Groundwater Monitoring Report
PPG Industries, Inc.
Shelby, Cleveland Co., NC
S&ME Project No. 1354-11-137

S&ME

Prepared for:
PPG Industries, Inc.
940 Washburn Switch Road
Shelby, North Carolina

Prepared by:
S&ME, Inc.
9751 Southern Pine Boulevard
Charlotte, NC 28273

August 5, 2015

August 5, 2015

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

Attention: Mr. Richard Young

Reference: **Groundwater Monitoring Report**
PPG Industries, Inc.
Shelby, Cleveland Co., NC
S&ME Project No. 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 July 2015 sampling results indicated concentrations of iron (MW-6) and manganese (MW-3, MW-5, MW-6, and MW-7) at levels greater than 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
Registration No. 1133

NORTH CAROLINA LICENSED SEAL 1133 GEOLOGIST AL QUARLES

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1.0 Introduction

S&ME includes herein, the results of the July 2015 semi-annual groundwater monitoring event for the referenced PPG Industries, Inc. fiberglass manufacturing plant located in Shelby, North Carolina (**Figures 1** and **2, Appendix I**). 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.

2.0 Sampling Methodology

On July 23 and 24, 2015, S&ME measured the depth to groundwater in the monitoring wells from the top of monitoring well casings (**Table 1, Appendix II**). 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.

3.0 Results

3.1 Water Levels and Groundwater Flow

On July 23 and 24, 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 January 2015 water levels, the July 2015 water levels decreased in six of the monitoring wells ranging from 0.59 feet (MW-2) to 2.81 feet (MW-5). The water level in monitoring well MW-1 increased by 0.06 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 July 2015 groundwater sampling event are summarized in **Table 2**. A copy of the laboratory report is included in **Appendix II**. The historical results since July 2010 are summarized in **Table 3**.

The July 2015 sampling results indicated concentrations of iron (MW-6) and manganese (MW-3, MW-5, MW-6, 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, copper, iron, and manganese were also detected in other monitoring well samples at levels less than the 2L Standards: barium (all seven monitoring wells), copper (MW-7), iron (MW-1 and MW-5), and manganese (all seven monitoring wells). Cadmium, chromium, 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).

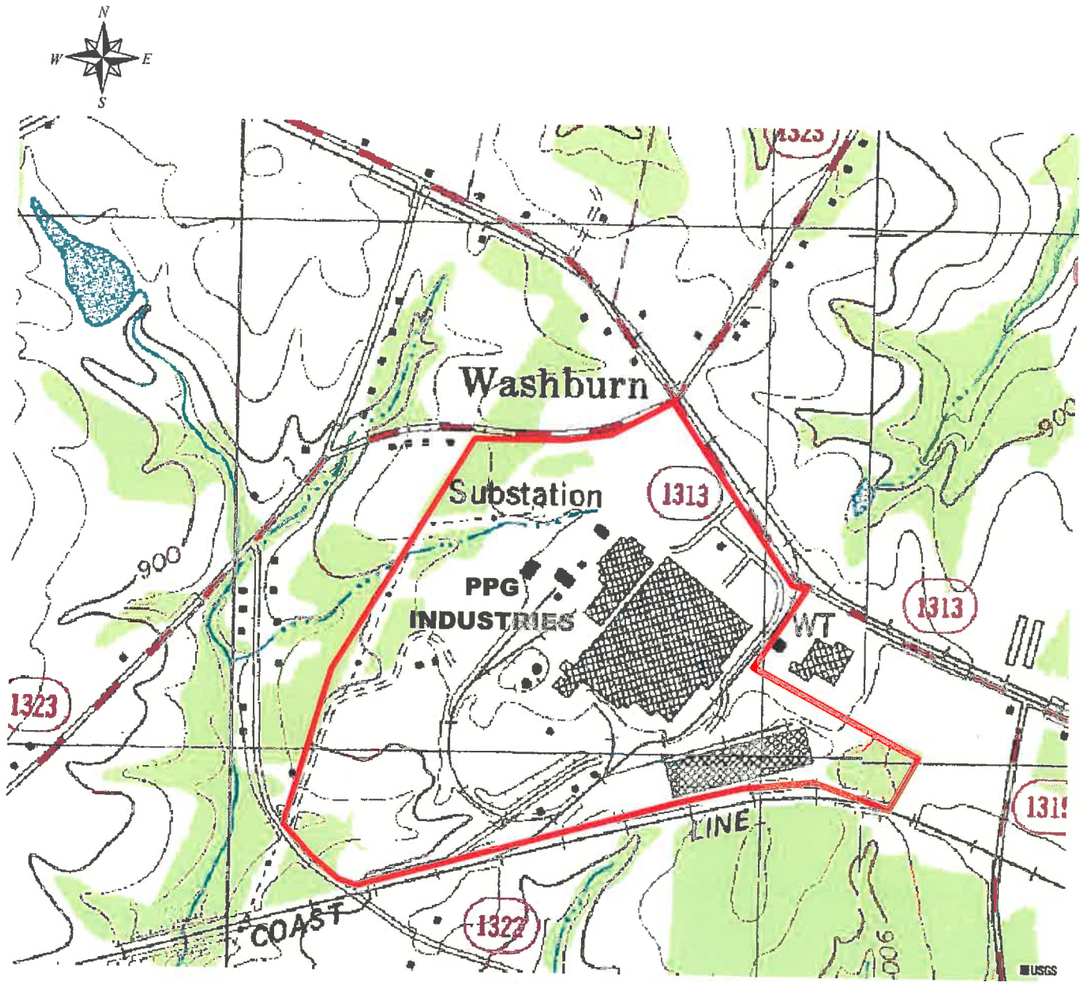
3.3 Quality Control Sample

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 attached to new peristaltic pump tubing directly into the laboratory containers (after passing water through the tubing). The blank was analyzed for the same parameters as the groundwater samples. A nitrate concentration of 0.053 milligrams per liter (mg/L) was detected in the blank sample compared to its 2L Standard of 10 mg/L.

3.4 Recommendations

Based on the results of the July 2015 monitoring event, S&ME recommends continued semi-annual groundwater monitoring.

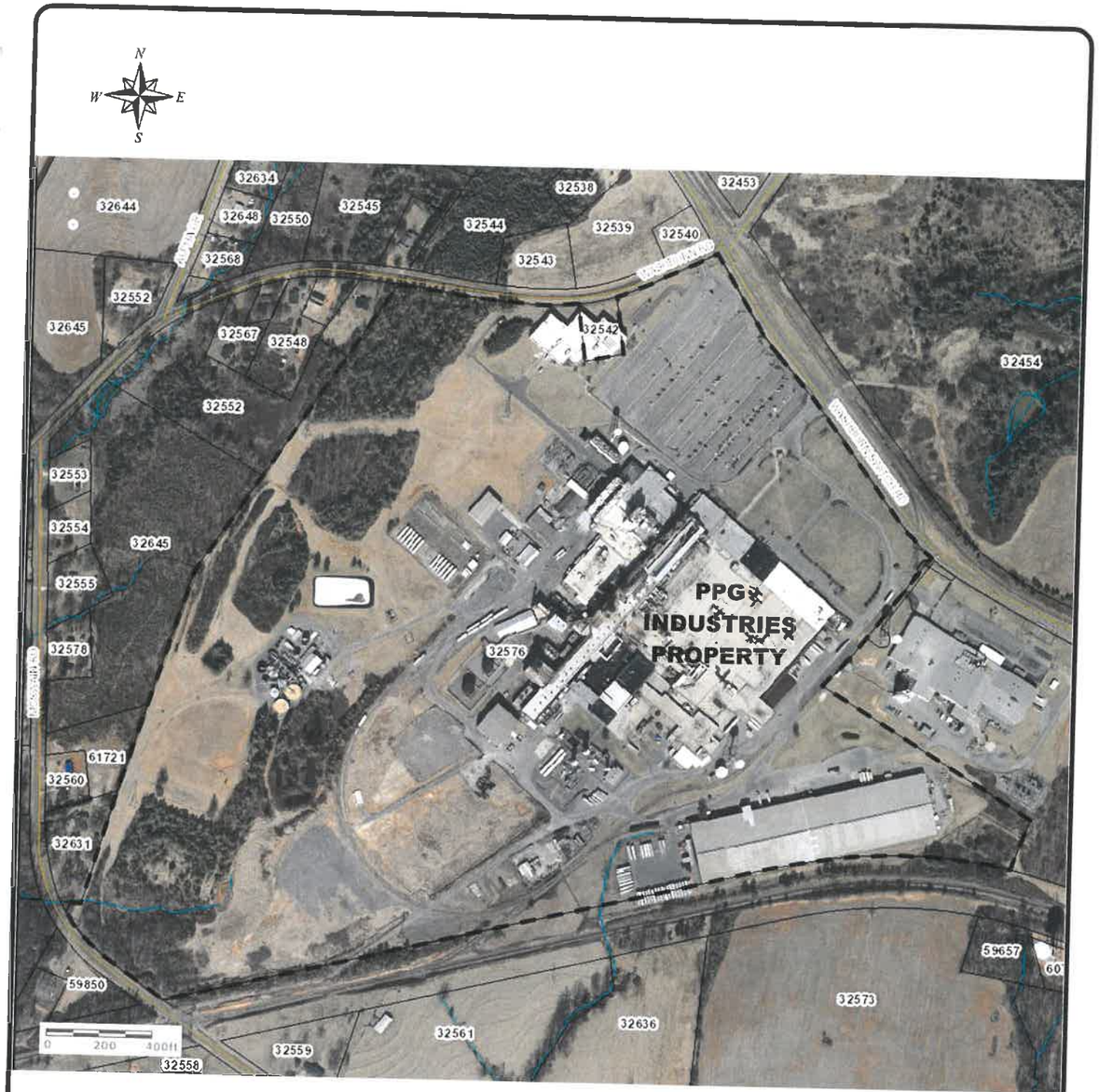
Appendix I – Figures



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			
Checked by: WAQ			**2**
Date: 08-05-14		S&ME Job No.: 1354-11-137	

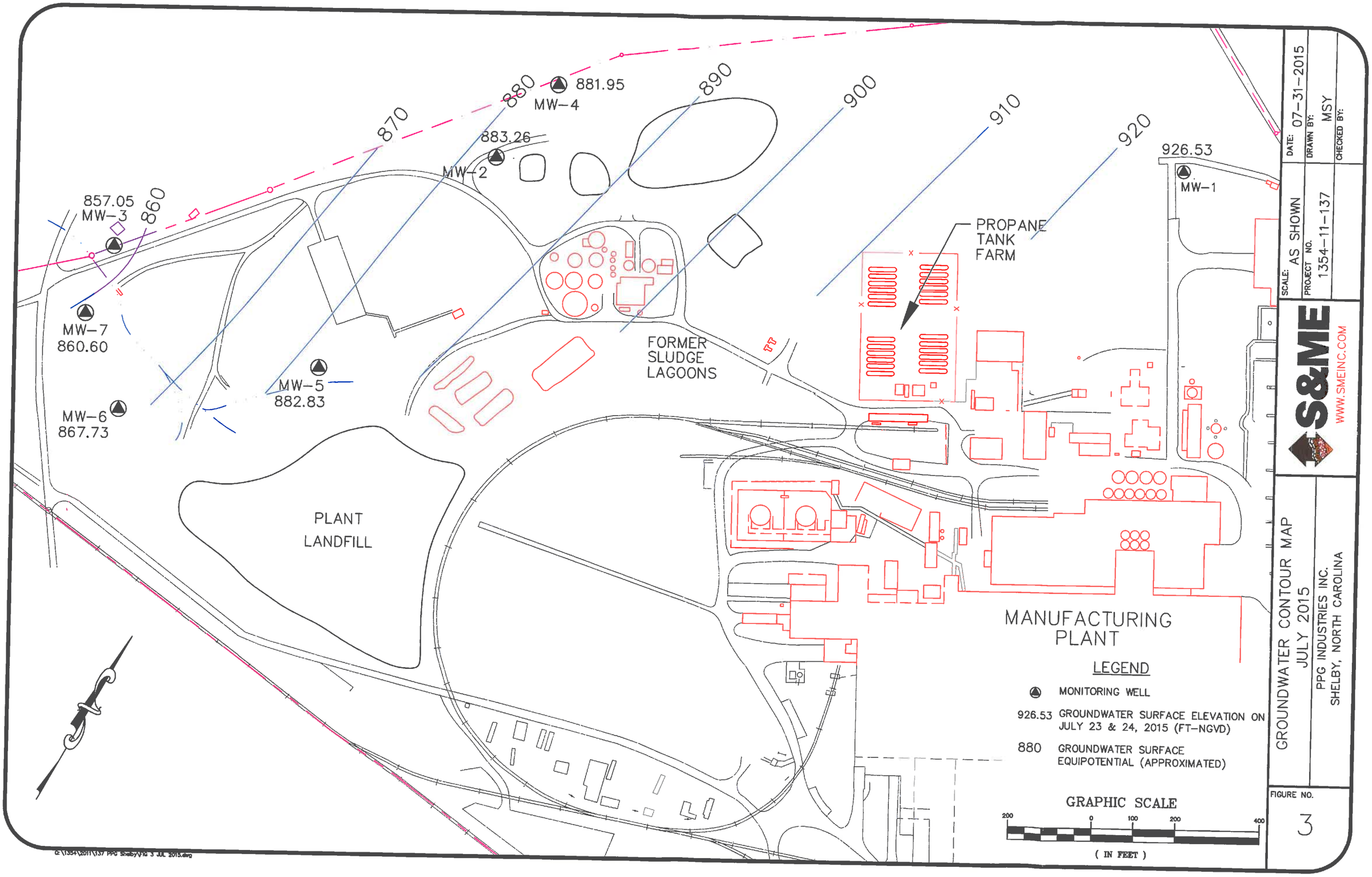

870
880
881.95
MW-4
890
900
910
920
926.53
MW-1
883.26
MW-2
857.05
MW-3
860
MW-7
860.60
MW-5
882.83
MW-6
867.73
PROPANE
TANK
FARM
FORMER
SLUDGE
LAGOONS
PLANT
LANDFILL
MANUFACTURING
PLANT
LEGEND
MONITORING WELL
926.53 GROUNDWATER SURFACE ELEVATION ON JULY 23 & 24, 2015 (FT-NGVD)
880 GROUNDWATER SURFACE EQUIPOTENTIAL (APPROXIMATED)
GRAPHIC SCALE
200
0
100
200
400
(IN FEET)
DATE: 07-31-2015
DRAWN BY: MSY
CHECKED BY:
SCALE: AS SHOWN
PROJECT NO. 1354-11-137
S&ME
WWW.SMEINC.COM
GROUNDWATER CONTOUR MAP
JULY 2015
PPG INDUSTRIES INC.
SHELBY, NORTH CAROLINA
FIGURE NO.
3

Table 1
Water Levels and Well Purging Data (July 23-24, 2015)
PPG Industries, Inc.
Shelby, North Carolina
S&ME Project # 1354-11-137

		Monitoring 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	26.50	21.15	9.96	19.44	9.58	18.92	9.74
Water Level Elevation	feet	926.53	883.26	857.05	881.95	882.83	867.73	860.60
Elevation Change*	feet	0.06	(0.59)	(2.18)	(0.74)	(2.81)	(2.35)	(1.20)
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	75	100	50	100	100	50	100
pH	standard	5.02	5.14	5.48	5.57	4.79	5.57	5.02
Conductivity	microSiemens per centimeter	42	42	104	104	90	51	35
Turbidity	nephelometric turbidity units	0.61	0.34	0.73	1.66	7.21	11.90	19.70
Dissolved Oxygen	milligrams per liter	3.96	5.29	0.48	0.23	3.13	1.79	3.90
Temperature	Celcius	24.20	20.90	21.90	18.10	19.10	21.80	19.70
ORP	millivolts	189.9	71.6	168.2	65.0	218.6	152.8	221.7

Notes * Difference in feet from the previous monitoring event.

TABLE 2
WATER QUALITY DATA (July 23-24, 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	**0.0286**	**0.0254**	**0.101**	**0.112**	**0.184**	**0.0248**	**0.0531**	<0.0025	0.7
Cadmium	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002
Chromium	mg/L	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.01
Copper	mg/L	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	**0.0025 J**	<0.0025	1
Iron	mg/L	**0.0596**	<0.0250	<0.0250	<0.0250	**0.190**	**2.620** *	<0.0250	<0.0250	0.3
Lead	mg/L	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.015
Manganese	mg/L	**0.0099**	**0.0088**	**1.680** *	**0.0469**	**0.144** *	**1.04** *	**0.0566** *	<0.0025	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**	**7.0**	**2.1**	**14.7**	**13.4**	**8.1**	**4.5**	<0.50	250
COD	mg/L	<12.5	<12.5	<12.5	**19.0 J**	**21.0 J**	<12.5	<12.5	<12.5	NA
Nitrate	mg/L	**2.1**	**0.46**	**0.85**	**0.9**	**3.9**	**0.3**	**1.20**	**0.053**	10
Sulfate	mg/L	**1.3 J**	**1.4 J**	**15.5**	**1.6 J**	<1.0	**1.1 J**	<1.0	<1.0	250
TDS	mg/L	<25.0	<25.0	**132**	**66.0**	**48.0**	**36.0**	<25.0	<25.0	NA
TOC	mg/L	<0.50	<0.50	**0.69 J**	**1.3**	<0.50	<0.50	<0.50	<0.50	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
HISTORICAL WATER QUALITY DATA (MW-1)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.0309	0.0278	0.0296	0.0312	dry	dry	0.0307	0.0323	0.0317	0.0317	0.0286
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	dry	dry	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	<0.05	**0.69**	<0.0500	0.604	dry	dry	0.128	0.0727	0.147	0.268	0.0596
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	dry	dry	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	0.0084	0.0182	0.0065	0.0165	dry	dry	0.0094	0.0096	0.0122	0.0144	0.0099
BOD	NA	<2	NS	<2.0	<2.0	dry	dry	<2.0	<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	4.5
COD	NA	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25.0	<25.0	25.0	<12.5
Nitrate	10	2.1	NS	2.1	2.2	dry	dry	2.2	2.0	2.0	2.1	2.1
Sulfate	250	<5	NS	<5.0	<5.0	dry	dry	<2.0	<2.0	<2.0	1.3 J	1.3 J
TDS	500	<25	NS	<25.0	<25.0	dry	dry	<25.0	<25.0	<25.0	33.0	<25.0
TOC	NA	<1	NS	1.2	1.1	dry	dry	1.2	1.8	4.5	< 1.0	<0.50

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
HISTORICAL WATER QUALITY DATA (MW-2)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.0241	0.0257	0.0263	0.0291	0.0258	0.0254	0.0255	0.0274	0.0224	0.0194	0.0254
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	<0.05	<0.05	0.13	<0.05	**0.601**	<0.0050	0.0525	<0.050	0.0517	< 0.050	<0.0250
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	0.0079	0.0093	0.0142	0.0106	0.0165	0.0125	0.0106	0.0091	0.0111	0.0069	0.0088
BOD	NA	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<2.0
Chloride	250	8	6.8	7.4	8.2	5	3.3	7.5	7.7	6.6	3.1	7.0
COD	NA	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25	<12.5
Nitrate	10	0.53	0.45	0.47	0.37	0.29	0.065	0.61	0.54	0.5	0.14	0.46
Sulfate	250	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.5 J	1.4 J
TDS	500	<25	<25	<25.0	<25.0	<25.0	36	27.0	<25.0	<25.0	< 25	<25.0
TOC	NA	<1	1.2	2.4	2.6	2	3.3	2.1	2.3	3.0	0.55 J	<0.50

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
HISTORICAL WATER QUALITY DATA (MW-3)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.127	0.115	0.124	0.109	0.108	0.105	0.124	0.117	0.116	0.103	0.101
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	0.0969	0.252	0.133	0.132	0.163	**1.08**	0.0797	<0.050	<0.050	0.107	<0.0250
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	**1.96**	**1.96**	**0.83**	**2.14**	**2.9**	**4.1**	**1.8**	**1.5**	**0.636**	**2.180**	**1.680**
BOD	NA	<2	<2	<2.0	<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	2.1
COD	NA	<25	<25	<25.0	53	<25.0	<25	<25	28.0	<25.0	< 25	<12.5
Nitrate	10	0.71	0.97	0.93	0.79	0.8	0.44	1.0	0.86	0.84	0.52	0.9
Sulfate	250	19.9	19.9	13.7	21.1	22.5	18.6	15.4	16.5	7.5	20.3	15.5
TDS	500	124	106	113	116	145	177	137	207	432	130	132
TOC	NA	5.3	4.7	5.2	38.8	<1.0	5.0	5.6	5.9	7.0	0.92 J	0.69 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
HISTORICAL WATER QUALITY DATA (MW-4)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.133	0.12	0.123	0.126	0.118	0.118	0.112	0.117	0.116	0.114	0.112
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	<0.05	<0.05	<0.0500	<0.0500	<0.500	<0.0500	<0.0500	<0.050	<0.050	< 0.050	<0.0250
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	**0.0694**	**0.0745**	**0.0691**	**0.093**	**0.071**	**0.0739**	**0.0569**	**0.056**	**0.0556**	**0.0591**	**0.0469**
BOD	NA	<2	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<2.0
Chloride	250	20.8	18.4	17.5	18.4	16.2	13.4	15.5	14.4	14.7	12.2	14.7
COD	NA	32	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25	19.0 J
Nitrate	10	0.76	0.86	0.83	0.87	0.86	1.0	0.95	0.87	0.82	1.1	0.9
Sulfate	250	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.8 J	1.6 J
TDS	500	76	72	77	51	76	78	74	50	75	51.0	66.0
TOC	NA	38.6	6.2	6.5	5.5	4.4	4.5	5.6	5.9	6.1	1.7	1.3

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
HISTORICAL WATER QUALITY DATA (MW-5)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.17	0.0944	0.161	0.136	0.153	0.176	0.155	0.189	0.176	0.184	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	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	0.0064	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	**1.23**	**4.75**	**2.07**	**1.98**	**1.39**	**1.11**	**5.94**	**1.41**	**1.52**	**1.040**	0.190
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	**0.145**	**0.643**	**0.0853**	**0.299**	**0.0546**	**0.172**	**0.217**	**0.656**	**0.257**	**0.287**	**0.144**
BOD	NA	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<2.0
Chloride	250	11.4	15.4	10.8	19.9	11	15.6	22.5	30.6	15.8	19.3	13.4
COD	NA	<25	<25	<25.0	<25.0	<25.0	<25	<25	32.0	103	< 25	21.0 J
Nitrate	10	3.7	0.99	3.5	0.79	3.2	1.3	0.27	0.25	2.6	1.9	3.9
Sulfate	250	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<1.0
TDS	500	32	52	34	37	39	55	57	65.0	36.0	64.0	48.0
TOC	NA	1.3	2	1.8	3	1.4	2.5	3.3	3.2	2.7	0.54 J	<0.50

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
HISTORICAL WATER QUALITY DATA (MW-6)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.0256	0.033	0.0298	0.0865	0.036	0.0287	0.0146	0.0178	0.0257	0.0255	0.0248
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	**0.019**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	0.0109	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Iron	0.30	**0.449**	0.0536	<0.0500	**5.7**	**5.16**	<0.050	0.237	0.275	**2.930**	**0.308**	**2.62**
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	**0.511**	0.0485	**0.0528**	**0.134**	**1.54**	**0.0718**	0.0102	0.0061	**0.282**	0.0463	**1.04**
BOD	NA	9.4	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<2.0
Chloride	250	8	7.7	8.1	7.8	8.5	6.7	4.5	4.4	5.8	5.7	8.1
COD	NA	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25	<12.5
Nitrate	10	0.11	0.26	<0.20	<0.20	0.046	0.23	0.029	0.15	2.4	0.43	0.3
Sulfate	250	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	1.2 J	1.1 J
TDS	500	<25	<25	<25.0	<25.0	40	41	<25.0	<25.0	<25.0	53.0	36.0
TOC	NA	<1	<1	1.4	1.2	1.3	1.5	1.4	1.8	2.2	0.53 J	<0.50

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
HISTORICAL WATER QUALITY DATA (MW-7)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE										
		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	7/23-24/15
Barium	0.7	0.0493	0.0462	0.0507	0.0523	0.548	0.0551	0.0545	0.053	0.0527	0.0530	0.0531
Cadmium	0.002	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	< 0.0010	<0.00050
Chromium	0.01	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Copper	1	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	0.0025 J
Iron	0.30	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0533	< 0.050	<0.0250
Lead	0.015	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0025
Manganese	0.05	0.047	**0.0586**	**0.0542**	**0.067**	**0.0618**	**0.0684**	**0.0707**	**0.0717**	**0.0708**	**0.0669**	**0.0566**
BOD	NA	<2	<2	<2.0	<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	4.5
COD	NA	<25	<25	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	< 25	<12.5
Nitrate	10	1.3	0.79	0.89	0.93	1	0.83	0.82	0.74	0.60	0.70	1.2
Sulfate	250	<5	<5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	<1.0
TDS	500	<25	<25	<25.0	<25.0	29	30	<25.0	<25.0	<25.0	< 25	<25.0
TOC	NA	<1	1.00000	1.5	<1.0	1.1	1.5	11.5	2.1	2.2	11.2	<0.50

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 III – 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: 7/24/15
PERSONNEL: M. BRUNDAGE

WELL CONDITION: Good

WEATHER: Sunny Hot 90°

REASON FOR SAMPLING: 2015 ~~January~~ July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.0 ft
Initial Depth to Water (DTW) from TOC: 26.50 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: ft
Initial DTW + 0.33 ft from TOC: 26.83 ft

Water Column: 2.5 ft
1/2 of Water Column: 1.25 ft
Well Diameter: 4" 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		
DTW (ft)	26.50	26.53	26.56	26.60	26.63	26.65		
Vol Purged (Cumm-ml)	~~75~~ 150	900	1650	2400 ~	~3150	3900		
Flow Rate (ml/min)	~75	~75	~75	~75	~75	~75		
pH (Stand Units)	5.02	5.00	4.99	5.02	5.02	5.02		
DO (mg/L)	4.87	4.75	4.21	4.79	3.94	3.96		
Conductivity (mS/sec)	0.042	0.042	0.042	0.042	0.042	0.042		
Turbidity (NTUs)	1.12	1.08	0.89	0.60	0.69	0.61		
Temperature (°C)	22.2	22.7	23.8	24.2	24.4	24.2		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear		
ORP	220.2	216.4	220.7	198.7	196.8	189.9		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3 ~~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: 7/24/15
Delivery Date: 7/24/15

Matthew J. Brundage
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: 7/24/15
PERSONNEL: M. GRUNDAGE

WELL CONDITION: Good
WEATHER: Clear, Hot

REASON FOR SAMPLING: 2015 ~~January~~ July new Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.82 ft
Initial Depth to Water (DTW) from TOC: 21.15 ft
Sand Pack or Open Hole: Sand pack
Depth to intake from base of well: ft
Initial DTW + 0.33 ft from TOC: 21.48 ft

Water Column: 8.67 ft
1/2 of Water Column: 4.33 ft
Well Diameter: 4" in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	0805	0818	0828	0838	0848	0900		
DTW (ft) 22.~~[illegible]~~		22.20	22.25	22.10	22.35	22.35		
Vol Purged (Cumm-ml)	~1000	~2000	~3000	~4000	~5000	~6000		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	5.10	5.07	5.12	5.13	5.14	5.14		
DO (mg/L)	5.41	5.59	5.23	5.29	5.43	5.29		
Conductivity (mS/sec)	0.042	0.042	0.041	0.042	0.041	0.042		
Turbidity (NTUs)	0.92	0.69	0.47	0.52	0.33	0.34		
Temperature (°C)	19.4	20.0	20.5	20.5	20.8	20.9		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear		
ORP	90.0	76.4	123.4	77.9	62.0	71.6		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3 ~~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: 0910
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Matthew P. Grundage
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: 7/23/15
PERSONNEL: B. Wilson
M. Brundage

WELL CONDITION: Good

WEATHER: Sunny / warm to hot

REASON FOR SAMPLING: 2015 ~~January~~ July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 20.0 ft
Initial Depth to Water (DTW) from TOC: 9.96 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: ~15 ft
Initial DTW + 0.33 ft from TOC: 10.29 ft

Water Column: 10.04 ft
1/2 of Water Column: 5.02 ft
Well Diameter: 4" in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	0839	0855	0909	0919	0929	0941		
DTW (ft)	10.21	10.29	10.32	10.29	10.28	10.27		
Vol Purged (Cumm-ml)	750ml	~1750	~2750	~3250	3750	4250		
Flow Rate (ml/min)	75ml/min	75	~75	~50	~50	~50		
pH (Stand Units)	5.21	5.40	5.52	5.56	5.52	5.48		
DO (mg/L)	0.57	0.48	0.47	0.54	0.52	0.48		
Conductivity (mS/sec)	112.3 mS/cm	0.105 mS/cm	0.103	0.102	0.102	0.104		
Turbidity (NTUs)	1.46	0.67	3.51	0.42	2.44	0.73		
Temperature (°C)	20.6	20.7	21.2	22.0	21.1	21.9		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	CLEAR		
ORP	305.3	276.0	233.1	178.0	171.0	168.2		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3 ~~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: 0950
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Matthew J Brundage
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: 7/24/15
PERSONNEL: M. BRUNDAGE

WELL CONDITION: Good

WEATHER: HOT, Sunny 80's

REASON FOR SAMPLING: 2015 ~~January~~ July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 27.73 ft
Initial Depth to Water (DTW) from TOC: 19.44 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: 19.77 ft
Initial DTW + 0.33 ft from TOC: ft

Water Column: 8.37 ft
1/2 of Water Column: 4.20 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1025	1035	1045	1055	1105	1115	1125	
DTW (ft)	19.40	19.44	19.50	19.52	19.55	19.52		
Vol Purged (Cumm-ml)	~750	1500	~2500	~3500	~4500	~5500		
Flow Rate (ml/min)	~75	~100	~100	~100	~100	~100		
pH (Stand Units)	5.53	5.56	5.56	5.56	5.56	5.57		
DO (mg/L)	0.59	0.22	0.23	0.21	0.21	0.23		
Conductivity (mS/sec)	0.102	0.104	0.101	0.104	0.105	0.104		
Turbidity (NTUs)	38.9	22.4	16.2	8.33	3.17	1.66		
Temperature (°C)	18.1	18.0	18.2	18.3	18.0	18.1		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear		
ORP	238.6	164.1	162.3	92.8	68.5	65.0		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3	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: 1130
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

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-5
DATE: 7/23/15
PERSONNEL: B. Wilson
M. Brundage

WELL CONDITION: Good

WEATHER: Sunny / Hot

REASON FOR SAMPLING: 2015 ~~January~~ July gw Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 9.58 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: ft
Initial DTW + 0.33 ft from TOC: 9.91 ft

Water Column: 11.42 ft
1/2 of Water Column: 5.71 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1553	1604	1614	1624	1634	1647		
DTW (ft)	9.84	9.92	9.96	9.97	9.96	9.96		
Vol Purged (Cumm-ml)	200	1200	2200	3200	4200	5200		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	4.81	4.86	4.88	4.87	4.69	4.79		
DO (mg/L)	3.42	3.29	3.06	3.26	3.11	3.13		
Conductivity (mS/sec)	0.090	0.089	0.089	0.090	0.090	0.090		
Turbidity (NTUs)	9.52	8.15	4.80	4.53	7.21			
Temperature (°C)	19.7	19.3	19.3	19.1	19.1	19.1		
Odor (Subjective)	None	None	None	None	None	None		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear		
ORP	257.2	214.8	209.0	209.9	222.9	218.6		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3	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: 1700
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Signature: Matthew J Brundage
Brian E. Wilson

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: 7/23/15
PERSONNEL: B. Wilson, M. Brundage

WELL CONDITION: Good
WEATHER: Sunny / Hot

REASON FOR SAMPLING: 2015 ~~January~~ July Bow Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 18.92 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: [redacted] ft
Initial DTW + 0.33 ft from TOC: 19.25 ft

Water Column: 2.08 ft
1/2 of Water Column: 1.08 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1313	1323	1333	1344	1354	1404	1415	1426
DTW (ft)	19.31	19.25	19.25	19.25	19.26	19.28	19.30	19.31
Vol Purged (Cumm-ml)	150	750	1250	1750	2250	2750	3250	3750
Flow Rate (ml/min)	250	~50	~50	~50	~50	~50	~50	~50
pH (Stand Units)	5.10	5.35	5.36	5.41	5.47	5.52	5.54	5.59
DO (mg/L)	2.42	1.99	1.91	1.81	1.68	2.19	2.01	1.79
Conductivity (mS/sec)	0.046	0.044	0.045	0.046	0.048	0.049	0.050	0.051
Turbidity (NTUs)	70	44.0	102	21.6	16.3	12.5	13.2	11.9
Temperature (°C)	21.4	23.0	24.1	22.3	22.2	22.2	21.7	21.8
Odor (Subjective)	None	None	None	None	None	None	None	None
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
ORP	248.2	225.4	214.4	190.4	173.1	164.4	158.0	152.8

Parameters	#	Type	Size	Preservative
BOD	1	Plastic	1 L	None
COD	1	Plastic	125 ml	H2SO4
TOC	3	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: 1435
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Matthew J Brundage
Signature Brian E. Wilson

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: 7/23/15
PERSONNEL: B. Wilson, M. Brandage

WELL CONDITION: Good
WEATHER: Sunny / Hot

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: 9.74 ft
Sand Pack or Open Hole: Sandpack
Depth to intake from base of well: ~18 ft
Initial DTW + 0.33 ft from TOC: 10.07 ft

Water Column: 11.26 ft
1/2 of Water Column: 5.63 ft
Well Diameter: 2 in
Borehole Diameter: — in
Purge Equipment:
Pegasus Peristaltic Pump + Tubing
YSI-556, Hanna Turbidity Meter

Record of Well Evacuation

Time	1106	1116	1126	1136	1146	1156		
DTW (ft)	9.82	9.85	9.86	9.86	9.88			
Vol Purged (Cumm-ml)	~300	1300	2300	3300	4300	5300		
Flow Rate (ml/min)	100	100	100	100	100	100		
pH (Stand Units)	4.69	4.94	5.01	5.06	5.09	5.02		
DO (mg/L)	4.05	3.87	3.89	3.39	3.44	3.90		
Conductivity (mS/sec)	0.034	0.034	0.034	0.035	0.035	0.035		
Turbidity (NTUs)	1.89	2.12	1.77	1.59	0.93	0.70		
Temperature (°C)	19.9	19.7	19.8	20.0	19.5	19.7		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	Clear	Clear	Clear	Clear	Clear	Clear		
ORP	251.1	226.5	220.9	228.3	218.9	221.7		

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	3	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: 1200
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Matthew J. Brandage
Brian E. Wilson
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: EB-1
DATE: 7/23/15
PERSONNEL: B. Wilson, M. Brundage

WELL CONDITION: N/A
WEATHER: Sunny/Hot

REASON FOR SAMPLING: 2015 January Sampling Event

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

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

Record of Well Evacuation

Time								
DTW (ft)								
Vol Purged (Cumm-ml)								
Flow Rate (ml/min)								
pH (Stand Units)								
DO (mg/L)								
Conductivity (mS/sec)								
Turbidity (NTUs)								
Temperature (°C)								
Odor (Subjective)								
Color (Subjective)								
ORP								

Parameters	#	Type	Size	Preservative	
BOD	1	Plastic	1 L	None	
COD	1	Plastic	125 ml	H2SO4	
TOC	32	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: 1710
Laboratory: Pace Analytical
Shipping Date: 7/24/15
Delivery Date: 7/24/15

Signature: Matthew J Brundage, Brian E. Wilson

Appendix IV – Laboratory Report

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

August 03, 2015

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

RE: Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Dear Mr. Quarles:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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.

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

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 1354-11-137
Pace Project No.: 92260382

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92260382001	MW-1	Water	07/24/15 13:55	07/24/15 16:50
92260382002	MW-2	Water	07/24/15 09:10	07/24/15 16:50
92260382003	MW-3	Water	07/23/15 09:50	07/24/15 16:50
92260382004	MW-4	Water	07/24/15 11:30	07/24/15 16:50
92260382005	MW-5	Water	07/23/15 17:00	07/24/15 16:50
92260382006	MW-6	Water	07/23/15 14:35	07/24/15 16:50
92260382007	MW-7	Water	07/23/15 12:00	07/24/15 16:50
92260382008	EB-1	Water	07/23/15 17:10	07/24/15 16:50

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SAMPLE ANALYTE COUNT

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92260382001	MW-1	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382002	MW-2	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382003	MW-3	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382004	MW-4	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382005	MW-5	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	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 1354-11-137
Pace Project No.: 92260382

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382006	MW-6	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382007	MW-7	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92260382008	EB-1	EPA 200.7	JDA	7	PASI-A
		SM 2540C	SAM	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	MJP	1	PASI-A
		SM 5310B	MDW	1	PASI-A

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SUMMARY OF DETECTION

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92260382001	**MW-1**					
EPA 200.7	Barium	28.6	ug/L	5.0	07/28/15 18:22	
EPA 200.7	Iron	59.6	ug/L	50.0	07/28/15 18:22	
EPA 200.7	Manganese	9.9	ug/L	5.0	07/28/15 18:22	
EPA 300.0	Sulfate	1.3J	mg/L	2.0	07/28/15 22:18	
EPA 353.2	Nitrogen, Nitrate	2.1	mg/L	0.020	07/25/15 00:20	
SM 4500-Cl-E	Chloride	4.5	mg/L	1.0	07/27/15 18:24	
92260382002	**MW-2**					
EPA 200.7	Barium	25.4	ug/L	5.0	07/28/15 18:25	
EPA 200.7	Manganese	8.8	ug/L	5.0	07/28/15 18:25	
EPA 300.0	Sulfate	1.4J	mg/L	2.0	07/28/15 22:31	
EPA 353.2	Nitrogen, Nitrate	0.46	mg/L	0.020	07/25/15 00:18	
SM 4500-Cl-E	Chloride	7.0	mg/L	1.0	07/27/15 18:25	
92260382003	**MW-3**					
EPA 200.7	Barium	101	ug/L	5.0	07/28/15 18:37	
EPA 200.7	Manganese	1680	ug/L	5.0	07/28/15 18:37	
SM 2540C	Total Dissolved Solids	132	mg/L	25.0	07/30/15 10:18	
EPA 300.0	Sulfate	15.5	mg/L	2.0	07/28/15 22:45	
EPA 353.2	Nitrogen, Nitrate	0.85	mg/L	0.020	07/25/15 00:03	
SM 4500-Cl-E	Chloride	2.1	mg/L	1.0	07/27/15 18:26	
SM 5310B	Total Organic Carbon	0.69J	mg/L	1.0	07/28/15 01:19	
92260382004	**MW-4**					
EPA 200.7	Barium	112	ug/L	5.0	07/28/15 18:40	
EPA 200.7	Manganese	46.9	ug/L	5.0	07/28/15 18:40	
SM 2540C	Total Dissolved Solids	66.0	mg/L	25.0	07/30/15 12:06	
EPA 300.0	Sulfate	1.6J	mg/L	2.0	07/28/15 23:26	
EPA 353.2	Nitrogen, Nitrate	0.91	mg/L	0.020	07/25/15 00:19	
SM 4500-Cl-E	Chloride	14.7	mg/L	1.0	07/27/15 18:27	
SM 5220D	Chemical Oxygen Demand	19.0J	mg/L	25.0	07/27/15 15:45	
SM 5310B	Total Organic Carbon	1.3	mg/L	1.0	07/28/15 01:29	
92260382005	**MW-5**					
EPA 200.7	Barium	184	ug/L	5.0	07/28/15 18:43	
EPA 200.7	Iron	190	ug/L	50.0	07/28/15 18:43	
EPA 200.7	Manganese	144	ug/L	5.0	07/28/15 18:43	
SM 2540C	Total Dissolved Solids	48.0	mg/L	25.0	07/30/15 10:18	
EPA 353.2	Nitrogen, Nitrate	3.9	mg/L	0.020	07/25/15 00:16	
SM 4500-Cl-E	Chloride	13.4	mg/L	1.0	07/27/15 18:28	
SM 5220D	Chemical Oxygen Demand	21.0J	mg/L	25.0	07/27/15 15:45	
92260382006	**MW-6**					
EPA 200.7	Barium	24.8	ug/L	5.0	07/28/15 18:47	
EPA 200.7	Iron	2620	ug/L	50.0	07/28/15 18:47	
EPA 200.7	Manganese	1040	ug/L	5.0	07/28/15 18:47	
SM 2540C	Total Dissolved Solids	36.0	mg/L	25.0	07/30/15 12:03	
EPA 300.0	Sulfate	1.1J	mg/L	2.0	07/28/15 23:53	
EPA 353.2	Nitrogen, Nitrate	0.30	mg/L	0.020	07/25/15 00:10	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92260382006	**MW-6**					
SM 4500-Cl-E	Chloride	8.1	mg/L	1.0	07/28/15 17:02	
92260382007	**MW-7**					
EPA 200.7	Barium	53.1	ug/L	5.0	07/28/15 18:50	
EPA 200.7	Copper	2.5J	ug/L	5.0	07/28/15 18:50	
EPA 200.7	Manganese	56.6	ug/L	5.0	07/28/15 18:50	
EPA 353.2	Nitrogen, Nitrate	1.2	mg/L	0.020	07/25/15 00:09	
SM 4500-Cl-E	Chloride	4.5	mg/L	1.0	07/28/15 17:05	
92260382008	**EB-1**					
EPA 353.2	Nitrogen, Nitrate	0.053	mg/L	0.020	07/25/15 00:17	

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Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Method: **EPA 200.7**
Description: 200.7 MET ICP
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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 1354-11-137
Pace Project No.: 92260382

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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 1354-11-137
Pace Project No.: 92260382

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for SM 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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 1354-11-137
Pace Project No.: 92260382

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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 1354-11-137
Pace Project No.: 92260382

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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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(704)875-9092

PROJECT NARRATIVE

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for SM 4500-Cl-E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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/23879

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92259615001,92260274005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1519290)
  - Chloride
- MSD (Lab ID: 1519291)
  - Chloride

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS (Lab ID: 1519288)
  - Chloride
- MSD (Lab ID: 1519289)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Method: **SM 5220D**
Description: 5220D COD
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for SM 5220D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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/23876

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92260042002,92260382006

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

- MS (Lab ID: 1519002)
  - Chemical Oxygen Demand
- MS (Lab ID: 1519004)
  - Chemical Oxygen Demand
- MSD (Lab ID: 1519003)
  - Chemical Oxygen Demand
- MSD (Lab ID: 1519005)
  - Chemical Oxygen Demand

Additional Comments:

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PROJECT NARRATIVE

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Method: **SM 5310B**
Description: 5310B TOC
Client: S&ME, Inc.
Date: August 03, 2015

General Information:
8 samples were analyzed for SM 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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/23875

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92259792001,92260140003

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

- MS (Lab ID: 1518843)
  - Total Organic Carbon
- MSD (Lab ID: 1518844)
  - 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 SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-1 **Lab ID: 92260382001** Collected: 07/24/15 13:55 Received: 07/24/15 16:50 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	**28.6**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:22	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:22	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:22	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:22	7440-50-8	
Iron	**59.6**	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:22	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:22	7439-92-1	
Manganese	**9.9**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:22	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		07/30/15 12:05		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.3J**	mg/L	2.0	1.0	1		07/28/15 22:18	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		07/25/15 00:20		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:20		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**4.5**	mg/L	1.0	0.50	1		07/27/15 18:24	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 00:58	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-2 **Lab ID: 92260382002** Collected: 07/24/15 09:10 Received: 07/24/15 16:50 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	**25.4**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:25	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:25	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:25	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:25	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:25	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:25	7439-92-1	
Manganese	**8.8**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:25	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		07/30/15 12:06		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.4J**	mg/L	2.0	1.0	1		07/28/15 22:31	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.46**	mg/L	0.020	0.010	1		07/25/15 00:18		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:18		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**7.0**	mg/L	1.0	0.50	1		07/27/15 18:25	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 01:08	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-3 **Lab ID: 92260382003** Collected: 07/23/15 09:50 Received: 07/24/15 16:50 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	**101**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:37	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:37	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:37	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:37	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:37	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:37	7439-92-1	
Manganese	**1680**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:37	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**132**	mg/L	25.0	25.0	1		07/30/15 10:18		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**15.5**	mg/L	2.0	1.0	1		07/28/15 22:45	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.85**	mg/L	0.020	0.010	1		07/25/15 00:03		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:03		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**2.1**	mg/L	1.0	0.50	1		07/27/15 18:26	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.69J**	mg/L	1.0	0.50	1		07/28/15 01:19	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-4 **Lab ID: 92260382004** Collected: 07/24/15 11:30 Received: 07/24/15 16:50 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	**112**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:40	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:40	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:40	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:40	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:40	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:40	7439-92-1	
Manganese	**46.9**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:40	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**66.0**	mg/L	25.0	25.0	1		07/30/15 12:06		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.6J**	mg/L	2.0	1.0	1		07/28/15 23:26	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.91**	mg/L	0.020	0.010	1		07/25/15 00:19		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:19		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**14.7**	mg/L	1.0	0.50	1		07/27/15 18:27	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**19.0J**	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1.3**	mg/L	1.0	0.50	1		07/28/15 01:29	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-5 **Lab ID: 92260382005** Collected: 07/23/15 17:00 Received: 07/24/15 16:50 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	07/27/15 19:00	07/28/15 18:43	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:43	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:43	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:43	7440-50-8	
Iron	**190**	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:43	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:43	7439-92-1	
Manganese	**144**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:43	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**48.0**	mg/L	25.0	25.0	1		07/30/15 10:18		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		07/28/15 23:39	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**3.9**	mg/L	0.020	0.010	1		07/25/15 00:16		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:16		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**13.4**	mg/L	1.0	0.50	1		07/27/15 18:28	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**21.0J**	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 01:40	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-6 **Lab ID: 92260382006** Collected: 07/23/15 14:35 Received: 07/24/15 16:50 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	**24.8**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:47	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:47	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:47	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:47	7440-50-8	
Iron	**2620**	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:47	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:47	7439-92-1	
Manganese	**1040**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:47	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**36.0**	mg/L	25.0	25.0	1		07/30/15 12:03		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.1J**	mg/L	2.0	1.0	1		07/28/15 23:53	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.30**	mg/L	0.020	0.010	1		07/25/15 00:10		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:10		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**8.1**	mg/L	1.0	0.50	1		07/28/15 17:02	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		M1
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 01:50	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: MW-7 **Lab ID: 92260382007** Collected: 07/23/15 12:00 Received: 07/24/15 16:50 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	**53.1**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:50	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 18:50	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:50	7440-47-3	
Copper	**2.5J**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:50	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 18:50	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:50	7439-92-1	
Manganese	**56.6**	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 18:50	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		07/30/15 12:04		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		07/29/15 00:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.2**	mg/L	0.020	0.010	1		07/25/15 00:09		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:09		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**4.5**	mg/L	1.0	0.50	1		07/28/15 17:05	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 02:01	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Sample: EB-1 **Lab ID: 92260382008** Collected: 07/23/15 17:10 Received: 07/24/15 16:50 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	07/27/15 19:00	07/28/15 19:43	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/27/15 19:00	07/28/15 19:43	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 19:43	7440-47-3	
Copper	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 19:43	7440-50-8	
Iron	ND	ug/L	50.0	25.0	1	07/27/15 19:00	07/28/15 19:43	7439-89-6	
Lead	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 19:43	7439-92-1	
Manganese	ND	ug/L	5.0	2.5	1	07/27/15 19:00	07/28/15 19:43	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		07/30/15 12:04		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	07/25/15 04:41	07/29/15 23:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	ND	mg/L	2.0	1.0	1		07/29/15 00:20	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.053**	mg/L	0.020	0.010	1		07/25/15 00:17		
Nitrogen, Nitrite	ND	mg/L	0.020	0.010	1		07/25/15 00:17		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	ND	mg/L	1.0	0.50	1		07/28/15 17:05	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	12.5	1		07/27/15 15:45		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		07/28/15 02:32	7440-44-0	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: MPRP/19099 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 MET
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007

METHOD BLANK: 1518987 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	07/28/15 17:03	
Cadmium	ug/L	ND	1.0	07/28/15 17:03	
Chromium	ug/L	ND	5.0	07/28/15 17:03	
Copper	ug/L	ND	5.0	07/28/15 17:03	
Iron	ug/L	ND	50.0	07/28/15 17:03	
Lead	ug/L	ND	5.0	07/28/15 17:03	
Manganese	ug/L	ND	5.0	07/28/15 17:03	

LABORATORY CONTROL SAMPLE: 1518988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	501	100	85-115	
Cadmium	ug/L	500	505	101	85-115	
Chromium	ug/L	500	525	105	85-115	
Copper	ug/L	500	524	105	85-115	
Iron	ug/L	5000	4940	99	85-115	
Lead	ug/L	500	509	102	85-115	
Manganese	ug/L	500	474	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518989 — 1518990

Parameter	Units	92260040001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	185	500	500	626	616	88	86	70-130	2	20	
Cadmium	ug/L	ND	500	500	467	484	93	97	70-130	4	20	
Chromium	ug/L	ND	500	500	459	458	91	91	70-130	0	20	
Copper	ug/L	ND	500	500	445	444	89	89	70-130	0	20	
Iron	ug/L	1860	5000	5000	6050	5940	84	82	70-130	2	20	
Lead	ug/L	ND	500	500	451	468	90	94	70-130	4	20	
Manganese	ug/L	2000	500	500	2380	2390	76	77	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518991 — 1518992

Parameter	Units	92260256001 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	455	459	91	91	70-130	1	20	
Cadmium	ug/L	ND	500	500	452	456	90	91	70-130	1	20	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518991 1518992

Parameter	Units	92260256001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	7.9	500	500	488	480	96	94	70-130	2	20	
Copper	ug/L	ND	500	500	474	477	95	95	70-130	1	20	
Iron	ug/L	52.1	5000	5000	4540	4540	90	90	70-130	0	20	
Lead	ug/L	ND	500	500	455	459	91	92	70-130	1	20	
Manganese	ug/L	ND	500	500	430	430	86	86	70-130	0	20	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: MPRP/19100 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 MET
Associated Lab Samples: 92260382008

METHOD BLANK: 1518994 — Matrix: Water
Associated Lab Samples: 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	07/28/15 19:37	
Cadmium	ug/L	ND	1.0	07/28/15 19:37	
Chromium	ug/L	ND	5.0	07/28/15 19:37	
Copper	ug/L	ND	5.0	07/28/15 19:37	
Iron	ug/L	ND	50.0	07/28/15 19:37	
Lead	ug/L	ND	5.0	07/28/15 19:37	
Manganese	ug/L	ND	5.0	07/28/15 19:37	

LABORATORY CONTROL SAMPLE: 1518995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	450	90	85-115	
Cadmium	ug/L	500	451	90	85-115	
Chromium	ug/L	500	467	93	85-115	
Copper	ug/L	500	464	93	85-115	
Iron	ug/L	5000	4460	89	85-115	
Lead	ug/L	500	449	90	85-115	
Manganese	ug/L	500	428	86	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518996 — 1518997

Parameter	Units	92260382008 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	445	449	89	90	70-130	1	20	
Cadmium	ug/L	ND	500	500	448	449	90	90	70-130	0	20	
Chromium	ug/L	ND	500	500	466	465	93	93	70-130	0	20	
Copper	ug/L	ND	500	500	462	461	92	92	70-130	0	20	
Iron	ug/L	ND	5000	5000	4430	4460	88	89	70-130	1	20	
Lead	ug/L	ND	500	500	445	449	89	90	70-130	1	20	
Manganese	ug/L	ND	500	500	428	428	85	85	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518998 — 1518999

Parameter	Units	92260178001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	138	500	500	606	626	94	98	70-130	3	20	
Cadmium	ug/L	2.3	500	500	457	453	91	90	70-130	1	20	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518998 1518999

Parameter	Units	92260178001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	13.0	500	500	475	473	92	92	70-130	1	20	
Copper	ug/L	824	500	500	1340	1440	102	122	70-130	7	20	
Iron	ug/L	1580	5000	5000	6250	6460	93	98	70-130	3	20	
Lead	ug/L	17.0	500	500	456	452	88	87	70-130	1	20	
Manganese	ug/L	59.7	500	500	490	490	86	86	70-130	0	20	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WET/39156 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92260382003, 92260382005

METHOD BLANK: 1520830 — Matrix: Water
Associated Lab Samples: 92260382003, 92260382005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	07/30/15 10:13	

LABORATORY CONTROL SAMPLE: 1520831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	258	103	90-110	

SAMPLE DUPLICATE: 1520832

Parameter	Units	92260104005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2990	2870	4	5	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WET/39157 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92260382001, 92260382002, 92260382004, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1520833 Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382004, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	07/30/15 12:01	

LABORATORY CONTROL SAMPLE: 1520834

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

SAMPLE DUPLICATE: 1520835

Parameter	Units	92260382006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	36.0	35.0	3	5	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WET/39092 — Analysis Method: SM 5210B
QC Batch Method: SM 5210B — Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1518626 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/29/15 23:39	

LABORATORY CONTROL SAMPLE: 1518627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	175	88	84.6-115.4	

SAMPLE DUPLICATE: 1518628

Parameter	Units	92260323002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	20.4	19.9	2	10	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23906 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1520228 Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	07/28/15 20:43	

LABORATORY CONTROL SAMPLE: 1520229

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	20.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1520230 1520231

Parameter	Units	92260326001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	20.4	20.4	95	95	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1520232 1520233

Parameter	Units	92260382008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	19.6	19.6	98	98	90-110	0	10	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23868 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1518622 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	07/25/15 00:00	
Nitrogen, Nitrite	mg/L	ND	0.020	07/25/15 00:00	

LABORATORY CONTROL SAMPLE: 1518623

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: 1518624 — 1518625

Parameter	Units	92260382003 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	0.85	2.5	2.5	3.2	3.3	96	97	90-110	1	10	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	103	105	90-110	2	10	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23879 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005

METHOD BLANK: 1519286 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	07/27/15 18:00	

LABORATORY CONTROL SAMPLE: 1519287

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1519288 — 1519289

Parameter	Units	92259615001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	340	20	20	382	385	210	227	90-110	1	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1519290 — 1519291

Parameter	Units	92260274005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	20.4	20	20	37.3	37.1	84	83	90-110	0	10	M1

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23904 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92260382006, 92260382007, 92260382008

METHOD BLANK: 1520053 — Matrix: Water
Associated Lab Samples: 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	07/28/15 17:00	

LABORATORY CONTROL SAMPLE: 1520054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.2	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1520055 1520056

Parameter	Units	92260382006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.1	20	20	28.6	28.6	103	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1520057 1520058

Parameter	Units	92260112010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.0	20	20	24.0	23.9	105	105	90-110	0	10	

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QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23876 — Analysis Method: SM 5220D
QC Batch Method: SM 5220D — Analysis Description: 5220D COD
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1519000 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	07/27/15 15:45	

LABORATORY CONTROL SAMPLE: 1519001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	746	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1519002 — 1519003

Parameter	Units	92260042002 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	250	1500	1500	578	578	22	22	90-110	0	3	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1519004 — 1519005

Parameter	Units	92260382006 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	ND	750	750	76.0	76.0	9	9	90-110	0	3	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

QC Batch: WETA/23875 — Analysis Method: SM 5310B
QC Batch Method: SM 5310B — Analysis Description: 5310B TOC
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

METHOD BLANK: 1518839 — Matrix: Water
Associated Lab Samples: 92260382001, 92260382002, 92260382003, 92260382004, 92260382005, 92260382006, 92260382007, 92260382008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	07/27/15 23:05	

LABORATORY CONTROL SAMPLE: 1518840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.3	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518841 — 1518842

Parameter	Units	92260140003 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	25.0	25.3	99	100	90-110	1	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1518843 — 1518844

Parameter	Units	92259792001 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	7.4	25	25	27.0	27.4	78	80	90-110	2	5	M1

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QUALIFIERS

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
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.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
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.
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 SHELBY 1354-11-137
Pace Project No.: 92260382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92260382001	MW-1	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382002	MW-2	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382003	MW-3	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382004	MW-4	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382005	MW-5	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382006	MW-6	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382007	MW-7	EPA 200.7	MPRP/19099	EPA 200.7	ICP/17173
92260382008	EB-1	EPA 200.7	MPRP/19100	EPA 200.7	ICP/17179
92260382001	MW-1	SM 2540C	WET/39157		
92260382002	MW-2	SM 2540C	WET/39157		
92260382003	MW-3	SM 2540C	WET/39156		
92260382004	MW-4	SM 2540C	WET/39157		
92260382005	MW-5	SM 2540C	WET/39156		
92260382006	MW-6	SM 2540C	WET/39157		
92260382007	MW-7	SM 2540C	WET/39157		
92260382008	EB-1	SM 2540C	WET/39157		
92260382001	MW-1	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382002	MW-2	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382003	MW-3	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382004	MW-4	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382005	MW-5	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382006	MW-6	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382007	MW-7	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382008	EB-1	SM 5210B	WET/39092	SM 5210B	WET/39095
92260382001	MW-1	EPA 300.0	WETA/23906		
92260382002	MW-2	EPA 300.0	WETA/23906		
92260382003	MW-3	EPA 300.0	WETA/23906		
92260382004	MW-4	EPA 300.0	WETA/23906		
92260382005	MW-5	EPA 300.0	WETA/23906		
92260382006	MW-6	EPA 300.0	WETA/23906		
92260382007	MW-7	EPA 300.0	WETA/23906		
92260382008	EB-1	EPA 300.0	WETA/23906		
92260382001	MW-1	EPA 353.2	WETA/23868		
92260382002	MW-2	EPA 353.2	WETA/23868		
92260382003	MW-3	EPA 353.2	WETA/23868		
92260382004	MW-4	EPA 353.2	WETA/23868		
92260382005	MW-5	EPA 353.2	WETA/23868		
92260382006	MW-6	EPA 353.2	WETA/23868		
92260382007	MW-7	EPA 353.2	WETA/23868		
92260382008	EB-1	EPA 353.2	WETA/23868		
92260382001	MW-1	SM 4500-Cl-E	WETA/23879		
92260382002	MW-2	SM 4500-Cl-E	WETA/23879		
92260382003	MW-3	SM 4500-Cl-E	WETA/23879		
92260382004	MW-4	SM 4500-Cl-E	WETA/23879		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG SHELBY 1354-11-137
Pace Project No.: 92260382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92260382005	MW-5	SM 4500-Cl-E	WETA/23879		
92260382006	MW-6	SM 4500-Cl-E	WETA/23904		
92260382007	MW-7	SM 4500-Cl-E	WETA/23904		
92260382008	EB-1	SM 4500-Cl-E	WETA/23904		
92260382001	MW-1	SM 5220D	WETA/23876		
92260382002	MW-2	SM 5220D	WETA/23876		
92260382003	MW-3	SM 5220D	WETA/23876		
92260382004	MW-4	SM 5220D	WETA/23876		
92260382005	MW-5	SM 5220D	WETA/23876		
92260382006	MW-6	SM 5220D	WETA/23876		
92260382007	MW-7	SM 5220D	WETA/23876		
92260382008	EB-1	SM 5220D	WETA/23876		
92260382001	MW-1	SM 5310B	WETA/23875		
92260382002	MW-2	SM 5310B	WETA/23875		
92260382003	MW-3	SM 5310B	WETA/23875		
92260382004	MW-4	SM 5310B	WETA/23875		
92260382005	MW-5	SM 5310B	WETA/23875		
92260382006	MW-6	SM 5310B	WETA/23875		
92260382007	MW-7	SM 5310B	WETA/23875		
92260382008	EB-1	SM 5310B	WETA/23875		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: May 16, 2016 Page 1 of 2*
	Document Number: F-CHR-CS-003-rev.16	Issuing Authority: Pace Huntersville Quality Office

Client Name: SPME

* Page 2 of 2 is for Internal Use Only

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.: 1.3 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 7/24

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:	N/S ☐Yes ☐No ☐N/A	12. MW-6 BP2U Soil has no I.D.
-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: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	AMB	Date:	7-24-15
SRF Review:	AMB	Date:	7-27-15

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# : 92260382

92260382

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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

1903486

Section A Required Client Information:
Company: SAME
Address: 7151 Southern Pine Blvd
Charlotte NC 28273
Email To: aquarles@smeinc.com
Phone: 7045224726 Fax: 7045253353
Requested Due Date/TAT: Standard

Section B Required Project Information:
Report To: Al Quarles
Copy To:
Purchase Order No.: 62597
Project Name: PPG- Sheby
Project Number: 1354-11-137

Section C Invoice Information:
Attention: Barbara Ellington
Company Name: SAME
Address: SAME
Pace Quote Reference:
Pace Project Manager: Angela Bazoni
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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	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	COD	TOC	TDS	Metals	Chloride	SO4, NO2, NO3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92260382
1	MW-1	WT	G	7/24	1355				9	4	1	1	3						X	X	X	X	X	X	X			001
2	MW-2			7/24	0910																							002
3	MW-3			7/23	0950																							003
4	MW-4			7/24	1130																							004
5	MW-5			7/23	1700																							005
6	MW-6			7/23	1435																							006
7	MW-7			7/23	1200																							007
8	EB-1			7/23	1710																							008
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matthew J. Brundage	7/24/15	1650	[signature]	7/24/15	1650	[illegible]	[illegible]	[illegible]	[illegible]

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: MATTHEW BRUNDAGE
SIGNATURE of SAMPLER: Matthew J. Brundage
DATE Signed (MM/DD/YY): 07/24/15

*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.

F-ALL-Q-020rev.07, 15-May-2007