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GROUNDWATER MONITORING REPORT
PPG INDUSTRIES, INC.
JULY 2012
940 WASHBURN SWITCH ROAD
SHELBY, CLEVELAND CO., NC
S&ME PROJECT # 1354-11-137

Prepared for:

PPG Industries

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

Prepared by:

S&ME

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

August 15, 2012

August 15, 2012

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

Attention: Mr. Richard Young

Reference: **Groundwater Monitoring Report**
July 2012 Semi-Annual Monitoring Event
PPG Industries, Inc.
940 Washburn Switch Road
Shelby, Cleveland County, North Carolina
S&ME Project # 1354-11-137

Dear Mr. Young:

S&ME, Inc. (S&ME) submits this Groundwater Monitoring Report for the referenced facility as part of a continuing groundwater monitoring program in accordance with North Carolina Department of Environment and Natural Resources (NCDENR) requirements. The sampling and reporting services were performed in general accordance with S&ME's Proposal No. 1354-24380-11 dated July 11, 2011. The July 2012 sampling results indicated concentrations of iron (MW-2, 5 and 6) and manganese (MW-3, 4, 5, 6 and 7) at levels exceeding the 15A NCAC 2L .0202 groundwater quality standards (2L Standards), similar to prior sampling events. 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.

Becka L. Davidson
Staff Professional

Al Quarles, L.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1133 GEOLOGIST AL QUARLES

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GROUNDWATER MONITORING REPORT
JULY 2012 MONITORING EVENT
PPG INDUSTRIES, INC.
940 WASHBURN SWITCH ROAD
SHELBY, CLEVELAND CO., NC
S&ME PROJECT # 1354-11-137

1 INTRODUCTION

S&ME includes herein, the results of the July 2012 semi-annual groundwater monitoring event for the referenced PPG Industries, Inc. fiberglass manufacturing plant located in Shelby, North Carolina (**Figures 1 and 2**). The NCDENR, Division of Waste Management (DWM) requires that a semi-annual monitoring program be implemented for this type of facility to monitor for potential environmental impacts. **Figure 3** is provided as a site plan of the subject facility and illustrates the locations of the seven groundwater monitor wells.

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

2 SAMPLING METHODOLOGY

On July 24 and 25, 2012, S&ME measured the depth to groundwater in the monitor wells from the top of monitor well casings (**Table 1**). Prior to water level measurements, monitor well seals were removed to allow groundwater levels to equilibrate with atmospheric pressure. Water level measurements were used to prepare a groundwater surface map from which the direction of groundwater flow could be inferred, as illustrated in **Figure 3**.

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

After field measurements were generally stabilized, the groundwater samples were collected directly from the tubing into laboratory-provided sample containers in a manner to limit aeration of the sample. No field or laboratory filtration of the samples was performed. The samples were analyzed in accordance with EPA SW-846 Methods for

the parameters listed in **Table 2**. Standard control measures, including sample collection and handling, were implemented before, during and after sample collection. Sample containers were delivered to a NCDENR-certified laboratory (Pace Laboratories) in accordance with chain-of-custody protocol.

3 RESULTS

3.1 Water Levels and Groundwater Flow

On July 24 and 25, 2012, S&ME measured the depth to water from the monitor well's top of casing (TOC). Based on the TOC elevations and depths to water, groundwater elevations were calculated. The groundwater surface elevations are summarized in **Table 1** and are presented in **Figure 3**. The inferred direction of groundwater flow is generally to the west.

Monitoring well MW-1 was dry during the July 2012 sampling event. Compared to January 2012 water levels, the July 2012 water levels decreased from 0.98 feet (MW-3) to 2.77 feet (MW-4).

3.2 Groundwater Quality

The results of the July 2012 groundwater sampling event are summarized in **Table 2**. A copy of the laboratory report is included in **Appendix II**. The historical results since January 2006 are summarized in **Table 3**. The July 2012 sampling results indicated concentrations of iron (MW-2, 5, and 6) and manganese (MW-3, 4, 5, 6, and 7) at levels exceeding the 15A NCAC 2L .0202 groundwater quality standards (2L Standards), similar to prior sampling events. The iron concentration in sample MW-2 was below the 2L Standard during the January 2012 sampling event. No other parameters were detected above the 2L Standards.

Comparison of the historical data indicates relatively consistent detections of iron and manganese in all wells (including upgradient well MW-1), fluctuating between non-detectable concentrations to concentrations exceeding the 2L Standards. The upradient well MW-1 was dry during the July 2012 sampling event.

Cadmium, chromium and lead have been detected at concentrations that exceeded the 2L Standards in several wells (i.e, MW-4, MW-5, MW-6, and MW-7); however, the detections are more sporadic than those for iron and manganese.

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). The historical results do not indicate increasing trends in constituent concentrations.

3.3 Quality Control Sample

S&ME also collected an equipment blank by pumping deionized (DI) water from a 1 liter glass container supplied by the laboratory through new inlet and outlet tubing attached to new peristaltic pump tubing directly into the laboratory containers (after passing 1 liter of water through the tubing). The blank was analyzed for the same parameters as the groundwater samples. None of the analyzed compounds were detected in the equipment blank sample except for chloride (14.2 mg/L) and nitrate (0.044 mg/L). The source of the chloride and nitrate is likely from the laboratory supplied DI water but may be from the tubing. The chloride concentration in the equipment blank was higher than the monitor well samples, except for sample MW-4 (16.2 mg/L). Nitrate was reported in all monitor well samples, at levels above the nitrate level in the equipment blank.

3.4 Recommendations

Based on the results of the January 2012 monitoring event, S&ME recommends continued semi-annual groundwater monitoring.

TABLES

Table 1

Water Levels and Well Purging Data (July 24-25, 2012)
PPG Industries, Inc.
Shelby, North Carolina
S&ME Project # 1354-11-137

		Monitor Well						
Parameter	**Unit**	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**
Top-of-Casing Elevation	feet	953.03	904.41	867.01	901.39	892.41	886.65	870.34
Depth to Water from Top-of-Casing	feet	*	21.87	9.41	20.01	8.81	18.83	9.25
Water Level Elevation	feet	<924.03	882.54	857.60	881.38	883.60	867.82	861.09
Elevation Change**	feet	>-1.64	-2.66	-0.98	-2.77	-2.53	-2.47	-1.29
Well Depth	feet	29	30	20	24	21	21	21
Sample Appearance			clear	clear	clear	clear	clear	clear
Flow	milliliters per minute		200	200	200	200	300	300
pH	standard		4.8	4.5	5.2	4.2	5.0	3.9
Conductivity	microSiemens per centimeter		67	340	162	148	83	105
Turbidity	nephelometric turbidity units		6.0	18.0	7.0	12.0	9.0	3.0
Dissolved Oxygen	milligrams per liter		8.5	7.5	1.6	5.5	6.2	8.4
Temperature	Celcius		18.8	22.5	18.5	17.7	19.1	17.0
ORP	millivolts		350	329	298	497	491	522

Notes

* = Well was dry at 29 feet below top of casing
** Difference in feet from the previous monitoring event.

TABLE 2
WATER QUALITY DATA (July 24-25, 2012)
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	EB	15A NCAC 2L STND. Current
Barium	mg/L	NS	**0.0258**	**0.108**	**0.118**	**0.153**	**0.036**	**0.548**	<0.0050	0.7
Cadmium	mg/L	NS	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002
Chromium	mg/L	NS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.01
Copper	mg/L	NS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1
Iron	mg/L	NS	**0.601** *	**0.163**	<0.0500	**1.39** *	**5.16** *	<0.0500	<0.0500	0.3
Lead	mg/L	NS	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.015
Manganese	mg/L	NS	**0.0165**	**2.900** *	**0.071** *	**0.0546** *	**1.540** *	**0.0618** *	<0.0050	0.05
BOD	mg/L	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA
Chloride	mg/L	NS	**5**	**2.5**	**16.2**	**11**	**8.5**	**4.2**	**14.2**	250
COD	mg/L	NS	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA
Nitrate	mg/L	NS	**0.29**	**0.8**	**0.86**	**3.2**	**0.046**	**1**	**0.044**	10
Sulfate	mg/L	NS	<2.0	**22.5**	<2.0	<2.0	<2.0	<2.0	<2.0	250
TDS	mg/L	NS	<25.0	**145**	**76**	**39**	**40**	**29**	<25.0	500
TOC	mg/L	NS	**2**	<1.0	**4.4**	**1.4**	**1.3**	**1.1**	<1.0	NA

NOTES:
NA = No numerical standard
NS = Not Sampled (MW-1, dry)
mg/L = Milligrams per liter
NR = Not Requested
* = Values exceeding current 15A NCAC 2L Standards (Revised 1/1/2010)
2L Standard = 15A NCAC 2L .0202 Groundwater Quality Standards

TABLE 3
WATER QUALITY DATA (MW-1)

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

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

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

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

TABLE 3
WATER QUALITY DATA (MW-2)

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

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

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

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

TABLE 3
WATER QUALITY DATA (MW-3)

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

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

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

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

TABLE 3
WATER QUALITY DATA (MW-4)

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

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

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
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Bold = Values exceeding 15A NCAC 2L Standards
NA = No Standard Established

TABLE 3
WATER QUALITY DATA (MW-5)

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

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

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

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

TABLE 3
WATER QUALITY DATA (MW-6)

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

PARAMETER	2L STND.	SAMPLE COLLECTION DATE													
		01/12/06	07/06/06	01/10/07	07/11/07	01/23/08	07/09/08	01/29/09	07/08/09	01/20/10	07/15/10	01/28/11	07/13/11	01/26/12	07/25/12
Barium	0.7	0.043	0.1	0.05	0.13	0.0436	0.0473	0.0507	0.0272	0.0202	0.0256	0.033	0.0298	0.0865	0.036
Cadmium	0.002	---	---	---	---	---	---	---	---	---	<0.001	<0.001	<0.0010	<0.0010	<0.0010
Chromium	0.01	---	0.0082	---	**0.017**	---	---	0.0052	---	---	<0.005	<0.005	<0.0050	**0.019**	<0.0050
Copper	1	---	0.003	---	0.016	---	---	---	---	---	<0.005	<0.005	<0.0050	0.0109	<0.0050
Iron	0.30	0.21	**2.8**	**0.58**	**7.7**	0.143	---	**1.86**	0.0503	---	**0.449**	0.0536	<0.0500	**5.7**	**5.16**
Lead	0.015	---	---	---	---	---	---	---	---	---	<0.005	<0.005	<0.0050	<0.0050	<0.0050
Manganese	0.05	0.02	**0.19**	**0.1**	**0.24**	0.0305	0.0245	**0.0877**	**0.112**	0.0054	**0.511**	0.0485	**0.0528**	**0.134**	**1.54**
BOD	NA	2	2	---	---	---	---	---	---	---	9.4	<2	<2.0	<2.0	<2.0
Chloride	250		6.1	---	8.6	9.2	11	9.1	7.5	5.5	8	7.7	8.1	7.8	8.5
COD	NA	---	---	---	---	---	---	---	31.1	---	<25	<25	<25.0	<25.0	<25.0
Nitrate	10	0.18	0.82	0.91	0.49	0.72	0.69	0.46	0.23	0.14	0.11	0.26	<0.20	<0.20	0.046
Sulfate	250		---	---	---	---	---	---	---	---	<5	<5	<5.0	<5.0	<2.0
TDS	500	---	58	---	---	24	34	---	52	56	<25	<25	<25.0	<25.0	40
TOC	NA	3.9	5.3	1.2	---	---	1.3	4.4	8.4	7.5	<1	<1	1.4	1.2	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
WATER QUALITY DATA (MW-7)

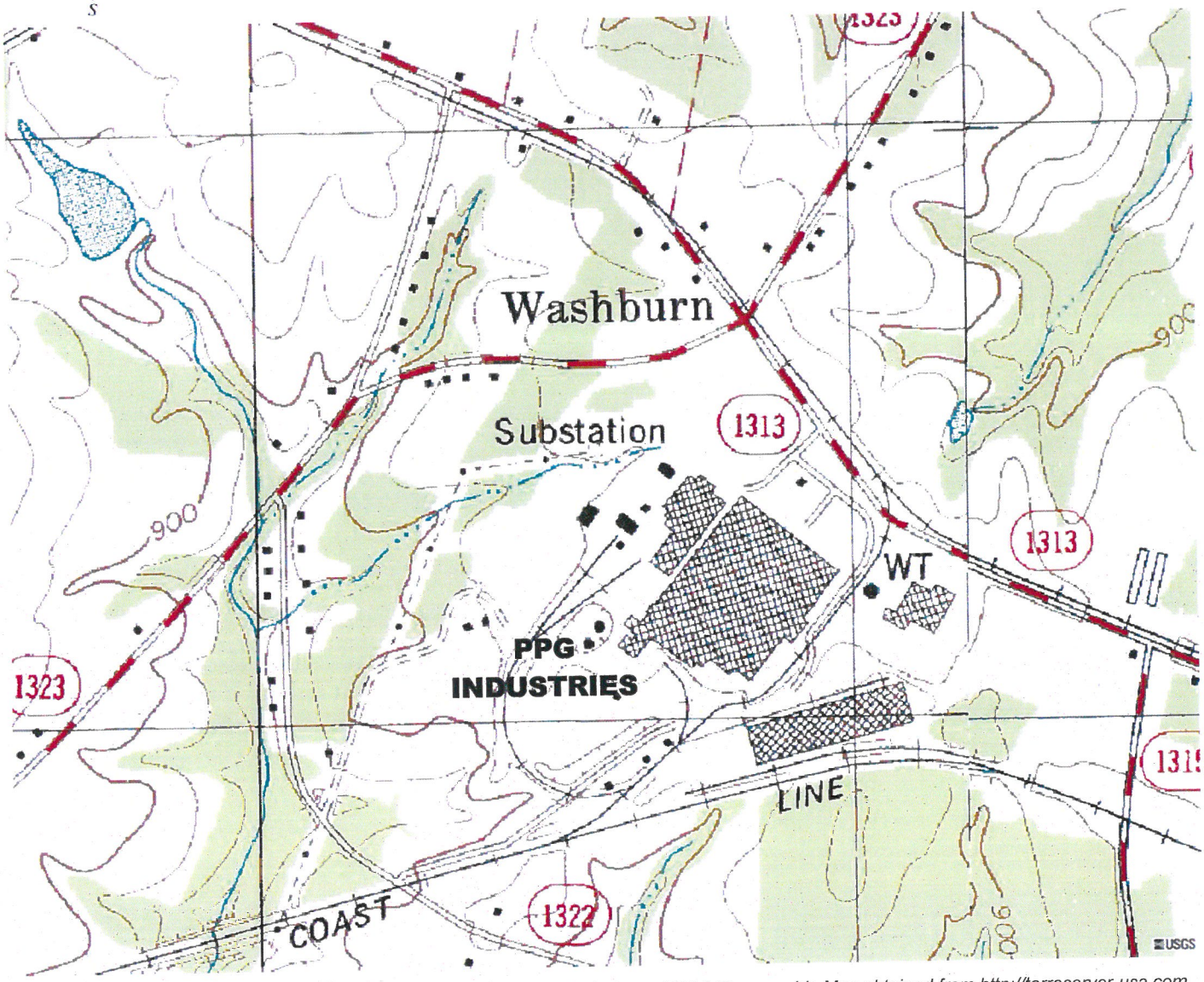
PPG INDUSTRIES, INC.
SHELBY, NORTH CAROLINA
S&ME PROJECT 1354-11-137

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

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

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

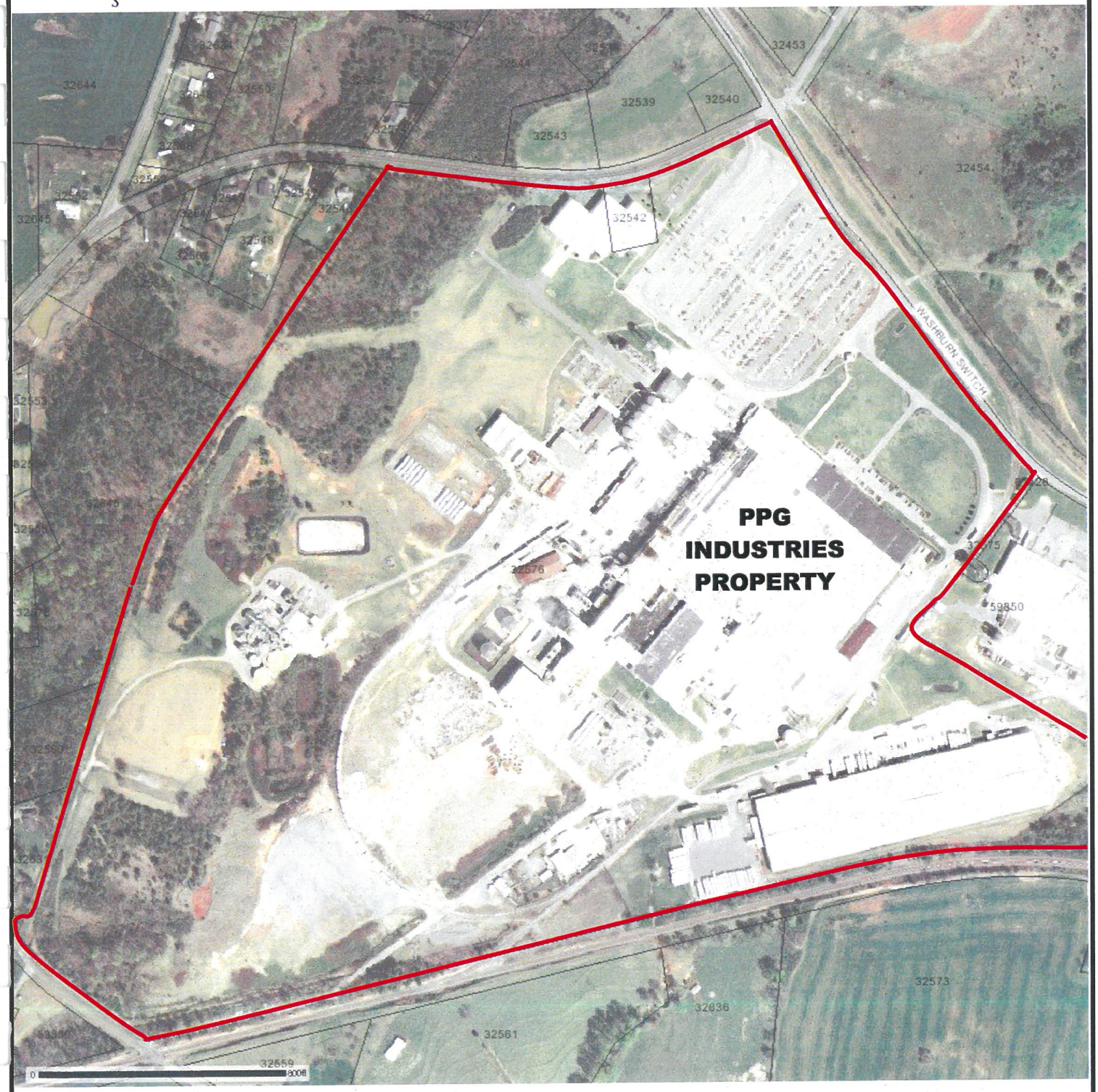
FIGURES



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

Approximate Location of Subject Property

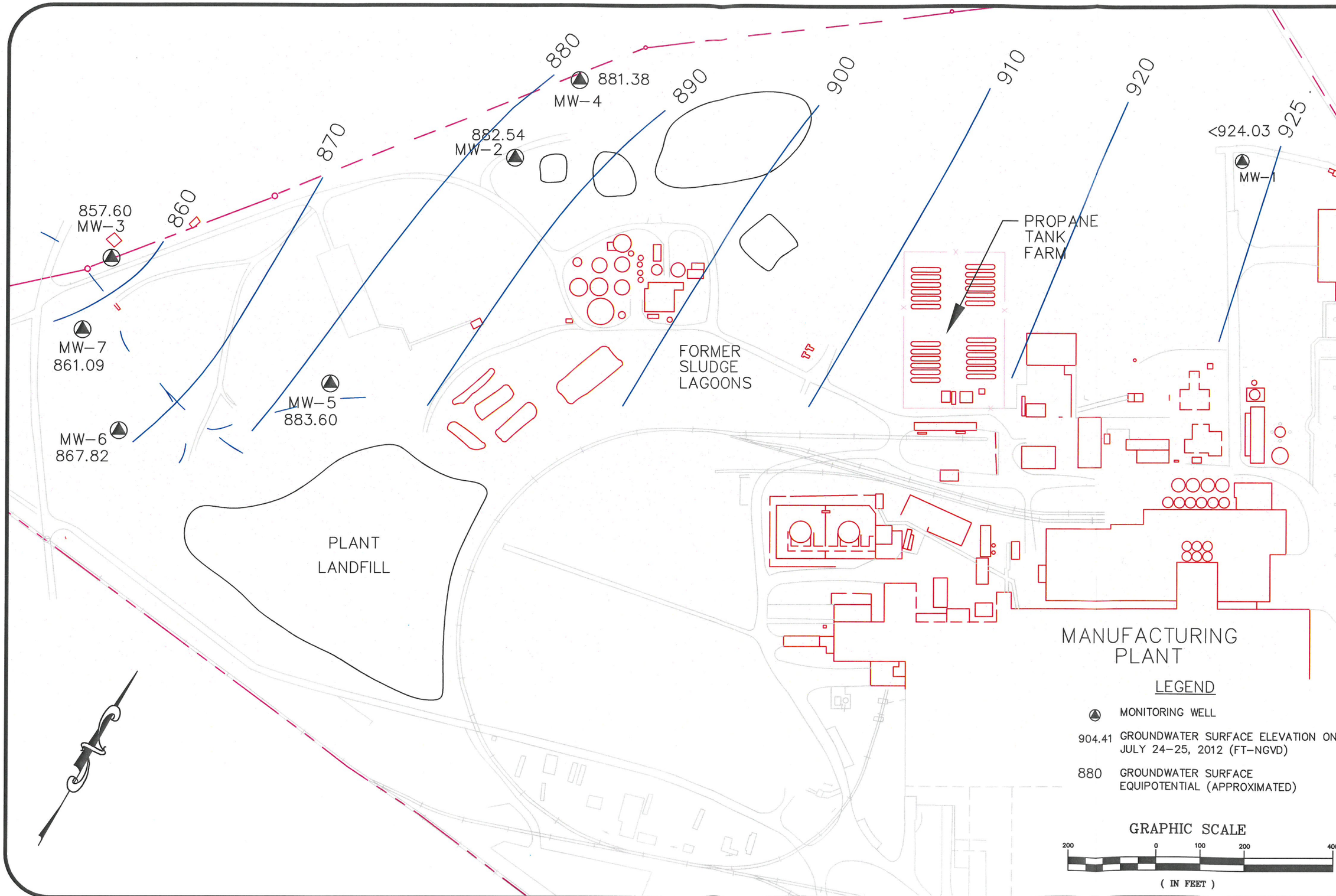
Scale: Not To Scale	S&ME	**SITE LOCATION MAP** PPG Industries 940 Washburn Switch Road Shelby, North Carolina	**Figure**
Drawn by: WAQ			**1**
Checked by:			
Date: 02-17-12		S&ME Job No.: 1354-11-137	



Approximate Location of Subject Property

Source: 2005 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** **2**
Drawn by: WAQ			
Checked by:			
Date: 02-17-12		S&ME Job No.: 1354-11-137	



DATE: 08-15-12
DRAWN BY: WAQ
CHECKED BY:
SCALE: AS SHOWN
PROJECT NO. 1354-11-137

S&ME
WWW.SMEINC.COM

GROUNDWATER CONTOUR MAP
JULY 2012
PPG INDUSTRIES INC.
SHELBY, NORTH CAROLINA

FIGURE NO.
3

Q:\1354\2011\137 PPG Shelby\FIG 3 JUL 2012.dwg

APPENDIX I
FIELD SAMPLING FORMS

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

S&ME

S&ME PROJECT #: 1354-11-137

WELL ID: MW-1
DATE: 7/25/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD

WEATHER: HOT, CLEAR, 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.00 ft
Initial Depth to Water (DTW) from TOC: — ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: — ft
Initial DTW - 0.33 ft from TOC: — ft

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

Purge Equipment:
Peristaltic Pump, Horiba 22
Hach 2100P 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								

DRY @ 29.0 ft to TOC

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

Sample Time: —
Laboratory: Pace Analytical
Shipping Date: —
Delivery Date: —

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: 7/25/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: CLOUDY ~75°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 29.82 ft
Initial Depth to Water (DTW) from TOC: 21.87 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~28 ft
Initial DTW - 0.33 ft from TOC: 22.2 ft

Water Column: 7.95 ft
Well Diameter: 4 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	0915	0930	0945	1000	1015	1015		
DTW (ft)	21.93	22.00	22.05	22.02	22.04	22.04		
Vol Purged (Cumm-ml)	0	3,000	6,000	9,000	11,000	12,000		
Flow Rate (ml/min)	~200	~200	~200	~200	~200	~200		
pH (Stand Units)	4.98	4.91	4.87	4.85	4.85	4.83		
DO (mg/L)	9.19	8.56	8.53	8.51	8.49	8.47		
Conductivity (mS/sec)	0.100	0.073	0.072	0.070	0.069	0.067		
Turbidity (NTUs)	— *	— *	15	11	8	6		
Temperature (°C)	19.15	18.48	18.81	18.84	18.79	18.77		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	314	338	346	349	350	350		

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

Sample Time: 1015
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

* TURBIDITY METER READING HIGH

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: 7/24/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: CLEAR, HOT, 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 20.0 ft
Initial Depth to Water (DTW) from TOC: 9.41 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~19.0 ft
Initial DTW - 0.33 ft from TOC: 9.74 ft

Water Column: 10.59 ft
Well Diameter: 4 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	1030	1045	1100	1110	1120	1130		
DTW (ft)	10.52	10.55	11.01	11.03	11.01	10.97		
Vol Purged (Cumm-ml)	0	3,000	6,000	8,000	10,000	12,000		
Flow Rate (ml/min)	~200	~200	~200	~200	~200	~200		
pH (Stand Units)	4.41	4.48	4.48	4.48	4.46	4.46		
DO (mg/L)	8.39	7.73	7.79	7.74	7.41	7.50		
Conductivity (mS/sec)	0.229	0.306	0.331	0.336	0.339	0.340		
Turbidity (NTUs)	153	73	19	9	15	18		
Temperature (°C)	23.50	23.10	22.30	22.60	22.69	22.45		
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE	NONE		
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		
ORP	326	341	338	333	331	329		

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

Sample Time: 1130
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

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: 7/25/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD

WEATHER: CLEAR, HOT, 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 27.73 ft
Initial Depth to Water (DTW) from TOC: 20.01 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~26 ft
Initial DTW - 0.33 ft from TOC: 20.34 ft

Water Column: 7.72 ft
Well Diameter: 2 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	1110	1125	1140	1155	1205			
DTW (ft)	20.01	20.23	20.26	20.28	20.28			
Vol Purged (Cumm-ml)	0	3,000	6,000	9,000	11,000			
Flow Rate (ml/min)	~200	~200	~200	~200	~200			
pH (Stand Units)	5.23	5.11	5.14	5.16	5.17			
DO (mg/L)	1.72	1.70	1.65	1.65	1.61			
Conductivity (mS/sec)	0.169	0.160	0.163	0.164	0.162			
Turbidity (NTUs)	25	11	8	5	7			
Temperature (°C)	19.76	18.49	18.53	18.52	18.49			
Odor (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR			
Color (Subjective)	NONE	NONE	NONE	NONE	NONE			
ORP	305	301	299	298	298			

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

Sample Time: 1210
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

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: 7/24/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: HOT, CLEAR, 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 8.81 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~20 ft
Initial DTW - 0.33 ft from TOC: 9.14 ft

Water Column: 12.19 ft
Well Diameter: 2 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	1405	1420	1430	1440	1450			
DTW (ft)	8.81	10.05	10.08	10.09	10.07			
Vol Purged (Cumm-ml)	0	3,000	5,000	7,000	9,000			
Flow Rate (ml/min)	~200	~200	~200	~200	~200			
pH (Stand Units)	4.20	4.18	4.22	4.21	4.23			
DO (mg/L)	6.23	5.56	5.52	5.48	5.50			
Conductivity (mS/sec)	0.167	0.156	0.152	0.150	0.148			
Turbidity (NTUs)	87	26	14	12	12			
Temperature (°C)	17.90	17.80	17.78	17.73	17.74			
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE			
Color (Subjective)	REDDISH	CLEAR	CLEAR	CLEAR	CLEAR			
ORP	518	515	510	502	497			

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

Sample Time: 1450
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

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: 7/24/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: HOT, CLEAR, 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: — ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 18.83 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~20 ft
Initial DTW - 0.33 ft from TOC: 19.16 ft

Water Column: 2.17 ft
Well Diameter: 2 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	1515	1530	1545	1600	1610			
DTW (ft)	18.83	19.05	19.10	19.12	19.14			
Vol Purged (Cumm-ml)	0	4,500	9,000	13,500	16,500			
Flow Rate (ml/min)	~300	~300	~300	~300	~300			
pH (Stand Units)	4.97	4.91	4.93	4.95	4.97			
DO (mg/L)	6.38	6.32	6.30	6.28	6.24			
Conductivity (mS/sec)	0.081	0.079	0.079	0.080	0.083			
Turbidity (NTUs)	12	15	16	12	9			
Temperature (°C)	19.04	19.02	19.03	19.06	19.10			
Odor (Subjective)	NONE	NONE	NONE	NONE	NONE			
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR			
ORP	512	509	493	493	491			

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

Sample Time: 1610
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

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: 7/24/12
PERSONNEL: C. MARCHIN

WELL CONDITION: GOOD
WEATHER: CLEAR, HOT 90°F

REASON FOR SAMPLING: 2012 July Sampling Event

TOC - Ground Level: ____ ft
Total Well Depth from TOC: 21.0 ft
Initial Depth to Water (DTW) from TOC: 9.25 ft
Sand Pack or Open Hole: SAND PACK
Depth to intake from TOC: ~20 ft
Initial DTW - 0.33 ft from TOC: 9.58 ft

Water Column: 11.75 ft
Well Diameter: 2 in
Borehole Diameter: — in

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

Record of Well Evacuation

Time	1245	1300	1315	1330				
DTW (ft)	9.25	9.61	9.65	9.67				
Vol Purged (Cumm-ml)	0	4,500	9,000	13,500				
Flow Rate (ml/min)	~300	~300	~300	~300				
pH (Stand Units)	4.46	3.86	3.91	3.93				
DO (mg/L)	10.64	8.46	8.42	8.39				
Conductivity (mS/sec)	0.442	0.109	0.108	0.105				
Turbidity (NTUs)	1	2	2	3				
Temperature (°C)	17.99	17.10	17.00	17.04				
Odor (Subjective)	NONE	NONE	NONE	NONE				
Color (Subjective)	CLEAR	CLEAR	CLEAR	CLEAR				
ORP	495	520	524	522				

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

Sample Time: 1330
Laboratory: Pace Analytical
Shipping Date: 7/25/12
Delivery Date: 7/25/12

APPENDIX II
LABORATORY REPORT

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Huntersville, NC 28078
(704)875-9092

August 08, 2012

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

RE: Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Dear Mr. Quarles:
Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2012. 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,

Kevin Godwin for
Kevin Herring
kevin.herring@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

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

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SAMPLE ANALYTE COUNT

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92125627001	MW-2	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627002	MW-3	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627003	MW-4	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627004	MW-5	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627005	MW-6	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	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.: 92125627

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627006	MW-7	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A
92125627007	Equipment Blank	EPA 200.7	JMW	7	PASI-A
		SM 2540C	LMD	1	PASI-A
		SM 5210B	LMD	1	PASI-A
		EPA 300.0	AES	1	PASI-A
		EPA 353.2	DMN	2	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	AES	1	PASI-A
		SM 5310B	AES	1	PASI-A

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HITS ONLY

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92125627001	**MW-2**					
EPA 200.7	Barium	25.8	ug/L	5.0	07/31/12 17:41	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 17:41	
EPA 200.7	Iron	60.1	ug/L	50.0	07/31/12 17:41	
EPA 200.7	Manganese	16.5	ug/L	5.0	07/31/12 17:41	
SM 2540C	Total Dissolved Solids	<25.0	mg/L	25.0	07/27/12 22:20	
EPA 353.2	Nitrogen, Nitrate	0.29	mg/L	0.020	07/26/12 00:10	
SM 4500-Cl-E	Chloride	5.0	mg/L	1.0	08/03/12 21:22	
SM 5310B	Total Organic Carbon	2.0	mg/L	1.0	08/04/12 20:33	
92125627002	**MW-3**					
EPA 200.7	Barium	108	ug/L	5.0	07/31/12 17:44	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 17:44	
EPA 200.7	Iron	163	ug/L	50.0	07/31/12 17:44	
EPA 200.7	Manganese	2900	ug/L	5.0	07/31/12 17:44	
SM 2540C	Total Dissolved Solids	145	mg/L	25.0	07/27/12 22:18	
EPA 300.0	Sulfate	22.5	mg/L	2.0	08/02/12 03:25	
EPA 353.2	Nitrogen, Nitrate	0.80	mg/L	0.020	07/25/12 23:58	
SM 4500-Cl-E	Chloride	2.5	mg/L	1.0	08/03/12 21:23	
92125627003	**MW-4**					
EPA 200.7	Barium	118	ug/L	5.0	07/31/12 17:47	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 17:47	
EPA 200.7	Iron	<50.0	ug/L	50.0	07/31/12 17:47	
EPA 200.7	Manganese	71.0	ug/L	5.0	07/31/12 17:47	
SM 2540C	Total Dissolved Solids	76.0	mg/L	25.0	07/27/12 22:21	
EPA 353.2	Nitrogen, Nitrate	0.86	mg/L	0.020	07/26/12 00:06	
SM 4500-Cl-E	Chloride	16.2	mg/L	1.0	08/03/12 21:25	
SM 5310B	Total Organic Carbon	4.4	mg/L	1.0	08/04/12 20:55	
92125627004	**MW-5**					
EPA 200.7	Barium	153	ug/L	5.0	07/31/12 17:59	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 17:59	
EPA 200.7	Iron	1390	ug/L	50.0	07/31/12 17:59	
EPA 200.7	Manganese	54.6	ug/L	5.0	07/31/12 17:59	
SM 2540C	Total Dissolved Solids	39.0	mg/L	25.0	07/27/12 22:19	
EPA 353.2	Nitrogen, Nitrate	3.2	mg/L	0.020	07/26/12 00:08	
SM 4500-Cl-E	Chloride	11.0	mg/L	1.0	08/03/12 21:25	
SM 5310B	Total Organic Carbon	1.4	mg/L	1.0	08/04/12 21:05	
92125627005	**MW-6**					
EPA 200.7	Barium	36.0	ug/L	5.0	07/31/12 18:02	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 18:02	
EPA 200.7	Iron	5160	ug/L	50.0	07/31/12 18:02	
EPA 200.7	Manganese	1540	ug/L	5.0	07/31/12 18:02	
SM 2540C	Total Dissolved Solids	40.0	mg/L	25.0	07/27/12 22:19	
EPA 353.2	Nitrogen, Nitrate	0.046	mg/L	0.020	07/26/12 00:09	
SM 4500-Cl-E	Chloride	8.5	mg/L	1.0	08/03/12 21:26	
SM 5310B	Total Organic Carbon	1.3	mg/L	1.0	08/04/12 21:15	

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HITS ONLY

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92125627006	**MW-7**					
EPA 200.7	Barium	54.8	ug/L	5.0	07/31/12 18:05	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 18:05	
EPA 200.7	Iron	<50.0	ug/L	50.0	07/31/12 18:05	
EPA 200.7	Manganese	61.8	ug/L	5.0	07/31/12 18:05	
SM 2540C	Total Dissolved Solids	29.0	mg/L	25.0	07/27/12 22:19	
EPA 353.2	Nitrogen, Nitrate	1.0	mg/L	0.020	07/26/12 00:07	
SM 4500-Cl-E	Chloride	4.2	mg/L	1.0	08/03/12 21:27	
SM 5310B	Total Organic Carbon	1.1	mg/L	1.0	08/04/12 21:25	
92125627007	**Equipment Blank**					
EPA 200.7	Barium	<5.0	ug/L	5.0	07/31/12 18:08	
EPA 200.7	Chromium	<5.0	ug/L	5.0	07/31/12 18:08	
EPA 200.7	Manganese	<5.0	ug/L	5.0	07/31/12 18:08	
EPA 353.2	Nitrogen, Nitrate	0.044	mg/L	0.020	07/25/12 23:53	
SM 4500-Cl-E	Chloride	14.2	mg/L	1.0	08/03/12 21:27	

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PROJECT NARRATIVE

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Method: **EPA 200.7**
Description: 200.7 MET ICP
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.: 92125627

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: S&ME, Inc.
Date: August 08, 2012

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.: 92125627

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.

QC Batch: WET/21778

R1: RPD value was outside control limits.
- DUP (Lab ID: 802342)
  - BOD, 5 day

Additional Comments:

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PROJECT NARRATIVE

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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/12787

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92125664002,92125878003

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

- MS (Lab ID: 804962)
  - Sulfate

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.: 92125627

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.: 92125627

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.: 92125627

Method: **SM 5220D**
Description: 5220D COD
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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.: 92125627

Method: **SM 5310B**
Description: 5310B TOC
Client: S&ME, Inc.
Date: August 08, 2012

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

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

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

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

Method Blank:
All analytes were below the report limit in the method blank 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/12839

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92125500002,92125682001

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

- MS (Lab ID: 808664)
  - Total Organic Carbon

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-2 **Lab ID: 92125627001** Collected: 07/25/12 10:15 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**25.8**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:41	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 17:41	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:41	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:41	7440-50-8	
Iron	**60.1**	ug/L	50.0	1	07/26/12 17:45	07/31/12 17:41	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:41	7439-92-1	
Manganese	**16.5**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:41	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		07/27/12 22:20		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 14:42	07/31/12 11:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/02/12 03:11	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.29**	mg/L	0.020	1		07/26/12 00:10		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/26/12 00:10		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.0**	mg/L	1.0	1		08/03/12 21:22	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**2.0**	mg/L	1.0	1		08/04/12 20:33	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-3 **Lab ID: 92125627002** Collected: 07/24/12 11:30 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**108**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:44	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 17:44	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:44	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:44	7440-50-8	
Iron	**163**	ug/L	50.0	1	07/26/12 17:45	07/31/12 17:44	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:44	7439-92-1	
Manganese	**2900**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:44	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**145**	mg/L	25.0	1		07/27/12 22:18		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**22.5**	mg/L	2.0	1		08/02/12 03:25	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.80**	mg/L	0.020	1		07/25/12 23:58		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/25/12 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.5**	mg/L	1.0	1		08/03/12 21:23	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**<1.0**	mg/L	1.0	1		08/04/12 20:45	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-4 **Lab ID: 92125627003** Collected: 07/25/12 12:10 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**118**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:47	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 17:47	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:47	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:47	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	07/26/12 17:45	07/31/12 17:47	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:47	7439-92-1	
Manganese	**71.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:47	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**76.0**	mg/L	25.0	1		07/27/12 22:21		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/02/12 03:38	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.86**	mg/L	0.020	1		07/26/12 00:06		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/26/12 00:06		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**16.2**	mg/L	1.0	1		08/03/12 21:25	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**4.4**	mg/L	1.0	1		08/04/12 20:55	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-5 **Lab ID: 92125627004** Collected: 07/24/12 14:00 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**153**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:59	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 17:59	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:59	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:59	7440-50-8	
Iron	**1390**	ug/L	50.0	1	07/26/12 17:45	07/31/12 17:59	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:59	7439-92-1	
Manganese	**54.6**	ug/L	5.0	1	07/26/12 17:45	07/31/12 17:59	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**39.0**	mg/L	25.0	1		07/27/12 22:19		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/02/12 03:52	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**3.2**	mg/L	0.020	1		07/26/12 00:08		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/26/12 00:08		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**11.0**	mg/L	1.0	1		08/03/12 21:25	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.4**	mg/L	1.0	1		08/04/12 21:05	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-6 **Lab ID: 92125627005** Collected: 07/24/12 16:10 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**36.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:02	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 18:02	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:02	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:02	7440-50-8	
Iron	**5160**	ug/L	50.0	1	07/26/12 17:45	07/31/12 18:02	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:02	7439-92-1	
Manganese	**1540**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:02	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**40.0**	mg/L	25.0	1		07/27/12 22:19		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/02/12 04:05	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.046**	mg/L	0.020	1		07/26/12 00:09		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/26/12 00:09		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**8.5**	mg/L	1.0	1		08/03/12 21:26	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.3**	mg/L	1.0	1		08/04/12 21:15	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: MW-7 **Lab ID: 92125627006** Collected: 07/24/12 13:30 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**54.8**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:05	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 18:05	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:05	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:05	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	07/26/12 17:45	07/31/12 18:05	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:05	7439-92-1	
Manganese	**61.8**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:05	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**29.0**	mg/L	25.0	1		07/27/12 22:19		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/02/12 04:19	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**1.0**	mg/L	0.020	1		07/26/12 00:07		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/26/12 00:07		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.2**	mg/L	1.0	1		08/03/12 21:27	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.1**	mg/L	1.0	1		08/04/12 21:25	7440-44-0	

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ANALYTICAL RESULTS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Sample: Equipment Blank **Lab ID: 92125627007** Collected: 07/24/12 10:00 Received: 07/25/12 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Barium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:08	7440-39-3	
Cadmium	**<1.0**	ug/L	1.0	1	07/26/12 17:45	07/31/12 18:08	7440-43-9	
Chromium	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:08	7440-47-3	
Copper	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:08	7440-50-8	
Iron	**<50.0**	ug/L	50.0	1	07/26/12 17:45	07/31/12 18:08	7439-89-6	
Lead	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:08	7439-92-1	
Manganese	**<5.0**	ug/L	5.0	1	07/26/12 17:45	07/31/12 18:08	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**<25.0**	mg/L	25.0	1		07/27/12 22:20		
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**<2.0**	mg/L	2.0	1	07/26/12 01:50	07/30/12 19:40		B4
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**<2.0**	mg/L	2.0	1		08/05/12 04:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.044**	mg/L	0.020	1		07/25/12 23:53		
Nitrogen, Nitrite	**<0.020**	mg/L	0.020	1		07/25/12 23:53		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**14.2**	mg/L	1.0	1		08/03/12 21:27	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**<25.0**	mg/L	25.0	1		08/08/12 10:15		
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**<1.0**	mg/L	1.0	1		08/04/12 21:35	7440-44-0	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: MPRP/11125 — Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 — Analysis Description: 200.7 MET
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 802866 — Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	<5.0	5.0	07/31/12 17:21	
Cadmium	ug/L	<1.0	1.0	07/31/12 17:21	
Chromium	ug/L	<5.0	5.0	07/31/12 17:21	
Copper	ug/L	<5.0	5.0	07/31/12 17:21	
Iron	ug/L	<50.0	50.0	07/31/12 17:21	
Lead	ug/L	<5.0	5.0	07/31/12 17:21	
Manganese	ug/L	<5.0	5.0	07/31/12 17:21	

LABORATORY CONTROL SAMPLE: 802867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	490	98	85-115	
Cadmium	ug/L	500	492	98	85-115	
Chromium	ug/L	500	499	100	85-115	
Copper	ug/L	500	498	100	85-115	
Iron	ug/L	5000	5060	101	85-115	
Lead	ug/L	500	494	99	85-115	
Manganese	ug/L	500	495	99	85-115	

MATRIX SPIKE SAMPLE: 802868

Parameter	Units	92125539001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	19.5	500	496	95	70-130	
Cadmium	ug/L	ND	500	478	95	70-130	
Chromium	ug/L	ND	500	486	97	70-130	
Copper	ug/L	ND	500	485	97	70-130	
Iron	ug/L	983	5000	5840	97	70-130	
Lead	ug/L	ND	500	480	96	70-130	
Manganese	ug/L	160	500	633	95	70-130	

MATRIX SPIKE SAMPLE: 803017

Parameter	Units	92125634002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	31.1	500	495	93	70-130	
Cadmium	ug/L	ND	500	477	95	70-130	
Chromium	ug/L	7.6	500	479	94	70-130	
Copper	ug/L	81.5	500	555	95	70-130	
Iron	ug/L	344	5000	5060	94	70-130	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

MATRIX SPIKE SAMPLE: 803017

Parameter	Units	92125634002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	436	87	70-130	
Manganese	ug/L	74.2	500	533	92	70-130	

SAMPLE DUPLICATE: 802869

Parameter	Units	92125540001 Result	Dup Result	RPD	Qualifiers
Barium	ug/L	64.6	63.5	2	
Cadmium	ug/L	3.4	3.4	0	
Chromium	ug/L	ND	<5.0		
Copper	ug/L	7.6	7.7	2	
Iron	ug/L	195	194	1	
Lead	ug/L	ND	6.1		
Manganese	ug/L	26.8	26.4	1	

SAMPLE DUPLICATE: 803018

Parameter	Units	92125638001 Result	Dup Result	RPD	Qualifiers
Barium	ug/L	0.027 mg/L	26.1	2	
Cadmium	ug/L	ND	<1.0		
Chromium	ug/L	ND	<5.0		
Copper	ug/L	0.11 mg/L	106	5	
Iron	ug/L	0.32 mg/L	309	4	
Lead	ug/L	ND	<5.0		
Manganese	ug/L	0.035 mg/L	34.4	3	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WET/21812 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 804035 — Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<25.0	25.0	07/27/12 22:18	

LABORATORY CONTROL SAMPLE: 804036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	250	100	80-120	

SAMPLE DUPLICATE: 804037

Parameter	Units	92125627002 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	145	135	7	

SAMPLE DUPLICATE: 804038

Parameter	Units	92125682002 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	48.0	47.0	2	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WET/21772 — Analysis Method: SM 5210B
QC Batch Method: SM 5210B — Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 802303 — Matrix: Water
Associated Lab Samples: 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	07/30/12 20:40	

LABORATORY CONTROL SAMPLE: 802304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	153	77	84.5-115.4	

SAMPLE DUPLICATE: 802305

Parameter	Units	92125627007 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	<2.0	<2.0		B4

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WET/21778
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92125627001

METHOD BLANK: 802340
Matrix: Water
Associated Lab Samples: 92125627001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	07/31/12 11:20	

LABORATORY CONTROL SAMPLE: 802341

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

SAMPLE DUPLICATE: 802342

Parameter	Units	92125656001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	2.8	2.2	22	R1

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12787 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006

METHOD BLANK: 804958 — Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<2.0	2.0	08/01/12 21:45	

LABORATORY CONTROL SAMPLE: 804959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE SAMPLE: 804960

Parameter	Units	92125664002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5480	20	4700	-3871	90-110	M6

MATRIX SPIKE SAMPLE: 804962

Parameter	Units	92125878003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	80.3	20	141	303	90-110	M1

SAMPLE DUPLICATE: 804961

Parameter	Units	92125664002 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	5480	5100	7	

SAMPLE DUPLICATE: 804963

Parameter	Units	92125878003 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	80.3	81.0	1	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12824
QC Batch Method: EPA 300.0
Associated Lab Samples: 92125627007

Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions

METHOD BLANK: 808016
Matrix: Water
Associated Lab Samples: 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<2.0	2.0	08/04/12 21:14	

LABORATORY CONTROL SAMPLE: 808017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.6	93	90-110	

MATRIX SPIKE SAMPLE: 808018

Parameter	Units	92126092001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	ND	20	20.5	94	90-110	

MATRIX SPIKE SAMPLE: 808020

Parameter	Units	92126245010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	1550	20	1410	-705	90-110	M6

SAMPLE DUPLICATE: 808019

Parameter	Units	92126092001 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	ND	2.0		

SAMPLE DUPLICATE: 808021

Parameter	Units	92126245010 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	1550	1560	1	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12739 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 802310 — Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	<0.020	0.020	07/25/12 23:49	
Nitrogen, Nitrite	mg/L	<0.020	0.020	07/25/12 23:49	

LABORATORY CONTROL SAMPLE: 802311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	101	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 802312

Parameter	Units	92125627007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.044	2.5	2.6	104	90-110	
Nitrogen, Nitrite	mg/L	<0.020	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 802314

Parameter	Units	92125627002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.80	2.5	3.3	98	90-110	
Nitrogen, Nitrite	mg/L	<0.020	1	1.1	106	90-110	

SAMPLE DUPLICATE: 802313

Parameter	Units	92125627007 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.044	0.042	5	
Nitrogen, Nitrite	mg/L	<0.020	<0.020		

SAMPLE DUPLICATE: 802315

Parameter	Units	92125627002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	0.80	0.81	1	
Nitrogen, Nitrite	mg/L	<0.020	<0.020		

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12832 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 808406 Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	08/03/12 21:18	

LABORATORY CONTROL SAMPLE: 808407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.2	96	90-110	

MATRIX SPIKE SAMPLE: 808408

Parameter	Units	92125500002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	120	20	117	-14	75-125	M6

SAMPLE DUPLICATE: 808409

Parameter	Units	92125500002 Result	Dup Result	RPD	Qualifiers
Chloride	mg/L	120	117	2	

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12850 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 809443 Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<25.0	25.0	08/08/12 10:15	

LABORATORY CONTROL SAMPLE: 809444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	732	98	90-110	

MATRIX SPIKE SAMPLE: 809445

Parameter	Units	92125500002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	750	737	96	75-125	

MATRIX SPIKE SAMPLE: 809447

Parameter	Units	92125627002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<25.0	750	711	95	75-125	

SAMPLE DUPLICATE: 809446

Parameter	Units	92125500002 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	<25.0		

SAMPLE DUPLICATE: 809448

Parameter	Units	92125627002 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<25.0	<25.0		

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QUALITY CONTROL DATA

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

QC Batch: WETA/12839 — Analysis Method: SM 5310B
QC Batch Method: SM 5310B — Analysis Description: 5310B TOC
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

METHOD BLANK: 808662 — Matrix: Water
Associated Lab Samples: 92125627001, 92125627002, 92125627003, 92125627004, 92125627005, 92125627006, 92125627007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	08/04/12 19:18	

LABORATORY CONTROL SAMPLE: 808663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	23.4	94	90-110	

MATRIX SPIKE SAMPLE: 808664

Parameter	Units	92125500002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	42.9	25	43.1	1	75-125	M1

MATRIX SPIKE SAMPLE: 808666

Parameter	Units	92125682001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	25	25.3	101	75-125	

SAMPLE DUPLICATE: 808665

Parameter	Units	92125506005 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	4.8	4.9	2	

SAMPLE DUPLICATE: 808667

Parameter	Units	92125682002 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	1.5	1.4	2	

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QUALIFIERS

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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LABORATORIES

PASI-A Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

B4	The glucose/glutamic acid standard exceeded the range of 198 plus or minus 30.5 mg/L.
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.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92125627001	MW-2	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627002	MW-3	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627003	MW-4	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627004	MW-5	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627005	MW-6	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627006	MW-7	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627007	Equipment Blank	EPA 200.7	MPRP/11125	EPA 200.7	ICP/10206
92125627001	MW-2	SM 2540C	WET/21812		
92125627002	MW-3	SM 2540C	WET/21812		
92125627003	MW-4	SM 2540C	WET/21812		
92125627004	MW-5	SM 2540C	WET/21812		
92125627005	MW-6	SM 2540C	WET/21812		
92125627006	MW-7	SM 2540C	WET/21812		
92125627007	Equipment Blank	SM 2540C	WET/21812		
92125627001	MW-2	SM 5210B	WET/21778	SM 5210B	WET/21803
92125627002	MW-3	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627003	MW-4	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627004	MW-5	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627005	MW-6	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627006	MW-7	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627007	Equipment Blank	SM 5210B	WET/21772	SM 5210B	WET/21775
92125627001	MW-2	EPA 300.0	WETA/12787		
92125627002	MW-3	EPA 300.0	WETA/12787		
92125627003	MW-4	EPA 300.0	WETA/12787		
92125627004	MW-5	EPA 300.0	WETA/12787		
92125627005	MW-6	EPA 300.0	WETA/12787		
92125627006	MW-7	EPA 300.0	WETA/12787		
92125627007	Equipment Blank	EPA 300.0	WETA/12824		
92125627001	MW-2	EPA 353.2	WETA/12739		
92125627002	MW-3	EPA 353.2	WETA/12739		
92125627003	MW-4	EPA 353.2	WETA/12739		
92125627004	MW-5	EPA 353.2	WETA/12739		
92125627005	MW-6	EPA 353.2	WETA/12739		
92125627006	MW-7	EPA 353.2	WETA/12739		
92125627007	Equipment Blank	EPA 353.2	WETA/12739		
92125627001	MW-2	SM 4500-Cl-E	WETA/12832		
92125627002	MW-3	SM 4500-Cl-E	WETA/12832		
92125627003	MW-4	SM 4500-Cl-E	WETA/12832		
92125627004	MW-5	SM 4500-Cl-E	WETA/12832		
92125627005	MW-6	SM 4500-Cl-E	WETA/12832		
92125627006	MW-7	SM 4500-Cl-E	WETA/12832		
92125627007	Equipment Blank	SM 4500-Cl-E	WETA/12832		
92125627001	MW-2	SM 5220D	WETA/12850		
92125627002	MW-3	SM 5220D	WETA/12850		
92125627003	MW-4	SM 5220D	WETA/12850		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PPG Shelby 1354-11-137
Pace Project No.: 92125627

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92125627004	MW-5	SM 5220D	WETA/12850		
92125627005	MW-6	SM 5220D	WETA/12850		
92125627006	MW-7	SM 5220D	WETA/12850		
92125627007	Equipment Blank	SM 5220D	WETA/12850		
92125627001	MW-2	SM 5310B	WETA/12839		
92125627002	MW-3	SM 5310B	WETA/12839		
92125627003	MW-4	SM 5310B	WETA/12839		
92125627004	MW-5	SM 5310B	WETA/12839		
92125627005	MW-6	SM 5310B	WETA/12839		
92125627006	MW-7	SM 5310B	WETA/12839		
92125627007	Equipment Blank	SM 5310B	WETA/12839		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1508849

Section A Required Client Information:

Company: S+ME
Address: 9711 SOUTHERN PINE BL
CHARLOTTE, NC
Email To: aquarlese@sei-inc.com
Phone: 704-523-4726 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: AL QUARLES
Copy To:
Purchase Order No.:
Project Name: PPG SHELBY
Project Number: 1354-11-187

Section C Invoice Information:

Attention: BARBARA ELLINGTON
Company Name: S+ME
Address: SAME
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

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	Composite Start TIME	Composite End/GRAB DATE	Composite End/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BOD	COD	TOC	TDS	METALS	CHLORIDE	SO_4, NO_3, NO_2	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-2	WT	G	/	/	7/25/12	1015		8	4	1	1	2					X	X	X	X	X	X			001
2	MW-3	WT	G	/	/	7/24/12	1130		8	4	1	1	2					X	X	X	X	X	X			002
3	MW-4	WT	G	/	/	7/25/12	1210		8	4	1	1	2					X	X	X	X	X	X			003
4	MW-5	WT	G	/	/	7/24/12	1455		8	4	1	1	2					X	X	X	X	X	X			004
5	MW-6	WT	G	/	/	7/24/12	1610		8	4	1	1	2					X	X	X	X	X	X			005
6	MW-7	WT	G	/	/	7/24/12	1330		8	4	1	1	2					X	X	X	X	X	X			006
7	EQUIPMENT BLANK	WT	G	/	/	7/24/12	1000		8	4	1	1	2					X	X	X	X	X	X			007
8																										
9																										
10																										
11																										
12																										

92125627

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	S+ME	7/25/12	1500		07/25/12	1500	2.8 Y N Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: COLEMAN MARCHIN

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 7/25/12

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

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

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

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 7, 2012 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.07**	Issuing Authority: Pace Huntersville Quality Office

Client Name: S+ME Project # 92125627

Where Received: ☑ Huntersville ☐ Asheville ☐ Eden

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 T1101 T1102 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1101: No Correction T1102: No Correction

Corrected Cooler Temp.: 2.8 C **Biological Tissue Is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: [illegible]

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. Missing MW-6 samples
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: -Includes date/time/ID/Analysis Matrix:_____	☐Yes	☑No	☐N/A	12. MW-5 duplicate samples w/ 7/24/12 @ 1620 received w/ all analysis received above not on COC
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		Initial when completed
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: MW-5 @ 16:20 labeled as MW-6.

SCURF Review: BLM **Date:** 7/25/12 **SRF Review:** [illegible] **Date:** 8/1/12

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)