PPG Industries Fiber Glass Products, Inc. 940 Washburn Switch Road Shelby, NC 28150

Richard Young
Senior Engineer Associate
Environmental

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March 21, 2014

Mr. Matt Gamble, Hydrogeologist
Solid Waste Division, NC DENR
1646 Mail Service Center
Raleigh, NC 27699-1646

014
SOLID WASTE SECTION

Sent Via Certified Mail – Return Receipt Requested

Subject: Semi-Annual Groundwater Monitoring Results

Dear Mr. Gamble:

Enclosed are the results from the January 2014 sampling and analysis of the seven groundwater monitoring wells at PPG Industries Fiber Glass Products, Inc. located in Shelby.

If there are any questions, please contact me at (704) 434-2261 extension 359.

Sincerely,

Richard Young

cc: File

GROUNDWATER MONITORING REPORT
PPG INDUSTRIES, INC.
JANUARY 2014 MONITORING EVENT
940 WASHBURN SWITCH ROAD
SHELBY, CLEVELAND CO., NC
S&ME PROJECT # 1354-11-137

Prepared for:

PPG Industries

PPG Industries, Inc.
940 Washburn Switch Road
Shelby, North Carolina 28150

Prepared by:

S&ME, Inc.
9751 Southern Pine Boulevard
Charlotte, North Carolina 28273

March 17, 2014

March 17, 2014

PPG Industries, Inc.
940 Washburn Switch Road
Shelby, North Carolina 28150

Attention: Mr. Richard Young

Reference: **Groundwater Monitoring Report**
January 2014 Semi-Annual Monitoring Event
PPG Industries, Inc.
940 Washburn Switch Road
Shelby, Cleveland County, North Carolina
S&ME Project # 1354-11-137

Dear Mr. Young:

S&ME, Inc. (S&ME) submits this Groundwater Monitoring Report for the referenced facility as part of a continuing groundwater monitoring program in accordance with North Carolina Department of Environment and Natural Resources (NCDENR) requirements. The sampling and reporting services were performed in general accordance with S&ME's Proposal No. 1354-24380-11 dated July 11, 2011. The January 2014 sampling results indicated concentrations of iron (MW-5) and manganese (MW-3, 4, 5, and 7) at levels exceeding the 15A NCAC 2L .0202 groundwater quality standards (2L Standards). No other parameters were detected above the 2L Standards. Based on these findings, we recommend continued semi-annual groundwater monitoring.

We appreciate the opportunity to provide our professional environmental services to PPG Industries, Inc. on this project. Should you have any questions concerning this report, please contact us at your earliest convenience.

Sincerely,

S&ME, INC.

Coleman S. Marchin
Staff Professional

Al Quarles, L.G.
Senior Hydrogeologist

CSM:WAQ\csm

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GROUNDWATER MONITORING REPORT
JANUARY 2014 MONITORING EVENT
PPG INDUSTRIES, INC.
940 WASHBURN SWITCH ROAD
SHELBY, CLEVELAND CO., NC
S&ME PROJECT # 1354-11-137

1 INTRODUCTION

S&ME includes herein, the results of the January 2014 semi-annual groundwater monitoring event for the referenced PPG Industries, Inc. fiberglass manufacturing plant located in Shelby, North Carolina (**Figures 1 and 2**). The NCDENR, Division of Waste Management (DWM) requires that a semi-annual monitoring program be implemented for this type of facility to monitor for potential environmental impacts. **Figure 3** is provided as a site plan of the subject facility and illustrates the locations of the seven groundwater monitor wells.

The report includes: 1) a description of the sample collection methodology; 2) groundwater level data and a groundwater surface map; and 3) results and conclusions of the groundwater quality analyses. Historical water quality data are also presented in the attached tables.

2 SAMPLING METHODOLOGY

On January 22 and 23, 2014, S&ME measured the depth to groundwater in the monitor wells from the top of monitor well casings (**Table 1**). Prior to water level measurements, monitor well seals were removed to allow groundwater levels to equilibrate with atmospheric pressure. Water level measurements were used to prepare a groundwater surface map from which the direction of groundwater flow could be inferred, as illustrated in **Figure 3**.

Low-flow sampling methods generally consistent with NCDENR guidance and EPA standard operating procedures were performed using a peristaltic pump with new tubing for each well. The base of the tubing was placed approximately 1 foot from the base of each well and the pump was operated at a low flow rate in an attempt to limit drawdown of the water column. During purging of each well, S&ME recorded pH, specific conductance, temperature, dissolved oxygen, oxygen-reduction potential, and turbidity. Field measurements are included on the Field Sampling Records in **Appendix I**.

After field measurements were generally stabilized, the groundwater samples were collected directly from the tubing into laboratory-provided sample containers in a manner to limit aeration of the sample. No field or laboratory filtration of the samples was performed. The samples were analyzed in accordance with EPA Methods and Standard Methods for the parameters listed in **Table 2**. Standard control measures, including

sample collection and handling, were implemented before, during and after sample collection. Sample containers were delivered to a NCDENR-certified laboratory (Pace Laboratories) in accordance with chain-of-custody protocol.

3 RESULTS

3.1 Water Levels and Groundwater Flow

On January 22 and 23, 2014, S&ME measured the depth to water from the monitor well's top of casing (TOC). Based on the TOC elevations and depths to water, groundwater elevations were calculated. The groundwater surface elevations are summarized in **Table 1** and are presented in **Figure 3**. The inferred direction of groundwater flow is generally to the west.

Compared to July 2013 water levels, the January 2014 water levels decreased from 0.35 feet in monitor well MW-7 while increasing 2.81 feet in MW-1.

3.2 Groundwater Quality

The results of the January 2014 groundwater sampling event are summarized in **Table 2**. A copy of the laboratory report is included in **Appendix II**. The historical results since January 2006 are summarized in **Table 3**.

The January 2014 sampling results indicated concentrations of iron (MW-5) and manganese (MW-3, 4, 6 and 7) at levels exceeding the 15A NCAC 2L .0202 groundwater quality standards (2L Standards). Concentrations of manganese and iron are generally similar to those detected during prior sampling events, and no increasing or decreasing trend in concentrations is apparent. Barium was detected in all seven monitor well samples, at levels less than the 2L Standards. Iron (in MW-1 and MW-6) and manganese (in MW-1, MW-2, and MW-6) were also detected at levels less than the 2L Standards. Cadmium, chromium, copper and lead were not detected above laboratory reporting limits in any of the monitor well samples.

Concentrations of chloride, nitrate, sulfate, and total dissolved solids (TDS) were either not detected above the laboratory reporting limits or not detected above the 2L Standards. There are no standards for biological oxygen demand (BOD), chemical oxygen demand (COD), or total organic carbon (TOC).

3.3 Quality Control Sample

S&ME also collected an equipment blank (EQ-1) by pumping deionized (DI) water from a 1 liter glass container supplied by the laboratory through new inlet and outlet tubing attached to new peristaltic pump tubing directly into the laboratory containers (after passing 1 liter of water through the tubing). The blank was analyzed for the same parameters as the groundwater samples. None of the analyzed compounds were detected in the equipment blank sample except for TOC (1.1 mg/L). The source of the TOC is

likely from the laboratory supplied DI water but may be from the tubing. TOC was reported in all monitor well samples, at levels ranging from 1.1 to 5.9 mg/L.

3.4 Recommendations

Based on the results of the January 2014 monitoring event, S&ME recommends continued semi-annual groundwater monitoring.

TABLES

Table 1
Water Levels and Well Purging Data (January 22-23, 2014)
PPG Industries, Inc.
Shelby, North Carolina
S&ME Project # 1354-11-137

		Monitor Well						
Parameter	**Unit**	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**
Top-of-Casing Elevation	feet	953.03	904.41	867.01	901.39	892.41	886.65	870.34
Depth to Water from Top-of-Casing	feet	22.92	13.34	8.31	12.05	5.11	14.80	7.83
Water Level Elevation	feet	930.11	891.07	858.70	889.34	887.30	871.85	862.51
Elevation Change*	feet	2.81	2.01	-0.23	1.97	0.09	-0.08	-0.35
Well Depth from Top-of-Casing	feet	29	30	20	27	21	21	21
Sample Appearance		Clear	Clear	Clear	Clear	Clear	Clear	Clear
Flow	milliliters per minute	100	100	100	100	100	100	100
pH	standard	5.13	5.36	6.66	5.39	6.57	6.03	6.20
Conductivity	microSiemens per centimeter	43	44	107	101	120	28	34
Turbidity	nephelometric turbidity units	1.20	0.67	0.32	0.94	4.10	0.77	0.47
Dissolved Oxygen	milligrams per liter	6.54	7.31	4.27	1.48	1.52	6.55	3.44
Temperature	Celcius	11.43	12.25	8.24	10.93	11.11	11.30	10.62
ORP	millivolts	-24.8	-33.1	-33.3	-132.2	-41.6	-2.8	-3.2

Notes * Difference in feet from the previous monitoring event.

TABLE 2
WATER QUALITY DATA (January 22-23, 2014)
PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	UNITS	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	EQ-1	15A NCAC 2L STND. Current
Barium	mg/L	0.0323	0.0274	0.117	0.117	0.189	0.0178	0.053	<0.0050	0.7
Cadmium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Chromium	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Copper	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1
Iron	mg/L	0.0727	<0.0500	<0.0500	<0.0500	1.41 *	0.275	<0.0500	<0.0500	0.3
Lead	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.015
Manganese	mg/L	0.0096	0.0091	1.54 *	0.056 *	0.656 *	0.0061	0.0717 *	<0.0050	0.05
BOD	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA
Chloride	mg/L	4.9	7.7	2.5	14.4	30.6	4.4	4.5	<1.0	250
COD	mg/L	<25	<25	28.0	<25	32.0	<25	<25	<25	10
Nitrate	mg/L	2.0	0.54	0.86	0.87	0.25	0.15	0.74	<0.020	10
Sulfate	mg/L	<2.0	<2.0	16.5	<2.0	<2.0	<2.0	<2.0	<2.0	250
TDS	mg/L	<25.0	<25.0	207	50.0	65.0	<25.0	<25.0	<25.0	NA
TOC	mg/L	1.8	2.3	5.9	5.9	3.2	1.8	2.1	1.1	NA

NOTES: NA = No numerical standard
mg/L = Milligrams per liter
2L Standard = 15A NCAC 2L .0202 Groundwater Quality Standards , Class GA groundwaters.
* = Values exceeding current 15A NCAC 2L Standards (Amended April 1, 2013)

TABLE 3
WATER QUALITY DATA (MW-1)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/16/10	01/28/11	07/13/11	01/25/12	07/25/12	01/24/13	7/9-10/13	01/22-23/14
Barium	0.7	0.034	0.028	0.03	0.034	dry	dry	dry	0.0291	0.0295	0.0309	0.0278	0.0296	0.0312	dry	dry	0.0307	0.0323
Cadmium	0.002	---	---	---	---	dry	dry	dry	---	---	<0.001	<0.001	<0.0010	<0.0010	dry	dry	<0.0010	<0.0010
Chromium	0.01	---	---	---	---	dry	dry	dry	---	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050
Copper	1	---	---	---	---	dry	dry	dry	---	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050
Iron	0.30	**0.39**	---	**0.32**	**0.59**	dry	dry	dry	**0.388**	---	<0.05	**0.69**	<0.0500	**0.604**	dry	dry	0.128	0.0727
Lead	0.015	---	---	---	---	dry	dry	dry	---	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050
Manganese	0.05	0.014	0.006	0.0091	0.016	dry	dry	dry	0.0128	0.007	0.0084	0.0182	0.0065	0.0165	dry	dry	0.0094	0.0096
BOD	NA	---	---	---	---	dry	dry	dry	---	---	<2	NS	<2.0	<2.0	dry	dry	<2.0	<2.0
Chloride	250		---	6.1	---	dry	dry	dry	5.8	---	<5	NS	<5.0	5.3	dry	dry	5.0	4.9
COD	NA	---	---	---	---	dry	dry	dry	---	---	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25
Nitrate	10	2.3	2.1	2	2.6	dry	dry	dry	2	2.3	2.1	NS	2.1	2.2	dry	dry	2.2	2.0
Sulfate	250		---	---	---	dry	dry	dry	---	---	<5	NS	<5.0	<5.0	dry	dry	<2.0	<2.0
TDS	500	---	30	---	50	dry	dry	dry	44	52	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25.0
TOC	NA	3.5	5	---	1.8	dry	dry	dry	2.7	---	<1	NS	1.2	1.1	dry	dry	1.2	1.8

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-2)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/19/10	07/16/10	01/27/11	07/12/11	01/25/12	07/25/12	01/24/13	07/9-10/13	01/22-23/14
Barium	0.7	0.027	0.025	0.015	0.026	0.0238	0.0305	0.0229	0.0269	0.0276	0.0241	0.0257	0.0263	0.0291	0.0258	0.0254	0.0255	0.0274
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	---	0.11	---	**0.49**	---	0.0591	---	**0.341**	---	<0.05	<0.05	0.13	<0.05	**0.601**	<0.0050	0.0525	<0.050
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	0.015	0.019	0.016	0.028	0.0236	**0.0539**	0.0204	0.0249	0.0099	0.0079	0.0093	0.0142	0.0106	0.0165	0.0125	0.0106	0.0091
BOD	NA	4	---	---	---	---	---	10.8	---	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250		5.5	6.4	6.9	---	17.6	---	6.7	7.6	8	6.8	7.4	8.2	5	3.3	7.5	7.7
COD	NA	---	---	---	---	---	---	---	---	---	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25
Nitrate	10	0.5	0.42	0.4	0.48	0.3	0.32	0.2	0.42	0.53	0.53	0.45	0.47	0.37	0.29	0.065	0.61	0.54
Sulfate	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
TDS	500	---	42	---	---	32	28	---	52	30	<25	<25	<25.0	<25.0	<25.0	36	27.0	<25.0
TOC	NA	6.2	9	2	3.7	---	8.2	10.7	2.9	2.5	<1	1.2	2.4	2.6	2	3.3	2.1	2.3

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-3)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/16/10	01/27/11	07/12/11	01/25/12	07/25/12	01/23/13	07/9-10/13	01/22-23/14
Barium	0.7	0.082	0.11	0.074	0.096	0.0854	0.0911	0.0787	0.0885	0.105	0.127	0.115	0.124	0.109	0.108	0.105	0.124	0.117
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	**7.9**	**1.5**	**6.6**	**0.56**	**2.5**	**4.07**	**1.52**	**0.328**	**0.845**	0.0969	0.252	0.133	**0.132**	0.163	**1.08**	0.0797	<0.050
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	**4**	**2.1**	**4.4**	**3.9**	**3.91**	**4.11**	**3.17**	**3.28**	**2**	**1.96**	**1.96**	**0.83**	**2.14**	**2.9**	**4.1**	**1.8**	**1.5**
BOD	NA	2	---	---	---	---	---	---	---	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	2.5	2.7	3.0	2.5
COD	NA	---	---	---	---	---	---	31	---	---	<25	<25	<25.0	53	<25.0	<25	<25	28.0
Nitrate	10	0.1	0.27	0.1	---	0.1	---	0.19	0.13	0.48	0.71	0.97	0.93	0.79	0.8	0.44	1.0	0.86
Sulfate	250		29	22	30	23.9	27.5	24.3	26.4	17.3	19.9	19.9	13.7	21.1	22.5	18.6	15.4	16.5
TDS	500	82	120	84	86	104	114	86	126	144	124	106	113	116	145	177	137	207
TOC	NA	10	18	4.3	5.3	---	14.6	26.3	6.8	1.9	5.3	4.7	5.2	38.8	<1.0	5	5.6	5.9

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-4)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/19/10	07/15/10	01/27/11	07/12/11	01/25/12	07/25/12	01/24/13	07/9-10/13	01/22-23/14
Barium	0.7	0.15	0.18	0.15	0.2	0.163	0.225	0.333	**1.12**	0.129	0.133	0.12	0.123	**0.126**	0.118	0.118	0.112	0.117
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	---	---	**0.023**	---	---	**0.0285**	**0.208**	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	---	---	---	0.0024	---	---	0.0112	0.0529	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	0.17	**0.34**	**0.65**	**2.4**	**1.45**	**0.49**	**8.08**	**40.1**	---	<0.05	<0.05	<0.0500	<0.0500	<0.500	<0.0500	<0.0500	<0.050
Lead	0.015	---	---	---	---	---	---	---	0.009	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	**0.058**	**0.063**	**0.092**	**0.1**	**0.187**	**0.137**	**0.26**	**0.902**	**0.0681**	**0.0694**	**0.0745**	**0.0691**	**0.093**	**0.071**	**0.0739**	**0.0569**	**0.056**
BOD	NA	6	2.3	2	2	2.2	4.5	4.4	4.1	2	<2	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250		20	19	19	19	21.2	19.8	19.2	19.9	20.8	18.4	17.5	18.4	16.2	13.4	15.5	14.4
COD	NA	---	41	48	---	---	---	48	50.1	---	32	<25	<25.0	<25.0	<25.0	<25	<25	<25
Nitrate	10	0.81	0.91	1	1.2	0.94	0.72	0.71	0.62	0.81	0.76	0.86	0.83	0.87	0.86	1.0	0.95	0.87
Sulfate	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
TDS	500	78	110	38	120	84	88	48	130	78	76	72	77	51	76	78	74	50
TOC	NA	19	23	8.2	12	4.2	15	20.6	8.2	9.6	38.6	6.2	6.5	5.5	4.4	4.5	5.6	5.9

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-5)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/16/10	01/28/11	07/13/11	01/26/12	07/25/12	01/23/13	07/9-10/13	01/22-23/14
Barium	0.7	0.2	0.13	0.19	0.22	0.12	0.174	0.131	0.182	0.152	0.17	0.0944	0.161	0.136	0.153	0.176	0.155	0.189
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	0.003	---	---	0.0089	---	0.0067	---	**0.0141**	---	<0.005	<0.005	<0.0050	0.0064	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	0.003	---	---	0.0095	---	---	---	0.0104	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	**1.3**	---	0.2	7.3	**0.591**	**0.307**	**1.03**	**11**	**1.52**	**1.23**	**4.75**	**2.07**	**1.98**	**1.39**	**1.11**	**5.94**	**1.41**
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	**0.22**	**0.077**	**0.18**	**0.26**	**0.217**	**0.155**	**0.925**	**0.245**	**0.306**	**0.145**	**0.643**	**0.0853**	**0.299**	**0.0546**	**0.172**	**0.217**	**0.656**
BOD	NA	---	---	---	---	---	---	---	---	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250		12	15	8.2	10.8	7.8	11.7	8.1	16.6	11.4	15.4	10.8	19.9	11	15.6	22.5	30.6
COD	NA	---	28	---	---	---	---	---	36	---	<25	<25	<25.0	<25.0	<25.0	<25	<25	32.0
Nitrate	10	2.3	1.9	2.1	4.5	2.2	3.1	2.6	3.3	1.2	3.7	0.99	3.5	0.79	3.2	1.3	0.27	0.25
Sulfate	250		---	---	---	---	---	---	9.5	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
TDS	500	20	110	---	24	50	36	30	56	76	32	52	34	37	39	55	57	65.0
TOC	NA	5.6	10	2.1	2.6	---	3.7	8.1	2.1	2.6	1.3	2	1.8	3	1.4	2.5	3.3	3.2

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-6)

PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/15/10	01/28/11	07/13/11	01/26/12	07/25/12	01/23/13	07/9-10/13	01/22-23/14
Barium	0.7	0.043	0.1	0.05	0.13	0.0436	0.0473	0.0507	0.0272	0.0202	0.0256	0.033	0.0298	0.0865	0.036	0.0287	0.0146	0.0178
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	0.0082	---	**0.017**	---	---	0.0052	---	---	<0.005	<0.005	<0.0050	**0.019**	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	---	0.003	---	0.016	---	---	---	---	---	<0.005	<0.005	<0.0050	0.0109	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	**0.21**	**2.8**	**0.58**	7.7	0.143	---	**1.86**	0.0503	---	**0.449**	0.0536	<0.0500	**5.7**	**5.16**	<0.050	0.237	0.275
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	0.02	**0.19**	**0.1**	**0.24**	0.0305	0.0245	**0.0877**	**0.112**	0.0054	**0.511**	0.0485	**0.0528**	**0.134**	**1.54**	**0.0718**	0.0102	0.0061
BOD	NA	2	2	---	---	---	---	---	---	---	9.4	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250		6.1	---	8.6	9.2	11	9.1	7.5	5.5	8	7.7	8.1	7.8	8.5	6.7	4.5	4.4
COD	NA	---	---	---	---	---	---	---	31.1	---	<25	<25	<25.0	<25.0	<25.0	<25	<25	<25
Nitrate	10	0.18	0.82	0.91	0.49	0.72	0.69	0.46	0.23	0.14	0.11	0.26	<0.20	<0.20	0.046	0.23	0.029	0.15
Sulfate	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
TDS	500	---	58	---	---	24	34	---	52	56	<25	<25	<25.0	<25.0	40	41	<25.0	<25.0
TOC	NA	3.9	5.3	1.2	---	---	1.3	4.4	8.4	7.5	<1	<1	1.4	1.2	1.3	1.5	1.4	1.8

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-7)

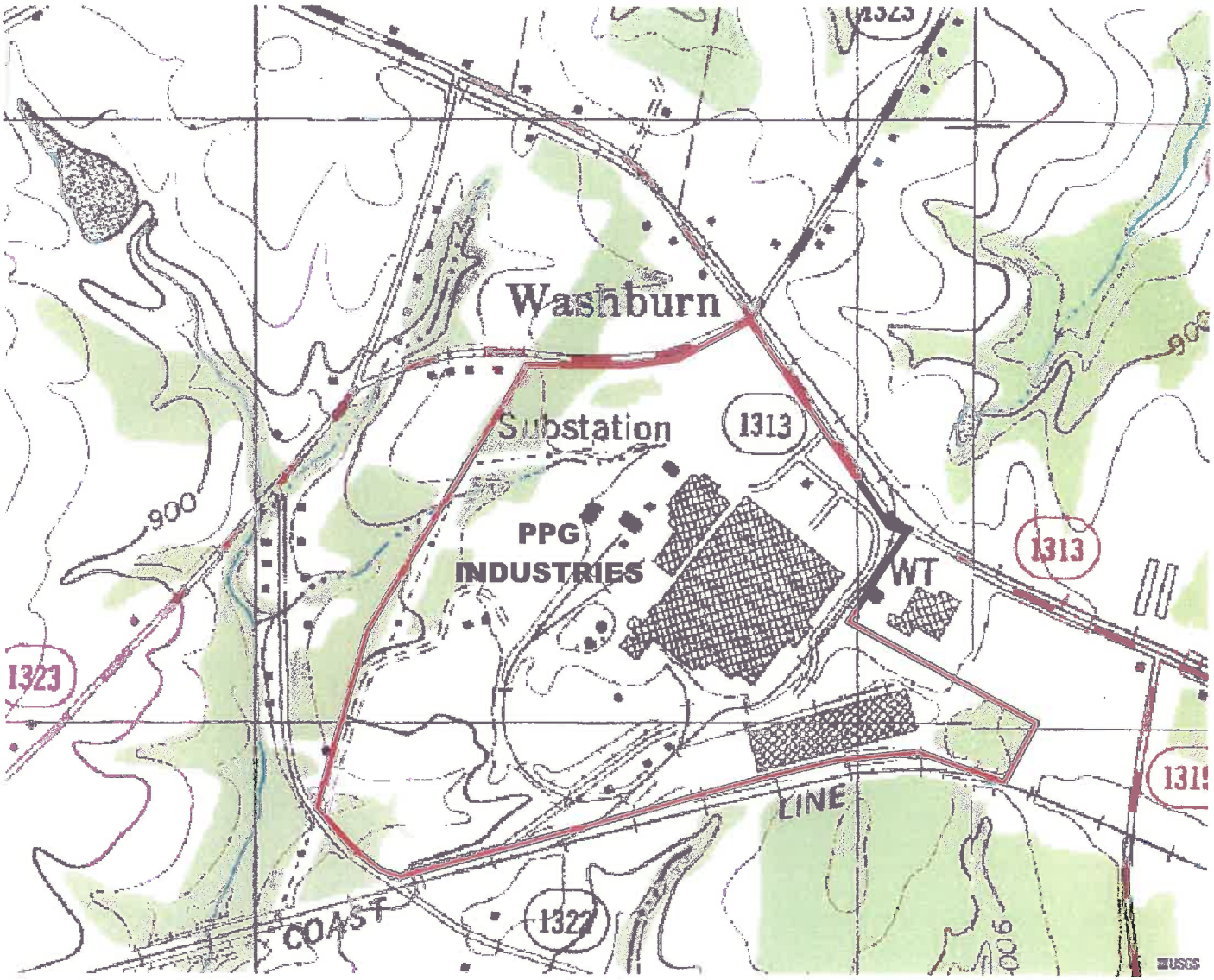
PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

PARAMETER	2L STND.	SAMPLE COLLECTION DATE																
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/15/10	01/27/11	07/12/11	01/26/12	07/25/12	01/23/13	07/9-10/13	01/22-23/14
Barium	0.7	0.057	0.094	0.026	0.048	0.0548	0.0514	0.0526	0.0492	0.0473	0.0493	0.0462	0.0507	0.0523	0.548	0.0551	0.0545	0.053
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	**0.012**	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	---	0.01	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron	0.30	**0.32**	**4.3**	**0.43**	---	0.051	---	---	0.0738	---	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Manganese	0.05	**0.092**	**0.17**	0.026	**0.083**	**0.0898**	**0.0779**	**0.0733**	**0.0683**	**0.0651**	0.047	**0.0586**	**0.0542**	**0.067**	**0.0618**	**0.0684**	**0.0707**	**0.0717**
BOD	NA	3	---	---	---	---	3.8	---	---	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloride	250	-	8.5	6	---	---	5.2	---	---	---	<5	<5	<5.0	<5.0	4.2	4.9	5.2	4.5
COD	NA	<25	---	180	---	---	---	---	---	---	<25	<25	<25.0	<25.0	<25.0	<25	<25	<25
Nitrate	10	0.57	0.22	0.11	0.94	1.3	1.2	1.3	0.85	1	1.3	0.79	0.89	0.93	1	0.83	0.82	0.74
Sulfate	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
TDS	500	---	48	---	---	20	22	---	36	66	<25	<25	<25.0	<25.0	29	30	<25.0	<25.0
TOC	NA	3.3	5.1	1.3	---	---	4.3	4.3	1.7	1.3	<1	1	1.5	<1.0	1.1	1.5	11.5	2.1

BOD = Biological Oxygen Demand
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TOX = Total Organic Halides

All concentrations in milligrams per liter (mg/L)
--- = Below quantitation limits unless otherwise noted
Blank = Not Sampled
Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

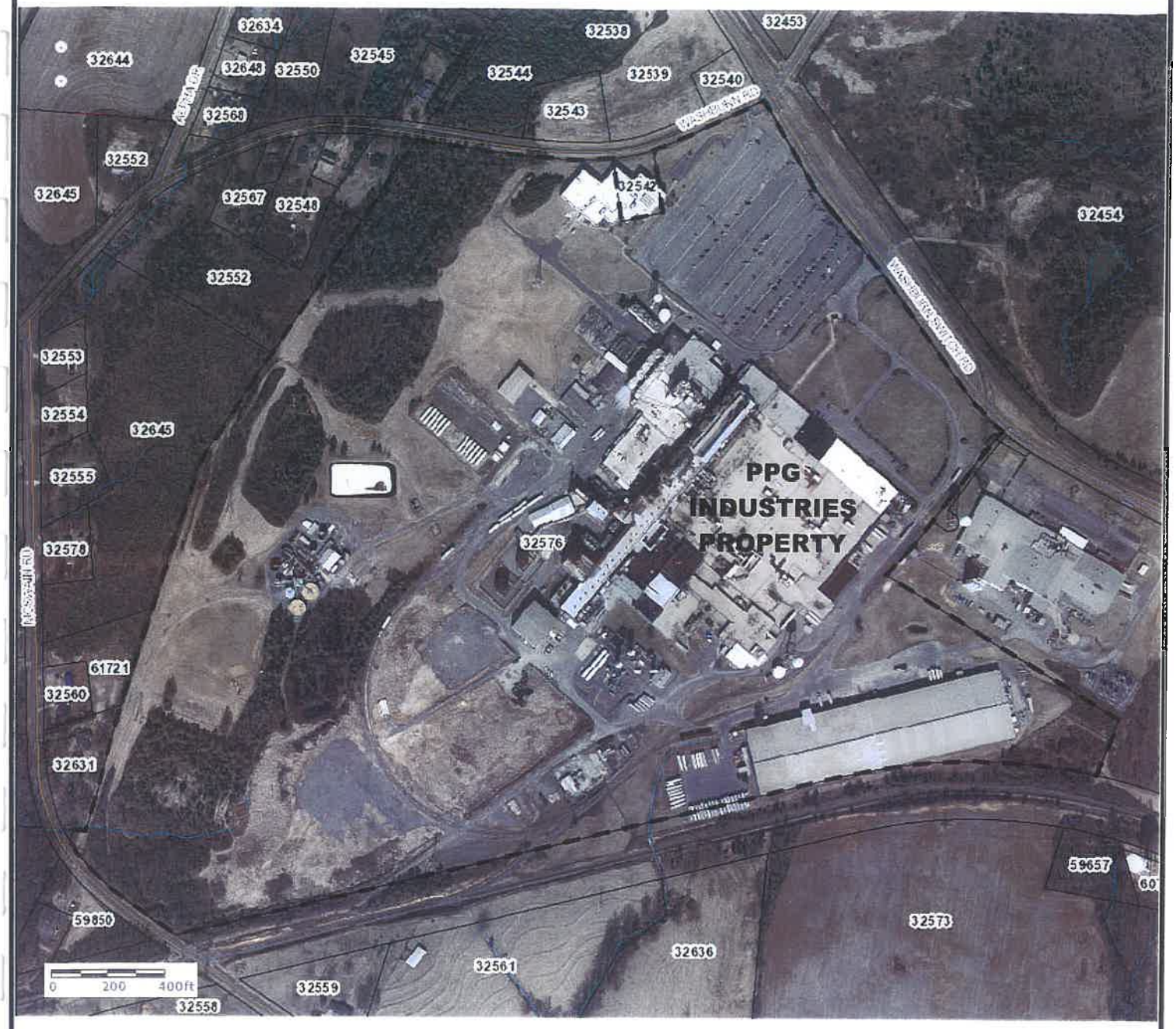
FIGURES



Source: USGS Topographic Map obtained from http://terraserver-usa.com

Approximate Location of Subject Property

Scale: Not To Scale	S&ME	**SITE LOCATION MAP** PPG Industries 940 Washburn Switch Road Shelby, North Carolina	**Figure**
Drawn by: CSM			**1**
Checked by: WAQ			
Date: 1-30-2014		S&ME Job No.: 1354-11-137	

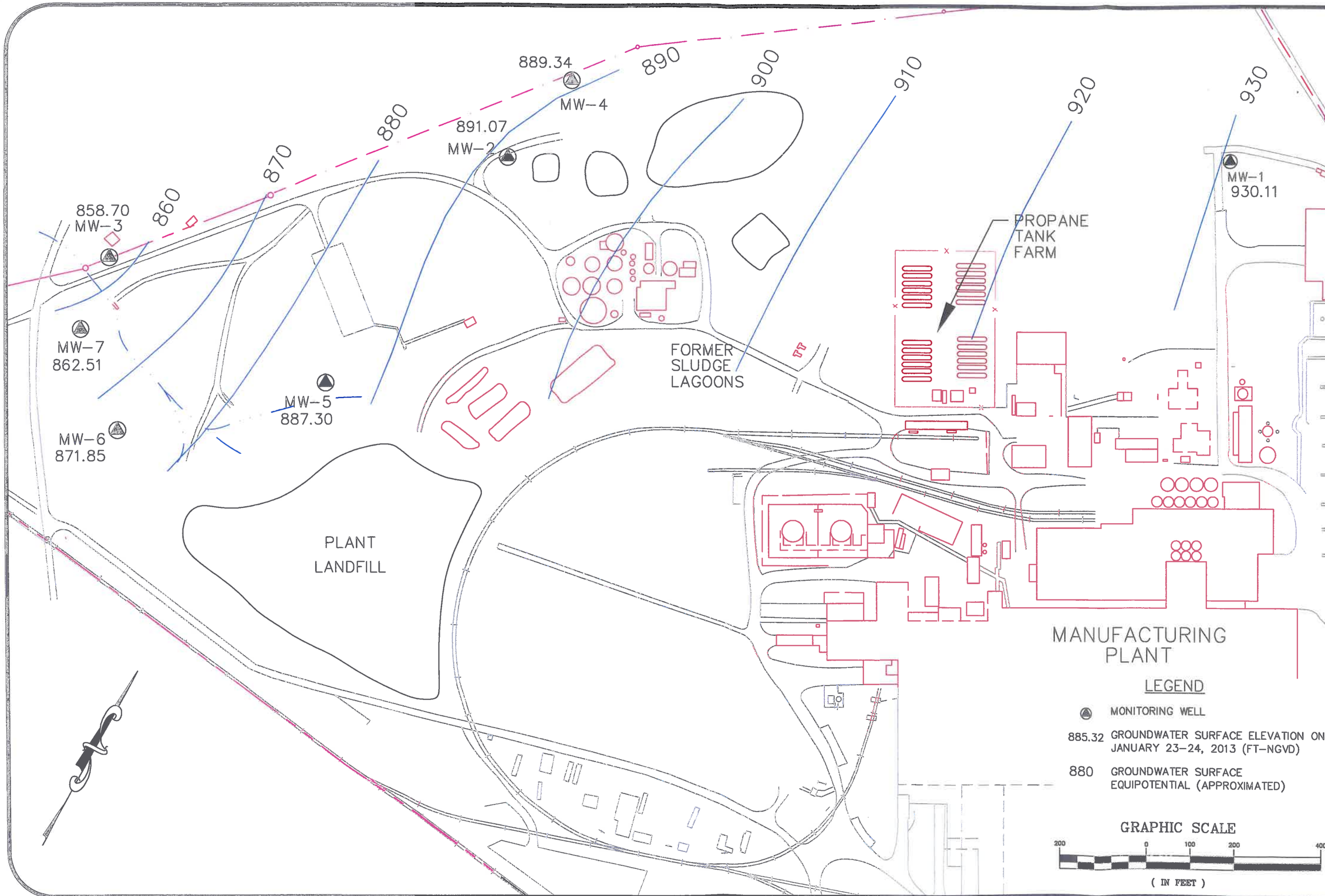


Property Boundary

32576 Cleveland County Parcel ID #'s

Source: 2010 Aerial obtained from Cleveland County GIS Website

Scale: As Shown	S&ME	**SITE AERIAL MAP** PPG Industries 940 Washburn Switch Road Shelby, North Carolina	**Figure**
Drawn by: CSM			**2**
Checked by: WAQ			
Date: 03-17-14		S&ME Job No.: 1354-11-137	



DATE: 03-17-14
DRAWN BY: CSM
CHECKED BY:
SCALE: AS SHOWN
PROJECT NO. 1354-11-137

S&ME
WWW.SMEINC.COM

GROUNDWATER CONTOUR MAP
JANUARY 2014
PPG INDUSTRIES INC.
SHELBY, NORTH CAROLINA

FIGURE NO.
3

G:\1354\2011\137 PPG Shelby\FIG 3 JAN 2014.dwg

APPENDIX I
FIELD SAMPLING FORMS

DAILY FIELD REPORT

S&ME

Field Personnel: C. MARCHIN
Project Name: PPG SHELBY SEMI ANNUAL SAMPLING
Project Number: 1354-11-137
Incident Number: N/A
Project Location: SHELBY, NC

S&ME, Inc.
9751 Southern Pine Blvd. (28273)
Charlotte, NC 28241
(704) 523-4726
Fax (704) 525-3953

Client/Owner: PPG SHELBY

Site Arrival/Departure Times: 0830 / 1630

Date: 1/22/14 Total Mileage: 68

Other Personnel: BERNARD (PPG) Total Project Hours for the Day: 10.5

General Scope: SAMPLE GROUNDWATER IN WWTP WELLS

Equipment Used **	Quantity	Equipment Used **	Quantity	Equipment Used **	Quantity
PERISTALTIC PUMP	1	W/L PROBE	1		
YSI METER	1				

** : *Submit appropriate Equipment Forms for S&ME Equipment*

Detailed Notes (Describe activities in detail, use additional pages as needed):

		Time Spent (1/2-hr Increments)
0830	ARRIVE ON SITE, CHECK IN @ GUARD SHACK	
0835	MEET GUY/JOHN/BERNARD @ WWTP	
0840	BERNARD + I MOB TO MW-3	
0900	SETUP FOR SAMPLING	
1045	SAMPLE MW-3, MOB TO MW-7	
1245	SAMPLE MW-7, MOB TO MW-6	
1410	SAMPLE MW-6, MOB TO MW-5	
1545	SAMPLE MW-5, MOB ~~OFFS~~ TO WWTP	
1600	ICE SAMPLES, STORE IN WWTP	
1630	OFF SITE	
	Total On-Site Time	

Problems encountered and who/how solved problem: MW-7 STEEL CASING ON STICK UP NEEDS TO BE DRAINED + FILLED W/SAND, PPG CONTACT (RICHARD YOUNG) MADE AWARE OF ISSUE

Page 1 of 1

Field Personnel Signature: [signature] Date: 1/22/14

DAILY FIELD REPORT

S&ME

Field Personnel: C. MARCHIN
BERNARD (PPG)
Project Name: 1354-11-137
Project Number: PPG SHELBY
Date: 1/23/14

Page 2
of Pages 2

ACTIVITIES PERFORMED	Time Spent (1/2-hr Increments)
0830 ADS; MEET BERNARD @ WWTP	
0840 SETUP FOR SAMPLING ON MW-2	
1005 COLLECT MW-2, MOB TO MW-4	
1130 COLLECT MW-4, MOB TO MW-1	
1315 COLLECT MW-1, MOB TO WWTP	
1400 PACK UP; DEPART FOR PACE LABS	
1520 DROP SAMPLES @ PACE, DEPART FOR OFFICE	
ADS: 0830 DEPART: 1400	
MILEAGE: 100	
PROBERT HOURS: 10.0	
On-Site Time Total	

Field Personnel Signature: [signature] Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-1
DATE: 1/23/14
PERSONNEL: C. MACHIN

WELL CONDITION: GOOD
WEATHER: CLEAR 30's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.0 ft
Initial Depth to Water (DTW) from TOC: 22.92 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~28.0 ft
Initial DTW - 0.33 ft from TOC: 23.25 ft

Water Column: 6.08 ft
Well Diameter: 4" in
Borehole Diameter: — in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	1200	1215	1230	1245	1300	1310	1315	
DTW (ft)	22.92	23.01	23.05	23.08	23.11	23.12	23.13	
Vol Purged (Cumm-ml)	0	1500	3000	4500	6000	7000	7500	
Flow Rate (ml/min)	100	100	100	100	100	100	100	
pH (Stand Units)	5.39	5.38	5.20	5.15	5.18	5.17	5.13	
DO (mg/L)	5.86	5.84	6.33	6.58	6.52	6.51	6.54	
Conductivity (mS/sec)	47	48	44	44	43	43	43	
Turbidity (NTUs)	1.2	0.48	0.53	0.83	0.71	0.42	1.2	
Temperature (°C)	12.38	12.12	11.41	11.49	11.41	11.40	11.43	
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	
ORP	-82.4	-54.7	-35.8	-29.0	-21.0	-23.4	-24.8	

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	~~2~~ 3	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride, SO4	1	Plastic	250 ml	None
SO4, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1315
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-2
DATE: 1/23/14
PERSONNEL: G. MARCHIN

WELL CONDITION: GOOD
WEATHER: CLEAR 19°F

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.82 ft
Initial Depth to Water (DTW) from TOC: 13.34 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~28.0 ft
Initial DTW - 0.33 ft from TOC: 13.67 ft

Water Column: 16.64 ft
Well Diameter: 4 in
Borehole Diameter: in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	0845	0915	0930	0945	1005			
DTW (ft)	13.34	13.56	13.58	13.60	13.60			
Vol Purged (Cumm-ml)	0	3000	4500	6000	800			
Flow Rate (ml/min)	100	100	100	100	100			
pH (Stand Units)	5.50	5.43	5.39	5.37	5.36			
DO (mg/L)	10.50	7.77	7.17	7.25	7.31			
Conductivity (mS/sec)	58	44	43	44	44			
Turbidity (NTUs)	3.8	0.43	0.83	0.54	0.67			
Temperature (°C)	11.90	11.99	12.26	12.24	12.25			
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE			
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR			
ORP	-85.0	-72.9	-50.8	-44.4	-33.1			

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	2	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride, SO4	1	Plastic	250 ml	None
SO4, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1005
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-3
DATE: 1/22/14
PERSONNEL: C. MARCHAN

WELL CONDITION: GOOD
WEATHER: CLEAR 20's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: ____ ft
Total Well Depth from TOC: 20.00 ft
Initial Depth to Water (DTW) from TOC: 8.31 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~19.0 ft
Initial DTW - 0.33 ft from TOC: 8.04 ft

Water Column: 11.69 ft
Well Diameter: 4 in
Borehole Diameter: ____ in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	0925	0955	1015	1025	1035	1045		
DTW (ft)	8.31	8.64	8.66	8.68	8.68	8.69		
Vol Purged (Cumm-ml)	0	3600	5600	6600	7600	8600		
Flow Rate (ml/min)	120	100	100	100	100	100		
pH (Stand Units)	6.76	6.69	6.69	6.67	6.65	6.66		
DO (mg/L)	6.40	5.46	4.71	4.19	4.23	4.27		
Conductivity (mS/sec)	0.112	0.107	0.105	0.106	0.107	0.107 *	REPORTED IN	
Turbidity (NTUs)	4.2	0.64	0.56	0.72	0.40	0.32	S/sec	
Temperature (°C)	9.37	8.64	8.22	8.24	8.25	8.24		
Odor (Subjective)	~~CLEAR~~ NO	NO	NO	NO	NO	NO		
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	-35.9 *	-41.8 *	-39.0 *	-32.4 *	-34.4 *	-33.3 *		

Parameters		#	Type	Size	Preservative
BOD	✓	1	Plastic	1 L	None
COD	✓	1	Plastic	125 ml	H2SO4
TOC	✓	~~2~~ 3	Glass	40 ml	HCL
TDS	✓	1	Plastic	500 ml	None
Metals	✓	1	Plastic	250 ml	HNO3
Chloride / SO4	✓	1	Plastic	250 ml	None
~~SO4~~, NO2, NO3	✓	1	Plastic	250 ml	None

Sample Time: ~~1~~ 1045
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-4
DATE: 1/23/14
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: CLEAR 20's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 27.73 ft
Initial Depth to Water (DTW) from TOC: 12.05 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: 26.0 ft
Initial DTW - 0.33 ft from TOC: 28.06 ft

Water Column: 15.68 ft
Well Diameter: 2" in
Borehole Diameter: in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	1030	1045	1100	1110	1120	1130		
DTW (ft)	12.05	12.17	12.21	12.20	12.18	12.19		
Vol Purged (Cumm-ml)	0	1500	3000	4000	5000	6000		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	5.35	5.39	5.37	5.38	5.39	5.39		
DO (mg/L)	10.53	1.70	1.50	1.49	1.42	1.40		
Conductivity (mS/sec)	114	101	99	99	101	101		
Turbidity (NTUs)	16.7	8.4	1.3	0.77	0.38	0.94		
Temperature (°C)	10.39	10.68	10.88	10.85	10.90	10.93		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	-62.1	-120.4	-133.7	-133.3	-132.9	-132.2		

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	~~2~~ 3	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride, SO_4	1	Plastic	250 ml	None
~~SO4~~, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1130
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-5
DATE: 1/22/14
PERSONNEL: C. MARCHIN

WELL CONDITION: ~~CLEAR 30's~~ GOOD
WEATHER: CLEAR 30's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 5.11 ft
Sand Pack or Open Hole: SAND
Depth to intake from TOC: 20.0 ft
Initial DTW - 0.33 ft from TOC: 5.44 ft

Water Column: 15.89 ft
Well Diameter: 2 in
Borehole Diameter: — in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	1430	1500	1515	1525	1535	1545		
DTW (ft)	5.11	5.23	5.25	5.28	5.30	5.31		
Vol Purged (Cumm-ml)	0	3000	4500	5500	6500	7500		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	6.69	6.63	6.61	6.58	6.56	6.57		
DO (mg/L)	1.89	1.76	1.59	1.52	1.54	1.52		
Conductivity (mS/sec)	121	121	121	118	119	120		
Turbidity (NTUs)	>1000	121	58	22	6.4	4.1		
Temperature (°C)	11.21	11.32	11.39	11.20	11.14	11.11		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	IRON IN WATER	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	-38.9	-42.5	-44.0	-41.8	-42.4	-41.6		

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	~~2~~ 3	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride, SO4	1	Plastic	250 ml	None
~~SO4~~, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1545
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-6 **WELL CONDITION:** GOOD
DATE: 1/22/14
PERSONNEL: C. MARCHIN **WEATHER:** CLEAR 30's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: ____ ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 14.80 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~20.0 ft
Initial DTW - 0.33 ft from TOC: 14.13 ft

Water Column: 6.2 ft
Well Diameter: 2 in
Borehole Diameter: ____ in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	1300	1330	1340	1350	1400	1410		
DTW (ft)	14.80	14.93	14.96	14.98	14.96	14.94		
Vol Purged (Cumm-ml)	0	3000	4000	5000	6000	7000		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	6.10	6.08	6.03	6.02	6.00	6.03		
DO (mg/L)	6.60	6.54	6.52	6.51	6.54	6.55		
Conductivity (mS/sec)	28	27	27	27	27	28		
Turbidity (NTUs)	73	14	8.2	2.1	0.48	0.77		
Temperature (°C)	11.44	11.38	11.32	11.31	11.29	11.30		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	SOME IRON	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	-8.9	-6.2	-3.4	-3.2	-2.9	-2.8		

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	3	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride	1	Plastic	250 ml	None
SO4, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1410
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

PPG INDUSTRIES, INC.
940 WASHBURN SWITCH RD
SHELBY, NORTH CAROLINA
MONITOR WELL SAMPLING LOG

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-7 **WELL CONDITION:** GOOD
DATE: 1/22/14
PERSONNEL: C. MARCHIN **WEATHER:** CLEAR 20's

REASON FOR SAMPLING: ~~2012~~ 2014 January Sampling Event

TOC - Ground Level: _____ ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 7.83 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: 20.0 ft
Initial DTW - 0.33 ft from TOC: 8.16 ft

Water Column: 13.17 ft
Well Diameter: _____ in
Borehole Diameter: _____ in

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P Turbidity Meter

Record of Well Evacuation

Time	1130	1145	1200	1210	1220	1230	1245	
DTW (ft)	7.83	7.87	7.93	7.95	7.97	7.97	7.96	
Vol Purged (Cumm-ml)	0	1500	2500	3500	4500	5500	7000	
Flow Rate (ml/min)	100	100	100	100	100	100	100	
pH (Stand Units)	6.53	6.55	6.27	6.21	6.23	6.19	6.20	
DO (mg/L)	4.0	3.82	3.48	3.53	3.50	3.49	3.44	
Conductivity (mS/sec)	39	38	35	35	34	34	34	
Turbidity (NTUs)	7.2	1.4	1.2	0.67	0.53	0.86	0.47	
Temperature (°C)	10.32	10.01	10.39	10.41	10.58	10.60	10.62	
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE	NONE	
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	
ORP	-28.0	-26.5	-16.2	-9.6	-4.2	-4.0	-3.2	

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	3	Glass	40 ml	HCL
TDS	1	Plastic	500 ml	None
Metals	1	Plastic	250 ml	HNO3
Chloride / SO_4	1	Plastic	250 ml	None
SO4, NO2, NO3	1	Plastic	250 ml	None

Sample Time: 1245
Laboratory: Pace Analytical
Shipping Date: 1/23/14
Delivery Date: 1/23/14

APPENDIX II
LABORATORY REPORT

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Huntersville, NC 28078
(704)875-9092

February 03, 2014

Mr. Al Quarles
S&ME, Inc.
9751 Southern Pine Blvd.
Charlotte, NC 28273

RE: Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Dear Mr. Quarles:
Enclosed are the analytical results for sample(s) received by the laboratory on January 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
Project Manager

Enclosures

cc: Roger Smith, S&ME, Inc.

NELAP ACCREDITED TNI LABORATORY

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Asheville Certification IDs
2225 Riverside Dr., Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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(704)875-9092

SAMPLE ANALYTE COUNT

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187535001	MW-1	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	DAS	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535002	MW-2	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	DAS	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535003	MW-3	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	DAS	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535004	MW-4	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	WRC	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535005	MW-5	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	WRC	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A

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SAMPLE ANALYTE COUNT

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535006	**MW-6**	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	WRC	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535007	**MW-7**	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	WRC	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A
92187535008	**EQ-1**	EPA 200.7	JDA	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	WRC	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	EWS	1	PASI-A
		SM 5310B	SAE	1	PASI-A

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SUMMARY OF DETECTION

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92187535001	**MW-1**					
EPA 200.7	Barium	32.3	ug/L	5.0	01/24/14 19:44	
EPA 200.7	Copper	<5.0	ug/L	5.0	01/24/14 19:44	
EPA 200.7	Iron	72.7	ug/L	50.0	01/24/14 19:44	
EPA 200.7	Manganese	9.6	ug/L	5.0	01/24/14 19:44	
EPA 353.2	Nitrogen, Nitrate	2.0	mg/L	0.020	01/24/14 00:24	
SM 4500-Cl-E	Chloride	4.9	mg/L	1.0	01/29/14 19:32	
SM 5310B	Total Organic Carbon	1.8	mg/L	1.0	01/30/14 16:27	
92187535002	**MW-2**					
EPA 200.7	Barium	27.4	ug/L	5.0	01/24/14 19:47	
EPA 200.7	Chromium	<5.0	ug/L	5.0	01/24/14 19:47	
EPA 200.7	Iron	<50.0	ug/L	50.0	01/24/14 19:47	
EPA 200.7	Manganese	9.1	ug/L	5.0	01/24/14 19:47	
EPA 353.2	Nitrogen, Nitrate	0.54	mg/L	0.020	01/24/14 00:26	
SM 4500-Cl-E	Chloride	7.7	mg/L	1.0	01/29/14 19:32	
SM 5310B	Total Organic Carbon	2.3	mg/L	1.0	01/30/14 17:05	
92187535003	**MW-3**					
EPA 200.7	Barium	117	ug/L	5.0	01/24/14 19:50	
EPA 200.7	Iron	<50.0	ug/L	50.0	01/24/14 19:50	
EPA 200.7	Manganese	1540	ug/L	5.0	01/24/14 19:50	
SM 2540C	Total Dissolved Solids	207	mg/L	25.0	01/27/14 15:47	
EPA 300.0	Sulfate	16.5	mg/L	2.0	01/30/14 13:30	
EPA 353.2	Nitrogen, Nitrate	0.86	mg/L	0.020	01/24/14 00:27	
SM 4500-Cl-E	Chloride	2.5	mg/L	1.0	01/29/14 19:33	
SM 5220D	Chemical Oxygen Demand	28.0	mg/L	25.0	01/31/14 15:30	
SM 5310B	Total Organic Carbon	5.9	mg/L	1.0	01/30/14 17:17	
92187535004	**MW-4**					
EPA 200.7	Barium	117	ug/L	5.0	01/24/14 19:58	
EPA 200.7	Iron	<50.0	ug/L	50.0	01/24/14 19:58	
EPA 200.7	Manganese	56.0	ug/L	5.0	01/24/14 19:58	
SM 2540C	Total Dissolved Solids	50.0	mg/L	25.0	01/27/14 15:48	
EPA 353.2	Nitrogen, Nitrate	0.87	mg/L	0.020	01/24/14 00:28	
SM 4500-Cl-E	Chloride	14.4	mg/L	1.0	01/29/14 19:34	
SM 5310B	Total Organic Carbon	5.9	mg/L	1.0	01/30/14 17:29	
92187535005	**MW-5**					
EPA 200.7	Barium	189	ug/L	5.0	01/24/14 20:01	
EPA 200.7	Chromium	<5.0	ug/L	5.0	01/24/14 20:01	
EPA 200.7	Copper	<5.0	ug/L	5.0	01/24/14 20:01	
EPA 200.7	Iron	1410	ug/L	50.0	01/24/14 20:01	
EPA 200.7	Manganese	656	ug/L	5.0	01/24/14 20:01	
SM 2540C	Total Dissolved Solids	65.0	mg/L	25.0	01/27/14 14:43	
EPA 353.2	Nitrogen, Nitrate	0.25	mg/L	0.020	01/24/14 00:22	
SM 4500-Cl-E	Chloride	30.6	mg/L	1.0	01/29/14 19:35	
SM 5220D	Chemical Oxygen Demand	32.0	mg/L	25.0	01/31/14 15:30	
SM 5310B	Total Organic Carbon	3.2	mg/L	1.0	01/30/14 17:40	

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SUMMARY OF DETECTION

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92187535006	**MW-6**					
EPA 200.7	Barium	17.8	ug/L	5.0	01/24/14 20:13	
EPA 200.7	Iron	275	ug/L	50.0	01/24/14 20:13	
EPA 200.7	Manganese	6.1	ug/L	5.0	01/24/14 20:13	
EPA 353.2	Nitrogen, Nitrate	0.15	mg/L	0.020	01/24/14 00:12	M1
SM 4500-Cl-E	Chloride	4.4	mg/L	1.0	01/30/14 01:48	
SM 5310B	Total Organic Carbon	1.8	mg/L	1.0	01/30/14 17:50	
92187535007	**MW-7**					
EPA 200.7	Barium	53.0	ug/L	5.0	01/24/14 20:32	
EPA 200.7	Copper	<5.0	ug/L	5.0	01/24/14 20:32	
EPA 200.7	Iron	<50.0	ug/L	50.0	01/24/14 20:32	
EPA 200.7	Manganese	71.7	ug/L	5.0	01/24/14 20:32	
EPA 353.2	Nitrogen, Nitrate	0.74	mg/L	0.020	01/24/14 00:06	M1
SM 4500-Cl-E	Chloride	4.5	mg/L	1.0	01/30/14 01:50	
SM 5310B	Total Organic Carbon	2.1	mg/L	1.0	01/30/14 18:05	M1
92187535008	**EQ-1**					
EPA 200.7	Chromium	<5.0	ug/L	5.0	01/24/14 20:35	
EPA 200.7	Copper	<5.0	ug/L	5.0	01/24/14 20:35	
EPA 200.7	Manganese	<5.0	ug/L	5.0	01/24/14 20:35	
SM 5310B	Total Organic Carbon	1.1	mg/L	1.0	01/30/14 18:35	

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **EPA 200.7**
Description: 200.7 MET ICP
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for SM 5210B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/17887

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92187073001,92187535001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1128450)
  - Sulfate
- MSD (Lab ID: 1128451)
  - Sulfate

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1128448)
  - Sulfate
- MSD (Lab ID: 1128449)
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/17847

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92187535006,92187535007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1127201)
  - Nitrogen, Nitrate
- MS (Lab ID: 1127203)
  - Nitrogen, Nitrate
- MSD (Lab ID: 1127202)
  - Nitrogen, Nitrate
- MSD (Lab ID: 1127204)
  - Nitrogen, Nitrate

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for SM 4500-Cl-E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/17903

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92186340004,92187216001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1129920)
  - Chloride
- MSD (Lab ID: 1129921)
  - Chloride
- MSD (Lab ID: 1129923)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **SM 5220D**
Description: 5220D COD
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for SM 5220D. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Method: **SM 5310B**
Description: 5310B TOC
Client: S&ME, Inc.
Date: February 03, 2014

General Information:
8 samples were analyzed for SM 5310B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/17880

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92186163001,92187535007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1128105)
  - Total Organic Carbon
- MSD (Lab ID: 1128106)
  - Total Organic Carbon

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-1 **Lab ID: 92187535001** Collected: 01/23/14 00:00 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**32.3**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:44	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 19:44	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:44	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:44	7440-50-8	
Iron	**72.7**	ug/L	50.0	1	01/24/14 08:50	01/24/14 19:44	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:44	7439-92-1	
Manganese	**9.6**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:44	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		01/27/14 15:46		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/24/14 13:40	01/29/14 10:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	M1
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**2.0**	mg/L	0.020	1		01/24/14 00:24		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:24		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.9**	mg/L	1.0	1		01/29/14 19:32	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.8**	mg/L	1.0	1		01/30/14 16:27	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-2 **Lab ID: 92187535002** Collected: 01/23/14 10:05 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**27.4**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:47	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 19:47	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:47	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:47	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	01/24/14 08:50	01/24/14 19:47	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:47	7439-92-1	
Manganese	**9.1**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:47	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		01/27/14 15:47		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/24/14 13:40	01/29/14 10:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.54**	mg/L	0.020	1		01/24/14 00:26		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:26		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**7.7**	mg/L	1.0	1		01/29/14 19:32	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**2.3**	mg/L	1.0	1		01/30/14 17:05	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-3 **Lab ID: 92187535003** Collected: 01/23/14 10:45 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**117**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:50	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 19:50	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:50	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:50	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	01/24/14 08:50	01/24/14 19:50	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:50	7439-92-1	
Manganese	**1540**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:50	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**207**	mg/L	25.0	1		01/27/14 15:47		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/24/14 13:40	01/29/14 10:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**16.5**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.86**	mg/L	0.020	1		01/24/14 00:27		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:27		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.5**	mg/L	1.0	1		01/29/14 19:33	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**28.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**5.9**	mg/L	1.0	1		01/30/14 17:17	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-4 **Lab ID: 92187535004** Collected: 01/23/14 11:30 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**117**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:58	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 19:58	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:58	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:58	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	01/24/14 08:50	01/24/14 19:58	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:58	7439-92-1	
Manganese	**56.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 19:58	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**50.0**	mg/L	25.0	1		01/27/14 15:48		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/24/14 22:00	01/29/14 18:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.87**	mg/L	0.020	1		01/24/14 00:28		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:28		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**14.4**	mg/L	1.0	1		01/29/14 19:34	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**5.9**	mg/L	1.0	1		01/30/14 17:29	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-5 **Lab ID: 92187535005** Collected: 01/22/14 15:45 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**189**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:01	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 20:01	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:01	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:01	7440-50-8	
Iron	**1410**	ug/L	50.0	1	01/24/14 08:50	01/24/14 20:01	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:01	7439-92-1	
Manganese	**656**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:01	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**65.0**	mg/L	25.0	1		01/27/14 14:43		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/23/14 23:15	01/28/14 21:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.25**	mg/L	0.020	1		01/24/14 00:22		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:22		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**30.6**	mg/L	1.0	1		01/29/14 19:35	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**32.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**3.2**	mg/L	1.0	1		01/30/14 17:40	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-6 **Lab ID: 92187535006** Collected: 01/22/14 14:10 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**17.8**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:13	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 20:13	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:13	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:13	7440-50-8	
Iron	**275**	ug/L	50.0	1	01/24/14 08:50	01/24/14 20:13	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:13	7439-92-1	
Manganese	**6.1**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:13	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		01/27/14 14:44		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/23/14 23:15	01/28/14 21:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.15**	mg/L	0.020	1		01/24/14 00:12		M1
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:12		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.4**	mg/L	1.0	1		01/30/14 01:48	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.8**	mg/L	1.0	1		01/30/14 17:50	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: MW-7 **Lab ID: 92187535007** Collected: 01/22/14 12:45 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**53.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:32	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 20:32	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:32	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:32	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	01/24/14 08:50	01/24/14 20:32	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:32	7439-92-1	
Manganese	**71.7**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:32	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		01/27/14 14:44		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/23/14 23:15	01/28/14 21:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.74**	mg/L	0.020	1		01/24/14 00:06		M1
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:06		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.5**	mg/L	1.0	1		01/30/14 01:50	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**2.1**	mg/L	1.0	1		01/30/14 18:05	7440-44-0	M1

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ANALYTICAL RESULTS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Sample: EQ-1 **Lab ID: 92187535008** Collected: 01/23/14 12:10 Received: 01/23/14 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:35	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	01/24/14 08:50	01/24/14 20:35	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:35	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:35	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	01/24/14 08:50	01/24/14 20:35	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:35	7439-92-1	
Manganese	**<5.0**	ug/L	5.0	1	01/24/14 08:50	01/24/14 20:35	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		01/27/14 15:48		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	01/24/14 22:00	01/29/14 18:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		01/30/14 13:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**<0.020**	mg/L	0.020	1		01/24/14 00:29		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		01/24/14 00:29		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**<1.0**	mg/L	1.0	1		01/30/14 01:51	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		01/31/14 15:30		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.1**	mg/L	1.0	1		01/30/14 18:35	7440-44-0	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: MPRP/15120 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 MET
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005

METHOD BLANK: 1127246 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	<5.0	5.0	01/24/14 17:49	
Cadmium	ug/L	<1.0	1.0	01/24/14 17:49	
Chromium	ug/L	<5.0	5.0	01/24/14 17:49	
Copper	ug/L	<5.0	5.0	01/24/14 17:49	
Iron	ug/L	<50.0	50.0	01/24/14 17:49	
Lead	ug/L	<5.0	5.0	01/24/14 17:49	
Manganese	ug/L	<5.0	5.0	01/24/14 17:49	

LABORATORY CONTROL SAMPLE: 1127247

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	495	99	85-115	
Cadmium	ug/L	500	497	99	85-115	
Chromium	ug/L	500	493	99	85-115	
Copper	ug/L	500	488	98	85-115	
Iron	ug/L	5000	4970	99	85-115	
Lead	ug/L	500	492	98	85-115	
Manganese	ug/L	500	492	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127248 — 1127249

Parameter	Units	92187216001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Barium	ug/L	12.6	500	500	471	470	92	91	70-130	0	
Cadmium	ug/L	ND	500	500	473	468	95	94	70-130	1	
Chromium	ug/L	ND	500	500	494	493	99	98	70-130	0	
Copper	ug/L	10.8	500	500	534	534	105	105	70-130	0	
Iron	ug/L	163	5000	5000	4870	4830	94	93	70-130	1	
Lead	ug/L	ND	500	500	443	438	89	88	70-130	1	
Manganese	ug/L	6.3	500	500	477	473	94	93	70-130	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127250 — 1127251

Parameter	Units	92187491004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Barium	ug/L	ND	500	500	500	510	96	98	70-130	2	
Cadmium	ug/L	0.0059 mg/L	500	500	485	494	96	98	70-130	2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127250 1127251

Parameter	Units	92187491004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chromium	ug/L	ND	500	500	489	499	96	98	70-130	2	
Copper	ug/L	0.11 mg/L	500	500	585	590	94	95	70-130	1	
Iron	ug/L	1.2 mg/L	5000	5000	5930	6040	95	97	70-130	2	
Lead	ug/L	1.9 mg/L	500	500	2330	2330	83	83	70-130	0	
Manganese	ug/L	0.045 mg/L	500	500	520	530	95	97	70-130	2	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: MPRP/15121 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 MET
Associated Lab Samples: 92187535006, 92187535007, 92187535008

METHOD BLANK: 1127252 — Matrix: Water
Associated Lab Samples: 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	<5.0	5.0	01/24/14 20:07	
Cadmium	ug/L	<1.0	1.0	01/24/14 20:07	
Chromium	ug/L	<5.0	5.0	01/24/14 20:07	
Copper	ug/L	<5.0	5.0	01/24/14 20:07	
Iron	ug/L	<50.0	50.0	01/24/14 20:07	
Lead	ug/L	<5.0	5.0	01/24/14 20:07	
Manganese	ug/L	<5.0	5.0	01/24/14 20:07	

LABORATORY CONTROL SAMPLE: 1127253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	488	98	85-115	
Cadmium	ug/L	500	493	99	85-115	
Chromium	ug/L	500	493	99	85-115	
Copper	ug/L	500	478	96	85-115	
Iron	ug/L	5000	5030	101	85-115	
Lead	ug/L	500	487	97	85-115	
Manganese	ug/L	500	490	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127254 — 1127255

Parameter	Units	92187535006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Barium	ug/L	17.8	500	500	508	506	98	98	70-130	0	
Cadmium	ug/L	<1.0	500	500	495	494	99	99	70-130	0	
Chromium	ug/L	<5.0	500	500	499	494	100	99	70-130	1	
Copper	ug/L	<5.0	500	500	484	477	97	95	70-130	1	
Iron	ug/L	275	5000	5000	5240	5260	99	100	70-130	0	
Lead	ug/L	<5.0	500	500	484	484	97	97	70-130	0	
Manganese	ug/L	6.1	500	500	498	497	98	98	70-130	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127256 — 1127257

Parameter	Units	92187562004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Barium	ug/L	ND	500	500	487	495	96	98	70-130	2	
Cadmium	ug/L	ND	500	500	490	498	98	100	70-130	2	
Chromium	ug/L	ND	500	500	493	501	99	100	70-130	2	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127256 1127257

Parameter	Units	92187562004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Copper	ug/L	69.4	500	500	546	554	95	97	70-130	1	
Iron	ug/L	56.8	5000	5000	4950	5030	98	99	70-130	2	
Lead	ug/L	ND	500	500	480	487	96	97	70-130	1	
Manganese	ug/L	ND	500	500	489	496	98	99	70-130	1	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WET/29267 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92187535005, 92187535006, 92187535007

METHOD BLANK: 1128361 — Matrix: Water
Associated Lab Samples: 92187535005, 92187535006, 92187535007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<25.0	25.0	01/27/14 14:41	

LABORATORY CONTROL SAMPLE: 1128362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	246	98	80-120	

SAMPLE DUPLICATE: 1128363

Parameter	Units	92187479001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	31.0	<25.0		

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WET/29271 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535008

METHOD BLANK: 1128443 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<25.0	25.0	01/27/14 15:46	

LABORATORY CONTROL SAMPLE: 1128444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	226	90	80-120	

SAMPLE DUPLICATE: 1128445

Parameter	Units	92187535001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	<25.0	<25.0		

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WET/29235 — Analysis Method: SM 5210B
QC Batch Method: SM 5210B — Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92187535005, 92187535006, 92187535007

METHOD BLANK: 1127192 — Matrix: Water
Associated Lab Samples: 92187535005, 92187535006, 92187535007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	01/28/14 21:09	

LABORATORY CONTROL SAMPLE: 1127193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	84.5-115.4	

SAMPLE DUPLICATE: 1127194

Parameter	Units	92187394001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	1400	1340	4	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WET/29239 — Analysis Method: SM 5210B
QC Batch Method: SM 5210B — Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92187535001, 92187535002, 92187535003

METHOD BLANK: 1127309 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	01/29/14 10:20	

LABORATORY CONTROL SAMPLE: 1127310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	176	89	84.5-115.4	

SAMPLE DUPLICATE: 1127311

Parameter	Units	92187535001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	<2.0	<2.0		

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WET/29251
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92187535004, 92187535008

METHOD BLANK: 1127857
Matrix: Water
Associated Lab Samples: 92187535004, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	01/29/14 18:23	

LABORATORY CONTROL SAMPLE: 1127858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	84.5-115.4	

SAMPLE DUPLICATE: 1127859

Parameter	Units	92187516004 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	6.1	6.2	2	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17887 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

METHOD BLANK: 1128446 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<2.0	2.0	01/30/14 13:30	

LABORATORY CONTROL SAMPLE: 1128447

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1128448 — 1128449

Parameter	Units	92187073001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	mg/L	1820	20	20	1820	1800	18	-94	90-110	1	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1128450 — 1128451

Parameter	Units	92187535001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	mg/L	<2.0	20	20	<2.0	<2.0	0	0	90-110		M1

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17847 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

METHOD BLANK: 1127199 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	<0.020	0.020	01/24/14 00:03	
Nitrogen, Nitrite	mg/L	<0.020	0.020	01/24/14 00:03	

LABORATORY CONTROL SAMPLE: 1127200

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	100	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127201 — 1127202

Parameter	Units	92187535007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	0.74	2.5	2.5	2.9	2.9	88	87	90-110	0	M1
Nitrogen, Nitrite	mg/L	<0.020	1	1	0.95	0.97	95	97	90-110	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127203 — 1127204

Parameter	Units	92187535006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	0.15	2.5	2.5	2.4	2.4	89	89	90-110	0	M1
Nitrogen, Nitrite	mg/L	<0.020	1	1	0.97	0.99	97	99	90-110	2	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17903 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005

METHOD BLANK: 1129918 Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	01/29/14 19:11	

LABORATORY CONTROL SAMPLE: 1129919

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.3	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129920 1129921

Parameter	Units	92187216001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	514	20	20	541	540	135	129	75-125	0	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129922 1129923

Parameter	Units	92186340004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	99.4	20	20	124	130	124	151	75-125	4	M6

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17908 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92187535006, 92187535007, 92187535008

METHOD BLANK: 1129966 — Matrix: Water
Associated Lab Samples: 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	01/30/14 01:46	

LABORATORY CONTROL SAMPLE: 1129967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129968 — 1129969

Parameter	Units	92187535006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	4.4	20	20	25.7	25.5	107	106	75-125	1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17912 — Analysis Method: SM 5220D
QC Batch Method: SM 5220D — Analysis Description: 5220D COD
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

METHOD BLANK: 1130243 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<25.0	25.0	01/31/14 15:30	

LABORATORY CONTROL SAMPLE: 1130244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	709	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1130245 — 1130246

Parameter	Units	92187272001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	2440	7500	7500	10200	9050	103	88	75-125	11	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1130247 — 1130248

Parameter	Units	92187535001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	<25.0	750	750	750	746	97	97	75-125	1	

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QUALITY CONTROL DATA

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

QC Batch: WETA/17880 — Analysis Method: SM 5310B
QC Batch Method: SM 5310B — Analysis Description: 5310B TOC
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

METHOD BLANK: 1128101 — Matrix: Water
Associated Lab Samples: 92187535001, 92187535002, 92187535003, 92187535004, 92187535005, 92187535006, 92187535007, 92187535008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	01/30/14 14:47	

LABORATORY CONTROL SAMPLE: 1128102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1128103 — 1128104

Parameter	Units	92186163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	19.4	20.2	76	79	75-125	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1128105 — 1128106

Parameter	Units	92187535007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	2.1	25	25	20.6	20.1	74	72	75-125	3	M1

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QUALIFIERS

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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LABORATORIES

PASI-A	Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187535001	MW-1	EPA 200.7	MPRP/15120	EPA 200.7	ICP/13724
92187535002	MW-2	EPA 200.7	MPRP/15120	EPA 200.7	ICP/13724
92187535003	MW-3	EPA 200.7	MPRP/15120	EPA 200.7	ICP/13724
92187535004	MW-4	EPA 200.7	MPRP/15120	EPA 200.7	ICP/13724
92187535005	MW-5	EPA 200.7	MPRP/15120	EPA 200.7	ICP/13724
92187535006	MW-6	EPA 200.7	MPRP/15121	EPA 200.7	ICP/13723
92187535007	MW-7	EPA 200.7	MPRP/15121	EPA 200.7	ICP/13723
92187535008	EQ-1	EPA 200.7	MPRP/15121	EPA 200.7	ICP/13723
92187535001	MW-1	SM 2540C	WET/29271		
92187535002	MW-2	SM 2540C	WET/29271		
92187535003	MW-3	SM 2540C	WET/29271		
92187535004	MW-4	SM 2540C	WET/29271		
92187535005	MW-5	SM 2540C	WET/29267		
92187535006	MW-6	SM 2540C	WET/29267		
92187535007	MW-7	SM 2540C	WET/29267		
92187535008	EQ-1	SM 2540C	WET/29271		
92187535001	MW-1	SM 5210B	WET/29239	SM 5210B	WET/29246
92187535002	MW-2	SM 5210B	WET/29239	SM 5210B	WET/29246
92187535003	MW-3	SM 5210B	WET/29239	SM 5210B	WET/29246
92187535004	MW-4	SM 5210B	WET/29251	SM 5210B	WET/29252
92187535005	MW-5	SM 5210B	WET/29235	SM 5210B	WET/29236
92187535006	MW-6	SM 5210B	WET/29235	SM 5210B	WET/29236
92187535007	MW-7	SM 5210B	WET/29235	SM 5210B	WET/29236
92187535008	EQ-1	SM 5210B	WET/29251	SM 5210B	WET/29252
92187535001	MW-1	EPA 300.0	WETA/17887		
92187535002	MW-2	EPA 300.0	WETA/17887		
92187535003	MW-3	EPA 300.0	WETA/17887		
92187535004	MW-4	EPA 300.0	WETA/17887		
92187535005	MW-5	EPA 300.0	WETA/17887		
92187535006	MW-6	EPA 300.0	WETA/17887		
92187535007	MW-7	EPA 300.0	WETA/17887		
92187535008	EQ-1	EPA 300.0	WETA/17887		
92187535001	MW-1	EPA 353.2	WETA/17847		
92187535002	MW-2	EPA 353.2	WETA/17847		
92187535003	MW-3	EPA 353.2	WETA/17847		
92187535004	MW-4	EPA 353.2	WETA/17847		
92187535005	MW-5	EPA 353.2	WETA/17847		
92187535006	MW-6	EPA 353.2	WETA/17847		
92187535007	MW-7	EPA 353.2	WETA/17847		
92187535008	EQ-1	EPA 353.2	WETA/17847		
92187535001	MW-1	SM 4500-Cl-E	WETA/17903		
92187535002	MW-2	SM 4500-Cl-E	WETA/17903		
92187535003	MW-3	SM 4500-Cl-E	WETA/17903		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG SemiAnnual Sampling
Pace Project No.: 92187535

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187535004	**MW-4**	SM 4500-Cl-E	WETA/17903		
92187535005	**MW-5**	SM 4500-Cl-E	WETA/17903		
92187535006	**MW-6**	SM 4500-Cl-E	WETA/17908		
92187535007	**MW-7**	SM 4500-Cl-E	WETA/17908		
92187535008	**EQ-1**	SM 4500-Cl-E	WETA/17908		
92187535001	**MW-1**	SM 5220D	WETA/17912		
92187535002	**MW-2**	SM 5220D	WETA/17912		
92187535003	**MW-3**	SM 5220D	WETA/17912		
92187535004	**MW-4**	SM 5220D	WETA/17912		
92187535005	**MW-5**	SM 5220D	WETA/17912		
92187535006	**MW-6**	SM 5220D	WETA/17912		
92187535007	**MW-7**	SM 5220D	WETA/17912		
92187535008	**EQ-1**	SM 5220D	WETA/17912		
92187535001	**MW-1**	SM 5310B	WETA/17880		
92187535002	**MW-2**	SM 5310B	WETA/17880		
92187535003	**MW-3**	SM 5310B	WETA/17880		
92187535004	**MW-4**	SM 5310B	WETA/17880		
92187535005	**MW-5**	SM 5310B	WETA/17880		
92187535006	**MW-6**	SM 5310B	WETA/17880		
92187535007	**MW-7**	SM 5310B	WETA/17880		
92187535008	**EQ-1**	SM 5310B	WETA/17880		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1799324

Section A Required Client Information:
Company: S+ME
Address: 9751 SOUTHERN PINE BLVD
CHARLOTTE, NC
Email To: qquarles@smeinc.com
Phone: 704-523-4726 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:
Report To: AL QUARLES
Copy To:
Purchase Order No.:
Project Name: PP6 SEMI-ANNUAL SAMPLING
Project Number: 1354-11-137

Section C Invoice Information:
Attention: BARBARA ELLINGTON
Company Name: S+ME INC
Address: SAME
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 898-23

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER
Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BOD	METALS 200.7	TDS	SULFATE	NITRATE	NITRITE	COD	CHLORIDE	TOC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92187535
1	MW-1	WT	G			1/23/14			9	4	1	1	3					X	X	X	X	X	X	X	X	X		001
2	MW-2					1/23/14	1005		9	4	1	1	3					X	X	X	X	X	X	X	X	X		002
3	MW-3					1/23/14	1045		9	4	1	1	3					X	X	X	X	X	X	X	X	X		003
4	MW-4					1/23/14	1130		9	4	1	1	3					X	X	X	X	X	X	X	X	X		004
5	MW-5					1/23/14	1545		9	4	1	1	3					X	X	X	X	X	X	X	X	X		005
6	MW-6					1/23/14	1410		9	4	1	1	3					X	X	X	X	X	X	X	X	X		006
7	MW-7					1/23/14	1245		9	4	1	1	3					X	X	X	X	X	X	X	X	X		007
8	EQ-1					1/23/14	1210		9	4	1	1	3					X	X	X	X	X	X	X	X	X		008
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Coleman S. Marchin S+ME	1/23/14	1520	[illegible] PACE	1-23-14	15:20	2.2	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: COLEMAN MARCHIN
SIGNATURE of SAMPLER: Coleman S. Marchin
DATE Signed (MM/DD/YY): 1/23/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Stmc

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.7 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: JW 1-23-14

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Al Quarles Date/Time: 1-23-14

Comments/ Resolution: Emailed for PO

SCURF Review: AMB Date: 1-23-14

SRF Review: [illegible] Date: 1/24/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92187535

92187535