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

Richard Young
EHS Supervisor
Environmental

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Fax 704-434-0792
Richardyoung@ppg.com

RECEIVED
FEB 23 2017
SOLID WASTE SECTION

Feburary 16, 2015

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

Sent Via Certified Mail – Return Receipt Requested

Subject: Semi-Annual Groundwater Monitoring Results

Dear Mr. Gamble:

Enclosed are the results from the January 2015 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 2359.

Sincerely,

Richard Young

cc: File

GROUNDWATER MONITORING REPORT
PPG INDUSTRIES, INC.
JANUARY 2015 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

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

January 29, 2015

January 29, 2015

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

Attention: Mr. Richard Young

Reference: **Groundwater Monitoring Report**
January 2015 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. 43-1400066 dated May 14, 2014. The January 2015 sampling results indicated concentrations of iron (MW-5 and MW-6) and manganese (MW-3, MW-4, MW-5, and MW-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.

Scott Young
Project Professional

Al Quarles, L.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1133 GEOLOGIST AL QUARLES

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GROUNDWATER MONITORING REPORT
JANUARY 2015 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 2015 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 monitoring for potential environmental impacts. **Figure 3** is provided as a site plan of the subject facility and illustrates the locations of the seven groundwater monitoring 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 15 and 16, S&ME measured the depth to groundwater in the monitoring wells from the top of monitoring well casings (**Table 1**). Prior to water level measurements, monitoring 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 in the middle of the water column of each well and the pump was operated at a low flow rate in an attempt to limit drawdown of the water column by no more than 0.33 feet. 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 15 and 16, 2015, S&ME measured the depth to water from the monitoring 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 2014 water levels, the January 2015 water levels decreased in four of the wells ranging from 0.06 feet (MW-7) to 3.23 feet (MW-1). The water level in monitoring MW-3 increased by 0.17 feet, in monitoring well MW-5 by 0.33 feet, and in monitoring well MW-6 by 1.34 feet.

3.2 Groundwater Quality

The results of the January 2015 groundwater sampling event are summarized in **Table 2**. A copy of the laboratory report is included in **Appendix II**. The historical results since January 2010 are summarized in **Table 3**.

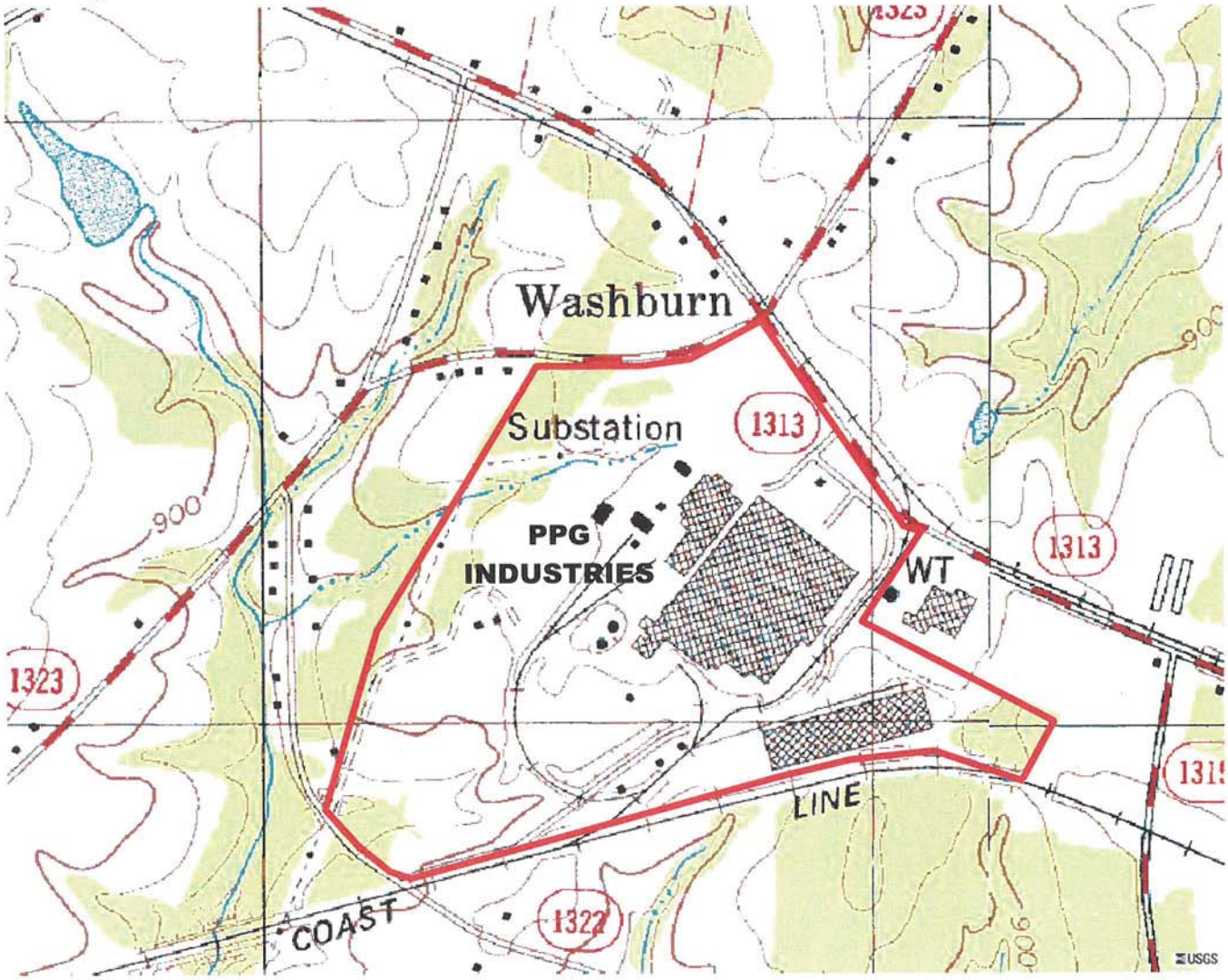
The January 2015 sampling results indicated concentrations of iron (MW-5 and MW-6) and manganese (MW-3, MW-4, MW-5, and MW-7) at levels greater than their respective 15A NCAC 2L .0202 Groundwater Quality Standards (2L Standards). Concentrations of manganese and iron are generally similar to those detected during prior sampling events, and no increasing or decreasing trend in concentrations is apparent. Barium, iron, and manganese were also detected in other monitoring well samples at levels less than the 2L Standards: iron (MW-1 and MW-3), barium (all seven monitoring wells), and manganese (MW-1, MW-2, and MW-6). Cadmium, chromium, copper, and lead were not detected at concentrations greater than the laboratory reporting limits in any of the monitoring 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 1 liter glass containers supplied by the laboratory through new inlet and outlet tubing

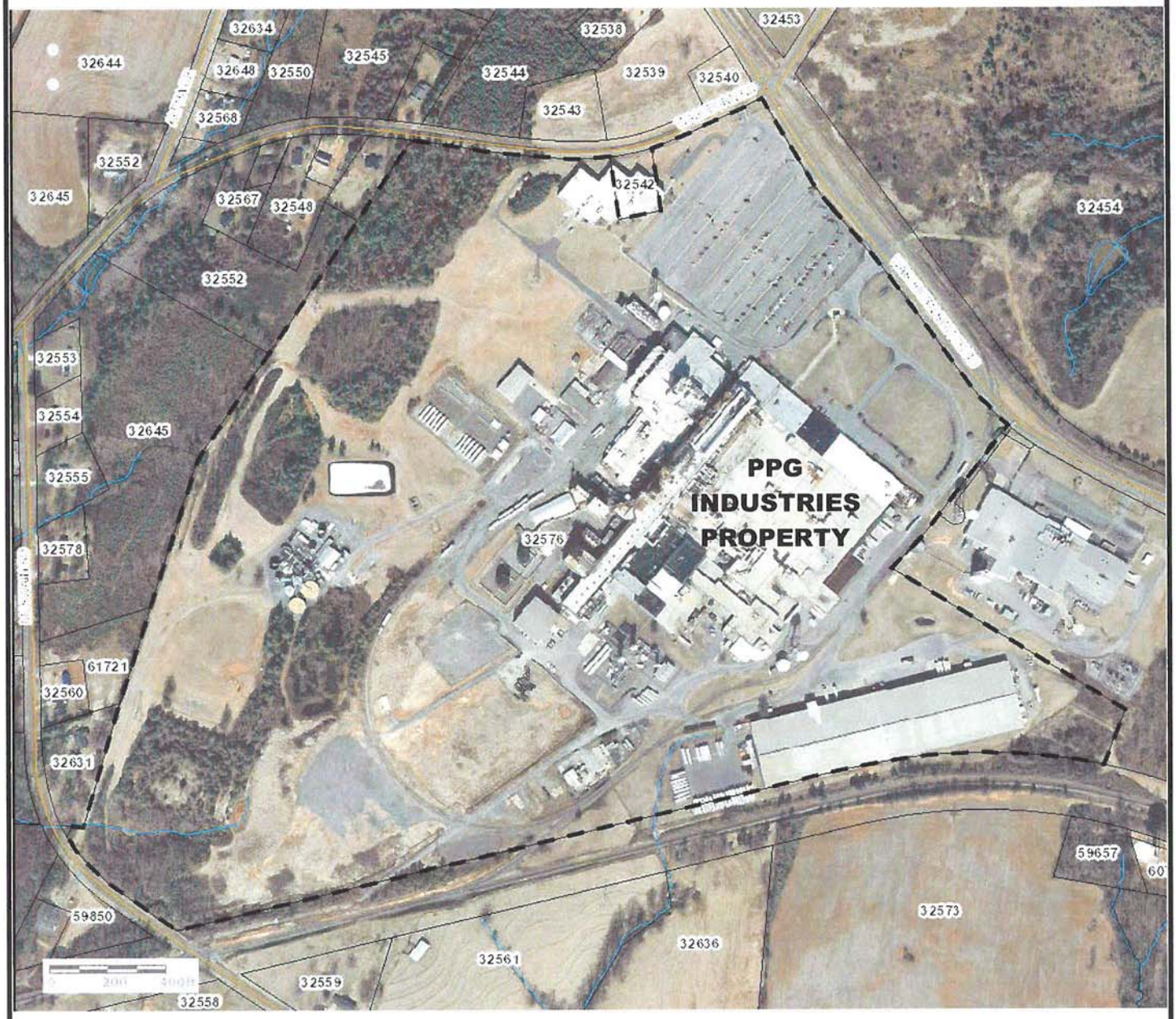
FIGURES



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: 08-05-2014		S&ME Job No.: 1354-11-137	

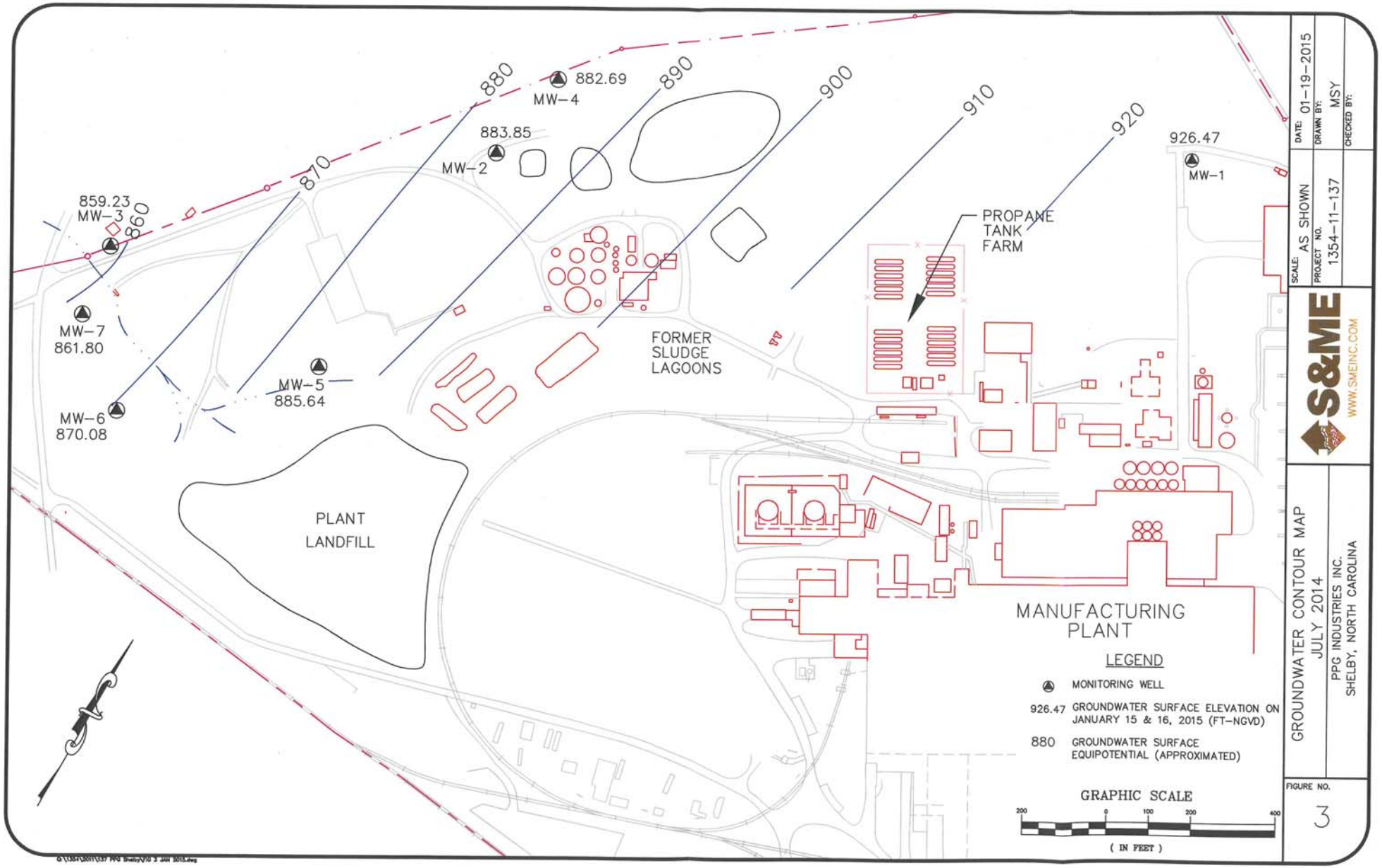


- - - - - Property Boundary

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: 08-05-14		S&ME Job No.: 1354-11-137	


880
882.69
MW-4
890
900
910
920
926.47
MW-1
883.85
MW-2
870
859.23
MW-3
860
MW-7
861.80
MW-5
885.64
MW-6
870.08
PROPANE
TANK
FARM
FORMER
SLUDGE
LAGOONS
PLANT
LANDFILL
MANUFACTURING
PLANT
LEGEND
MONITORING WELL
926.47 GROUNDWATER SURFACE ELEVATION ON JANUARY 15 & 16, 2015 (FT-NGVD)
880 GROUNDWATER SURFACE EQUIPOTENTIAL (APPROXIMATED)
GRAPHIC SCALE
200
0
100
200
400
(IN FEET)
DATE: 01-19-2015
DRAWN BY: MSY
CHECKED BY:
SCALE: AS SHOWN
PROJECT NO. 1354-11-137
S&ME
WWW.SMEINC.COM
GROUNDWATER CONTOUR MAP
JULY 2014
PPG INDUSTRIES INC.
SHELBY, NORTH CAROLINA
FIGURE NO.
3

TABLES

Table 1
Water Levels and Well Purging Data (January 15-16, 2015)
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	26.56	20.56	7.78	18.70	6.77	16.57	8.54
Water Level Elevation	feet	926.47	883.85	859.23	882.69	885.64	870.08	861.80
Elevation Change*	feet	(3.23)	(2.59)	0.17	(2.23)	0.33	1.34	(0.06)
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	50	100	50	100	100	50	100
pH	standard	4.53	4.75	5.23	5.08	4.44	4.70	4.51
Conductivity	microSiemens per centimeter	46	32	128	107	97	38	36
Turbidity	nephelometric turbidity units	3.89	0.81	1.20	1.02	4.80	3.92	0.90
Dissolved Oxygen	milligrams per liter	9.61	7.61	3.59	2.01	3.24	4.56	4.52
Temperature	Celcius	14.39	13.77	8.37	13.07	13.33	12.72	11.67
ORP	millivolts	210.5	224.8	252.0	184.9	274.9	264.6	263.1

Notes * Difference in feet from the previous monitoring event.

TABLE 2
WATER QUALITY DATA (January 15-16, 2015)
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	**0.0317**	**0.0194**	**0.103**	**0.114**	**0.184**	**0.0255**	**0.0530**	< 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	**0.268**	< 0.050	**0.107**	< 0.050	**1.040** *	**0.308** *	< 0.050	< 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	**0.0144**	**0.0069**	**2.180** *	**0.0591** *	**0.287** *	**0.0463**	**0.0669** *	< 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	**4.5**	**3.1**	**2.0**	**12.2**	**19.3**	**5.7**	**4.6**	< 1.0	250
COD	mg/L	**25.0**	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NA
Nitrate	mg/L	**2.1**	**0.14**	**0.52**	**1.1**	**1.9**	**0.43**	**0.70**	**0.030**	10
Sulfate	mg/L	**1.3 J**	**1.5 J**	**20.3**	**1.8 J**	< 2.0	**1.2 J**	< 2.0	<2.0	250
TDS	mg/L	**33.0**	< 25	**130**	**51.0**	**64.0**	**53.0**	< 25	< 25	NA
TOC	mg/L	< 1.0	**0.55 J**	**0.92 J**	**1.7**	**0.54 J**	**0.53 J**	**11.2**	< 1.0	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										
		01/20/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.0295	0.0309	0.0278	0.0296	0.0312	dry	dry	0.0307	0.0323	0.0317	0.0317
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	dry	dry	<0.0010	<0.0010	<0.0010	< 0.0010
Chromium	0.01	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	---	<0.05	**0.69**	<0.0500	0.604	dry	dry	0.128	0.0727	0.147	0.268
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	0.007	0.0084	0.0182	0.0065	0.0165	dry	dry	0.0094	0.0096	0.0122	0.0144
BOD	NA	---	<2	NS	<2.0	<2.0	dry	dry	<2.0	<2.0	<2.0	< 2.0
Chloride	250	---	<5	NS	<5.0	5.3	dry	dry	5.0	4.9	2.5	4.5
COD	NA	---	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25.0	<25.0	25.0
Nitrate	10	2.3	2.1	NS	2.1	2.2	dry	dry	2.2	2.0	2.0	2.1
Sulfate	250	---	<5	NS	<5.0	<5.0	dry	dry	<2.0	<2.0	<2.0	1.3 J
TDS	500	52	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25.0	<25.0	33.0
TOC	NA	---	<1	NS	1.2	1.1	dry	dry	1.2	1.8	4.5	< 1.0

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										
		01/19/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.0276	0.0241	0.0257	0.0263	0.0291	0.0258	0.0254	0.0255	0.0274	0.0224	0.0194
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<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	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	---	<0.05	<0.05	0.13	<0.05	**0.601**	<0.0050	0.0525	<0.050	0.0517	< 0.050
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	0.0099	0.0079	0.0093	0.0142	0.0106	0.0165	0.0125	0.0106	0.0091	0.0111	0.0069
BOD	NA	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
Chloride	250	7.6	8	6.8	7.4	8.2	5	3.3	7.5	7.7	6.6	3.1
COD	NA	---	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25
Nitrate	10	0.53	0.53	0.45	0.47	0.37	0.29	0.065	0.61	0.54	0.5	0.14
Sulfate	250	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.5 J
TDS	500	30	<25	<25	<25.0	<25.0	<25.0	36	27.0	<25.0	<25.0	< 25
TOC	NA	2.5	<1	1.2	2.4	2.6	2	3.3	2.1	2.3	3.0	0.55 J

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										
		01/20/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.105	0.127	0.115	0.124	0.109	0.108	0.105	0.124	0.117	0.116	0.103
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<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	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	**0.845**	0.0969	0.252	0.133	0.132	0.163	**1.08**	0.0797	<0.050	<0.050	0.107
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	**2**	**1.96**	**1.96**	**0.83**	**2.14**	**2.9**	**4.1**	**1.8**	**1.5**	**0.636**	**2.180**
BOD	NA	---	<2	<2	<2.0	<2.0	<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	2.5	2.0
COD	NA	---	<25	<25	<25.0	53	<25.0	<25	<25	28.0	<25.0	< 25
Nitrate	10	0.48	0.71	0.97	0.93	0.79	0.8	0.44	1.0	0.86	0.84	0.52
Sulfate	250	17.3	19.9	19.9	13.7	21.1	22.5	18.6	15.4	16.5	7.5	20.3
TDS	500	144	124	106	113	116	145	177	137	207	432	130
TOC	NA	1.9	5.3	4.7	5.2	38.8	<1.0	5	5.6	5.9	7.0	0.92 J

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										
		01/19/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.129	0.133	0.12	0.123	0.126	0.118	0.118	0.112	0.117	0.116	0.114
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<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	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	---	<0.05	<0.05	<0.0500	<0.0500	<0.500	<0.0500	<0.0500	<0.050	<0.050	< 0.050
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	**0.0681**	**0.0694**	**0.0745**	**0.0691**	**0.093**	**0.071**	**0.0739**	**0.0569**	**0.056**	**0.0556**	**0.0591**
BOD	NA	2	<2	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
Chloride	250	19.9	20.8	18.4	17.5	18.4	16.2	13.4	15.5	14.4	14.7	12.2
COD	NA	---	32	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25
Nitrate	10	0.81	0.76	0.86	0.83	0.87	0.86	1.0	0.95	0.87	0.82	1.1
Sulfate	250	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.8 J
TDS	500	78	76	72	77	51	76	78	74	50	75	51.0
TOC	NA	9.6	38.6	6.2	6.5	5.5	4.4	4.5	5.6	5.9	6.1	1.7

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										
		01/20/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.152	0.17	0.0944	0.161	0.136	0.153	0.176	0.155	0.189	0.176	0.184
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010
Chromium	0.01	---	<0.005	<0.005	<0.0050	0.0064	<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	<0.0050	< 0.0050
Iron	0.30	**1.52**	**1.23**	**4.75**	**2.07**	**1.98**	**1.39**	**1.11**	**5.94**	**1.41**	**1.52**	**1.040**
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	**0.306**	**0.145**	**0.643**	**0.0853**	**0.299**	**0.0546**	**0.172**	**0.217**	**0.656**	**0.257**	**0.287**
BOD	NA	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
Chloride	250	16.6	11.4	15.4	10.8	19.9	11	15.6	22.5	30.6	15.8	19.3
COD	NA	---	<25	<25	<25.0	<25.0	<25.0	<25	<25	32.0	103	< 25
Nitrate	10	1.2	3.7	0.99	3.5	0.79	3.2	1.3	0.27	0.25	2.6	1.9
Sulfate	250	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
TDS	500	76	32	52	34	37	39	55	57	65.0	36.0	64.0
TOC	NA	2.6	1.3	2	1.8	3	1.4	2.5	3.3	3.2	2.7	0.54 J

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										
		01/20/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.0202	0.0256	0.033	0.0298	0.0865	0.036	0.0287	0.0146	0.0178	0.0257	0.0255
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010
Chromium	0.01	---	<0.005	<0.005	<0.0050	**0.019**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	0.0109	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	---	**0.449**	0.0536	<0.0500	**5.7**	**5.16**	<0.050	0.237	0.275	**2.930**	**0.308**
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	0.0054	**0.511**	0.0485	**0.0528**	**0.134**	**1.54**	**0.0718**	0.0102	0.0061	**0.282**	0.0463
BOD	NA	---	9.4	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
Chloride	250	5.5	8	7.7	8.1	7.8	8.5	6.7	4.5	4.4	5.8	5.7
COD	NA	---	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25
Nitrate	10	0.14	0.11	0.26	<0.20	<0.20	0.046	0.23	0.029	0.15	2.4	0.43
Sulfate	250	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.2 J
TDS	500	56	<25	<25	<25.0	<25.0	40	41	<25.0	<25.0	<25.0	53.0
TOC	NA	7.5	<1	<1	1.4	1.2	1.3	1.5	1.4	1.8	2.2	0.53 J

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										
		01/20/10	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	7/22-23/14	1/15-16/15
Barium	0.7	0.0473	0.0493	0.0462	0.0507	0.0523	0.548	0.0551	0.0545	0.053	0.0527	0.0530
Cadmium	0.002	---	<0.001	<0.001	<0.0010	<0.0010	<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	<0.0050	< 0.0050
Copper	1	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Iron	0.30	---	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0533	< 0.050
Lead	0.015	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050
Manganese	0.05	**0.0651**	0.047	**0.0586**	**0.0542**	**0.067**	**0.0618**	**0.0684**	**0.0707**	**0.0717**	**0.0708**	**0.0669**
BOD	NA	---	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
Chloride	250	---	<5	<5	<5.0	<5.0	4.2	4.9	5.2	4.5	4.6	4.6
COD	NA	---	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25
Nitrate	10	1	1.3	0.79	0.89	0.93	1	0.83	0.82	0.74	0.60	0.70
Sulfate	250	---	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
TDS	500	66	<25	<25	<25.0	<25.0	29	30	<25.0	<25.0	<25.0	< 25
TOC	NA	1.3	<1	1	1.5	<1.0	1.1	1.5	11.5	2.1	2.2	11.2

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

APPENDIX I
FIELD SAMPLING FORMS

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: 1/16/15
PERSONNEL: J. Niewald

WELL CONDITION: Good
WEATHER: 29°F Clear Sunny

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.0 ft
Initial Depth to Water (DTW) from TOC: 26.56 ft
Sand Pack or Open Hole: Sand PACK
Depth to intake from base of well: ~28.0 ft
Initial DTW + 0.33 ft from TOC: 26.89 ft

Water Column: 2.44 ft
1/2 of Water Column: 1.22 ft
Well Diameter: 4" in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	0905	0915	0925	0935	0945	0955	1005	1015
DTW (ft)	26.73	26.80	26.88	26.89	26.88	26.89	26.89	26.89
Vol Purged (Cumm-ml)	~1000	~2000	~3000	~4000	~4750	~5250	~5750	~6250
Flow Rate (ml/min)	~100	~100	~100	~100	~75	~50	~50	~50
pH (Stand Units)	5.19	4.93	4.80	4.73	4.60	4.55	4.53	4.53
DO (mg/L)	16.83	13.24	10.58	11.74	10.88	9.44	9.31	9.61
Conductivity (mS/sec)	.053	.050	.046	.046	.046	.045	.045	.046
Turbidity (NTUs)	50.5	26.6	18.4	14.7	10.9	7.23	5.72	3.89
Temperature (°C)	12.48	13.33	13.90	14.23	14.43	14.40	14.39	14.39
Odor (Subjective)	None	None	None	None	None	None	None	None
Color (Subjective)	CLR	CLR	CLR	CLR	CLR	CLR	CLR	CLR
ORP	126.3	135.8	130.0	163.9	183.5	198.9	204.3	210.5

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

Sample Time: 1015
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Jeff Niewald
Signature

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: 1-15-15
PERSONNEL: J. Nieuwall

WELL CONDITION: Good
WEATHER: cold 40°F

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.82 ft
Initial Depth to Water (DTW) from TOC: 20.56 ft
Sand Pack or Open Hole: Sand Pack
Depth to intake from base of well: 29.0 ft
Initial DTW + 0.33 ft from TOC: 20.89 ft

Water Column: 9.26 ft
1/2 of Water Column: 4.63 ft
Well Diameter: 4.11 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1430	1440	1450	1500	1510			
DTW (ft)	20.76	20.82	20.82	20.80	20.83			
Vol Purged (Cumm-ml)	~1000	~1000	~3000	~4000	~5000			
Flow Rate (ml/min)	~100	~100	~100	~100	~100			
pH (Stand Units)	4.76	4.77	4.76	4.74	4.75			
DO (mg/L)	8.78	8.14	7.47	7.87	7.61			
Conductivity (mS/sec)	.032	.032	.032	.032	.032			
Turbidity (NTUs)	1.55	.71	.40	.79	.81			
Temperature (°C)	13.41	13.63	13.79	13.78	13.77			
Odor (Subjective)	None	None	None	None	None			
Color (Subjective)	Clr	Clr	Clr	Clr	Clr			
ORP	191.9	198.1	212.2	217.4	224.8			

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

Sample Time: 1510
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature

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: 1/15/15
PERSONNEL: J. Niewald

WELL CONDITION: Good
WEATHER: Cold 38°F

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 20.0 ft
Initial Depth to Water (DTW) from TOC: 7.78 ft
Sand Pack or Open Hole: SANDPACK
Depth to intake from base of well: 19.5 ft
Initial DTW + 0.33 ft from TOC: 8.11 ft

Water Column: 11.89 ft
1/2 of Water Column: 5.95 ft
Well Diameter: 4" in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1010	1025	1040	1055	1100	1115		
DTW (ft)	7.98	8.02	8.09	8.08	8.10	8.08		
Vol Purged (Cumm-ml)	~750	~1500	2250	~2750	~3250	~3750		
Flow Rate (ml/min)	~75	~75	~75	~50	~50	~50		
pH (Stand Units)	5.31	5.23	5.24	5.22	5.23	5.23		
DO (mg/L)	7.49	6.24	3.84	3.72	3.71	3.59		
Conductivity (mS/sec)	.194	.134	.131	.131	.130	.128		
Turbidity (NTUs)	2.5	2.5	2.48	3.23	1.67	1.2		
Temperature (°C)	9.23	9.29	9.38	8.27	8.24	8.37		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clr	Clr	Clr	Clr	Clr	Clr		
ORP	163.4	200.7	221.7	237.3	248.6	252.0		

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

Sample Time: 1120
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature

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: 1/15/15
PERSONNEL: J Niewald

WELL CONDITION: Good
WEATHER: Cold 40's

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 27.73 ft
Initial Depth to Water (DTW) from TOC: 18.70 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: ~26.0 ft
Initial DTW + 0.33 ft from TOC: 19.03 ft

Water Column: 9.03 ft
1/2 of Water Column: 4.51 ft
Well Diameter: 2" in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1550	1600	1610	1620	1630	1640		
DTW (ft)	18.70	18.92	18.94	18.94	18.95	18.95		
Vol Purged (Cumm-ml)	~750	~1750	2750	3750	4750	5750		
Flow Rate (ml/min)	~75	~100	~100	~100	~100	~100		
pH (Stand Units)	5.13	5.11	5.11	5.10	5.08	5.08		
DO (mg/L)	11.53	7.27	6.03	2.13	2.07	2.01		
Conductivity (mS/sec)	.104	.105	.105	.106	.107	.107		
Turbidity (NTUs)	1.29	1.07	.89	.94	.96	1.02		
Temperature (°C)	12.59	13.03	12.98	13.08	13.09	13.07		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	CLR	CLR	CLR	CLR	CLR	CLR		
ORP	132.5	157.6	171.3	174.2	177.2	184.9		

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

Sample Time: 1640
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature: J Niewald

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: 1/16/15
PERSONNEL: J. Niewall

WELL CONDITION: Good
WEATHER: Warm Sunny 50°F

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 6.77 ft
Sand Pack or Open Hole: Sand Pack
Depth to intake from base of well: 20.1 ft
Initial DTW + 0.33 ft from TOC: 7.10 ft

Water Column: 14.23 ft
1/2 of Water Column: 7.12 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1255	1305	1315	1325	1335	1345	1355	
DTW (ft)	6.76	6.85	7.02	7.03	6.98	6.99	7.00	
Vol Purged (Cumm-ml)	~1000	~2000	~3000	~4000	~5000	~6000	~7000	
Flow Rate (ml/min)	~100	~100	~100	~100	~100	~100	~100	
pH (Stand Units)	4.50	4.44	4.44	4.43	4.44	4.43	4.44	
DO (mg/L)	3.01	2.61	1.75	1.53	3.42	3.00	3.24	
Conductivity (mS/sec)	.095	.075	.075	.097	.096	.097	.097	
Turbidity (NTUs)	5.27	5.18	21.3	15.4	15.0	5.2	4.8	
Temperature (°C)	13.20	13.03	13.10	13.15	12.99	13.25	13.33	
Odor (Subjective)	None	None	None	None	None	None	None	
Color (Subjective)	Clr	Clr	Clr	Clr	Clr	Clr	Clr	
ORP	275.2	279.3	281.6	281.1	276.6	275.2	274.9	

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

Sample Time: 1355
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature

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
DATE: 1/16/15
PERSONNEL: J. Arnold

WELL CONDITION: Good
WEATHER: Sunny / Cool 40°F

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 16.57 ft
Sand Pack or Open Hole: Sand Pack
Depth to intake from base of well: ~20.0 ft
Initial DTW + 0.33 ft from TOC: 16.90 ft

Water Column: 4.43 ft
1/2 of Water Column: 2.22 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1125	1135	1145	1155	1205	1215		
DTW (ft)	16.76	16.78	16.75	16.75	16.75	16.75		
Vol Purged (Cumm-ml)	~1000	~1500	~2000	~2500	~3000	~3500		
Flow Rate (ml/min)	250	~50	~50	250	~50	~50		
pH (Stand Units)	4.72	4.70	4.70	4.71	4.70	4.70		
DO (mg/L)	5.93	5.75	5.28	5.03	4.77	4.56		
Conductivity (mS/sec)	.036	.028	.037	.037	.037	.038		
Turbidity (NTUs)	11.7	10.1	7.78	6.20	4.64	3.92		
Temperature (°C)	13.18	12.95	12.78	12.67	12.59	12.72		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clr	Clr	Clr	Clr	Clr	Clr		
ORP	265.9	265.4	264.6	263.6	263.8	264.6		

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

Sample Time: 1215
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature

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
DATE: 1/15/15
PERSONNEL: J. Niewahl

WELL CONDITION: Good
WEATHER: Cold 40°F

REASON FOR SAMPLING: 2015 January Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 8.54 ft
Sand Pack or Open Hole: Sand Pack
Depth to intake from base of well: 20.0 ft
Initial DTW + 0.33 ft from TOC: 8.87 ft

Water Column: 12.46 ft
1/2 of Water Column: 6.23 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1220	1230	1240	1250	1300	1310		
DTW (ft)	8.54	8.50	8.51	8.52	8.50	8.52		
Vol Purged (Cumm-ml)	~1000	~2000	~3000	~4000	~5000	~6000		
Flow Rate (ml/min)	~100	~100	~100	~100	~100	~100		
pH (Stand Units)	4.72	4.59	4.53	4.52	4.52	4.51		
DO (mg/L)	7.95	6.06	5.16	4.65	4.68	4.52		
Conductivity (mS/sec)	.037	.036	.037	.037	.036	.036		
Turbidity (NTUs)	.90	1.18	.60	.54	.91	.90		
Temperature (°C)	10.92	11.31	11.52	11.59	11.63	11.67		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clr	Clr	Clr	Clr	Clr	Clr		
ORP	239.8	246.9	253.8	257.5	261.3	263.1		

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

Sample Time: 1315
Laboratory: Pace Analytical
Shipping Date: 1/16/15
Delivery Date: 1/16/15

Signature

APPENDIX II
LABORATORY REPORT

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 27, 2015

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

RE: Project: PPG-SHELBY
Pace Project No.: 92233875

Dear Mr. Quarles:
Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2015. 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.
Scott Young, S&ME, Inc.

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CERTIFICATIONS

Project: PPG-SHELBY
Pace Project No.: 92233875

Asheville Certification IDs
2225 Riverside Drive, 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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SAMPLE SUMMARY

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92233875001	**MW-3**	Water	01/15/15 11:20	01/16/15 17:20
92233875002	**MW-7**	Water	01/15/15 13:15	01/16/15 17:20
92233875003	**MW-2**	Water	01/15/15 15:10	01/16/15 17:20
92233875004	**MW-4**	Water	01/15/15 16:40	01/16/15 17:20
92233875005	**EB-1**	Water	01/16/15 07:40	01/16/15 17:20
92233875006	**MW-1**	Water	01/16/15 10:15	01/16/15 17:20
92233875007	**MW-6**	Water	01/16/15 12:15	01/16/15 17:20
92233875008	**MW-5**	Water	01/16/15 13:55	01/16/15 17:20

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SAMPLE ANALYTE COUNT

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92233875001	MW-3	EPA 200.7	SH1	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875002	MW-7	EPA 200.7	SH1	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875003	MW-2	EPA 200.7	SH1	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875004	MW-4	EPA 200.7	SH1	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875005	EB-1	EPA 200.7	SH1	7	PASI-A
		SM 2540C	WRC	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A

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SAMPLE ANALYTE COUNT

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875006	MW-1	EPA 200.7	SH1	7	PASI-A
		SM 2540C	TEP	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875007	MW-6	EPA 200.7	SH1	7	PASI-A
		SM 2540C	TEP	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92233875008	MW-5	EPA 200.7	SH1	7	PASI-A
		SM 2540C	TEP	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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SUMMARY OF DETECTION

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92233875001	**MW-3**					
EPA 200.7	Barium	103	ug/L	5.0	01/20/15 20:52	
EPA 200.7	Iron	107	ug/L	50.0	01/20/15 20:52	
EPA 200.7	Manganese	2180	ug/L	5.0	01/20/15 20:52	
SM 2540C	Total Dissolved Solids	130	mg/L	25.0	01/20/15 19:58	
EPA 300.0	Sulfate	20.3	mg/L	2.0	01/20/15 19:30	
EPA 353.2	Nitrogen, Nitrate	0.52	mg/L	0.020	01/16/15 22:21	
SM 4500-Cl-E	Chloride	2.0	mg/L	1.0	01/21/15 22:36	
SM 5310B	Total Organic Carbon	0.92J	mg/L	1.0	01/17/15 18:45	
92233875002	**MW-7**					
EPA 200.7	Barium	53.0	ug/L	5.0	01/20/15 20:55	
EPA 200.7	Manganese	66.9	ug/L	5.0	01/20/15 20:55	
EPA 353.2	Nitrogen, Nitrate	0.70	mg/L	0.020	01/16/15 22:27	
SM 4500-Cl-E	Chloride	4.6	mg/L	1.0	01/21/15 22:37	
SM 5310B	Total Organic Carbon	11.2	mg/L	1.0	01/17/15 19:12	
92233875003	**MW-2**					
EPA 200.7	Barium	19.4	ug/L	5.0	01/20/15 20:58	
EPA 200.7	Manganese	6.9	ug/L	5.0	01/20/15 20:58	
EPA 300.0	Sulfate	1.5J	mg/L	2.0	01/21/15 10:58	
EPA 353.2	Nitrogen, Nitrate	0.14	mg/L	0.020	01/16/15 22:28	
SM 4500-Cl-E	Chloride	3.1	mg/L	1.0	01/21/15 22:38	
SM 5310B	Total Organic Carbon	0.55J	mg/L	1.0	01/17/15 19:22	
92233875004	**MW-4**					
EPA 200.7	Barium	114	ug/L	5.0	01/20/15 21:01	
EPA 200.7	Manganese	59.1	ug/L	5.0	01/20/15 21:01	
SM 2540C	Total Dissolved Solids	51.0	mg/L	25.0	01/20/15 19:59	
EPA 300.0	Sulfate	1.8J	mg/L	2.0	01/20/15 20:38	
EPA 353.2	Nitrogen, Nitrate	1.1	mg/L	0.020	01/16/15 22:32	
SM 4500-Cl-E	Chloride	12.2	mg/L	1.0	01/21/15 22:39	
SM 5310B	Total Organic Carbon	1.7	mg/L	1.0	01/17/15 19:33	
92233875005	**EB-1**					
EPA 353.2	Nitrogen, Nitrate	0.030	mg/L	0.020	01/16/15 22:33	
92233875006	**MW-1**					
EPA 200.7	Barium	31.7	ug/L	5.0	01/20/15 21:08	
EPA 200.7	Iron	268	ug/L	50.0	01/20/15 21:08	
EPA 200.7	Manganese	14.4	ug/L	5.0	01/20/15 21:08	
SM 2540C	Total Dissolved Solids	33.0	mg/L	25.0	01/21/15 07:33	
EPA 300.0	Sulfate	1.3J	mg/L	2.0	01/20/15 21:33	
EPA 353.2	Nitrogen, Nitrate	2.1	mg/L	0.020	01/16/15 22:34	
SM 4500-Cl-E	Chloride	4.5	mg/L	1.0	01/21/15 22:41	
SM 5220D	Chemical Oxygen Demand	25.0	mg/L	25.0	01/26/15 21:15	
92233875007	**MW-6**					
EPA 200.7	Barium	25.5	ug/L	5.0	01/20/15 21:11	
EPA 200.7	Iron	308	ug/L	50.0	01/20/15 21:11	
EPA 200.7	Manganese	46.3	ug/L	5.0	01/20/15 21:11	

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(704)875-9092

SUMMARY OF DETECTION

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92233875007	**MW-6**					
SM 2540C	Total Dissolved Solids	53.0	mg/L	25.0	01/21/15 07:34	
EPA 300.0	Sulfate	1.2J	mg/L	2.0	01/20/15 21:46	
EPA 353.2	Nitrogen, Nitrate	0.43	mg/L	0.020	01/16/15 22:35	
SM 4500-Cl-E	Chloride	5.7	mg/L	1.0	01/21/15 22:42	
SM 5310B	Total Organic Carbon	0.53J	mg/L	1.0	01/17/15 20:33	
92233875008	**MW-5**					
EPA 200.7	Barium	184	ug/L	5.0	01/20/15 21:14	
EPA 200.7	Iron	1040	ug/L	50.0	01/20/15 21:14	
EPA 200.7	Manganese	287	ug/L	5.0	01/20/15 21:14	
SM 2540C	Total Dissolved Solids	64.0	mg/L	25.0	01/21/15 07:34	
EPA 353.2	Nitrogen, Nitrate	1.9	mg/L	0.020	01/16/15 22:36	
SM 4500-Cl-E	Chloride	19.3	mg/L	1.0	01/21/15 22:43	
SM 5310B	Total Organic Carbon	0.54J	mg/L	1.0	01/17/15 20:43	

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PROJECT NARRATIVE

Project: PPG-SHELBY
Pace Project No.: 92233875

Method: **EPA 200.7**
Description: 200.7 MET ICP
Client: S&ME, Inc.
Date: January 27, 2015

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-SHELBY
Pace Project No.: 92233875

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: S&ME, Inc.
Date: January 27, 2015

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-SHELBY
Pace Project No.: 92233875

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: S&ME, Inc.
Date: January 27, 2015

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-SHELBY
Pace Project No.: 92233875

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: S&ME, Inc.
Date: January 27, 2015

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.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG-SHELBY
Pace Project No.: 92233875

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: S&ME, Inc.
Date: January 27, 2015

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.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG-SHELBY
Pace Project No.: 92233875

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: S&ME, Inc.
Date: January 27, 2015

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.

Additional Comments:

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PROJECT NARRATIVE

Project: PPG-SHELBY
Pace Project No.: 92233875

Method: **SM 5220D**
Description: 5220D COD
Client: S&ME, Inc.
Date: January 27, 2015

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.

QC Batch: WETA/21688

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92233549004,92233884001

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

- MS (Lab ID: 1377304)
  - Chemical Oxygen Demand
- MSD (Lab ID: 1377305)
  - Chemical Oxygen Demand

Additional Comments:

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PROJECT NARRATIVE

Project: PPG-SHELBY
Pace Project No.: 92233875

Method: **SM 5310B**
Description: 5310B TOC
Client: S&ME, Inc.
Date: January 27, 2015

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.

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-SHELBY
Pace Project No.: 92233875

Sample: MW-3 **Lab ID: 92233875001** Collected: 01/15/15 11:20 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**103**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:52	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 20:52	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:52	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:52	7440-50-8	
Iron	**107**	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 20:52	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:52	7439-92-1	
Manganese	**2180**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:52	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**130**	mg/L	25.0	25.0	1		01/20/15 19:58		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**20.3**	mg/L	2.0	1.0	1		01/20/15 19:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.52**	mg/L	0.020	0.010	1		01/16/15 22:21		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:21		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**2.0**	mg/L	1.0	0.50	1		01/21/15 22:36	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/21/15 10:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.92J**	mg/L	1.0	0.50	1		01/17/15 18:45	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-7 **Lab ID: 92233875002** Collected: 01/15/15 13:15 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	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	2.5	1	01/19/15 15:00	01/20/15 20:55	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 20:55	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:55	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:55	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 20:55	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:55	7439-92-1	
Manganese	**66.9**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:55	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/20/15 19:58		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		01/20/15 20:11	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.70**	mg/L	0.020	0.010	1		01/16/15 22:27		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:27		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**4.6**	mg/L	1.0	0.50	1		01/21/15 22:37	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/21/15 10:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**11.2**	mg/L	1.0	0.50	1		01/17/15 19:12	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-2 **Lab ID: 92233875003** Collected: 01/15/15 15:10 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**19.4**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:58	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 20:58	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:58	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:58	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 20:58	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:58	7439-92-1	
Manganese	**6.9**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 20:58	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/20/15 19:59		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.5J**	mg/L	2.0	1.0	1		01/21/15 10:58	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.14**	mg/L	0.020	0.010	1		01/16/15 22:28		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:28		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**3.1**	mg/L	1.0	0.50	1		01/21/15 22:38	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/21/15 10:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.55J**	mg/L	1.0	0.50	1		01/17/15 19:22	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-4 **Lab ID: 92233875004** Collected: 01/15/15 16:40 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**114**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:01	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 21:01	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:01	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:01	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 21:01	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:01	7439-92-1	
Manganese	**59.1**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:01	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**51.0**	mg/L	25.0	25.0	1		01/20/15 19:59		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.8J**	mg/L	2.0	1.0	1		01/20/15 20:38	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.1**	mg/L	0.020	0.010	1		01/16/15 22:32		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:32		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**12.2**	mg/L	1.0	0.50	1		01/21/15 22:39	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/26/15 21:15		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1.7**	mg/L	1.0	0.50	1		01/17/15 19:33	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: EB-1 **Lab ID: 92233875005** Collected: 01/16/15 07:40 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:05	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 21:05	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:05	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:05	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 21:05	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:05	7439-92-1	
Manganese	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:05	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/20/15 19:59		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		01/20/15 21:19	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.030**	mg/L	0.020	0.010	1		01/16/15 22:33		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:33		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	ND	mg/L	1.0	0.50	1		01/21/15 22:39	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/26/15 21:15		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		01/17/15 19:47	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-1 **Lab ID: 92233875006** Collected: 01/16/15 10:15 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**31.7**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:08	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 21:08	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:08	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:08	7440-50-8	
Iron	**268**	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 21:08	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:08	7439-92-1	
Manganese	**14.4**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:08	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**33.0**	mg/L	25.0	25.0	1		01/21/15 07:33		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.3J**	mg/L	2.0	1.0	1		01/20/15 21:33	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**2.1**	mg/L	0.020	0.010	1		01/16/15 22:34		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:34		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**4.5**	mg/L	1.0	0.50	1		01/21/15 22:41	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**25.0**	mg/L	25.0	12.5	1		01/26/15 21:15		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		01/17/15 20:18	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-6 **Lab ID: 92233875007** Collected: 01/16/15 12:15 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**25.5**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:11	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 21:11	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:11	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:11	7440-50-8	
Iron	**308**	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 21:11	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:11	7439-92-1	
Manganese	**46.3**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:11	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**53.0**	mg/L	25.0	25.0	1		01/21/15 07:34		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.2J**	mg/L	2.0	1.0	1		01/20/15 21:46	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.43**	mg/L	0.020	0.010	1		01/16/15 22:35		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:35		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**5.7**	mg/L	1.0	0.50	1		01/21/15 22:42	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/26/15 21:15		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.53J**	mg/L	1.0	0.50	1		01/17/15 20:33	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG-SHELBY
Pace Project No.: 92233875

Sample: MW-5 **Lab ID: 92233875008** Collected: 01/16/15 13:55 Received: 01/16/15 17:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Barium	**184**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:14	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	01/19/15 15:00	01/20/15 21:14	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:14	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:14	7440-50-8	
Iron	**1040**	ug/L	50.0	25.0	1	01/19/15 15:00	01/20/15 21:14	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:14	7439-92-1	
Manganese	**287**	ug/L	5.0	2.5	1	01/19/15 15:00	01/20/15 21:14	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**64.0**	mg/L	25.0	25.0	1		01/21/15 07:34		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	01/17/15 06:30	01/22/15 03:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		01/20/15 22:00	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.9**	mg/L	0.020	0.010	1		01/16/15 22:36		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		01/16/15 22:36		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**19.3**	mg/L	1.0	0.50	1		01/21/15 22:43	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		01/26/15 21:15		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.54J**	mg/L	1.0	0.50	1		01/17/15 20:43	7440-44-0	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: MPRP/17741 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1372956 Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	01/20/15 19:39	
Cadmium	ug/L	ND	1.0	01/20/15 19:39	
Chromium	ug/L	ND	5.0	01/20/15 19:39	
Copper	ug/L	ND	5.0	01/20/15 19:39	
Iron	ug/L	ND	50.0	01/20/15 19:39	
Lead	ug/L	ND	5.0	01/20/15 19:39	
Manganese	ug/L	ND	5.0	01/20/15 19:39	

LABORATORY CONTROL SAMPLE: 1372957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	484	97	85-115	
Cadmium	ug/L	500	496	99	85-115	
Chromium	ug/L	500	462	92	85-115	
Copper	ug/L	500	491	98	85-115	
Iron	ug/L	5000	4540	91	85-115	
Lead	ug/L	500	481	96	85-115	
Manganese	ug/L	500	472	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372958 1372959

Parameter	Units	92233476001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	ND	500	500	492	495	98	99	70-130	1	20	
Cadmium	ug/L	ND	500	500	500	504	100	101	70-130	1	20	
Chromium	ug/L	ND	500	500	467	470	93	94	70-130	1	20	
Copper	ug/L	7.0	500	500	504	508	99	100	70-130	1	20	
Iron	ug/L	ND	5000	5000	4640	4690	93	93	70-130	1	20	
Lead	ug/L	ND	500	500	487	492	97	98	70-130	1	20	
Manganese	ug/L	ND	500	500	477	480	95	96	70-130	1	20	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372960 1372961

Parameter	Units	92233103007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	ND	500	500	433	440	87	88	70-130	2	20	
Cadmium	ug/L	ND	500	500	547	545	109	109	70-130	0	20	
Chromium	ug/L	0.20 mg/L	500	500	652	655	91	92	70-130	1	20	
Copper	ug/L	0.20 mg/L	500	500	728	730	106	107	70-130	0	20	
Iron	ug/L	28.7 mg/L	5000	5000	32800	33200	81	89	70-130	1	20	
Lead	ug/L	0.0054 mg/L	500	500	420	417	83	82	70-130	1	20	
Manganese	ug/L	0.31 mg/L	500	500	761	765	91	92	70-130	1	20	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WET/35321 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005

METHOD BLANK: 1374069 Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	01/20/15 19:55	

LABORATORY CONTROL SAMPLE: 1374070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	232	93	90-110	

SAMPLE DUPLICATE: 1374071

Parameter	Units	92233747001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	52500	58000	10	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WET/35329 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92233875006, 92233875007, 92233875008

METHOD BLANK: 1374113 Matrix: Water
Associated Lab Samples: 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	01/21/15 07:33	

LABORATORY CONTROL SAMPLE: 1374114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	244	98	90-110	

SAMPLE DUPLICATE: 1374115

Parameter	Units	92233875006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	33.0	34.0	3	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WET/35291 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1372668 Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	01/22/15 03:48	

LABORATORY CONTROL SAMPLE: 1372669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	198	100	84.5-115.4	

SAMPLE DUPLICATE: 1372670

Parameter	Units	92233735002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	141	135	4	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21646 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1373368 — Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	01/20/15 15:53	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.8	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373370 — 1373371

Parameter	Units	92233605009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	12.9	20	20	34.2	34.1	107	106	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373372 — 1373373

Parameter	Units	92233875001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	20.3	20	20	38.5	39.2	91	94	90-110	2	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21626 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1372661 | Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	01/16/15 22:18	
Nitrogen, Nitrite	mg/L	ND	0.020	01/16/15 22:18	

LABORATORY CONTROL SAMPLE: 1372662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	102	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372663 1372664

Parameter	Units	92233875001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.52	2.5	2.5	3.0	3.0	99	99	90-110	0	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.1	1.1	105	105	90-110	0	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21652 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1374078 Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	01/21/15 22:32	

LABORATORY CONTROL SAMPLE: 1374079

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374080 1374081

Parameter	Units	92233504002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	25.8	100	100	127	126	101	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374082 1374083

Parameter	Units	92233875008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.3	20	20	37.3	37.3	90	90	90-110	0	10	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21657 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92233875001, 92233875002, 92233875003

METHOD BLANK: 1374245 Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	01/21/15 10:40	

LABORATORY CONTROL SAMPLE: 1374246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	771	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374247 1374248

Parameter	Units	92233103005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	393	750	750	1090	1080	93	92	90-110	0	3	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21688 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1377302 Matrix: Water
Associated Lab Samples: 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	01/26/15 21:15	

LABORATORY CONTROL SAMPLE: 1377303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	782	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377304 1377305

Parameter	Units	92233549004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	366	1500	1500	1700	1700	89	89	90-110	0	3	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377306 1377307

Parameter	Units	92233884001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	4360	7500	7500	11500	11500	95	95	90-110	0	3	

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QUALITY CONTROL DATA

Project: PPG-SHELBY
Pace Project No.: 92233875

QC Batch: WETA/21633 — Analysis Method: SM 5310B
QC Batch Method: SM 5310B — Analysis Description: 5310B TOC
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

METHOD BLANK: 1372799 — Matrix: Water
Associated Lab Samples: 92233875001, 92233875002, 92233875003, 92233875004, 92233875005, 92233875006, 92233875007, 92233875008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	01/17/15 18:15	

LABORATORY CONTROL SAMPLE: 1372800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.1	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372801 — 1372802

Parameter	Units	92233875001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.92J	25	25	25.3	25.1	98	97	90-110	1	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372803 — 1372804

Parameter	Units	92233606001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	24.8	24.6	98	97	90-110	1	5	

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QUALIFIERS

Project: PPG-SHELBY
Pace Project No.: 92233875

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.

PQL - Practical Quantitation 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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TNI - The NELAC Institute.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92233875001	MW-3	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875002	MW-7	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875003	MW-2	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875004	MW-4	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875005	EB-1	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875006	MW-1	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875007	MW-6	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875008	MW-5	EPA 200.7	MPRP/17741	EPA 200.7	ICP/15971
92233875001	MW-3	SM 2540C	WET/35321		
92233875002	MW-7	SM 2540C	WET/35321		
92233875003	MW-2	SM 2540C	WET/35321		
92233875004	MW-4	SM 2540C	WET/35321		
92233875005	EB-1	SM 2540C	WET/35321		
92233875006	MW-1	SM 2540C	WET/35329		
92233875007	MW-6	SM 2540C	WET/35329		
92233875008	MW-5	SM 2540C	WET/35329		
92233875001	MW-3	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875002	MW-7	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875003	MW-2	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875004	MW-4	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875005	EB-1	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875006	MW-1	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875007	MW-6	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875008	MW-5	SM 5210B	WET/35291	SM 5210B	WET/35295
92233875001	MW-3	EPA 300.0	WETA/21646		
92233875002	MW-7	EPA 300.0	WETA/21646		
92233875003	MW-2	EPA 300.0	WETA/21646		
92233875004	MW-4	EPA 300.0	WETA/21646		
92233875005	EB-1	EPA 300.0	WETA/21646		
92233875006	MW-1	EPA 300.0	WETA/21646		
92233875007	MW-6	EPA 300.0	WETA/21646		
92233875008	MW-5	EPA 300.0	WETA/21646		
92233875001	MW-3	EPA 353.2	WETA/21626		
92233875002	MW-7	EPA 353.2	WETA/21626		
92233875003	MW-2	EPA 353.2	WETA/21626		
92233875004	MW-4	EPA 353.2	WETA/21626		
92233875005	EB-1	EPA 353.2	WETA/21626		
92233875006	MW-1	EPA 353.2	WETA/21626		
92233875007	MW-6	EPA 353.2	WETA/21626		
92233875008	MW-5	EPA 353.2	WETA/21626		
92233875001	MW-3	SM 4500-Cl-E	WETA/21652		
92233875002	MW-7	SM 4500-Cl-E	WETA/21652		
92233875003	MW-2	SM 4500-Cl-E	WETA/21652		
92233875004	MW-4	SM 4500-Cl-E	WETA/21652		
92233875005	EB-1	SM 4500-Cl-E	WETA/21652		
92233875006	MW-1	SM 4500-Cl-E	WETA/21652		

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG-SHELBY
Pace Project No.: 92233875

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92233875007	**MW-6**	SM 4500-Cl-E	WETA/21652		
92233875008	**MW-5**	SM 4500-Cl-E	WETA/21652		
92233875001	**MW-3**	SM 5220D	WETA/21657		
92233875002	**MW-7**	SM 5220D	WETA/21657		
92233875003	**MW-2**	SM 5220D	WETA/21657		
92233875004	**MW-4**	SM 5220D	WETA/21688		
92233875005	**EB-1**	SM 5220D	WETA/21688		
92233875006	**MW-1**	SM 5220D	WETA/21688		
92233875007	**MW-6**	SM 5220D	WETA/21688		
92233875008	**MW-5**	SM 5220D	WETA/21688		
92233875001	**MW-3**	SM 5310B	WETA/21633		
92233875002	**MW-7**	SM 5310B	WETA/21633		
92233875003	**MW-2**	SM 5310B	WETA/21633		
92233875004	**MW-4**	SM 5310B	WETA/21633		
92233875005	**EB-1**	SM 5310B	WETA/21633		
92233875006	**MW-1**	SM 5310B	WETA/21633		
92233875007	**MW-6**	SM 5310B	WETA/21633		
92233875008	**MW-5**	SM 5310B	WETA/21633		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: S & ME

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 T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 1.8 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: JS 1/16/15

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: pg 116	☑Yes	☐No	☐N/A	12. two sets of MW-3 - matched by time - probably MW-2 mislabeled!
-Includes date/time/ID/Analysis Matrix:_____				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13. MW6 pH > 2 BP3S
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. HS - 1 vial
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: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	AMB	Date:	1-16-15
SRF Review:	AMB	Date:	1-17-15

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#: 92233875

92233875

Pace Analytical®
www.pacelabs.com

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

1884162

Section A Required Client Information:

Company: S&ME, Inc
Address: 9751 Southern Pine Blvd
Charlotte NC 28273
Email To: aquarles@smeinc.com
Phone: 704-523-4726 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Al Quarles
Copy To:
Purchase Order No.: 61656
Project Name: PPG-Shelby
Project Number: 1354-11-137

Section C Invoice Information:

Attention: Barbara Ellington
Company Name: Same
Address:
Pace Quote Reference:
Pace Project Manager: Angela Baioni
Pace Profile #:

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): BOD Y, COD Y, TOC Y, TDS N, Metals Y, Cl, NO3, PO4, SO4 N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Phosphoric Acid	BOD	COD	TOC	TDS	Metals	Cl, NO3, PO4, SO4	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-3	WT	G			1/15/15	1120		8	3	1	1					3	1	1	3	1	1	1		92233001
2	MW-7						1335																		002
3	MW2						1510																		003
4	MW4						1640																		004
5	EB-1					1/16/15	740																		005
6	MW-1						1015																		006
7	MW-6						1215																		007
8	MW5						1355																		008
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Jeff Niewell	1/16/15	1720	[illegible] / Pace	1-16-15	17:20	-5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Jeff Niewell
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 01/16/15

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.