7	4.38	8.66	67.2	4.26	100	1.5	48.49	
10:30	26.05	129.3	4.48	8.70	64.6	3.67	100	2.0	48.58	
10:35	27.13	129.6	4.51	8.71	63.8	2.45	100	2.5	48.59	
10:40	26.76	125.5	4.34	8.75	64.4	2.51	100	3.0	48.59	
10:45	21.64	124.3	4.35	8.80	69.3	1.42	100	3.5	48.59	
10:50	21.44	123.5	4.60	8.77	63.6	1.88	100	4.0	48.59	
Stabilizing Criteria[4,5]		**+/- 3%**		**+/- 0.1 SU**		**< 10 NTUs or +/- 10%**	**> 100 mL < 250 mL**	**> 3L**	**< 0.33 ft[6,7]**	

(1) - Purge rate to be 0.5 lpm or less

(2) - Sample rate to be 0.25 lpm or less

(3) - Collect sample from pump discharge without tubing contacting sample container

(4) - Field parameter measurements to be recorded every 3 to 5 minutes.

(5) - Stabilization criteria based on three most recent consecutive measurements.

(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.

(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed

(8) - Preserve all samples as appropriate immediately following collection

ERM

GROUND WATER S[illegible]LING LOG SHEET

Client: Murata
Project No.: 190949
Sampling Date: 10/2/18
Site/Location: Rockmart, GA
Sampler's Name: A. Smith
Well ID: MW-B-4
Pump Type/Model: QED Bladder
Sample Collection Time: 1250
Total Depth (ft)[a]: 100
Tubing Material: LDPE
Sample Purge Rate (L/min)[c]: 0.10
Depth to Water (ft): 49.53
Pump Intake Depth (ft): 90
Sample ID: MW-B-4
Well Diameter (in): 2
Purge Method: Low Flow
QA/QC Collected? NO
*Well Volume (gal) = 0.041d²h: 8.27
Start/Stop Purge Time: 1205 / 1245
QA/QC I.D. —
Purge Rate (L/min)[b]: 0.10
Total Purge Volume (L): 4.0
Laboratory Analyses: See COC

Well Type: Flush / Stick Up
Well Cap Condition: Good / Replace / Other
Well Lock: Yes / No
Well Bolted: Yes / No
Bolts Needed: Yes / No

Sampling Method: ☐ soda straw
(check all that apply) ☒ pump head discharge
☐ Bailer (only used if necessary)
Bladder Pump

Time[d]	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H_2O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1210	29.76	386.8	4.16	10.98	132.7	6.34	0.5	49.10	
1215	—	~~386.8~~	—	~~10.98~~	—	5.10	1.0	49.47	iSitu app froze, sent as
1225	29.95	384.7	3.32	11.01	114.7	3.89	2.0	50.29	report 1 of 2, started new
1230	29.43	382.3	3.21	11.04	112.4	3.02	2.5	50.61	report (2 of 2) at 1220
1235	27.68	382.70	3.14	11.11	110.2	2.61	3.0	50.94	
1240	26.81	384.60	3.13	11.15	108.2	1.48	3.5	51.29	3 well volume purge not
1245	27.53	387.10	3.12	11.13	105.8	1.34	4.0	51.63	completed - not feasible due
									to size of volumes
				Well Parameters stabilized @ 1245					
				Sampled @ 1250					
				Total depth = 100.54					
Stabilizing Criteria[e]	+/- 1°C	+/- 3%	+/- 10% (see note below)[g]	+/- 0.1 unit	+/- 10 mV (see note below)[h]	<10 NTUs OR +/- 10%	(see note below)[d]	(see note below)[f]	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since initial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

* d = well diameter (inches);
h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

APPENDIX B GROUNDWATER LABORATORY ANALYTICAL REPORTS

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 16, 2018

Nic Very
ERM-Southeast

3200 Windy Hill Rd
Atlanta GA 30341

RE: Murata

Dear Nic Very: Order No: 1810394

Analytical Environmental Services, Inc. received 33 samples on 10/4/2018 10:45:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/18-06/30/19.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/18-06/30/19 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/19.
These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Mirzeta Kararic

Mirzeta Kararic

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive Atlanta GA 30340- 3906

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1810394

Date: 10/4/18 Page 1 of 3

COMPANY: ERM

ADDRESS: 3200 Windy Hill Rd. SE, Suite 1500W, Atlanta, GA 30339

PHONE: (678)486-2700

FAX:

SAMPLED BY: T. Payne, A. Smith,B. Griffeth

SIGNATURE:

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

PRESERVATION (See codes)

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	8260B VOCs	VOC SIM- 1,4-dioxane	RCRA Metals- Total Fe, Hg	REMARKS	No # of Containers
1	FD-1-WG-20181003	10/3	-	✔		GW	✔	✔	✔		5
2	FD-2-WG-20181003	10/3	-	✔		GW	✔	✔	✔		5
3	FD-3-WG-20181003	10/3		✔		GW	✔	✔	✔		5
4	EB-01-WQ-20181002	10/2	17:20	✔		~~GW~~ W	✔	✔	✔		5
5	EB-02-WQ-20181003	10/3	17:00	✔		~~GW~~ W	✔	✔	✔		5
6	MW-3-WG-20181002	10/2	12:20	✔		GW	✔	✔	✔		5
7	MW-4-WG-20181001	10/1	16:29	✔		GW	✔	✔	✔		5
8	MW-5-WG-20181001	10/1	16:00	✔		GW	✔	✔	✔		5
9	MW-6-WG-20181002	10/2	16:30	✔		GW	✔	✔	✔		5
10	MW-7-~~G-20181003~~ WG-20181003	10/3	10:30	✔		GW	✔	✔	✔		5
11	MW-8-WG-20181003	10/3	14:40	✔		GW	✔	✔	✔		5
12	MW-9-WG-20181001	10/1	14:50	✔		GW	✔	✔	✔		5
13	MW-12-WG-20181003	10/3	17:32	✔		GW	✔	✔	✔		5
14	MW-17-WG-20181002	10/2	14:30	✔		GW	✔	✔	✔		5

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	10/4/18 10:45	Monique Albrecht	10/4/2018 10:45am
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

☒ CLIENT ☐ FedEx ☐ UPS ☐ MAIL ☐ COURIER

☐ GREYHOUND ☐ OTHER

PROJECT INFORMATION

PROJECT NAME: Murata

PROJECT #: 0190949

SITE ADDRESS: 308 Prospect Rd. Rockmart, GA

SEND REPORT TO: nic.vrey@erm.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers 85

Turnaround Time Request

- ☑ Standard 5 Business Days
- ☐ 2 Business Day Rush
- ☐ Next Business Day Rush
- ☐ Same Day Rush (auth req.)
- ☐ Other

STATE PROGRAM (if any): GA

E-mail? Y / N; Y Fax? Y / N N

DATA PACKAGE: ☐ I ☑ II ☐ III ☐ IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED WITH STANDARD TAT.

SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) WW=Wastewater DW=Drinking Water O = Other (specify)

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive Atlanta GA 30340- 3906

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1810394

Date: 10/4/18 Page 2 of 3

COMPANY:	ADDRESS:
ERM	3200 Windy Hill Rd. SE Suite 1500W Atlanta, GA 30339
PHONE: (678)486-2700	FAX:
SAMPLED BY: T. Payne, A. Smith,B. Griffeth	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	8260B VOCs	VOC SIM- 1,4-dioxane	RCRA Metals- Total Fe, Hg	PRESERVATION (See codes)	REMARKS	No # of Containers
1	MW-18-WG-20181003	10/3	13:30	✔		GW	✔	✔	✔			5
2	MW-19-WG-20181003	10/3	16:48	✔		GW	✔	✔	✔			5
3	MW-20-WG-20181003	10/3	09:00	✔		GW	✔	✔	✔			5
4	MW-22-WG-20181003	10/3	10:05	✔		GW	✔	✔	✔			5
5	MW-23-WG-20181003	10/3	12:00	✔		GW	✔	✔	✔			5
6	MW-24-WG-20181002	10/2	17:00	✔		GW	✔	✔	✔			5
7	MW-25-WG-20181002	10/2	16:48	✔		GW	✔	✔	✔			5
8	MW-26-WG-20181002	10/2	13:58	✔		GW	✔	✔	✔			5
9	MW-27-WG-20181003	10/3	15:05	✔		GW	✔	✔	✔			5
10	MW-29-WG-20181003	10/3	17:20	✔		GW	✔	✔	✔			5
11	MW-A-4-WG-20181003	10/3	14:15	✔		GW	✔	✔	✔			5
12	MW-A-5-WG-20181003	10/3	11:40	✔		GW	✔	✔	✔			5
13	MW-B-1-WG-20181002	10/2	10:35	✔		GW	✔	✔	✔			5
14	MW-B-2-WG-20181002	10/2	11:18	✔		GW	✔	✔	✔			5

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	10/4 10:25	1: Monique Abreu	10/4/2018 10:45am
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

[X] CLIENT [ ] FedEx [ ] UPS [ ] MAIL [ ] COURIER

[ ] GREYHOUND [ ] OTHER_____

PROJECT INFORMATION

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INVOICE TO:
(IF DIFFERENT FROM ABOVE)

QUOTE #:_____ PO#:_____

RECEIPT

Total # of Containers: 85

Turnaround Time Request

- [✔] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same Day Rush (auth req.)
- [ ] Other _____

STATE PROGRAM (if any): GA

E-mail? Y / N: Y Fax? Y / N N

DATA PACKAGE: [ ] I [✔] II [ ] III [ ] IV

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SIGNATURE:

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2	MW-B-4-WG-20181002	10/2	12:50	✔		GW	✔	✔	✔											5
3	TB-1-WQ-20181003	10/3	00:00	✔		W	✔													2
4	TB-2-WQ-20181003	10/3	00:00	✔		W	✔													2
5	TB-3-WQ-20181003	10/3	00:00	✔		W	✔													2
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

PRESERVATION (See codes)

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	10/4 10:45	1: Monique Albritton	10/4/2018 10:45am
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

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(IF DIFFERENT FROM ABOVE)

QUOTE #:_____ PO#:_____

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STATE PROGRAM (if any): GA

E-mail? Y / N; Y Fax? Y / N N

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Client: ERM-Southeast
Project: Murata
Lab ID: 1810394

Case Narrative

Sample Receiving Nonconformance:

Sample information on the Chain of Custody (COC) did not match that on the sample vial labels for sample "MW-24-WG-20181002." Sample was labeled with sample ID "MW-26-WG-20181002." Sample collection date/time listed on the COC corresponded with the sample label. Sample was logged in according to the COC.

Volatile Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1810394-016, -017, and -023 required dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-1-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 15:31	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 15:31	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 15:31	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-1-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Tetrachloroethene	5.7	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 15:31	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 15:31	ZH
Surr: 4-Bromofluorobenzene	92.5	68-127		%REC	268566	1	10/10/2018 15:31	ZH
Surr: Dibromofluoromethane	96.5	84.4-122		%REC	268566	1	10/10/2018 15:31	ZH
Surr: Toluene-d8	96.9	80.1-116		%REC	268566	1	10/10/2018 15:31	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 15:20	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 05:54	OM
Surr: 4-Bromofluorobenzene	96.4	85.7-115		%REC	268424	1	10/11/2018 05:54	OM
Surr: Dibromofluoromethane	119	73.4-129		%REC	268424	1	10/11/2018 05:54	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 05:54	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 17:53	DG
Barium	0.0530	0.0200		mg/L	268279	1	10/05/2018 17:53	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 17:53	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/08/2018 10:44	DG
Iron	0.142	0.100		mg/L	268279	1	10/05/2018 17:53	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 17:53	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 17:53	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 17:53	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-2-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 15:56	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 15:56	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 15:56	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-2-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Tetrachloroethene	200	25		ug/L	268566	5	10/11/2018 00:18	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 15:56	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 15:56	ZH
Surr: 4-Bromofluorobenzene	98.4	68-127		%REC	268566	5	10/11/2018 00:18	ZH
Surr: 4-Bromofluorobenzene	93.6	68-127		%REC	268566	1	10/10/2018 15:56	ZH
Surr: Dibromofluoromethane	94.3	84.4-122		%REC	268566	5	10/11/2018 00:18	ZH
Surr: Dibromofluoromethane	97.1	84.4-122		%REC	268566	1	10/10/2018 15:56	ZH
Surr: Toluene-d8	97.9	80.1-116		%REC	268566	5	10/11/2018 00:18	ZH
Surr: Toluene-d8	98.5	80.1-116		%REC	268566	1	10/10/2018 15:56	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 15:23	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	15	5.0		ug/L	268424	1	10/11/2018 06:19	OM
Surr: 4-Bromofluorobenzene	94.5	85.7-115		%REC	268424	1	10/11/2018 06:19	OM
Surr: Dibromofluoromethane	118	73.4-129		%REC	268424	1	10/11/2018 06:19	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 06:19	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:06	DG
Barium	0.0481	0.0200		mg/L	268279	1	10/05/2018 18:06	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:06	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/08/2018 10:47	DG
Iron	0.184	0.100		mg/L	268279	1	10/05/2018 18:06	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:06	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:06	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:06	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-3-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 16:21	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 16:21	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 16:21	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	FD-3-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Tetrachloroethene	910	50		ug/L	268566	10	10/11/2018 19:56	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Trichloroethene	26	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 16:21	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 16:21	ZH
Surr: 4-Bromofluorobenzene	93.9	68-127		%REC	268566	1	10/10/2018 16:21	ZH
Surr: 4-Bromofluorobenzene	93.9	68-127		%REC	268566	10	10/11/2018 19:56	ZH
Surr: Dibromofluoromethane	93.8	84.4-122		%REC	268566	10	10/11/2018 19:56	ZH
Surr: Dibromofluoromethane	97.4	84.4-122		%REC	268566	1	10/10/2018 16:21	ZH
Surr: Toluene-d8	98.7	80.1-116		%REC	268566	1	10/10/2018 16:21	ZH
Surr: Toluene-d8	98.8	80.1-116		%REC	268566	10	10/11/2018 19:56	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00047	0.00020		mg/L	268345	1	10/08/2018 15:27	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	9.3	5.0		ug/L	268424	1	10/11/2018 06:45	OM
Surr: 4-Bromofluorobenzene	96	85.7-115		%REC	268424	1	10/11/2018 06:45	OM
Surr: Dibromofluoromethane	120	73.4-129		%REC	268424	1	10/11/2018 06:45	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 06:45	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:09	DG
Barium	0.0837	0.0200		mg/L	268279	1	10/05/2018 18:09	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:09	DG
Chromium	0.0509	0.0100		mg/L	268279	1	10/08/2018 10:49	DG
Iron	3.85	0.100		mg/L	268279	1	10/05/2018 18:09	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:09	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:09	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:09	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	EB-01-WQ-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 5:20:00 PM
Lab ID:	1810394-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 16:46	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 16:46	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 16:46	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	EB-01-WQ-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 5:20:00 PM
Lab ID:	1810394-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 16:46	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 16:46	ZH
Surr: 4-Bromofluorobenzene	95.8	68-127		%REC	268566	1	10/10/2018 16:46	ZH
Surr: Dibromofluoromethane	95.1	84.4-122		%REC	268566	1	10/10/2018 16:46	ZH
Surr: Toluene-d8	97.6	80.1-116		%REC	268566	1	10/10/2018 16:46	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 15:30	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 18:19	OM
Surr: 4-Bromofluorobenzene	94.2	85.7-115		%REC	268424	1	10/10/2018 18:19	OM
Surr: Dibromofluoromethane	123	73.4-129		%REC	268424	1	10/10/2018 18:19	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 18:19	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:12	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:12	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:12	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:12	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:12	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:12	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:12	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:12	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	EB-02-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:00:00 PM
Lab ID:	1810394-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 17:11	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 17:11	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 17:11	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	EB-02-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:00:00 PM
Lab ID:	1810394-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 17:11	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 17:11	ZH
Surr: 4-Bromofluorobenzene	93.1	68-127		%REC	268566	1	10/10/2018 17:11	ZH
Surr: Dibromofluoromethane	95.4	84.4-122		%REC	268566	1	10/10/2018 17:11	ZH
Surr: Toluene-d8	101	80.1-116		%REC	268566	1	10/10/2018 17:11	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 15:33	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 18:44	OM
Surr: 4-Bromofluorobenzene	94.4	85.7-115		%REC	268424	1	10/10/2018 18:44	OM
Surr: Dibromofluoromethane	122	73.4-129		%REC	268424	1	10/10/2018 18:44	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 18:44	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:14	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:14	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:14	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:14	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:14	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:14	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:14	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:14	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-3-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 12:20:00 PM
Lab ID:	1810394-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 09:02	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
Acetone	54	50		ug/L	268607	1	10/11/2018 09:02	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 09:02	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-3-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 12:20:00 PM
Lab ID:	1810394-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 09:02	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:02	ZH
Surr: 4-Bromofluorobenzene	98	68-127		%REC	268607	1	10/11/2018 09:02	ZH
Surr: Dibromofluoromethane	95.6	84.4-122		%REC	268607	1	10/11/2018 09:02	ZH
Surr: Toluene-d8	98.4	80.1-116		%REC	268607	1	10/11/2018 09:02	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00050	0.00020		mg/L	268345	1	10/08/2018 16:21	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 08:53	OM
Surr: 4-Bromofluorobenzene	101	85.7-115		%REC	268424	1	10/11/2018 08:53	OM
Surr: Dibromofluoromethane	118	73.4-129		%REC	268424	1	10/11/2018 08:53	OM
Surr: Toluene-d8	107	85-115		%REC	268424	1	10/11/2018 08:53	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:22	DG
Barium	0.0423	0.0200		mg/L	268279	1	10/05/2018 18:22	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:22	DG
Chromium	0.0733	0.0100		mg/L	268279	1	10/08/2018 11:07	DG
Iron	27.8	0.100		mg/L	268279	1	10/05/2018 18:22	DG
Lead	0.0276	0.0100		mg/L	268279	1	10/05/2018 18:22	DG
Selenium	0.0293	0.0200		mg/L	268279	1	10/05/2018 18:22	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:22	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-4-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 4:29:00 PM
Lab ID:	1810394-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 17:39	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 17:39	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 17:39	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH

Qualifiers:

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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-4-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 4:29:00 PM
Lab ID:	1810394-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 17:39	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 17:39	ZH
Surr: 4-Bromofluorobenzene	93.5	68-127		%REC	268566	1	10/10/2018 17:39	ZH
Surr: Dibromofluoromethane	95.4	84.4-122		%REC	268566	1	10/10/2018 17:39	ZH
Surr: Toluene-d8	99	80.1-116		%REC	268566	1	10/10/2018 17:39	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 15:46	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 19:10	OM
Surr: 4-Bromofluorobenzene	95.8	85.7-115		%REC	268424	1	10/10/2018 19:10	OM
Surr: Dibromofluoromethane	122	73.4-129		%REC	268424	1	10/10/2018 19:10	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 19:10	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:25	DG
Barium	0.185	0.0200		mg/L	268279	1	10/05/2018 18:25	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:25	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:25	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:25	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:25	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:25	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:25	DG

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- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-5-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 4:00:00 PM
Lab ID:	1810394-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 18:03	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 18:03	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 18:03	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
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- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-5-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 4:00:00 PM
Lab ID:	1810394-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 18:03	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:03	ZH
Surr: 4-Bromofluorobenzene	93.1	68-127		%REC	268566	1	10/10/2018 18:03	ZH
Surr: Dibromofluoromethane	94.1	84.4-122		%REC	268566	1	10/10/2018 18:03	ZH
Surr: Toluene-d8	97.4	80.1-116		%REC	268566	1	10/10/2018 18:03	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 14:44	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 10:11	OM
Surr: 4-Bromofluorobenzene	97.8	85.7-115		%REC	268424	1	10/11/2018 10:11	OM
Surr: Dibromofluoromethane	119	73.4-129		%REC	268424	1	10/11/2018 10:11	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 10:11	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:28	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:28	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:28	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:28	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:28	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:28	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:28	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:28	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-6-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 4:30:00 PM
Lab ID:	1810394-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 18:28	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 18:28	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 18:28	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-6-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 4:30:00 PM
Lab ID:	1810394-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 18:28	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:28	ZH
Surr: 4-Bromofluorobenzene	91.3	68-127		%REC	268566	1	10/10/2018 18:28	ZH
Surr: Dibromofluoromethane	95.5	84.4-122		%REC	268566	1	10/10/2018 18:28	ZH
Surr: Toluene-d8	98.4	80.1-116		%REC	268566	1	10/10/2018 18:28	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 16:01	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 10:36	OM
Surr: 4-Bromofluorobenzene	97.2	85.7-115		%REC	268424	1	10/11/2018 10:36	OM
Surr: Dibromofluoromethane	120	73.4-129		%REC	268424	1	10/11/2018 10:36	OM
Surr: Toluene-d8	109	85-115		%REC	268424	1	10/11/2018 10:36	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:31	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:31	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:31	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:31	DG
Iron	0.642	0.100		mg/L	268279	1	10/05/2018 18:31	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:31	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:31	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:31	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-7-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 10:30:00 AM
Lab ID:	1810394-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 09:52	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 09:52	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 09:52	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-7-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 10:30:00 AM
Lab ID:	1810394-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 09:52	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:52	ZH
Surr: 4-Bromofluorobenzene	96.3	68-127		%REC	268607	1	10/11/2018 09:52	ZH
Surr: Dibromofluoromethane	95.8	84.4-122		%REC	268607	1	10/11/2018 09:52	ZH
Surr: Toluene-d8	95.4	80.1-116		%REC	268607	1	10/11/2018 09:52	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00069	0.00020		mg/L	268345	1	10/08/2018 16:05	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 13:38	OM
Surr: 4-Bromofluorobenzene	110	85.7-115		%REC	268424	1	10/11/2018 13:38	OM
Surr: Dibromofluoromethane	113	73.4-129		%REC	268424	1	10/11/2018 13:38	OM
Surr: Toluene-d8	104	85-115		%REC	268424	1	10/11/2018 13:38	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:33	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:33	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:33	DG
Chromium	0.0856	0.0100		mg/L	268279	1	10/08/2018 11:10	DG
Iron	0.916	0.100		mg/L	268279	1	10/05/2018 18:33	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:33	DG
Selenium	0.0202	0.0200		mg/L	268279	1	10/05/2018 18:33	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:33	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-8-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 2:40:00 PM
Lab ID:	1810394-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 18:53	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 18:53	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 18:53	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-8-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 2:40:00 PM
Lab ID:	1810394-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Tetrachloroethene	210	25		ug/L	268566	5	10/11/2018 19:31	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 18:53	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 18:53	ZH
Surr: 4-Bromofluorobenzene	94.2	68-127		%REC	268566	5	10/11/2018 19:31	ZH
Surr: 4-Bromofluorobenzene	93.1	68-127		%REC	268566	1	10/10/2018 18:53	ZH
Surr: Dibromofluoromethane	94.3	84.4-122		%REC	268566	5	10/11/2018 19:31	ZH
Surr: Dibromofluoromethane	95.6	84.4-122		%REC	268566	1	10/10/2018 18:53	ZH
Surr: Toluene-d8	98.7	80.1-116		%REC	268566	5	10/11/2018 19:31	ZH
Surr: Toluene-d8	97.7	80.1-116		%REC	268566	1	10/10/2018 18:53	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 16:08	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	15	5.0		ug/L	268424	1	10/11/2018 04:11	OM
Surr: 4-Bromofluorobenzene	95.8	85.7-115		%REC	268424	1	10/11/2018 04:11	OM
Surr: Dibromofluoromethane	116	73.4-129		%REC	268424	1	10/11/2018 04:11	OM
Surr: Toluene-d8	107	85-115		%REC	268424	1	10/11/2018 04:11	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:36	DG
Barium	0.0490	0.0200		mg/L	268279	1	10/05/2018 18:36	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:36	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/08/2018 11:12	DG
Iron	0.237	0.100		mg/L	268279	1	10/05/2018 18:36	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:36	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:36	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:36	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-9-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 2:50:00 PM
Lab ID:	1810394-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 13:19	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 13:19	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 13:19	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-9-WG-20181001
Project Name:	Murata	**Collection Date:**	10/1/2018 2:50:00 PM
Lab ID:	1810394-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Tetrachloroethene	20	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 13:19	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 13:19	ZH
Surr: 4-Bromofluorobenzene	94.5	68-127		%REC	268566	1	10/11/2018 13:19	ZH
Surr: Dibromofluoromethane	94.3	84.4-122		%REC	268566	1	10/11/2018 13:19	ZH
Surr: Toluene-d8	100	80.1-116		%REC	268566	1	10/11/2018 13:19	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 16:11	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 17:53	OM
Surr: 4-Bromofluorobenzene	95.6	85.7-115		%REC	268424	1	10/10/2018 17:53	OM
Surr: Dibromofluoromethane	124	73.4-129		%REC	268424	1	10/10/2018 17:53	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 17:53	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:39	DG
Barium	0.0441	0.0200		mg/L	268279	1	10/05/2018 18:39	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:39	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/08/2018 11:14	DG
Iron	0.541	0.100		mg/L	268279	1	10/05/2018 18:39	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:39	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:39	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:39	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-12-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:32:00 PM
Lab ID:	1810394-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 13:44	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 13:44	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 13:44	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-12-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:32:00 PM
Lab ID:	1810394-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 13:44	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 13:44	ZH
Surr: 4-Bromofluorobenzene	94.7	68-127		%REC	268566	1	10/11/2018 13:44	ZH
Surr: Dibromofluoromethane	94.3	84.4-122		%REC	268566	1	10/11/2018 13:44	ZH
Surr: Toluene-d8	99.3	80.1-116		%REC	268566	1	10/11/2018 13:44	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 16:15	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 05:28	OM
Surr: 4-Bromofluorobenzene	95.7	85.7-115		%REC	268424	1	10/11/2018 05:28	OM
Surr: Dibromofluoromethane	118	73.4-129		%REC	268424	1	10/11/2018 05:28	OM
Surr: Toluene-d8	107	85-115		%REC	268424	1	10/11/2018 05:28	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:41	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:41	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:41	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:41	DG
Iron	18.1	0.100		mg/L	268279	1	10/05/2018 18:41	DG
Lead	0.101	0.0100		mg/L	268279	1	10/05/2018 18:41	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:41	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:41	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-17-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 2:30:00 PM
Lab ID:	1810394-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/10/2018 20:08	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
Acetone	BRL	50		ug/L	268566	1	10/10/2018 20:08	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Freon-113	BRL	10		ug/L	268566	1	10/10/2018 20:08	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-17-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 2:30:00 PM
Lab ID:	1810394-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/10/2018 20:08	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/10/2018 20:08	ZH
Surr: 4-Bromofluorobenzene	91.4	68-127		%REC	268566	1	10/10/2018 20:08	ZH
Surr: Dibromofluoromethane	95.6	84.4-122		%REC	268566	1	10/10/2018 20:08	ZH
Surr: Toluene-d8	97.2	80.1-116		%REC	268566	1	10/10/2018 20:08	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268345	1	10/08/2018 16:18	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 03:20	OM
Surr: 4-Bromofluorobenzene	98.6	85.7-115		%REC	268424	1	10/11/2018 03:20	OM
Surr: Dibromofluoromethane	118	73.4-129		%REC	268424	1	10/11/2018 03:20	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 03:20	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:44	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:44	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:44	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 18:44	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:44	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 18:44	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:44	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:44	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-18-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 1:30:00 PM
Lab ID:	1810394-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 04:02	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 04:02	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 04:02	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-18-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 1:30:00 PM
Lab ID:	1810394-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 04:02	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:02	ZH
Surr: 4-Bromofluorobenzene	96.1	68-127		%REC	268566	1	10/11/2018 04:02	ZH
Surr: Dibromofluoromethane	97	84.4-122		%REC	268566	1	10/11/2018 04:02	ZH
Surr: Toluene-d8	101	80.1-116		%REC	268566	1	10/11/2018 04:02	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:00	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 03:45	OM
Surr: 4-Bromofluorobenzene	99.6	85.7-115		%REC	268424	1	10/11/2018 03:45	OM
Surr: Dibromofluoromethane	120	73.4-129		%REC	268424	1	10/11/2018 03:45	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/11/2018 03:45	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:47	DG
Barium	0.287	0.0200		mg/L	268279	1	10/05/2018 18:47	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:47	DG
Chromium	0.0312	0.0100		mg/L	268279	1	10/08/2018 11:16	DG
Iron	13.7	0.100		mg/L	268279	1	10/05/2018 18:47	DG
Lead	0.0118	0.0100		mg/L	268279	1	10/05/2018 18:47	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:47	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 18:47	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-19-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 4:48:00 PM
Lab ID:	1810394-016	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,1,2,2-Tetrachloroethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,1,2-Trichloroethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,1-Dichloroethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,1-Dichloroethene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2,4-Trichlorobenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dibromo-3-chloropropane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dibromoethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dichlorobenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dichloroethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dichloropropane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,3-Dichlorobenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
1,4-Dichlorobenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
2-Butanone	BRL	500		ug/L	268607	10	10/11/2018 10:17	ZH
2-Hexanone	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
4-Methyl-2-pentanone	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
Acetone	BRL	500		ug/L	268607	10	10/11/2018 10:17	ZH
Benzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Bromodichloromethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Bromoform	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Bromomethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Carbon disulfide	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Carbon tetrachloride	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Chlorobenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Chloroethane	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
Chloroform	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Chloromethane	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
cis-1,2-Dichloroethene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
cis-1,3-Dichloropropene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Cyclohexane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Dibromochloromethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Dichlorodifluoromethane	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
Ethylbenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Freon-113	BRL	100		ug/L	268607	10	10/11/2018 10:17	ZH
Isopropylbenzene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
m,p-Xylene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Methyl acetate	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Methyl tert-butyl ether	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Methylcyclohexane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Methylene chloride	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Naphthalene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-19-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 4:48:00 PM
Lab ID:	1810394-016	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Styrene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Tetrachloroethene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Toluene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
trans-1,2-Dichloroethene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
trans-1,3-Dichloropropene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Trichloroethene	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Trichlorofluoromethane	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Vinyl chloride	BRL	20		ug/L	268607	10	10/11/2018 10:17	ZH
1,2-Dichloroethene, Total	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Xylenes, Total	BRL	50		ug/L	268607	10	10/11/2018 10:17	ZH
Surr: 4-Bromofluorobenzene	97.6	68-127		%REC	268607	10	10/11/2018 10:17	ZH
Surr: Dibromofluoromethane	95	84.4-122		%REC	268607	10	10/11/2018 10:17	ZH
Surr: Toluene-d8	99.9	80.1-116		%REC	268607	10	10/11/2018 10:17	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00162	0.00020		mg/L	268353	1	10/08/2018 14:04	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	268424	10	10/11/2018 14:29	OM
Surr: 4-Bromofluorobenzene	104	85.7-115		%REC	268424	10	10/11/2018 14:29	OM
Surr: Dibromofluoromethane	115	73.4-129		%REC	268424	10	10/11/2018 14:29	OM
Surr: Toluene-d8	106	85-115		%REC	268424	10	10/11/2018 14:29	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:55	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 18:55	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:55	DG
Chromium	0.176	0.0100		mg/L	268279	1	10/08/2018 11:19	DG
Iron	BRL	0.100		mg/L	268279	1	10/05/2018 18:55	DG
Lead	0.0177	0.0100		mg/L	268279	1	10/05/2018 18:55	DG
Selenium	0.0677	0.0200		mg/L	268279	1	10/05/2018 18:55	DG
Silver	0.0170	0.0100		mg/L	268279	1	10/05/2018 18:55	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-20-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 9:00:00 AM
Lab ID:	1810394-017	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,1,2,2-Tetrachloroethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,1,2-Trichloroethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,1-Dichloroethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,1-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2,4-Trichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dibromo-3-chloropropane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dibromoethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dichloroethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dichloropropane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,3-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
1,4-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
2-Butanone	BRL	1000		ug/L	268607	20	10/11/2018 10:42	ZH
2-Hexanone	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
4-Methyl-2-pentanone	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
Acetone	BRL	1000		ug/L	268607	20	10/11/2018 10:42	ZH
Benzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Bromodichloromethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Bromoform	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Bromomethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Carbon disulfide	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Carbon tetrachloride	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Chlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Chloroethane	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
Chloroform	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Chloromethane	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
cis-1,2-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
cis-1,3-Dichloropropene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Cyclohexane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Dibromochloromethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Dichlorodifluoromethane	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
Ethylbenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Freon-113	BRL	200		ug/L	268607	20	10/11/2018 10:42	ZH
Isopropylbenzene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
m,p-Xylene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Methyl acetate	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Methyl tert-butyl ether	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Methylcyclohexane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Methylene chloride	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Naphthalene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-20-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 9:00:00 AM
Lab ID:	1810394-017	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Styrene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Tetrachloroethene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Toluene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
trans-1,2-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
trans-1,3-Dichloropropene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Trichloroethene	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Trichlorofluoromethane	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Vinyl chloride	BRL	40		ug/L	268607	20	10/11/2018 10:42	ZH
1,2-Dichloroethene, Total	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Xylenes, Total	BRL	100		ug/L	268607	20	10/11/2018 10:42	ZH
Surr: 4-Bromofluorobenzene	95.6	68-127		%REC	268607	20	10/11/2018 10:42	ZH
Surr: Dibromofluoromethane	92.6	84.4-122		%REC	268607	20	10/11/2018 10:42	ZH
Surr: Toluene-d8	99.3	80.1-116		%REC	268607	20	10/11/2018 10:42	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00029	0.00020		mg/L	268353	1	10/08/2018 14:07	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	100		ug/L	268424	20	10/11/2018 14:55	OM
Surr: 4-Bromofluorobenzene	103	85.7-115		%REC	268424	20	10/11/2018 14:55	OM
Surr: Dibromofluoromethane	115	73.4-129		%REC	268424	20	10/11/2018 14:55	OM
Surr: Toluene-d8	107	85-115		%REC	268424	20	10/11/2018 14:55	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 18:58	DG
Barium	0.221	0.0200		mg/L	268279	1	10/05/2018 18:58	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 18:58	DG
Chromium	0.0726	0.0100		mg/L	268279	1	10/08/2018 11:21	DG
Iron	1.52	0.100		mg/L	268279	1	10/05/2018 18:58	DG
Lead	0.0223	0.0100		mg/L	268279	1	10/05/2018 18:58	DG
Selenium	0.0938	0.0200		mg/L	268279	1	10/05/2018 18:58	DG
Silver	0.0246	0.0100		mg/L	268279	1	10/05/2018 18:58	DG

Qualifiers:

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- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-22-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 10:05:00 AM
Lab ID:	1810394-018	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 04:27	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 04:27	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 04:27	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-22-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 10:05:00 AM
Lab ID:	1810394-018	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Tetrachloroethene	5.9	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 04:27	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:27	ZH
Surr: 4-Bromofluorobenzene	98.3	68-127		%REC	268566	1	10/11/2018 04:27	ZH
Surr: Dibromofluoromethane	97	84.4-122		%REC	268566	1	10/11/2018 04:27	ZH
Surr: Toluene-d8	100	80.1-116		%REC	268566	1	10/11/2018 04:27	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:10	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 20:27	OM
Surr: 4-Bromofluorobenzene	94.8	85.7-115		%REC	268424	1	10/10/2018 20:27	OM
Surr: Dibromofluoromethane	121	73.4-129		%REC	268424	1	10/10/2018 20:27	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 20:27	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 19:00	DG
Barium	0.0525	0.0200		mg/L	268279	1	10/05/2018 19:00	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 19:00	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/08/2018 11:23	DG
Iron	0.217	0.100		mg/L	268279	1	10/05/2018 19:00	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 19:00	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 19:00	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 19:00	DG

Qualifiers:

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- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-23-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 12:00:00 PM
Lab ID:	1810394-019	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 09:27	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 09:27	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 09:27	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-23-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 12:00:00 PM
Lab ID:	1810394-019	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 09:27	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 09:27	ZH
Surr: 4-Bromofluorobenzene	97.3	68-127		%REC	268607	1	10/11/2018 09:27	ZH
Surr: Dibromofluoromethane	95.5	84.4-122		%REC	268607	1	10/11/2018 09:27	ZH
Surr: Toluene-d8	98.9	80.1-116		%REC	268607	1	10/11/2018 09:27	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:14	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/11/2018 14:04	OM
Surr: 4-Bromofluorobenzene	106	85.7-115		%REC	268424	1	10/11/2018 14:04	OM
Surr: Dibromofluoromethane	114	73.4-129		%REC	268424	1	10/11/2018 14:04	OM
Surr: Toluene-d8	104	85-115		%REC	268424	1	10/11/2018 14:04	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 19:03	DG
Barium	BRL	0.0200		mg/L	268279	1	10/05/2018 19:03	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 19:03	DG
Chromium	0.0342	0.0100		mg/L	268279	1	10/08/2018 11:26	DG
Iron	0.110	0.100		mg/L	268279	1	10/05/2018 19:03	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 19:03	DG
Selenium	0.0295	0.0200		mg/L	268279	1	10/05/2018 19:03	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 19:03	DG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-24-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 5:00:00 PM
Lab ID:	1810394-020	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 04:52	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 04:52	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 04:52	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-24-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 5:00:00 PM
Lab ID:	1810394-020	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 04:52	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 04:52	ZH
Surr: 4-Bromofluorobenzene	95.6	68-127		%REC	268566	1	10/11/2018 04:52	ZH
Surr: Dibromofluoromethane	96.8	84.4-122		%REC	268566	1	10/11/2018 04:52	ZH
Surr: Toluene-d8	98.9	80.1-116		%REC	268566	1	10/11/2018 04:52	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:24	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268424	1	10/10/2018 20:53	OM
Surr: 4-Bromofluorobenzene	94.9	85.7-115		%REC	268424	1	10/10/2018 20:53	OM
Surr: Dibromofluoromethane	121	73.4-129		%REC	268424	1	10/10/2018 20:53	OM
Surr: Toluene-d8	108	85-115		%REC	268424	1	10/10/2018 20:53	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268279	1	10/05/2018 19:06	DG
Barium	0.0691	0.0200		mg/L	268279	1	10/05/2018 19:06	DG
Cadmium	BRL	0.0050		mg/L	268279	1	10/05/2018 19:06	DG
Chromium	BRL	0.0100		mg/L	268279	1	10/05/2018 19:06	DG
Iron	1.39	0.100		mg/L	268279	1	10/05/2018 19:06	DG
Lead	BRL	0.0100		mg/L	268279	1	10/05/2018 19:06	DG
Selenium	BRL	0.0200		mg/L	268279	1	10/05/2018 19:06	DG
Silver	BRL	0.0100		mg/L	268279	1	10/05/2018 19:06	DG

Qualifiers:

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- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-25-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 4:48:00 PM
Lab ID:	1810394-021	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 05:17	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 05:17	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 05:17	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-25-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 4:48:00 PM
Lab ID:	1810394-021	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 05:17	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 05:17	ZH
Surr: 4-Bromofluorobenzene	96.1	68-127		%REC	268566	1	10/11/2018 05:17	ZH
Surr: Dibromofluoromethane	96.6	84.4-122		%REC	268566	1	10/11/2018 05:17	ZH
Surr: Toluene-d8	100	80.1-116		%REC	268566	1	10/11/2018 05:17	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:27	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 11:02	OM
Surr: 4-Bromofluorobenzene	96.7	85.7-115		%REC	268581	1	10/11/2018 11:02	OM
Surr: Dibromofluoromethane	119	73.4-129		%REC	268581	1	10/11/2018 11:02	OM
Surr: Toluene-d8	107	85-115		%REC	268581	1	10/11/2018 11:02	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 16:30	NS
Barium	0.0467	0.0200		mg/L	268280	1	10/05/2018 16:30	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 16:30	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 16:30	NS
Iron	0.753	0.100		mg/L	268280	1	10/05/2018 16:30	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 16:30	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 16:30	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 16:30	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-26-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 1:58:00 PM
Lab ID:	1810394-022	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 05:42	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 05:42	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 05:42	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-26-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 1:58:00 PM
Lab ID:	1810394-022	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 05:42	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 05:42	ZH
Surr: 4-Bromofluorobenzene	96.7	68-127		%REC	268566	1	10/11/2018 05:42	ZH
Surr: Dibromofluoromethane	95.2	84.4-122		%REC	268566	1	10/11/2018 05:42	ZH
Surr: Toluene-d8	98.7	80.1-116		%REC	268566	1	10/11/2018 05:42	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:30	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/10/2018 21:44	OM
Surr: 4-Bromofluorobenzene	95.1	85.7-115		%REC	268581	1	10/10/2018 21:44	OM
Surr: Dibromofluoromethane	122	73.4-129		%REC	268581	1	10/10/2018 21:44	OM
Surr: Toluene-d8	107	85-115		%REC	268581	1	10/10/2018 21:44	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 16:46	NS
Barium	0.0787	0.0200		mg/L	268280	1	10/05/2018 16:46	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 16:46	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 16:46	NS
Iron	0.724	0.100		mg/L	268280	1	10/05/2018 16:46	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 16:46	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 16:46	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 16:46	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-27-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 3:05:00 PM
Lab ID:	1810394-023	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,1,2,2-Tetrachloroethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,1,2-Trichloroethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,1-Dichloroethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,1-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2,4-Trichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dibromo-3-chloropropane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dibromoethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dichloroethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dichloropropane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,3-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
1,4-Dichlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
2-Butanone	BRL	1000		ug/L	268607	20	10/11/2018 11:07	ZH
2-Hexanone	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
4-Methyl-2-pentanone	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
Acetone	BRL	1000		ug/L	268607	20	10/11/2018 11:07	ZH
Benzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Bromodichloromethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Bromoform	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Bromomethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Carbon disulfide	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Carbon tetrachloride	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Chlorobenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Chloroethane	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
Chloroform	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Chloromethane	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
cis-1,2-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
cis-1,3-Dichloropropene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Cyclohexane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Dibromochloromethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Dichlorodifluoromethane	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
Ethylbenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Freon-113	BRL	200		ug/L	268607	20	10/11/2018 11:07	ZH
Isopropylbenzene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
m,p-Xylene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Methyl acetate	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Methyl tert-butyl ether	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Methylcyclohexane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Methylene chloride	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Naphthalene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-27-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 3:05:00 PM
Lab ID:	1810394-023	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Styrene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Tetrachloroethene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Toluene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
trans-1,2-Dichloroethene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
trans-1,3-Dichloropropene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Trichloroethene	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Trichlorofluoromethane	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Vinyl chloride	BRL	40		ug/L	268607	20	10/11/2018 11:07	ZH
1,2-Dichloroethene, Total	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Xylenes, Total	BRL	100		ug/L	268607	20	10/11/2018 11:07	ZH
Surr: 4-Bromofluorobenzene	94.1	68-127		%REC	268607	20	10/11/2018 11:07	ZH
Surr: Dibromofluoromethane	93.6	84.4-122		%REC	268607	20	10/11/2018 11:07	ZH
Surr: Toluene-d8	98.8	80.1-116		%REC	268607	20	10/11/2018 11:07	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 14:34	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	100		ug/L	268581	20	10/11/2018 15:21	OM
Surr: 4-Bromofluorobenzene	100	85.7-115		%REC	268581	20	10/11/2018 15:21	OM
Surr: Dibromofluoromethane	114	73.4-129		%REC	268581	20	10/11/2018 15:21	OM
Surr: Toluene-d8	107	85-115		%REC	268581	20	10/11/2018 15:21	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 16:49	NS
Barium	BRL	0.0200		mg/L	268280	1	10/05/2018 16:49	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 16:49	NS
Chromium	0.0256	0.0100		mg/L	268280	1	10/05/2018 16:49	NS
Iron	0.614	0.100		mg/L	268280	1	10/05/2018 16:49	NS
Lead	0.0362	0.0100		mg/L	268280	1	10/05/2018 16:49	NS
Selenium	0.147	0.0200		mg/L	268280	1	10/05/2018 16:49	NS
Silver	0.0158	0.0100		mg/L	268280	1	10/05/2018 16:49	NS

Qualifiers:

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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-29-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:20:00 PM
Lab ID:	1810394-024	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 06:07	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 06:07	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 06:07	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-29-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 5:20:00 PM
Lab ID:	1810394-024	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Tetrachloroethene	870	50		ug/L	268566	10	10/11/2018 20:21	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Trichloroethene	20	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 06:07	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 06:07	ZH
Surr: 4-Bromofluorobenzene	94.3	68-127		%REC	268566	10	10/11/2018 20:21	ZH
Surr: 4-Bromofluorobenzene	97	68-127		%REC	268566	1	10/11/2018 06:07	ZH
Surr: Dibromofluoromethane	95.1	84.4-122		%REC	268566	1	10/11/2018 06:07	ZH
Surr: Dibromofluoromethane	94.2	84.4-122		%REC	268566	10	10/11/2018 20:21	ZH
Surr: Toluene-d8	99.7	80.1-116		%REC	268566	1	10/11/2018 06:07	ZH
Surr: Toluene-d8	98.2	80.1-116		%REC	268566	10	10/11/2018 20:21	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	0.00050	0.00020		mg/L	268353	1	10/09/2018 13:45	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	8.8	5.0		ug/L	268581	1	10/10/2018 22:09	OM
Surr: 4-Bromofluorobenzene	92.4	85.7-115		%REC	268581	1	10/10/2018 22:09	OM
Surr: Dibromofluoromethane	120	73.4-129		%REC	268581	1	10/10/2018 22:09	OM
Surr: Toluene-d8	108	85-115		%REC	268581	1	10/10/2018 22:09	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 16:52	NS
Barium	0.0818	0.0200		mg/L	268280	1	10/05/2018 16:52	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 16:52	NS
Chromium	0.0459	0.0100		mg/L	268280	1	10/05/2018 16:52	NS
Iron	3.63	0.100		mg/L	268280	1	10/05/2018 16:52	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 16:52	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 16:52	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 16:52	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-A-4-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 2:15:00 PM
Lab ID:	1810394-025	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 06:32	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 06:32	ZH
Benzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Cyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
Ethylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 06:32	ZH
Isopropylbenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
m,p-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Methylcyclohexane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Naphthalene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-A-4-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 2:15:00 PM
Lab ID:	1810394-025	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Toluene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 06:32	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Xylenes, Total	BRL	5.0		ug/L	268566	1	10/11/2018 06:32	ZH
Surr: 4-Bromofluorobenzene	95.9	68-127		%REC	268566	1	10/11/2018 06:32	ZH
Surr: Dibromofluoromethane	96.6	84.4-122		%REC	268566	1	10/11/2018 06:32	ZH
Surr: Toluene-d8	99.8	80.1-116		%REC	268566	1	10/11/2018 06:32	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/08/2018 13:50	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/10/2018 22:35	OM
Surr: 4-Bromofluorobenzene	93.9	85.7-115		%REC	268581	1	10/10/2018 22:35	OM
Surr: Dibromofluoromethane	120	73.4-129		%REC	268581	1	10/10/2018 22:35	OM
Surr: Toluene-d8	108	85-115		%REC	268581	1	10/10/2018 22:35	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:03	NS
Barium	0.0845	0.0200		mg/L	268280	1	10/05/2018 17:03	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:03	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:03	NS
Iron	BRL	0.100		mg/L	268280	1	10/05/2018 17:03	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:03	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:03	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:03	NS

Qualifiers:

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- Narr See case narrative
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- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-A-5-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 11:40:00 AM
Lab ID:	1810394-026	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
2-Butanone	BRL	50		ug/L	268566	1	10/11/2018 06:57	ZH
2-Hexanone	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
Acetone	BRL	50		ug/L	268566	1	10/11/2018 06:57	ZH
Benzene	3600	500		ug/L	268566	100	10/11/2018 21:11	ZH
Bromodichloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Bromoform	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Bromomethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Carbon disulfide	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Chlorobenzene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Chloroethane	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
Chloroform	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Chloromethane	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Cyclohexane	130	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Dibromochloromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
Ethylbenzene	950	50		ug/L	268566	10	10/11/2018 20:46	ZH
Freon-113	BRL	10		ug/L	268566	1	10/11/2018 06:57	ZH
Isopropylbenzene	38	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
m,p-Xylene	3100	50		ug/L	268566	10	10/11/2018 20:46	ZH
Methyl acetate	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Methyl tert-butyl ether	240	50		ug/L	268566	10	10/11/2018 20:46	ZH
Methylcyclohexane	50	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Methylene chloride	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Naphthalene	120	5.0		ug/L	268566	1	10/11/2018 06:57	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
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- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-A-5-WG-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018 11:40:00 AM
Lab ID:	1810394-026	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	1500	50		ug/L	268566	10	10/11/2018 20:46	ZH
Styrene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Tetrachloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Toluene	10000	500		ug/L	268566	100	10/11/2018 21:11	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Trichloroethene	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Vinyl chloride	BRL	2.0		ug/L	268566	1	10/11/2018 06:57	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268566	1	10/11/2018 06:57	ZH
Xylenes, Total	4600	50		ug/L	268566	10	10/11/2018 20:46	ZH
Surr: 4-Bromofluorobenzene	96.1	68-127		%REC	268566	100	10/11/2018 21:11	ZH
Surr: 4-Bromofluorobenzene	98.4	68-127		%REC	268566	1	10/11/2018 06:57	ZH
Surr: 4-Bromofluorobenzene	99	68-127		%REC	268566	10	10/11/2018 20:46	ZH
Surr: Dibromofluoromethane	87.6	84.4-122		%REC	268566	1	10/11/2018 06:57	ZH
Surr: Dibromofluoromethane	91.7	84.4-122		%REC	268566	10	10/11/2018 20:46	ZH
Surr: Dibromofluoromethane	92.9	84.4-122		%REC	268566	100	10/11/2018 21:11	ZH
Surr: Toluene-d8	96.7	80.1-116		%REC	268566	1	10/11/2018 06:57	ZH
Surr: Toluene-d8	97.2	80.1-116		%REC	268566	100	10/11/2018 21:11	ZH
Surr: Toluene-d8	99.9	80.1-116		%REC	268566	10	10/11/2018 20:46	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/09/2018 13:41	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 13:12	OM
Surr: 4-Bromofluorobenzene	131	85.7-115	S	%REC	268581	1	10/11/2018 13:12	OM
Surr: Dibromofluoromethane	103	73.4-129		%REC	268581	1	10/11/2018 13:12	OM
Surr: Toluene-d8	106	85-115		%REC	268581	1	10/11/2018 13:12	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:12	NS
Barium	0.464	0.0200		mg/L	268280	1	10/05/2018 17:12	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:12	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:12	NS
Iron	8.84	0.100		mg/L	268280	1	10/05/2018 17:12	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:12	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:12	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:12	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-1-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 10:35:00 AM
Lab ID:	1810394-027	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 18:16	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 18:16	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 18:16	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-1-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 10:35:00 AM
Lab ID:	1810394-027	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 18:16	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 18:16	ZH
Surr: 4-Bromofluorobenzene	94.3	68-127		%REC	268607	1	10/11/2018 18:16	ZH
Surr: Dibromofluoromethane	94.8	84.4-122		%REC	268607	1	10/11/2018 18:16	ZH
Surr: Toluene-d8	98.8	80.1-116		%REC	268607	1	10/11/2018 18:16	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/09/2018 13:48	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 01:37	OM
Surr: 4-Bromofluorobenzene	98.4	85.7-115		%REC	268581	1	10/11/2018 01:37	OM
Surr: Dibromofluoromethane	115	73.4-129		%REC	268581	1	10/11/2018 01:37	OM
Surr: Toluene-d8	107	85-115		%REC	268581	1	10/11/2018 01:37	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:16	NS
Barium	0.0387	0.0200		mg/L	268280	1	10/05/2018 17:16	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:16	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:16	NS
Iron	0.181	0.100		mg/L	268280	1	10/05/2018 17:16	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:16	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:16	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:16	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-2-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 11:18:00 AM
Lab ID:	1810394-028	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 07:47	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 07:47	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 07:47	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-2-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 11:18:00 AM
Lab ID:	1810394-028	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 07:47	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 07:47	ZH
Surr: 4-Bromofluorobenzene	97.3	68-127		%REC	268607	1	10/11/2018 07:47	ZH
Surr: Dibromofluoromethane	94.1	84.4-122		%REC	268607	1	10/11/2018 07:47	ZH
Surr: Toluene-d8	98.5	80.1-116		%REC	268607	1	10/11/2018 07:47	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/09/2018 13:51	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 02:03	OM
Surr: 4-Bromofluorobenzene	99.4	85.7-115		%REC	268581	1	10/11/2018 02:03	OM
Surr: Dibromofluoromethane	117	73.4-129		%REC	268581	1	10/11/2018 02:03	OM
Surr: Toluene-d8	107	85-115		%REC	268581	1	10/11/2018 02:03	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:19	NS
Barium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:19	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:19	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:19	NS
Iron	1.55	0.100		mg/L	268280	1	10/05/2018 17:19	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:19	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:19	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:19	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-3-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 11:00:00 AM
Lab ID:	1810394-029	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 08:12	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 08:12	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 08:12	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-3-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 11:00:00 AM
Lab ID:	1810394-029	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 08:12	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 08:12	ZH
Surr: 4-Bromofluorobenzene	98.4	68-127		%REC	268607	1	10/11/2018 08:12	ZH
Surr: Dibromofluoromethane	96.2	84.4-122		%REC	268607	1	10/11/2018 08:12	ZH
Surr: Toluene-d8	99.7	80.1-116		%REC	268607	1	10/11/2018 08:12	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/09/2018 13:55	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 02:28	OM
Surr: 4-Bromofluorobenzene	99	85.7-115		%REC	268581	1	10/11/2018 02:28	OM
Surr: Dibromofluoromethane	119	73.4-129		%REC	268581	1	10/11/2018 02:28	OM
Surr: Toluene-d8	108	85-115		%REC	268581	1	10/11/2018 02:28	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:22	NS
Barium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:22	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:22	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:22	NS
Iron	0.669	0.100		mg/L	268280	1	10/05/2018 17:22	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:22	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:22	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:22	NS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-4-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 12:50:00 PM
Lab ID:	1810394-030	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,1,2-Trichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,1-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,1-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dibromoethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dichloroethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dichloropropane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,3-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,4-Dichlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
2-Butanone	BRL	50		ug/L	268607	1	10/11/2018 08:37	ZH
2-Hexanone	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
4-Methyl-2-pentanone	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
Acetone	BRL	50		ug/L	268607	1	10/11/2018 08:37	ZH
Benzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Bromodichloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Bromoform	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Bromomethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Carbon disulfide	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Carbon tetrachloride	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Chlorobenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Chloroethane	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
Chloroform	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Chloromethane	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Cyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Dibromochloromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Dichlorodifluoromethane	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
Ethylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Freon-113	BRL	10		ug/L	268607	1	10/11/2018 08:37	ZH
Isopropylbenzene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
m,p-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Methyl acetate	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Methyl tert-butyl ether	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Methylcyclohexane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Methylene chloride	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Naphthalene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	MW-B-4-WG-20181002
Project Name:	Murata	**Collection Date:**	10/2/2018 12:50:00 PM
Lab ID:	1810394-030	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
o-Xylene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Styrene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Tetrachloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Toluene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Trichloroethene	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Trichlorofluoromethane	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Vinyl chloride	BRL	2.0		ug/L	268607	1	10/11/2018 08:37	ZH
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Xylenes, Total	BRL	5.0		ug/L	268607	1	10/11/2018 08:37	ZH
Surr: 4-Bromofluorobenzene	96.1	68-127		%REC	268607	1	10/11/2018 08:37	ZH
Surr: Dibromofluoromethane	94.5	84.4-122		%REC	268607	1	10/11/2018 08:37	ZH
Surr: Toluene-d8	98.8	80.1-116		%REC	268607	1	10/11/2018 08:37	ZH
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	268353	1	10/09/2018 13:58	CD
1,4-Dioxane by SIM GC/MS SW8260B-SIM				**(SW5030B)**				
1,4-Dioxane	BRL	5.0		ug/L	268581	1	10/11/2018 02:54	OM
Surr: 4-Bromofluorobenzene	97.9	85.7-115		%REC	268581	1	10/11/2018 02:54	OM
Surr: Dibromofluoromethane	119	73.4-129		%REC	268581	1	10/11/2018 02:54	OM
Surr: Toluene-d8	107	85-115		%REC	268581	1	10/11/2018 02:54	OM
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	268280	1	10/05/2018 17:25	NS
Barium	0.695	0.0200		mg/L	268280	1	10/05/2018 17:25	NS
Cadmium	BRL	0.0050		mg/L	268280	1	10/05/2018 17:25	NS
Chromium	BRL	0.0100		mg/L	268280	1	10/05/2018 17:25	NS
Iron	BRL	0.100		mg/L	268280	1	10/05/2018 17:25	NS
Lead	BRL	0.0100		mg/L	268280	1	10/05/2018 17:25	NS
Selenium	BRL	0.0200		mg/L	268280	1	10/05/2018 17:25	NS
Silver	BRL	0.0100		mg/L	268280	1	10/05/2018 17:25	NS

Qualifiers:

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- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-1-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-031	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,1,2-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,1-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,1-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dibromoethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dichloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,3-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
1,4-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
2-Butanone	BRL	50		ug/L	268425	1	10/08/2018 18:10	OM
2-Hexanone	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
4-Methyl-2-pentanone	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
Acetone	BRL	50		ug/L	268425	1	10/08/2018 18:10	OM
Benzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Bromodichloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Bromoform	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Bromomethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Carbon disulfide	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Carbon tetrachloride	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Chlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Chloroethane	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
Chloroform	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Chloromethane	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Cyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Dibromochloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Dichlorodifluoromethane	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
Ethylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Freon-113	BRL	10		ug/L	268425	1	10/08/2018 18:10	OM
Isopropylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
m,p-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Methyl acetate	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Methyl tert-butyl ether	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Methylcyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Methylene chloride	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Naphthalene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM

Qualifiers:

- * Value exceeds maximum contaminant level
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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-1-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-031	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
o-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Styrene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Tetrachloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Toluene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Trichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Trichlorofluoromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Vinyl chloride	BRL	2.0		ug/L	268425	1	10/08/2018 18:10	OM
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Xylenes, Total	BRL	5.0		ug/L	268425	1	10/08/2018 18:10	OM
Surr: 4-Bromofluorobenzene	94.4	68-127		%REC	268425	1	10/08/2018 18:10	OM
Surr: Dibromofluoromethane	96.4	84.4-122		%REC	268425	1	10/08/2018 18:10	OM
Surr: Toluene-d8	99	80.1-116		%REC	268425	1	10/08/2018 18:10	OM

Qualifiers:

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- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-2-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-032	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,1,2-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,1-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,1-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dibromoethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dichloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,3-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
1,4-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
2-Butanone	BRL	50		ug/L	268425	1	10/08/2018 18:35	OM
2-Hexanone	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
4-Methyl-2-pentanone	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
Acetone	BRL	50		ug/L	268425	1	10/08/2018 18:35	OM
Benzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Bromodichloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Bromoform	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Bromomethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Carbon disulfide	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Carbon tetrachloride	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Chlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Chloroethane	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
Chloroform	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Chloromethane	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Cyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Dibromochloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Dichlorodifluoromethane	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
Ethylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Freon-113	BRL	10		ug/L	268425	1	10/08/2018 18:35	OM
Isopropylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
m,p-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Methyl acetate	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Methyl tert-butyl ether	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Methylcyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Methylene chloride	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Naphthalene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM

Qualifiers:

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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-2-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-032	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
o-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Styrene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Tetrachloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Toluene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Trichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Trichlorofluoromethane	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Vinyl chloride	BRL	2.0		ug/L	268425	1	10/08/2018 18:35	OM
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Xylenes, Total	BRL	5.0		ug/L	268425	1	10/08/2018 18:35	OM
Surr: 4-Bromofluorobenzene	91.9	68-127		%REC	268425	1	10/08/2018 18:35	OM
Surr: Dibromofluoromethane	97	84.4-122		%REC	268425	1	10/08/2018 18:35	OM
Surr: Toluene-d8	99.6	80.1-116		%REC	268425	1	10/08/2018 18:35	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-3-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-033	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,1,2-Trichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,1-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,1-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dibromoethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dichloroethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dichloropropane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,3-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
1,4-Dichlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
2-Butanone	BRL	50		ug/L	268425	1	10/08/2018 19:00	OM
2-Hexanone	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
4-Methyl-2-pentanone	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
Acetone	BRL	50		ug/L	268425	1	10/08/2018 19:00	OM
Benzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Bromodichloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Bromoform	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Bromomethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Carbon disulfide	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Carbon tetrachloride	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Chlorobenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Chloroethane	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
Chloroform	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Chloromethane	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
cis-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
cis-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Cyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Dibromochloromethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Dichlorodifluoromethane	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
Ethylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Freon-113	BRL	10		ug/L	268425	1	10/08/2018 19:00	OM
Isopropylbenzene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
m,p-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Methyl acetate	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Methyl tert-butyl ether	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Methylcyclohexane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Methylene chloride	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Naphthalene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 16-Oct-18

Client:	ERM-Southeast	**Client Sample ID:**	TB-3-WQ-20181003
Project Name:	Murata	**Collection Date:**	10/3/2018
Lab ID:	1810394-033	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
o-Xylene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Styrene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Tetrachloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Toluene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
trans-1,2-Dichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
trans-1,3-Dichloropropene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Trichloroethene	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Trichlorofluoromethane	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Vinyl chloride	BRL	2.0		ug/L	268425	1	10/08/2018 19:00	OM
1,2-Dichloroethene, Total	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Xylenes, Total	BRL	5.0		ug/L	268425	1	10/08/2018 19:00	OM
Surr: 4-Bromofluorobenzene	92.9	68-127		%REC	268425	1	10/08/2018 19:00	OM
Surr: Dibromofluoromethane	95.8	84.4-122		%REC	268425	1	10/08/2018 19:00	OM
Surr: Toluene-d8	98.2	80.1-116		%REC	268425	1	10/08/2018 19:00	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear | Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **ERM-Southeast** AES Work Order Number: **1810394**

2. Carrier: FedEx ■ UPS ☐ USPS ☐ Client ☐ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	◉	○	○		
5.	Custody seals intact on shipping container?	◉	○	○		
6.	Temperature blanks present?	○	◉	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	◉	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	◉	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
10.	Sampler name and/or signature on COC?	◉	○	○		
11.	Were all samples received within holding time?	◉	○	○		
12.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 2.6 °C Cooler 2 Temperature 2.1 °C Cooler 3 Temperature 1.8 °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). AJJ 10/4/18

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	◉	○	○		
17.	Custody seals present on sample containers?	○	◉	○		
18.	Custody seals intact on sample containers?	○	○	◉		
19.	Do sample container labels match the COC?	○	◉	○	incomplete info ☐ illegible ☐ no label ☐ other ■	
20.	Are analyses requested indicated on the COC?	◉	○	○		
21.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	◉	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
24.	Were samples received in appropriate containers?	◉	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	◉	○	○		
26.	Were trip blanks submitted?	◉	○	○	listed on COC ■ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). AB 10/4/18

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	◉	○	○		
29.	Containers meet preservation guidelines?	○	◉	○		
30.	Was pH adjusted at Sample Receipt?	◉	○	○		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). AB 10/4/18

Checklist 6.9.17 Rev 2

Locked

AES, Inc.
3080 Presidential Drive
Atlanta GA 30340

pH Adjustment Sheet

AES Sample ID number	Test Requested	pH as Received	Required pH	Preservative Required	Lot # of Preservative	Amount Added mL or Pellets*	Final pH	Tech's Initials	Date	Time
1810394-007B	6010/7470	6	<2	HNO3	MET-838-12	0.5 mL Pellets	1	AB	10/4	15:00
						mL Pellets				
1810394-022B	6010/7470	6	<2	HNO3	MET-838-12	0.5 mL Pellets	1	AB	10/4	15:05
						mL Pellets				
1810394-026B	6010/7470	6	<2	HNO3	MET-838-12	0.5 mL Pellets	1	AB	10/4	15:10
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				
						mL Pellets				

*** Number of Pellets when adding NAOH**

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268279

Sample ID: **MB-268279** Client ID: Units: **mg/L** Prep Date: **10/05/2018** Run No: **381740**
SampleType: **MBLK** TestCode: **METALS, TOTAL SW6010D** BatchID: **268279** Analysis Date: **10/05/2018** Seq No: **8513640**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.0500									
Barium	BRL	0.0200									
Cadmium	BRL	0.0050									
Chromium	BRL	0.0100									
Iron	BRL	0.100									
Lead	BRL	0.0100									
Selenium	BRL	0.0200									
Silver	BRL	0.0100									

Sample ID: **LCS-268279** Client ID: Units: **mg/L** Prep Date: **10/05/2018** Run No: **381740**
SampleType: **LCS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268279** Analysis Date: **10/05/2018** Seq No: **8513643**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.063	0.0500	1.000		106	80	120				
Barium	1.061	0.0200	1.000		106	80	120				
Cadmium	1.012	0.0050	1.000		101	80	120				
Chromium	1.038	0.0100	1.000		104	80	120				
Iron	10.28	0.100	10.00		103	80	120				
Lead	1.029	0.0100	1.000		103	80	120				
Selenium	1.000	0.0200	1.000		100	80	120				
Silver	0.1035	0.0100	0.1000		104	80	120				

Sample ID: **1810394-001BMS** Client ID: **FD-1-WG-20181003** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381740**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268279** Analysis Date: **10/05/2018** Seq No: **8513645**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.034	0.0500	1.000		103	75	125				
Barium	1.049	0.0200	1.000	0.05301	99.6	75	125				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268279

Sample ID: **1810394-001BMS** Client ID: **FD-1-WG-20181003** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381740**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268279** Analysis Date: **10/05/2018** Seq No: **8513645**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	0.9832	0.0050	1.000		98.3	75	125				
Chromium	0.9934	0.0100	1.000	0.01257	98.1	75	125				
Iron	9.943	0.100	10.00	0.1421	98.0	75	125				
Lead	0.9828	0.0100	1.000		98.3	75	125				
Selenium	0.9763	0.0200	1.000		97.6	75	125				
Silver	0.1007	0.0100	0.1000		101	75	125				

Sample ID: **1810394-001BMSD** Client ID: **FD-1-WG-20181003** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381740**
SampleType: **MSD** TestCode: **METALS, TOTAL SW6010D** BatchID: **268279** Analysis Date: **10/05/2018** Seq No: **8513646**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.035	0.0500	1.000		103	75	125	1.034	0.093	20	
Barium	1.047	0.0200	1.000	0.05301	99.4	75	125	1.049	0.173	20	
Cadmium	0.9818	0.0050	1.000		98.2	75	125	0.9832	0.142	20	
Chromium	0.9936	0.0100	1.000	0.01257	98.1	75	125	0.9934	0.020	20	
Iron	9.927	0.100	10.00	0.1421	97.9	75	125	9.943	0.164	20	
Lead	0.9761	0.0100	1.000		97.6	75	125	0.9828	0.678	20	
Selenium	0.9811	0.0200	1.000		98.1	75	125	0.9763	0.485	20	
Silver	0.1006	0.0100	0.1000		101	75	125	0.1007	0.060	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268280

Sample ID: **MB-268280** Client ID: Units: **mg/L** Prep Date: **10/05/2018** Run No: **381734**
SampleType: **MBLK** TestCode: **METALS, TOTAL SW6010D** BatchID: **268280** Analysis Date: **10/05/2018** Seq No: **8513459**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.0500									
Barium	BRL	0.0200									
Cadmium	BRL	0.0050									
Chromium	BRL	0.0100									
Iron	BRL	0.100									
Lead	BRL	0.0100									
Selenium	BRL	0.0200									
Silver	BRL	0.0100									

Sample ID: **LCS-268280** Client ID: Units: **mg/L** Prep Date: **10/05/2018** Run No: **381734**
SampleType: **LCS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268280** Analysis Date: **10/05/2018** Seq No: **8513464**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.9965	0.0500	1.000	0.008990	98.8	80	120				
Barium	1.037	0.0200	1.000		104	80	120				
Cadmium	1.028	0.0050	1.000		103	80	120				
Chromium	0.9772	0.0100	1.000		97.7	80	120				
Iron	10.23	0.100	10.00		102	80	120				
Lead	1.050	0.0100	1.000		105	80	120				
Selenium	1.008	0.0200	1.000		101	80	120				
Silver	0.1026	0.0100	0.1000		103	80	120				

Sample ID: **1810394-021BMS** Client ID: **MW-25-WG-20181002** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381734**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268280** Analysis Date: **10/05/2018** Seq No: **8513466**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.016	0.0500	1.000	0.009130	101	75	125				
Barium	1.055	0.0200	1.000	0.04669	101	75	125				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268280

Sample ID: **1810394-021BMS** Client ID: **MW-25-WG-20181002** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381734**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **268280** Analysis Date: **10/05/2018** Seq No: **8513466**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	1.038	0.0050	1.000		104	75	125				
Chromium	0.9651	0.0100	1.000		96.5	75	125				
Iron	10.90	0.100	10.00	0.7533	101	75	125				
Lead	1.036	0.0100	1.000	0.005490	103	75	125				
Selenium	1.018	0.0200	1.000		102	75	125				
Silver	0.1041	0.0100	0.1000		104	75	125				

Sample ID: **1810394-021BMSD** Client ID: **MW-25-WG-20181002** Units: **mg/L** Prep Date: **10/05/2018** Run No: **381734**
SampleType: **MSD** TestCode: **METALS, TOTAL SW6010D** BatchID: **268280** Analysis Date: **10/05/2018** Seq No: **8513467**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.017	0.0500	1.000	0.009130	101	75	125	1.016	0.080	20	
Barium	1.070	0.0200	1.000	0.04669	102	75	125	1.055	1.41	20	
Cadmium	1.052	0.0050	1.000		105	75	125	1.038	1.37	20	
Chromium	0.9812	0.0100	1.000		98.1	75	125	0.9651	1.65	20	
Iron	11.05	0.100	10.00	0.7533	103	75	125	10.90	1.38	20	
Lead	1.055	0.0100	1.000	0.005490	105	75	125	1.036	1.80	20	
Selenium	1.041	0.0200	1.000		104	75	125	1.018	2.25	20	
Silver	0.1055	0.0100	0.1000		106	75	125	0.1041	1.35	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268345

Sample ID: **MB-268345**	Client ID:				Units: **mg/L**		Prep Date: **10/08/2018**		Run No: **381812**
SampleType: **MBLK**	TestCode: **Mercury, Total SW7470A**				BatchID: **268345**		Analysis Date: **10/08/2018**		Seq No: **8515335**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00020									

Sample ID: **LCS-268345**	Client ID:				Units: **mg/L**		Prep Date: **10/08/2018**		Run No: **381812**
SampleType: **LCS**	TestCode: **Mercury, Total SW7470A**				BatchID: **268345**		Analysis Date: **10/08/2018**		Seq No: **8515336**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004954	0.00020	0.0050		99.1	80	120				

Sample ID: **1810394-008BMS**	Client ID: **MW-5-WG-20181001**				Units: **mg/L**		Prep Date: **10/08/2018**		Run No: **381812**
SampleType: **MS**	TestCode: **Mercury, Total SW7470A**				BatchID: **268345**		Analysis Date: **10/08/2018**		Seq No: **8515338**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004979	0.00020	0.0050		99.6	75	125				

Sample ID: **1810394-008BMSD**	Client ID: **MW-5-WG-20181001**				Units: **mg/L**		Prep Date: **10/08/2018**		Run No: **381812**
SampleType: **MSD**	TestCode: **Mercury, Total SW7470A**				BatchID: **268345**		Analysis Date: **10/08/2018**		Seq No: **8515339**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004996	0.00020	0.0050		99.9	75	125	0.004979	0.331	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268353

Sample ID: **MB-268353**	Client ID:			Units: **mg/L**	Prep Date: **10/08/2018**	Run No: **381793**
SampleType: **MBLK**	TestCode: **Mercury, Total SW7470A**			BatchID: **268353**	Analysis Date: **10/08/2018**	Seq No: **8514953**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00020									

Sample ID: **LCS-268353**	Client ID:			Units: **mg/L**	Prep Date: **10/08/2018**	Run No: **381793**
SampleType: **LCS**	TestCode: **Mercury, Total SW7470A**			BatchID: **268353**	Analysis Date: **10/08/2018**	Seq No: **8514955**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.005023	0.00020	0.0050		100	80	120				

Sample ID: **1810394-025BMS**	Client ID: **MW-A-4-WG-20181003**			Units: **mg/L**	Prep Date: **10/08/2018**	Run No: **381793**
SampleType: **MS**	TestCode: **Mercury, Total SW7470A**			BatchID: **268353**	Analysis Date: **10/08/2018**	Seq No: **8514958**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.005004	0.00020	0.0050		100	75	125				

Sample ID: **1810394-025BMSD**	Client ID: **MW-A-4-WG-20181003**			Units: **mg/L**	Prep Date: **10/08/2018**	Run No: **381793**
SampleType: **MSD**	TestCode: **Mercury, Total SW7470A**			BatchID: **268353**	Analysis Date: **10/08/2018**	Seq No: **8514960**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.005090	0.00020	0.0050		102	75	125	0.005004	1.71	20	

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268424

Sample ID: **MB-268424** Client ID: Units: **ug/L** Prep Date: **10/09/2018** Run No: **381836**
SampleType: **MBLK** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268424** Analysis Date: **10/09/2018** Seq No: **8516480**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	5.0									
Surr: 4-Bromofluorobenzene	47.50	0	50.00		95.0	85.7	115				
Surr: Dibromofluoromethane	54.31	0	50.00		109	73.4	129				
Surr: Toluene-d8	50.87	0	50.00		102	85	115				

Sample ID: **LCS-268424** Client ID: Units: **ug/L** Prep Date: **10/09/2018** Run No: **382022**
SampleType: **LCS** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268424** Analysis Date: **10/10/2018** Seq No: **8520385**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	7.180	5.0	10.00		71.8	69.1	131				
Surr: 4-Bromofluorobenzene	47.01	0	50.00		94.0	85.7	115				
Surr: Dibromofluoromethane	61.89	0	50.00		124	73.4	129				
Surr: Toluene-d8	53.40	0	50.00		107	85	115				

Sample ID: **1810394-001AMS** Client ID: **FD-1-WG-20181003** Units: **ug/L** Prep Date: **10/09/2018** Run No: **382028**
SampleType: **MS** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268424** Analysis Date: **10/11/2018** Seq No: **8520415**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	10.85	5.0	10.00		108	60	141				
Surr: 4-Bromofluorobenzene	48.97	0	50.00		97.9	85.7	115				
Surr: Dibromofluoromethane	59.93	0	50.00		120	73.4	129				
Surr: Toluene-d8	54.23	0	50.00		108	85	115				

Sample ID: **1810394-001AMSD** Client ID: **FD-1-WG-20181003** Units: **ug/L** Prep Date: **10/09/2018** Run No: **382028**
SampleType: **MSD** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268424** Analysis Date: **10/11/2018** Seq No: **8520416**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	11.43	5.0	10.00		114	60	141	10.85	5.21	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268424

Sample ID: **1810394-001AMSD** Client ID: **FD-1-WG-20181003** Units: **ug/L** Prep Date: **10/09/2018** Run No: **382028**
SampleType: **MSD** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268424** Analysis Date: **10/11/2018** Seq No: **8520416**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	48.58	0	50.00		97.2	85.7	115	48.97	0	0	
Surr: Dibromofluoromethane	59.63	0	50.00		119	73.4	129	59.93	0	0	
Surr: Toluene-d8	54.00	0	50.00		108	85	115	54.23	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268425

Sample ID: **MB-268425** Client ID: Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268425** Analysis Date: **10/08/2018** Seq No: **8524591**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloroethene, Total	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268425

Sample ID: **MB-268425** Client ID: Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268425** Analysis Date: **10/08/2018** Seq No: **8524591**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloromethane	BRL	10									
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
Naphthalene	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	46.50	0	50.00		93.0	68	127				
Surr: Dibromofluoromethane	48.88	0	50.00		97.8	84.4	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268425

Sample ID: **MB-268425** Client ID: Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268425** Analysis Date: **10/08/2018** Seq No: **8524591**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	49.61	0	50.00		99.2	80.1	116				

Sample ID: **LCS-268425** Client ID: Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268425** Analysis Date: **10/08/2018** Seq No: **8524590**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	56.92	5.0	50.00		114	69	136				
Benzene	54.76	5.0	50.00		110	73.7	126				
Chlorobenzene	56.22	5.0	50.00		112	73.5	124				
Toluene	57.54	5.0	50.00		115	76.8	125				
Trichloroethene	57.58	5.0	50.00		115	70.9	124				
Surr: 4-Bromofluorobenzene	48.15	0	50.00		96.3	68	127				
Surr: Dibromofluoromethane	48.74	0	50.00		97.5	84.4	122				
Surr: Toluene-d8	49.16	0	50.00		98.3	80.1	116				

Sample ID: **1810491-029AMS** Client ID: Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268425** Analysis Date: **10/09/2018** Seq No: **8524593**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	55.80	5.0	50.00		112	65.7	143				
Benzene	54.21	5.0	50.00		108	66.1	137				
Chlorobenzene	55.55	5.0	50.00		111	70.9	132				
Toluene	57.14	5.0	50.00		114	63.8	141				
Trichloroethene	56.38	5.0	50.00		113	70.6	128				
Surr: 4-Bromofluorobenzene	47.06	0	50.00		94.1	68	127				
Surr: Dibromofluoromethane	47.94	0	50.00		95.9	84.4	122				
Surr: Toluene-d8	49.47	0	50.00		98.9	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268425

Sample ID: **1810491-029AMSD** Client ID:
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B**
Units: **ug/L** Prep Date: **10/08/2018** Run No: **381807**
BatchID: **268425** Analysis Date: **10/09/2018** Seq No: **8524594**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.08	5.0	50.00		108	65.7	143	55.80	3.13	17.7	
Benzene	55.06	5.0	50.00		110	66.1	137	54.21	1.56	20	
Chlorobenzene	57.07	5.0	50.00		114	70.9	132	55.55	2.70	20	
Toluene	58.25	5.0	50.00		116	63.8	141	57.14	1.92	20	
Trichloroethene	56.53	5.0	50.00		113	70.6	128	56.38	0.266	20	
Surr: 4-Bromofluorobenzene	47.18	0	50.00		94.4	68	127	47.06	0	0	
Surr: Dibromofluoromethane	47.59	0	50.00		95.2	84.4	122	47.94	0	0	
Surr: Toluene-d8	48.87	0	50.00		97.7	80.1	116	49.47	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268566

Sample ID: **MB-268566** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/10/2018** Seq No: **8521492**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloroethene, Total	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268566

Sample ID: **MB-268566** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/10/2018** Seq No: **8521492**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloromethane	BRL	10									
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
Naphthalene	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	46.19	0	50.00		92.4	68	127				
Surr: Dibromofluoromethane	48.16	0	50.00		96.3	84.4	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268566

Sample ID: **MB-268566** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/10/2018** Seq No: **8521492**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	49.00	0	50.00		98.0	80.1	116				

Sample ID: **LCS-268566** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/10/2018** Seq No: **8521491**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	52.55	5.0	50.00		105	69	136				
Benzene	52.15	5.0	50.00		104	73.7	126				
Chlorobenzene	54.20	5.0	50.00		108	73.5	124				
Toluene	56.15	5.0	50.00		112	76.8	125				
Trichloroethene	55.48	5.0	50.00		111	70.9	124				
Surr: 4-Bromofluorobenzene	46.23	0	50.00		92.5	68	127				
Surr: Dibromofluoromethane	48.36	0	50.00		96.7	84.4	122				
Surr: Toluene-d8	48.99	0	50.00		98.0	80.1	116				

Sample ID: **1810394-002AMS** Client ID: **FD-2-WG-20181003** Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/11/2018** Seq No: **8521515**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	246.2	25	250.0		98.5	65.7	143				
Benzene	260.6	25	250.0		104	66.1	137				
Chlorobenzene	275.1	25	250.0		110	70.9	132				
Toluene	275.0	25	250.0		110	63.8	141				
Trichloroethene	273.9	25	250.0	0.3700	109	70.6	128				
Surr: 4-Bromofluorobenzene	246.8	0	250.0		98.7	68	127				
Surr: Dibromofluoromethane	238.2	0	250.0		95.3	84.4	122				
Surr: Toluene-d8	247.3	0	250.0		98.9	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268566

Sample ID: **1810394-002AMSD** Client ID: **FD-2-WG-20181003** Units: **ug/L** Prep Date: **10/10/2018** Run No: **382079**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268566** Analysis Date: **10/11/2018** Seq No: **8521516**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	250.4	25	250.0		100	65.7	143	246.2	1.69	17.7	
Benzene	258.6	25	250.0		103	66.1	137	260.6	0.770	20	
Chlorobenzene	269.4	25	250.0		108	70.9	132	275.1	2.11	20	
Toluene	276.8	25	250.0		111	63.8	141	275.0	0.653	20	
Trichloroethene	262.6	25	250.0	0.3700	105	70.6	128	273.9	4.21	20	
Surr: 4-Bromofluorobenzene	242.4	0	250.0		97.0	68	127	246.8	0	0	
Surr: Dibromofluoromethane	237.6	0	250.0		95.0	84.4	122	238.2	0	0	
Surr: Toluene-d8	248.2	0	250.0		99.3	80.1	116	247.3	0	0	

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268581

Sample ID: **MB-268581** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382022**
SampleType: **MBLK** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268581** Analysis Date: **10/10/2018** Seq No: **8520381**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	5.0									
Surr: 4-Bromofluorobenzene	47.16	0	50.00		94.3	85.7	115				
Surr: Dibromofluoromethane	61.73	0	50.00		123	73.4	129				
Surr: Toluene-d8	53.07	0	50.00		106	85	115				

Sample ID: **LCS-268581** Client ID: Units: **ug/L** Prep Date: **10/10/2018** Run No: **382022**
SampleType: **LCS** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268581** Analysis Date: **10/10/2018** Seq No: **8520380**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	9.840	5.0	10.00		98.4	69.1	131				
Surr: 4-Bromofluorobenzene	46.16	0	50.00		92.3	85.7	115				
Surr: Dibromofluoromethane	60.82	0	50.00		122	73.4	129				
Surr: Toluene-d8	52.31	0	50.00		105	85	115				

Sample ID: **1810394-022AMS** Client ID: **MW-26-WG-20181002** Units: **ug/L** Prep Date: **10/10/2018** Run No: **382028**
SampleType: **MS** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268581** Analysis Date: **10/11/2018** Seq No: **8520421**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	9.970	5.0	10.00		99.7	60	141				
Surr: 4-Bromofluorobenzene	48.32	0	50.00		96.6	85.7	115				
Surr: Dibromofluoromethane	60.21	0	50.00		120	73.4	129				
Surr: Toluene-d8	53.96	0	50.00		108	85	115				

Sample ID: **1810394-022AMSD** Client ID: **MW-26-WG-20181002** Units: **ug/L** Prep Date: **10/10/2018** Run No: **382028**
SampleType: **MSD** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268581** Analysis Date: **10/11/2018** Seq No: **8520422**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	10.87	5.0	10.00		109	60	141	9.970	8.64	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268581

Sample ID: **1810394-022AMSD** Client ID: **MW-26-WG-20181002** Units: **ug/L** Prep Date: **10/10/2018** Run No: **382028**
SampleType: **MSD** TestCode: **1,4-Dioxane by SIM GC/MS SW8260B-SIM** BatchID: **268581** Analysis Date: **10/11/2018** Seq No: **8520422**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	47.63	0	50.00		95.3	85.7	115	48.32	0	0	
Surr: Dibromofluoromethane	59.22	0	50.00		118	73.4	129	60.21	0	0	
Surr: Toluene-d8	53.97	0	50.00		108	85	115	53.96	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268607

Sample ID: **MB-268607** Client ID: Units: **ug/L** Prep Date: **10/11/2018** Run No: **382103**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522454**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloroethene, Total	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268607

Sample ID: **MB-268607** Client ID: Units: **ug/L** Prep Date: **10/11/2018** Run No: **382103**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522454**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloromethane	BRL	10									
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
Naphthalene	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	49.05	0	50.00		98.1	68	127				
Surr: Dibromofluoromethane	48.08	0	50.00		96.2	84.4	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268607

Sample ID: **MB-268607** Client ID: Units: **ug/L** Prep Date: **10/11/2018** Run No: **382103**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522454**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	49.52	0	50.00		99.0	80.1	116				

Sample ID: **LCS-268607** Client ID: Units: **ug/L** Prep Date: **10/11/2018** Run No: **382103**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522453**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.21	5.0	50.00		100	69	136				
Benzene	52.34	5.0	50.00		105	73.7	126				
Chlorobenzene	53.64	5.0	50.00		107	73.5	124				
Toluene	54.98	5.0	50.00		110	76.8	125				
Trichloroethene	53.74	5.0	50.00		107	70.9	124				
Surr: 4-Bromofluorobenzene	49.02	0	50.00		98.0	68	127				
Surr: Dibromofluoromethane	48.22	0	50.00		96.4	84.4	122				
Surr: Toluene-d8	49.52	0	50.00		99.0	80.1	116				

Sample ID: **1810394-030AMS** Client ID: **MW-B-4-WG-20181002** Units: **ug/L** Prep Date: **10/11/2018** Run No: **382104**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522988**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	58.84	5.0	50.00		118	65.7	143				
Benzene	57.70	5.0	50.00		115	66.1	137				
Chlorobenzene	58.01	5.0	50.00		116	70.9	132				
Toluene	60.51	5.0	50.00		121	63.8	141				
Trichloroethene	59.79	5.0	50.00		120	70.6	128				
Surr: 4-Bromofluorobenzene	47.70	0	50.00		95.4	68	127				
Surr: Dibromofluoromethane	47.69	0	50.00		95.4	84.4	122				
Surr: Toluene-d8	49.70	0	50.00		99.4	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: ERM-Southeast
Project Name: Murata
Workorder: 1810394

ANALYTICAL QC SUMMARY REPORT

BatchID: 268607

Sample ID: **1810394-030AMSD** Client ID: **MW-B-4-WG-20181002** Units: **ug/L** Prep Date: **10/11/2018** Run No: **382104**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **268607** Analysis Date: **10/11/2018** Seq No: **8522989**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	57.29	5.0	50.00		115	65.7	143	60.46	5.38	17.7	
Benzene	55.16	5.0	50.00		110	66.1	137	57.23	3.68	20	
Chlorobenzene	56.88	5.0	50.00		114	70.9	132	57.26	0.666	20	
Toluene	59.47	5.0	50.00		119	63.8	141	60.19	1.20	20	
Trichloroethene	56.54	5.0	50.00		113	70.6	128	58.94	4.16	20	
Surr: 4-Bromofluorobenzene	47.52	0	50.00		95.0	68	127	47.69	0	0	
Surr: Dibromofluoromethane	47.75	0	50.00		95.5	84.4	122	47.21	0	0	
Surr: Toluene-d8	49.68	0	50.00		99.4	80.1	116	50.21	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

APPENDIX C US EPA VISL CALCULATOR OUTPUT

Default VISL Results
Commercial Equation Inputs

Output generated 02JUL2018:14:51:29

Variable	Value
Exposure Scenario	Commercial
Temperature for Groundwater Vapor Concentration C	25
THQ (target hazard quotient) unitless	1
TR (target risk) unitless	1E-05
AT_w (averaging time - composite worker)	365
EF_w (exposure frequency - composite worker) day/yr	250
ED_w (exposure duration - composite worker) yr	25
ET_w (exposure time - composite worker) hr	8
LT (lifetime) yr	70
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03

Output generated 02JUL2018:14:51:29

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? (C_{vp} > $C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? (C_{hc} > $C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-05 or THQ=1) MIN($C_{ia,c}$,$C_{ia,nc}$) (µg/m³)	Toxicity Basis	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=1E-05 or THQ=1) C_{sg},Target (µg/m³)	Target Groundwater Concentration (TCR=1E-05 or THQ=1) C_{gw},Target (µg/L)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	1.75E+02	NC	5.84E+03	2.42E+02	No (5)
Trichloroethylene	79-01-6	Yes	Yes	Yes	Yes	8.76E+00	NC	2.92E+02	2.18E+01	No (5)

Chemical	Pure Phase Vapor Concentration C_{vp}\ (25 ℃)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc}\ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (℃)	Lower Explosive Limit LEL (% by volume)	LEL Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	RfC (mg/m³)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-05 $C_{ia,c}$ (µg/m³)	Noncarcinogenic VISL THQ=1 $C_{ia,nc}$ (µg/m³)
Tetrachloroethylene	1.65E+08	1.49E+08	25	-		2.60E-07	I	4.00E-02	I	No	4.72E+02	1.75E+02
Trichloroethylene	4.88E+08	5.15E+08	25	8.00	CRC89	4.10E-06	I	2.00E-03	I	Mut	2.99E+01	8.76E+00

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)
Tetrachloroethylene	127-18-4	Yes	Yes	165.83	PHYSPROP	1.85E+01	PHYSPROP	2.06E+02	PHYSPROP	5	1.77E-02	7.24E-01	PHYSPROP	7.24E-01
Trichloroethylene	79-01-6	Yes	Yes	131.39	PHYSPROP	6.90E+01	PHYSPROP	1.28E+03	PHYSPROP	5	9.85E-03	4.03E-01	PHYSPROP	4.03E-01

Chemical	D_{ia} \ (cm^2/s)	D_{ia} \ Ref	D_{iw} \ (cm^2/s)	D_{iw} \ Ref	Normal Boiling Point T_{boil} \ (K)	BP Ref	Critical Temperature T_{crit} \ (K)	T_{crit} \ Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$ \ (cal/mol)	$\Delta H_{v,b}$ \ Ref	K_{oc} \ (cm^3/g)	K_{oc} \ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
Tetrachloroethylene	5.05E-02	WATER9 (U.S. EPA, 2001)	9.46E-06	WATER9 (U.S. EPA, 2001)	394.45	PHYSPROP	6.20E+02	YAWS	8.29E+03	Weast	94.94	EPI	-	
Trichloroethylene	6.87E-02	WATER9 (U.S. EPA, 2001)	1.02E-05	WATER9 (U.S. EPA, 2001)	360.35	PHYSPROP	5.71E+02	YAWS	7.51E+03	Weast	60.7	EPI	8	CRC89

APPENDIX D VAPOR INTRUSION ASSESSMENT FIELD SHEETS

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-01

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	481	Flow Controller Number:	551
Start Date/Time:	11/30/2018 9:17	Stop Date/Time:	11/30/2018 15:40
Start Pressure: (inches Hg) [1]	-28.69	Stop Pressure: (inches Hg) [2]	-12.32

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	5	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):			Noticeable Odor? (Y/N)	N
Reading #1:	Time: 10:10	Summa Vacuum ("Hg):	-26.4	Noticeable Odor? (Y/N)	N
Reading #2:	Time:	Summa Vacuum ("Hg):		Noticeable Odor? (Y/N)	N
Reading #3:	Time:	Summa Vacuum ("Hg):		Noticeable Odor? (Y/N)	N
Reading #4:	Time:	Summa Vacuum ("Hg):		Noticeable Odor? (Y/N)	N
Reading #5:	Time:	Summa Vacuum ("Hg):		Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-02

Duplicate Sample? (Y/N) Y **Duplicate Sample ID: DUP-01-IA**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2224	Flow Controller Number:	1169
Start Date/Time:	11/30/2018 9:21	Stop Date/Time:	11/30/2018 15:42
Start Pressure: (inches Hg) [1]	-29.04	Stop Pressure: (inches Hg) [2]	-10.77

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	5	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
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Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-03

Duplicate Sample? (Y/N) Y **Duplicate Sample ID:** FD-01

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	1733/178	Flow Controller Number:	0956/0786
Start Date/Time:	11/30/2018 9:23	Stop Date/Time:	11/30/2018 15:44
Start Pressure: (inches Hg) [1]	-29.22/-30.02	Stop Pressure: (inches Hg) [2]	-9.69/-11.88

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	5	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

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Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-04

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2299	Flow Controller Number:	751
Start Date/Time:	11/30/2018 9:27	Stop Date/Time:	11/30/2018 15:48
Start Pressure: (inches Hg) [1]	-30.06	Stop Pressure: (inches Hg) [2]	-12.65

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	4	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
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Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-05

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2612	Flow Controller Number:	951
Start Date/Time:	11/30/2018 9:30	Stop Date/Time:	11/30/2018 15:49
Start Pressure: (inches Hg) [1]	-29.37	Stop Pressure: (inches Hg) [2]	-11.49

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	6	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time: 13:45	Summa Vacuum ("Hg): -8.62	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
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Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: IA-06

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2230	Flow Controller Number:	408
Start Date/Time:	11/30/2018 9:31	Stop Date/Time:	11/30/2018 15:51
Start Pressure: (inches Hg) [1]	-29.1	Stop Pressure: (inches Hg) [2]	-10.42

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	Warehouse	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	3.5	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time: 15:45	Summa Vacuum ("Hg): -9.46	Noticeable Odor? (Y/N) N	

Sketch of Sample Location:

Comments:

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Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: 0A-01

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	446	Flow Controller Number:	702
Start Date/Time:	11/30/2018 8:42	Stop Date/Time:	11/30/2018 15:54
Start Pressure: (inches Hg) [1]	-30.24	Stop Pressure: (inches Hg) [2]	-18.77

Other Sampling Information:

Story/Level	outside	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	NA
Room	NA	Slab thickness (if applicable)	NA	Distance from Building (if applicable)	6'
Indoor Air Temp (ºF)	NA	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	~470
Intake Height Above Ground Level (ft.)	3.5	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N) N	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-01 (SG-1)

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2480	Flow Controller Number:	141
Start Date/Time:	11/30/2018 10:07	Stop Date/Time:	11/30/2018 10:22
Start Pressure: (inches Hg) [1]	-28.71	Stop Pressure: (inches Hg) [2]	-0.12

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	15.1	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
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Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-02 (SG-2)

Duplicate Sample? (Y/N) Y **Duplicate Sample ID: DUP-01-SSV**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2385/2423		Flow Controller Number:	0840/0912	
Start Date/Time:	11/30/2018	10:38/10:56	Stop Date/Time:	11/30/2018	10:53/11:10
Start Pressure: (inches Hg) [1]		-28.17/-28.19	Stop Pressure: (inches Hg) [2]		-0.7/-0.24

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	2,803.0	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
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Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-03 (SG-3)

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	181	Flow Controller Number:	1005
Start Date/Time:	11/30/2018 12:32	Stop Date/Time:	11/30/2018 12:45
Start Pressure: (inches Hg) [1]	-26.8	Stop Pressure: (inches Hg) [2]	-0.74

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	3.8	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
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Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-04 (SG-4)

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	209	Flow Controller Number:	839
Start Date/Time:	11/30/2018 12:58	Stop Date/Time:	11/30/2018 13:13
Start Pressure: (inches Hg) [1]	-28.7	Stop Pressure: (inches Hg) [2]	-0.82

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	8.3	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
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Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-05

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	374	Flow Controller Number:	193
Start Date/Time:	11/30/2018 13:27	Stop Date/Time:	11/30/2018 13:42
Start Pressure: (inches Hg) [1]	-28.4	Stop Pressure: (inches Hg) [2]	-0.47

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	Sub-Slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	5.8	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0190949
Project Name:	Murata
Location:	308 Prospect Rd
	Rockmart, GA
Project Manager:	Nic Vrey

Sample Location:	Murata Warehouse	**Collector(s):**	Taylor Payne
Address:	308 Prospect Rd, Rockmart, GA		
PID Meter Used: (Model, Serial #)	MiniRae 3000	**Date:**	30-Nov-18

Sample ID: SSV-05

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	550	Flow Controller Number:	165
Start Date/Time:	11/30/2018 13:59	Stop Date/Time:	11/30/2018 14:30
Start Pressure: (inches Hg) [1]	-29.01	Stop Pressure: (inches Hg) [2]	-0.36

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room	Warehouse	Slab thickness (if applicable)	~6"	Distance from Building (if applicable)	NA
Indoor Air Temp (ºF)	70	Potential Vapor Pathways Observed?	None	Distance to nearest Roadway (ft.)	NA
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Mostly Sunny, high of 57, low of 45
Barometric Pressure Initial ("Hg or mb)	30.11 Hg	Barometric Pressure Final ("Hg or mb)	30.11 Hg	Wind Speed (mph)	0-8 mph from the East

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	4.6	Noticeable Odor? (Y/N) N	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

APPENDIX E VAPOR INTRUSION ASSESSMENT ANALYTICAL REPORTS

ANALYTICAL REPORT

Lab Number:	L1849491
Client:	ERM, Inc. 3200 Windy Hill Road, SE Suite 1500W Atlanta, GA 30339
ATTN:	Nicolas Vrey
Phone:	(678) 486-2762
Project Name:	MURATA
Project Number:	0190949
Report Date:	12/11/18

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1849491-01	SG-1	SOIL_VAPOR	ROCKMART, GA	11/30/18 10:22	12/04/18
L1849491-02	SG-2	SOIL_VAPOR	ROCKMART, GA	11/30/18 10:53	12/04/18
L1849491-03	DUP-1-SG	SOIL_VAPOR	ROCKMART, GA	11/30/18 00:00	12/04/18
L1849491-04	SG-3	SOIL_VAPOR	ROCKMART, GA	11/30/18 12:45	12/04/18
L1849491-05	SG-4	SOIL_VAPOR	ROCKMART, GA	11/30/18 13:13	12/04/18
L1849491-06	SG-5	SOIL_VAPOR	ROCKMART, GA	11/30/18 13:42	12/04/18
L1849491-07	SG-6	SOIL_VAPOR	ROCKMART, GA	11/30/18 14:30	12/04/18
L1849491-08	OA-01	AIR	ROCKMART, GA	11/30/18 15:54	12/04/18
L1849491-09	IA-01	AIR	ROCKMART, GA	11/30/18 15:40	12/04/18
L1849491-10	IA-02	AIR	ROCKMART, GA	11/30/18 15:42	12/04/18
L1849491-11	IA-03	AIR	ROCKMART, GA	11/30/18 15:44	12/04/18
L1849491-12	DUP-01-1A	AIR	ROCKMART, GA	11/30/18 00:00	12/04/18
L1849491-13	IA-04	AIR	ROCKMART, GA	11/30/18 15:48	12/04/18
L1849491-14	IA-05	AIR	ROCKMART, GA	11/30/18 15:49	12/04/18
L1849491-15	IA-06	AIR	ROCKMART, GA	11/30/18 15:51	12/04/18
L1849491-16	UNUSED 551	AIR	ROCKMART, GA		12/04/18
L1849491-17	UNUSED 140	AIR	ROCKMART, GA		12/04/18

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on November 29, 2018. The canister certification results are provided as an addendum.

L1849491-08 : The canister vacuum measured on receipt at the laboratory was > 15 in. Hg. Prior to sample analysis, the canister was pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

The WG1187204-3 LCS recovery for 1,2,4-trichlorobenzene (133%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 12/11/18

AIR

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-01 D
Client ID: SG-1
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 10:22
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 10:03
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	1090	357	--	5860	1920	--		1786
Tetrachloroethene	139000	357	--	943000	2420	--		1786

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	91		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	94		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-02 D
Client ID: SG-2
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 10:53
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 03:13
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	5000	--	ND	26900	--		25000
Tetrachloroethene	1090000	5000	--	7390000	33900	--		25000

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	92		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	96		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-03 D
Client ID: DUP-1-SG
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 00:00
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 03:43
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	5000	--	ND	26900	--		25000
Tetrachloroethene	1060000	5000	--	7190000	33900	--		25000

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	92		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	95		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-04 D
Client ID: SG-3
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 12:45
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 07:21
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	1.34	--	ND	7.20	--		6.69
Tetrachloroethene	283	1.34	--	1920	9.09	--		6.69

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	94		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	97		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-05 D
Client ID: SG-4
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 13:13
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 07:54
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	5.85	--	ND	31.4	--		29.24
Tetrachloroethene	1960	5.85	--	13300	39.7	--		29.24

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	93		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	96		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-06 D
Client ID: SG-5
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 13:42
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 08:26
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	11.5	--	ND	61.8	--		57.74
Tetrachloroethene	4600	11.5	--	31200	78.0	--		57.74

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	92		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	95		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-07 D
Client ID: SG-6
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 14:30
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 12/09/18 09:31
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	11.4	--	ND	61.3	--		57.21
Tetrachloroethene	4370	11.4	--	29600	77.3	--		57.21

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	91		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	94		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-08 D
Client ID: OA-01
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:54
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 18:48
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	0.044	0.037	--	0.239	0.199	--		1.852
Tetrachloroethene	0.628	0.037	--	4.26	0.251	--		1.852

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	93		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	94		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-09
Client ID: IA-01
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:40
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 19:21
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	0.043	0.020	--	0.231	0.107	--		1
Tetrachloroethene	0.896	0.020	--	6.08	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	84		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	83		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-10
Client ID: IA-02
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:42
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 19:53
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	0.027	0.020	--	0.145	0.107	--		1
Tetrachloroethene	1.01	0.020	--	6.85	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	84		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-11
Client ID: IA-03
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:44
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 20:26
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.173	0.020	--	1.17	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	85		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-12
Client ID: DUP-01-1A
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 00:00
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 20:58
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.153	0.020	--	1.04	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	83		60-140
bromochloromethane	86		60-140
chlorobenzene-d5	82		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-13
Client ID: IA-04
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:48
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 21:31
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.255	0.020	--	1.73	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	78		60-140
bromochloromethane	83		60-140
chlorobenzene-d5	74		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-14
Client ID: IA-05
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:49
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 22:04
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	0.020	0.020	--	0.107	0.107	--		1
Tetrachloroethene	0.812	0.020	--	5.51	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	82		60-140
bromochloromethane	85		60-140
chlorobenzene-d5	80		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

SAMPLE RESULTS

Lab ID: L1849491-15
Client ID: IA-06
Sample Location: ROCKMART, GA

Date Collected: 11/30/18 15:51
Date Received: 12/04/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 22:36
Analyst: MB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Trichloroethene	0.037	0.020	--	0.199	0.107	--		1
Tetrachloroethene	0.876	0.020	--	5.94	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	83		60-140

Project Name: MURATA
Project Number: 0190949
Lab Number: L1849491
Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 08-15 Batch: WG1187204-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 08-15 Batch: WG1187204-4								
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1

Project Name: MURATA
Project Number: 0190949
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Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 08-15 Batch: WG1187204-4								
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,2,3-Trichloropropane	ND	0.020	--	ND	0.121	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 08-15 Batch: WG1187204-4								
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Project Name: MURATA
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Lab Number: L1849491
Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1187205-4								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1

Project Name: MURATA
Project Number: 0190949
Lab Number: L1849491
Report Date: 12/11/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1187205-4								
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: MURATA
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Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1187205-4								
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl Acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: MURATA
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Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1187205-4								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane (C10)	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1

Project Name: MURATA
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Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 12/08/18 14:56

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1187205-4								
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 08-15 Batch: WG1187204-3								
Propylene	109		-		70-130	-		25
Dichlorodifluoromethane	78		-		70-130	-		25
Chloromethane	101		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	105		-		70-130	-		25
Vinyl chloride	103		-		70-130	-		25
1,3-Butadiene	108		-		70-130	-		25
Bromomethane	104		-		70-130	-		25
Chloroethane	100		-		70-130	-		25
Ethyl Alcohol	89		-		70-130	-		25
Vinyl bromide	105		-		70-130	-		25
Acetone	106		-		70-130	-		25
Trichlorofluoromethane	100		-		70-130	-		25
iso-Propyl Alcohol	110		-		70-130	-		25
Acrylonitrile	92		-		70-130	-		25
1,1-Dichloroethene	92		-		70-130	-		25
tert-Butyl Alcohol[1]	107		-		70-130	-		25
Methylene chloride	97		-		70-130	-		25
3-Chloropropene	100		-		70-130	-		25
Carbon disulfide	92		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	94		-		70-130	-		25
trans-1,2-Dichloroethene	90		-		70-130	-		25
1,1-Dichloroethane	92		-		70-130	-		25
Methyl tert butyl ether	92		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 08-15 Batch: WG1187204-3								
Vinyl acetate	101		-		70-130	-		25
2-Butanone	99		-		70-130	-		25
cis-1,2-Dichloroethene	92		-		70-130	-		25
Ethyl Acetate	104		-		70-130	-		25
Chloroform	95		-		70-130	-		25
Tetrahydrofuran	85		-		70-130	-		25
1,2-Dichloroethane	90		-		70-130	-		25
n-Hexane	94		-		70-130	-		25
1,1,1-Trichloroethane	93		-		70-130	-		25
Benzene	94		-		70-130	-		25
Carbon tetrachloride	97		-		70-130	-		25
Cyclohexane	96		-		70-130	-		25
Dibromomethane[1]	82		-		70-130	-		25
1,2-Dichloropropane	96		-		70-130	-		25
Bromodichloromethane	99		-		70-130	-		25
1,4-Dioxane	104		-		70-130	-		25
Trichloroethene	95		-		70-130	-		25
2,2,4-Trimethylpentane	100		-		70-130	-		25
cis-1,3-Dichloropropene	98		-		70-130	-		25
4-Methyl-2-pentanone	100		-		70-130	-		25
trans-1,3-Dichloropropene	84		-		70-130	-		25
1,1,2-Trichloroethane	97		-		70-130	-		25
Toluene	98		-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 08-15 Batch: WG1187204-3								
2-Hexanone	103		-		70-130	-		25
Dibromochloromethane	108		-		70-130	-		25
1,2-Dibromoethane	99		-		70-130	-		25
Tetrachloroethene	98		-		70-130	-		25
1,1,1,2-Tetrachloroethane	95		-		70-130	-		25
Chlorobenzene	99		-		70-130	-		25
Ethylbenzene	97		-		70-130	-		25
p/m-Xylene	97		-		70-130	-		25
Bromoform	108		-		70-130	-		25
Styrene	98		-		70-130	-		25
1,1,2,2-Tetrachloroethane	105		-		70-130	-		25
o-Xylene	99		-		70-130	-		25
1,2,3-Trichloropropane[1]	96		-		70-130	-		25
Isopropylbenzene	96		-		70-130	-		25
Bromobenzene[1]	94		-		70-130	-		25
4-Ethyltoluene	104		-		70-130	-		25
1,3,5-Trimethylbenzene	100		-		70-130	-		25
1,2,4-Trimethylbenzene	105		-		70-130	-		25
Benzyl chloride	103		-		70-130	-		25
1,3-Dichlorobenzene	107		-		70-130	-		25
1,4-Dichlorobenzene	105		-		70-130	-		25
sec-Butylbenzene	100		-		70-130	-		25
p-Isopropyltoluene	94		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 08-15 Batch: WG1187204-3								
1,2-Dichlorobenzene	106		-		70-130	-		25
n-Butylbenzene	111		-		70-130	-		25
1,2,4-Trichlorobenzene	**133**	Q	-		70-130	-		25
Naphthalene	103		-		70-130	-		25
1,2,3-Trichlorobenzene	126		-		70-130	-		25
Hexachlorobutadiene	125		-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1187205-3								
Chlorodifluoromethane	89		-		70-130	-		
Propylene	78		-		70-130	-		
Dichlorodifluoromethane	78		-		70-130	-		
Chloromethane	103		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	112		-		70-130	-		
Methanol	120		-		70-130	-		
Vinyl chloride	105		-		70-130	-		
1,3-Butadiene	106		-		70-130	-		
Butane	89		-		70-130	-		
Bromomethane	101		-		70-130	-		
Chloroethane	107		-		70-130	-		
Ethyl Alcohol	88		-		70-130	-		
Dichlorofluoromethane	97		-		70-130	-		
Vinyl bromide	107		-		70-130	-		
Acrolein	88		-		70-130	-		
Acetone	104		-		70-130	-		
Acetonitrile	91		-		70-130	-		
Trichlorofluoromethane	107		-		70-130	-		
iso-Propyl Alcohol	106		-		70-130	-		
Acrylonitrile	96		-		70-130	-		
Pentane	90		-		70-130	-		
Ethyl ether	86		-		70-130	-		
1,1-Dichloroethene	93		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1187205-3								
tert-Butyl Alcohol	108		-		70-130	-		
Methylene chloride	99		-		70-130	-		
3-Chloropropene	99		-		70-130	-		
Carbon disulfide	94		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	96		-		70-130	-		
trans-1,2-Dichloroethene	91		-		70-130	-		
1,1-Dichloroethane	94		-		70-130	-		
Methyl tert butyl ether	92		-		70-130	-		
Vinyl acetate	104		-		70-130	-		
2-Butanone	98		-		70-130	-		
cis-1,2-Dichloroethene	95		-		70-130	-		
Ethyl Acetate	104		-		70-130	-		
Chloroform	97		-		70-130	-		
Tetrahydrofuran	91		-		70-130	-		
2,2-Dichloropropane	86		-		70-130	-		
1,2-Dichloroethane	92		-		70-130	-		
n-Hexane	103		-		70-130	-		
Isopropyl Ether	93		-		70-130	-		
Ethyl-Tert-Butyl-Ether	91		-		70-130	-		
1,1,1-Trichloroethane	97		-		70-130	-		
1,1-Dichloropropene	97		-		70-130	-		
Benzene	97		-		70-130	-		
Carbon tetrachloride	101		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1187205-3								
Cyclohexane	102		-		70-130	-		
Tertiary-Amyl Methyl Ether	90		-		70-130	-		
Dibromomethane	97		-		70-130	-		
1,2-Dichloropropane	102		-		70-130	-		
Bromodichloromethane	105		-		70-130	-		
1,4-Dioxane	108		-		70-130	-		
Trichloroethene	100		-		70-130	-		
2,2,4-Trimethylpentane	105		-		70-130	-		
Methyl Methacrylate	100		-		70-130	-		
Heptane	101		-		70-130	-		
cis-1,3-Dichloropropene	104		-		70-130	-		
4-Methyl-2-pentanone	104		-		70-130	-		
trans-1,3-Dichloropropene	90		-		70-130	-		
1,1,2-Trichloroethane	102		-		70-130	-		
Toluene	100		-		70-130	-		
1,3-Dichloropropane	98		-		70-130	-		
2-Hexanone	107		-		70-130	-		
Dibromochloromethane	112		-		70-130	-		
1,2-Dibromoethane	103		-		70-130	-		
Butyl Acetate	96		-		70-130	-		
Octane	95		-		70-130	-		
Tetrachloroethene	102		-		70-130	-		
1,1,1,2-Tetrachloroethane	101		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1187205-3								
Chlorobenzene	103		-		70-130	-		
Ethylbenzene	101		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
Bromoform	110		-		70-130	-		
Styrene	101		-		70-130	-		
1,1,2,2-Tetrachloroethane	113		-		70-130	-		
o-Xylene	107		-		70-130	-		
1,2,3-Trichloropropane	99		-		70-130	-		
Nonane (C9)	102		-		70-130	-		
Isopropylbenzene	102		-		70-130	-		
Bromobenzene	98		-		70-130	-		
o-Chlorotoluene	99		-		70-130	-		
n-Propylbenzene	101		-		70-130	-		
p-Chlorotoluene	97		-		70-130	-		
4-Ethyltoluene	108		-		70-130	-		
1,3,5-Trimethylbenzene	112		-		70-130	-		
tert-Butylbenzene	107		-		70-130	-		
1,2,4-Trimethylbenzene	114		-		70-130	-		
Decane (C10)	108		-		70-130	-		
Benzyl chloride	111		-		70-130	-		
1,3-Dichlorobenzene	109		-		70-130	-		
1,4-Dichlorobenzene	109		-		70-130	-		
sec-Butylbenzene	106		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1187205-3								
p-Isopropyltoluene	97		-		70-130	-		
1,2-Dichlorobenzene	106		-		70-130	-		
n-Butylbenzene	105		-		70-130	-		
1,2-Dibromo-3-chloropropane	100		-		70-130	-		
Undecane	121		-		70-130	-		
Dodecane (C12)	**155**	Q	-		70-130	-		
1,2,4-Trichlorobenzene	127		-		70-130	-		
Naphthalene	100		-		70-130	-		
1,2,3-Trichlorobenzene	120		-		70-130	-		
Hexachlorobutadiene	123		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 08-15 QC Batch ID: WG1187204-5 QC Sample: L1850415-01 Client ID: DUP Sample						
Trichloroethene	0.557	0.564	ppbV	1		25
Tetrachloroethene	0.609	0.623	ppbV	2		25
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1187205-5 QC Sample: L1849491-06 Client ID: SG-5						
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	4600	4690	ppbV	2		25

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1849491-01	SG-1	0141	Flow 1	11/29/18	279142		-	-	-	Pass	200	217	8
L1849491-01	SG-1	2480	2.7L Can	11/29/18	279142	L1848148-01	Pass	-29.0	-0.8	-	-	-	-
L1849491-02	SG-2	0840	Flow 1	11/29/18	279142		-	-	-	Pass	200	211	5
L1849491-02	SG-2	2385	2.7L Can	11/29/18	279142	L1848148-01	Pass	-29.0	-1.4	-	-	-	-
L1849491-03	DUP-1-SG	0912	Flow 1	11/29/18	279142		-	-	-	Pass	200	215	7
L1849491-03	DUP-1-SG	2423	2.7L Can	11/29/18	279142	L1848148-01	Pass	-29.0	-0.8	-	-	-	-
L1849491-04	SG-3	01005	Flow 1	11/29/18	279142		-	-	-	Pass	200	204	2
L1849491-04	SG-3	181	2.7L Can	11/29/18	279142	L1848148-01	Pass	-28.4	-1.4	-	-	-	-
L1849491-05	SG-4	0839	Flow 1	11/29/18	279142		-	-	-	Pass	200	207	3
L1849491-05	SG-4	209	2.7L Can	11/29/18	279142	L1848148-02	Pass	-28.9	-1.6	-	-	-	-
L1849491-06	SG-5	0193	flow 2	11/29/18	279142		-	-	-	Pass	200	208	4
L1849491-06	SG-5	374	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-1.2	-	-	-	-
L1849491-07	SG-6	0165	#90 SV	11/29/18	279142		-	-	-	Pass	200	213	6
L1849491-07	SG-6	550	2.7L Can	11/29/18	279142	L1848148-01	Pass	-28.9	-1.0	-	-	-	-
L1849491-08	OA-01	0702	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	2.3	65

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1849491-08	OA-01	446	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-18.7	-	-	-	-
L1849491-09	IA-01	0551	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	4.4	2
L1849491-09	IA-01	481	2.7L Can	11/29/18	279142	L1848148-02	Pass	-28.9	-13.0	-	-	-	-
L1849491-10	IA-02	01169	Flow 4	11/29/18	279142		-	-	-	Pass	4.5	4.1	9
L1849491-10	IA-02	2224	2.7L Can	11/29/18	279142	L1848148-02	Pass	-28.9	-11.7	-	-	-	-
L1849491-11	IA-03	0956	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	4.6	2
L1849491-11	IA-03	1733	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-10.7	-	-	-	-
L1849491-12	DUP-01-1A	0786	Flow 4	11/29/18	279142		-	-	-	Pass	4.5	4.7	4
L1849491-12	DUP-01-1A	178	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-12.1	-	-	-	-
L1849491-13	IA-04	0751	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	2.5	57
L1849491-13	IA-04	2299	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-12.7	-	-	-	-
L1849491-14	IA-05	0951	Flow 4	11/29/18	279142		-	-	-	Pass	4.5	3.7	20
L1849491-14	IA-05	2612	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-12.3	-	-	-	-
L1849491-15	IA-06	0408	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	4.4	2
L1849491-15	IA-06	2230	2.7L Can	11/29/18	279142	L1848148-02	Pass	-28.5	-11.2	-	-	-	-

Project Name: MURATA

Project Number: 0190949

Lab Number: L1849491

Report Date: 12/11/18

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1849491-16	UNUSED 551	0825	Flow 5	11/29/18	279142		-	-	-	Pass	4.5	4.3	5
L1849491-16	UNUSED 551	551	2.7L Can	11/29/18	279142	L1848148-02	Pass	-29.0	-29.7	-	-	-	-
L1849491-17	UNUSED 140	0268	Flow 1	11/29/18	279142		-	-	-	Pass	200	216	8
L1849491-17	UNUSED 140	140	2.7L Can	11/29/18	279142	L1848148-01	Pass	-29.0	-29.5	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 11/27/18 18:05
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	79		60-140
Bromochloromethane	83		60-140
chlorobenzene-d5	80		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 11/27/18 18:05
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-01
Client ID: CAN 405 SHELF 1
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	78		60-140
bromochloromethane	85		60-140
chlorobenzene-d5	81		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 11/27/18 18:37
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	80		60-140
chlorobenzene-d5	77		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 11/27/18 18:37
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1848148
Report Date: 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1848148

Project Number: CANISTER QC BAT **Report Date:** 12/11/18

Air Canister Certification Results

Lab ID: L1848148-02
Client ID: CAN 508 SHELF 4
Sample Location:

Date Collected: 11/26/18 16:00
Date Received: 11/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	74		60-140
bromochloromethane	82		60-140
chlorobenzene-d5	78		60-140

Project Name: MURATA
Project Number: 0190949

Lab Number: L1849491
Report Date: 12/11/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1849491-01A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-02A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-03A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-04A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-05A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-06A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-07A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-LL(30)
L1849491-08A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-09A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-10A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-11A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-12A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-13A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-14A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-15A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		TO15-SIM(30)
L1849491-16A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		CLEAN-FEE()
L1849491-17A	Canister - 2.7 Liter	N/A	NA			Y	Present/Intact		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	MURATA	**Lab Number:**	L1849491
Project Number:	0190949	**Report Date:**	12/11/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: Data Usability Report

Project Name:	MURATA	**Lab Number:**	L1849491
Project Number:	0190949	**Report Date:**	12/11/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/4/18

ALPHA Job #: L1849491

Client Information

Client: ERM
Address: 3200 Windy Hill Rd. SE Suite 1500
Atlanta, GA 30339
Phone: 678-486-2700
Fax:
Email: nic.vrey@erm.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Murata
Project Location: Rockmart, GA
Project #: 0190949
Project Manager: Nic Vrey
ALPHA Quote #:

Turn-Around-Time

☒ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Report/Data Deliverables Information

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Residential/Commercial

Other Project Specific Requirements/Comments:
☐ Project-Specific Target Compound List

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: End Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-15	TO-15 SIM	APH: Subtract non-petroleum HCs ☐	FIXED GASES	Sulfides & Mercaptans by TO-15			Sample Specific Comments (i.e. PID)
1849491.01	SG-1	11/30/18	10:07	10:22	-28.71	-0.12	SV	TP	2.7L	2480	0142	☒	☐	☐	☐	☐	☐	☐	
02	SG-2	11/30/18	10:38	10:53	-28.17	-0.7	SV	TP	2.7L	2385	0840	☒	☐	☐	☐	☐	☐	☐	
03	DUP-1-SG	11/30/18			-28.19	-0.24	SV	TP	2.7L	2423	0912	☒	☐	☐	☐	☐	☐	☐	
04	SG-3	11/30/18	12:32	12:45	-26.8	-0.74	SV	TP	2.7L	181	01005	☒	☐	☐	☐	☐	☐	☐	
05	SG-4	11/30/18	12:58	13:13	-28.7	-0.82	SV	TP	2.7L	209	0839	☒	☐	☐	☐	☐	☐	☐	
06	SG-5	11/30/18	13:27	13:42	-28.4	-0.47	SV	TP	2.7L	374	0193	☒	☐	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

SAMPLE MATRIX CODES:

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By	Date/Time
Fedex	12/4/18	Fedex	
		[signature] AAC	12/4/18 1032

Please print clearly & legibly and completely. Samples cannot be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms

Form 101-02 (I) Rev 25-Sept-15

AIR ANALYSIS

CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/4/18

ALPHA Job #: L1849491

Client Information

Client: ERM
Address: 3200 Windy Hill Rd. SE Suite 1500
Atlanta, GA 30339
Phone: 678-486-2700
Fax:
Email: nic.vrey@erm.com

Project Information

Project Name: Murata
Project Location: Rockmart, GA
Project #: 0190949
Project Manager: Nic Vrey
ALPHA Quote #:

Turn-Around-Time

☒ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:
☐ Project-Specific Target Compound List

Report/Data Deliverables Information

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Residential/Commercial

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: End Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-15	TO-15 SIM	APH Subtract non-petroleum HCs ☐	FIXED GASES	Sulfides & Mercaptans by TO-15			Sample Specific Comments (i.e. PID)
1949491.07	SG-6	11/30/18	13:59	14:30	-29.01	-0.36	SV	TP	2.7L	550	0165	☒	☐	☐	☐	☐	☐	☐	
.08	OA-01	11/30/18	08:42	15:54	-30.24	-18.77	AA	TP	2.7L	446	0702	☐	☒	☐	☐	☐	☐	☐	
.09	IA-01	11/30/18	09:17	15:40	-28.69	-12.32	AA	TP	2.7L	481	0551	☐	☒	☐	☐	☐	☐	☐	
.10	IA-02	11/30/18	09:21	15:42	-29.04	-10.77	AA	TP	2.7L	2224	01169	☐	☒	☐	☐	☐	☐	☐	
.11	IA-03	11/30/18	09:23	15:44	-29.22	-9.69	AA	TP	2.7L	1733	0956	☐	☒	☐	☐	☐	☐	☐	
.12	DUP-01-IA	11/30/18			-30.02	-11.88	AA	TP	2.7L	178	0786	☐	☒	☐	☐	☐	☐	☐	
											Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
[signature] Fedex	12/4/18	Fedex [signature] - AAL	12/4/18 1037

Please print clearly & legibly and completely. Samples cannot be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms

Form 101-02 (1) Rev. 25-Sept-15

AIR ANALYSIS

PAGE 3 OF 3

CHAIN OF CUSTODY

ALPHA ANALYTICAL

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/4/18

ALPHA Job #: L1849491

Project Information

Project Name: Murata
Project Location: Rockmart, GA
Project #: 0190949
Project Manager: Nic Vrey
ALPHA Quote #:

Report/Data Deliverables Information

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Client Information

Client: ERM
Address: 3200 Windy Hill Rd. SE Suite 1500
Atlanta, GA 30339
Phone: 678-486-2700
Fax:
Email: nic.vrey@erm.com

Turn-Around-Time

☒ Standard ☐ Rush (only confirmed if pre-approved)

Date Due: Time:

Regulatory Requirements/Report Limits

State/Fed	Program	Residential/Commercial

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments:
☐ Project-Specific Target Compound List

Analysis

All Columns Below Must Be Filled Out

Alpha Lab Use Only	Sample ID	Collection: End Date	Start Time	End Time	Initial Vac	Final Vac	Sample Matrix*	Sampler Initials	Can Size	ID Can	ID Flow Controller	TO-15	TO-15 SIM	APH Subtract non-petroleum HCs ☐	FIXED GASES	Sulfides & Mercaptans by TO-15			Sample Specific Comments (i.e. PID)
1949 1, 13	IA-04	11/30/18	09:27	15:48	-30.06	-12.65	AA	TP	2.7L	2299	0751	☐	☒	☐	☐	☐	☐	☐	
14	IA-05	11/30/18	09:30	15:49	-29.37	-11.49	AA	TP	2.7L	2612	0951	☐	☒	☐	☐	☐	☐	☐	
15	IA-06	11/30/18	09:31	15:51	-29.1	-10.42	AA	TP	2.7L	2230	0408	☐	☒	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												☐	☐	☐	☐	☐	☐	☐	
												Container Type	-	-	-	-	-	-	-	

***SAMPLE MATRIX CODES:**

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By	Date/Time	Received By:	Date/Time
Fedex	12/4/18	Fedex	
		[illegible] - AAL	12/4/18 1037

Please print clearly & legibly and completely. Samples cannot be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Form 101-02 (I) Rev. 25-Sept-15

APPENDIX F DRAFT UECS

After Recording Return to:
Murata Erie NA Inc.
Kevin Crampsie
2200 Lake Park Drive
Smyrna, GA 30080

CROSS-REFERENCE:
County: Polk
Deed Book: _____
Page(s): _____

Environmental Covenant

This instrument is an Environmental Covenant executed pursuant to the Georgia Uniform Environmental Covenants Act, O.C.G.A. § 44-16-1 *et seq.*, as may be amended from time to time (hereinafter "Act"). This Environmental Covenant is entered into by the entities executing this Environmental Covenant as part of an environmental response project to address regulated substances released into the environment that have migrated in the groundwater onto the Property identified below. This Environmental Covenant restricts the use of groundwater on the Property to prevent humans from coming into contact with regulated substances.

Fee Simple Owner(s)/Grantor(s):
Beary Properties Inc.
2500 W. Arthington
Chicago, IL 60612

Grantee/Holder with the power to enforce:
Murata Erie NA Inc.
2200 Lake Park Drive
Smyrna, GA 30080

Grantee/Entity with express power to enforce:
State of Georgia
Department of Natural Resources
Environmental Protection Division
2 Martin Luther King Jr. Drive, SE
Suite 1456 East Tower
Atlanta, GA 30334

Property Subject

The property subject to this Environmental Covenant is a tract of approximately 4.32 acres of real property located at 515 Industrial Dr, Rockmart, Polk County, Georgia, which is further identified by the tax parcel ID number(s) below (hereinafter "Property"). The Property was conveyed on 6/27/2005 to Beary Properties Inc.; such conveyance is recorded in Deed Book 1098, Page 467, of the Polk County deed records. ~~The Property is located in Land Lot _____ of the ___th District of Polk County, Georgia.~~

The tax parcel(s) of the Property is 054-052- of Polk County, Georgia.

A legal description of the Property is attached as Exhibit A.

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Environmental Covenant Runs with the Land and is Perpetual

Pursuant to the Act, this Environmental Covenant shall run with the land and shall be perpetual unless terminated or amended pursuant to terms herein or in accordance with provisions of the Act. This Environmental Covenant shall be binding upon Beary Properties Inc., Murata Erie NA Inc., and all successors, assigns and transferees of any interest in the Property or any portion thereof.

Administrative Records

This Environmental Covenant imposes activity and/or use limitations and other requirements on the Property that arise under an environmental response performed and/or being performed at the Murata Erie NA Inc. facility/site HSI Site 10771. Records pertaining to this corrective action are available at the following EPD location(s):

Georgia Environmental Protection Division
Response and Remediation Program
2 MLK Jr. Drive, SE, Suite 1054 East Tower
Atlanta, Georgia 30334
Monday-Friday 8:00 AM to 4:30 PM, excluding state holidays

Activity and Use Limitations.

The use or extraction of groundwater beneath the Property for drinking water or other potable uses shall be prohibited. The use or extraction of groundwater for any other purpose besides site characterization is prohibited unless conducted under a plan approved in writing by EPD.

Other Requirements. The Property is subject to the following additional requirements.

A. Notice of Limitations and Requirements in Future Conveyances. Each instrument hereafter conveying any interest in the Property or any portion thereof that may affect the activity and use limitations described herein shall include a statement that the Property is subject to this Environmental Covenant (and any amendments thereto), the location (County, Deed Book and Page) in the deed records where this Environmental Covenant (and any amendments thereto) is recorded.

B. Termination or Modification: The Environmental Covenant shall remain in full force and effect in accordance with O.C.G.A. § 44-5-1 et seq., unless and until the Director determines that the Property is in compliance with the Type 1 or 2 Risk Reduction Standards for groundwater, as defined in Section 391-3-19-.07 of the Georgia Rules of Hazardous Site Response, whereupon the Environmental Covenant may be terminated in accordance with O.C.G.A. § 44-16-1 *et seq*.

Environmental Covenant Does Not Authorize Use Otherwise Prohibited

Pursuant to the Act, this Environmental Covenant shall not be construed to authorize a use of the Property that is otherwise prohibited by zoning, ordinance, local law or general law or by a recorded instrument that has priority over this Environmental Covenant.

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Rights of Access/Compliance

Grantor(s) shall provide reasonable access to authorized representatives of EPD and Murata Erie NA Inc. to verify compliance with the terms of this Environmental Covenant.

This Environmental Covenant shall be enforceable by EPD, Murata Erie NA Inc. and other parties as provided in the Act. Such rights of access and enforcement herein shall not limit EPD's authority under other applicable law.

No Interest in Real Property in EPD

EPD's rights under this Environmental Covenant and the Act shall not be considered an interest in real property.

Recording of Environmental Covenant and Service on Other Persons

Within thirty (30) days after execution of this Environmental Covenant by the Director of EPD, Beary Properties Inc. shall record the Environmental Covenant in every county in which any portion of the Property is located in accordance with the law governing the recording and priority of interests in real property. Upon recording of the Environmental Covenant, Beary Properties Inc. shall provide in a manner deemed acceptable by EPD a copy of the executed, recorded Environmental Covenant to each of the persons or entities identified in O.C.G.A. § 44-16-7.

Representations and Warranties by Grantor(s).

~~<for properties owned by individuals>~~

~~Grantor(s) represents and warrants that all of the following are true and correct~~

~~A. Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided, and to carry out all obligations hereunder and in accordance with O.C.G.A. § 44-16-1 et seq.~~

~~B. At least thirty (30) days prior to presenting this Environmental Covenant to EPD for execution, a copy of the proposed final text of this Environmental Covenant was served on all persons or entities required to be noticed in accordance with O.C.G.A. § 44-16-7.~~

Grantor(s) represents and warrants that all of the following are true and correct:

A. Beary Properties Inc. holds fee simple title to the Property.

B. Beary Properties Inc. has the authority to enter into this Environmental Covenant, has the authority to grant any rights granted by it within, has the ability to carry out the obligations described within and, based upon information and belief after reasonable inquiry, does not know of any anticipated material change in the practices, ownership, or authority of Beary Properties Inc. that will alter this representation and warranty.

C. The execution and delivery of this Environmental Covenant and carrying out the obligations described within will not conflict with any of the provisions of the organizational documents, operating agreement of Beary Properties Inc. nor will it

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violate, contravene and/or constitute a breach or default under any agreement, contract, order or instrument to which Beary Properties Inc. is a party or by which Beary Properties Inc. may be bound.

D. There are no persons with existing interests other than fee simple in the Property;

E. At least thirty (30) days prior to presenting this Environmental Covenant to EPD for execution, a copy of the proposed final text of this Environmental Covenant was served on all persons or entities required to be noticed in accordance with O.C.G.A. § 44-16-7.

EPD's Environmental Covenants Registry

This Environmental Covenant and any amendment thereto or termination thereof may be included in EPD's registry for environmental covenants.

Severability

Should any provision of this Environmental Covenant be found by a court of competent jurisdiction to be invalid and/or unenforceable in any respect, the remaining provisions shall continue in full force and effect.

Effective Date

This Environmental Covenant shall be effective on the date the fully executed Environmental Covenant is recorded in accordance with O.C.G.A. § 44-16-8(a).

DRAFT

Grantor

[use signature block executed, witnessed, and notarized in accordance with all requirements specified in the Act and any and all other applicable federal, state, or local laws]

Sample signature block, to be amended or updated in accordance with all applicable requirements:

Beary Properties Inc.

_____
(Signature)

[Name of Authorized Representative]

[Title of Authorized Representative]

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of [Name]
County of [Name]

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_____Personally Known
_____Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

DRAFT

Grantee

[use signature block executed, witnesses, and notarized in accordance with all requirements specified in the Act and any and all other applicable federal, state, or local laws]

Sample signature block, to be amended or updated in accordance with all applicable requirements:

[Name of Grantee]

_____
(Signature)

[Name of Authorized Representative]

[Title of Authorized Representative]

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of [Name]
County of [Name]

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_☐ Personally Known
_☐ Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

DRAFT

For the Environmental Protection Division, Department of Natural Resources, State of Georgia, this _____ day of _____, 20_____:

_____
(Signature)

[Name]
Director, Environmental Protection Division

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of Georgia
County of Fulton

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_____Personally Known
_____Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

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Exhibit A
Legal Description of Property

<*if necessary* Exhibit B
Disclosures>

DRAFT

After Recording Return to:
Murata Erie NA Inc.
Kevin Crampsie
2200 Lake Park Drive
Smyrna, GA 30080

CROSS-REFERENCE:
County: Polk
Deed Book: _____
Page(s): _____

Environmental Covenant

This instrument is an Environmental Covenant executed pursuant to the Georgia Uniform Environmental Covenants Act, O.C.G.A. § 44-16-1 *et seq.*, as may be amended from time to time (hereinafter "Act"). This Environmental Covenant is entered into by the entities executing this Environmental Covenant as part of an environmental response project to address regulated substances released into the environment that have migrated in the groundwater onto the Property identified below. This Environmental Covenant restricts the use of groundwater on the Property to prevent humans from coming into contact with regulated substances.

Fee Simple Owner(s)/Grantor(s):
Hematite Holdings LLC.
481 Iron Hill Rd
Taylorsville, GA 30178

Grantee/Holder with the power to enforce:
Murata Erie NA Inc.
2200 Lake Park Drive
Smyrna, GA 30080

Grantee/Entity with express power to enforce:
State of Georgia
Department of Natural Resources
Environmental Protection Division
2 Martin Luther King Jr. Drive, SE
Suite 1456 East Tower
Atlanta, GA 30334

Property Subject

The property subject to this Environmental Covenant is a tract of approximately 5.56 acres of real property located at 457 Industrial Dr, Rockmart, Polk County, Georgia, which is further identified by the tax parcel ID number(s) below (hereinafter "Property"). The Property was conveyed on 8/23/2012 to Hematite Holdings LLC.; such conveyance is recorded in Deed Book 1438, Page 95, of the Polk County deed records. ~~The Property is located in Land Lot _____ of the ___th District of Polk County, Georgia.~~

The tax parcel(s) of the Property is 054-049D of Polk County, Georgia.

A legal description of the Property is attached as Exhibit A.

Environmental Covenant Runs with the Land and is Perpetual

Pursuant to the Act, this Environmental Covenant shall run with the land and shall be perpetual unless terminated or amended pursuant to terms herein or in accordance with provisions of the Act. This Environmental Covenant shall be binding upon Hematite Holdings LLC., Murata Erie NA Inc., and all successors, assigns and transferees of any interest in the Property or any portion thereof.

Administrative Records

This Environmental Covenant imposes activity and/or use limitations and other requirements on the Property that arise under an environmental response performed and/or being performed at the Murata Erie NA Inc. facility/site HSI Site 10771. Records pertaining to this corrective action are available at the following EPD location(s):

Georgia Environmental Protection Division
Response and Remediation Program
2 MLK Jr. Drive, SE, Suite 1054 East Tower
Atlanta, Georgia 30334
Monday-Friday 8:00 AM to 4:30 PM, excluding state holidays

Activity and Use Limitations.

The use or extraction of groundwater beneath the Property for drinking water or other potable uses shall be prohibited. The use or extraction of groundwater for any other purpose besides site characterization is prohibited unless conducted under a plan approved in writing by EPD.

Other Requirements. The Property is subject to the following additional requirements.

A. Notice of Limitations and Requirements in Future Conveyances. Each instrument hereafter conveying any interest in the Property or any portion thereof that may affect the activity and use limitations described herein shall include a statement that the Property is subject to this Environmental Covenant (and any amendments thereto), the location (County, Deed Book and Page) in the deed records where this Environmental Covenant (and any amendments thereto) is recorded.

B. Termination or Modification: The Environmental Covenant shall remain in full force and effect in accordance with O.C.G.A. § 44-5-1 et seq., unless and until the Director determines that the Property is in compliance with the Type 1 or 2 Risk Reduction Standards for groundwater, as defined in Section 391-3-19-.07 of the Georgia Rules of Hazardous Site Response, whereupon the Environmental Covenant may be terminated in accordance with O.C.G.A. § 44-16-1 *et seq*.

Environmental Covenant Does Not Authorize Use Otherwise Prohibited

Pursuant to the Act, this Environmental Covenant shall not be construed to authorize a use of the Property that is otherwise prohibited by zoning, ordinance, local law or general law or by a recorded instrument that has priority over this Environmental Covenant.

Rights of Access/Compliance

Grantor(s) shall provide reasonable access to authorized representatives of EPD and Murata Erie NA Inc. to verify compliance with the terms of this Environmental Covenant.

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EPD's rights under this Environmental Covenant and the Act shall not be considered an interest in real property.

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Representations and Warranties by Grantor(s).

~~<for properties owned by individuals>~~

~~Grantor(s) represents and warrants that all of the following are true and correct~~

~~A. Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided, and to carry out all obligations hereunder and in accordance with O.C.G.A. § 44-16-1 et seq.~~

~~B. At least thirty (30) days prior to presenting this Environmental Covenant to EPD for execution, a copy of the proposed final text of this Environmental Covenant was served on all persons or entities required to be noticed in accordance with O.C.G.A. § 44-16-7.~~

Grantor(s) represents and warrants that all of the following are true and correct:

A. Hematite Holdings LLC. holds fee simple title to the Property.

B. Hematite Holdings LLC. has the authority to enter into this Environmental Covenant, has the authority to grant any rights granted by it within, has the ability to carry out the obligations described within and, based upon information and belief after reasonable inquiry, does not know of any anticipated material change in the practices, ownership, or authority of Hematite Holdings LLC. that will alter this representation and warranty.

C. The execution and delivery of this Environmental Covenant and carrying out the obligations described within will not conflict with any of the provisions of the organizational documents, operating agreement of Hematite Holdings LLC.nor will

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it violate, contravene and/or constitute a breach or default under any agreement, contract, order or instrument to which Hematite Holdings LLC. is a party or by which Hematite Holdings LLC. may be bound.

D. There are no persons with existing interests other than fee simple in the Property;

E. At least thirty (30) days prior to presenting this Environmental Covenant to EPD for execution, a copy of the proposed final text of this Environmental Covenant was served on all persons or entities required to be noticed in accordance with O.C.G.A. § 44-16-7.

EPD's Environmental Covenants Registry

This Environmental Covenant and any amendment thereto or termination thereof may be included in EPD's registry for environmental covenants.

Severability

Should any provision of this Environmental Covenant be found by a court of competent jurisdiction to be invalid and/or unenforceable in any respect, the remaining provisions shall continue in full force and effect.

Effective Date

This Environmental Covenant shall be effective on the date the fully executed Environmental Covenant is recorded in accordance with O.C.G.A. § 44-16-8(a).

DRAFT

Grantor

[use signature block executed, witnessed, and notarized in accordance with all requirements specified in the Act and any and all other applicable federal, state, or local laws]

Sample signature block, to be amended or updated in accordance with all applicable requirements:

Hematite Holdings LLC.

_____
(Signature)

[Name of Authorized Representative]

[Title of Authorized Representative]

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of [Name]
County of [Name]

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_____Personally Known
_____Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

DRAFT

Grantee

[use signature block executed, witnesses, and notarized in accordance with all requirements specified in the Act and any and all other applicable federal, state, or local laws]

Sample signature block, to be amended or updated in accordance with all applicable requirements:

[Name of Grantee]

_____
(Signature)

[Name of Authorized Representative]

[Title of Authorized Representative]

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of [Name]
County of [Name]

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_☐ Personally Known
_☐ Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

DRAFT

For the Environmental Protection Division, Department of Natural Resources, State of Georgia, this _____ day of _____, 20_____:

_____
(Signature)

[Name]
Director, Environmental Protection Division

Signed in the presence of:

_____
Unofficial Witness (*signature*)

_____
Unofficial Witness (*print name*)

State of Georgia
County of Fulton

This instrument was signed or attested before me this ___ day of_____ _ , 20__, by [Name].

_____Personally Known
_____Produced Identification

_____
Notary Public *(Signature)*

My Commission Expires:

(NOTARY SEAL)_____

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Exhibit A
Legal Description of Property

<*if necessary* Exhibit B
Disclosures>

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ERM has over 160 offices across the following countries and territories worldwide

Argentina
Australia
Belgium
Brazil
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Portugal
Puerto Rico
Romania
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South Korea
Spain
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Taiwan
Thailand
UAE
UK
US
Vietnam

ERM's Atlanta Office
The Towers at Wildwood
3200 Windy Hill Rd SE
Suite 1500 Wes
Atlanta, GA 30339

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