AECOM
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Ms. Addie Walker
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

May 15, 2014

Dear Ms. Walker,

Subject: Performance Monitoring Wells Installation and Baseline Results
Auriga, Spartanburg Facility
BoW Site ID# 00225, VCC 13-5841-RP
AECOM Project No. 60280417

Chloroform remediation activities approved in South Carolina Department of Health and Environmental Control (DHEC) letters dated September 5th and 9th, 2013 have been initiated. The approved plan included installation of performance monitoring wells at 14 locations. Nine performance monitoring locations were established on the north side of Interstate 85. Five performance monitoring locations were established south of Interstate 85 on the property at 600 Bruckner Road. Well installation activities and baseline monitoring activities have been completed. The activities completed to date are summarized below.

Performance monitoring well installation was started on December 3, 2013 and completed on March 31, 2014. A total of 24 performance monitoring wells were installed. A saprolite performance monitoring well was completed at each of the 14 locations. A paired bedrock boring was also completed at each of the 14 locations. At four of the 14 locations the bedrock boring was dry and no well was installed. Bedrock performance monitoring wells were installed at the remaining 10 locations. All 28 locations, including the 4 dry bedrock borings, were surveyed on April 2, 2014. The locations are presented on Figure 1.

Three of the four dry bedrock locations were on the DMT area side of Interstate 85. These locations were designated RW-125, RW-131, and RW-135. The remaining dry bedrock location was identified as RW-117 and is located within the 600 Bruckner property. The lack of water producing fractures within these locations is consistent with intermittent competent rock areas.

Well construction details are presented on Table 1. Complete well construction logs are presented in Attachment 1 of this letter.

As part of the well construction activities, AECOM completed two packer tests to provide vertical delineation of the chloroform plume. One packer test was completed at location RW-129 on the DMT side of Interstate 85. The second packer test was completed at location RW-115 on the 600 Bruckner Road property. The results of the packer tests are summarized in the tables below. The sample screen intervals are presented in feet below ground surface (feet bgs). The chloroform results are presented in milligrams per liter (mg/L).

Packer Tests Results – Location RW-129

	Depth (feet bgs)	Chloroform Result (mg/L)
First Interval	88.5 - 105	3.88
Second Interval	105 - 120	3.29
Third Interval	120 -135	DRY
Fourth Interval	135 - 150	1.09
Fifth Interval	150-165	DRY
Sixth Interval	165 - 180	DRY

Packer Test Results – Location RW-115

	Depth (feet bgs)	Chloroform Result (mg/L)
First Interval	75-90	2.45
Second Interval	90-105	DRY
Third Interval	105 - 120	DRY

At each packer test location two consecutive dry intervals were identified. Areas of competent rock are frequently encountered and create hydraulic barriers to vertical migration. The surveyed ground surface elevation of RW-129 is 751.96 feet. The surveyed ground surface elevation of RW-115 is 714.80 feet. Based on these results the vertical delineation was determined to be approximately 150 feet bgs on the DMT area and 90 feet bgs in the 600 Bruckner Road area. This depth was used to support selection of bedrock well screening depths, with consideration that the delineation elevation could potentially decrease as the ground elevation declines.

Baseline performance monitoring samples were collected between March 31 and April 3, 2014. The chloroform results are summarized on Table 2. The data on Table 2 is organized by well pairs. The chloroform data for saprolite wells is presented on Figure 2. The chloroform data for bedrock wells is presented on Figure 3.

The primary observation of this baseline data is that the results are consistent with the previous direct push evaluations. These results define an effective baseline reference for demonstration of remediation results across the established horizontal delineation of the plume in both saprolite and bedrock.

One significant observation is made regarding the saprolite and bedrock data on the 600 Bruckner Road property. Saprolite well MW-112 is located near Bruckner Road and near the location of DPT positions OSS-12-01 and OSS-12-02. The chloroform results in samples from these direct push locations were 2.03 and 2.53 mg/L. The chloroform result for the saprolite well MW-112 was 2.00 mg/L, consistent with the direct push results for the area. The paired bedrock well at this location is RW-113. As shown on Table 1, the distance between the bottom of the MW-112 screen and the top of the RW-113 screen is only 21.3 feet. However, the chloroform result for the sample from the bedrock well was non-detect (<0.005 mg/L). This combination of results shows that the bedrock in this area is competent and serves as a barrier to vertical migration. The next bedrock well location along the creek to the east is RW-117. This location was determined to be dry and no well was

installed. Combined with the results for RW-113, the data indicate that chloroform on the western side of the property at 600 Bruckner Road is limited to saprolite.

Well pairs to the north and east on the 600 Bruckner Road property reported detections of chloroform in both saprolite and bedrock. These results are consistent with historic data from wells RW-108 and MW-109. Chloroform in bedrock in these areas is expected to flow in a southeasterly direction, more directly toward the Pacolet River. Based on both the packer test results and the bedrock barrier identified to the west, when chloroform is detected in bedrock the depth is expected to be limited.

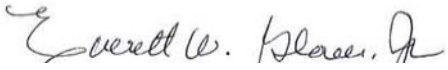
A complete analytical summary is presented in Table 3. Complete lab reports are also attached to this report. All samples were analyzed for volatile organics. In addition to chloroform there were three detections of cis-1,2-dichloroethene and two detections each of methylene chloride and tetrachloroethene. Each of these detections were within the former DMT vicinity on the plant property and are consistent with detections previously noted in routine monitoring activities.

In addition, the groundwater samples from the 600 Bruckner Road property were analyzed for 1,4-dioxane and semivolatile organics, including DowTherm A™ components (1,1-diphenyl and biphenyl ether). 1,4-Dioxane was detected three times in wells consistent with the detections previously noted in direct push samples. DowTherm A™ components were not detected. The only semivolatile organics detected were phthalates. These compounds are commonly encountered and are also common laboratory contaminants.

Injection activities are underway and are expected to be complete in late May. The annual June monitoring event will be scheduled soon. The first quarterly post-injection monitoring event will be completed in September. The results of the June 2014 event and four quarterly post injection events will be compared to the baseline results presented in this report. A review and assessment of the result is expected to be complete in late 2015.

If you have questions, please contact us at 404.965.9600.

Sincerely,



Bryon Dahlgren, PE
Project Manager

Everett W. Glover, Jr., PE
Senior Program Manager

Table 1
Performance Monitoring Well Construction Summary
April 2014
Auriga Spartanburg Facility
AECOM Project No. 60280417

Well Name	Zone	Date Started	Date Completed	Total Depth (ft)	Screen Interval (ft)
BRUCKNER ROAD LOCATIONS					
MW-112	Saprolite	12/4/2013	12/5/2013	39	28.7-38.7
RW-113	Bedrock	3/19/2014	3/26/2014	70	60-70
MW-114	Saprolite	12/3/2013	12/4/2013	56.6	46.3-56.3
RW-115	Bedrock	2/27/2014	3/26/2014	88.8	78.5-88.5
MW-116	Saprolite	12/6/2013	12/12/2013	31.3	21.3-31.3
RW-117	Bedrock	3/10/2014	3/26/2014	DRY - not installed	
MW-118	Saprolite	12/10/2013	12/13/2013	44.3	34.3-44.3
RW-119	Bedrock	3/6/2014	3/26/2014	90.3	80-90
MW-120	Saprolite	12/5/2013	12/13/2013	55	44.7-54.7
RW-121	Bedrock	3/4/2014	3/26/2014	80	75-80
DMT AREA LOCATIONS					
MW-122	Saprolite	12/11/2013	12/11/2013	57.5	47.2-57.2
RW-123	Bedrock	1/23/2014	3/28/2014	137.3	127-137
MW-124	Saprolite	12/11/2013	12/12/2013	59.9	49.6-59.6
RW-125	Bedrock	1/21/2014	1/22/2014	DRY - not installed	
MW-126	Saprolite	12/12/2013	12/12/2013	49.5	39.2-49.2
RW-127	Bedrock	1/9/2014	3/31/2014	92.7	82.4-92.4
MW-128	Saprolite	12/16/2013	12/17/2013	60.3	50.1-60.1
RW-129	Bedrock	2/3/2014	3/25/2014	150	134.7-144.7
MW-130	Saprolite	12/17/2013	12/17/2013	60.7	50.5-60.5
RW-131	Bedrock	1/27/2014	3/25/2014	DRY - not installed	
MW-132	Saprolite	12/18/2013	12/18/2013	65.2	54.9-64.9
RW-133	Bedrock	2/6/2014	3/25/2014	117.3	107-117
MW-134	Saprolite	12/19/2013	12/19/2013	75.4	65.1-75.1
RW-135	Bedrock	2/17/2014	2/19/2014	DRY - not installed	
MW-136	Saprolite	12/13/2013	12/13/2013	60.5	50.2-60.2
RW-137	Bedrock	2/17/2014	2/26/2014	107.3	97-107
MW-138	Saprolite	12/13/2013	12/16/2013	59.6	49.3-59.3
RW-139	Bedrock	2/21/2014	2/26/2014	97.8	87.5-97.5

Table 2
Baseline Performance Monitoring Chloroform Results
April 2014
Auriga Spartanburg Facility
AECOM Project No. 60280417

600 Bruckner Road			
MW-112	2.00	**RW-113**	<0.005
MW-114	1.66	**RW-115**	2.57
MW-116	0.845	**RW-117**	DRY
MW-118	0.697	**RW-119**	0.214
MW-120	0.149	**RW-121**	0.115
DMT			
MW-122	0.0308	**RW-123**	0.0235
MW-124	0.798	**RW-125**	DRY
MW-126	2.00	**RW-127**	1.06
MW-128	0.0077	**RW-129**	0.575
MW-130	0.0398	**RW-131**	DRY
MW-132	<0.005	**RW-133**	0.0492
MW-134	5.29	**RW-135**	DRY
MW-136	<0.005	**RW-137**	0.243
MW-138	0.148	**RW-139**	0.958

All Results in mg/L

Table 3
Summary of Baseline Performance Monitoring Results
April 2014
Auriga Spartanburg Facility
AECOM Project No. 60280417

Parameter	Unit	MW-112 4/1/2014	MW-114 4/2/2014	MW-114 Dup 4/2/2014	MW-116 4/1/2014	MW-118 4/1/2014	MW-120 4/2/2014	MW-122 4/3/2014	MW-124 4/3/2014	MW-126 4/3/2014
Volatile Organics and 1,4-Dioxane										
chloroform	mg/L	2.00	1.66	1.49	0.845	0.697	0.149	0.0308	0.798	2.00
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0183	<0.005	<0.005
1,4-dioxane	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	0.0023	NA	NA	NA
methylene chloride	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0067	0.0054
Semivolatile Organics										
bis(2-ethylhexyl)phthalate	mg/L	<0.006	<0.006	<0.006	<0.006	0.0068	<0.006	NA	NA	NA
di-n-octyl phthalate	mg/L	<0.01	0.0127	0.0129	<0.01	0.02	<0.01	NA	NA	NA
Field and Natural Attenuation Parameters										
alkalinity	mg/L	21.5	16.3	15.1	23.6	11.7	14.8	15.8	<5	7.9
chloride	mg/L	2.5	7.2	7.2	5.1	3.3	2.8	3.3	7	13.9
dissolved oxygen	mg/L	5.5	6.07	6.07	3.6	6.41	4.51	4.59	5.83	6.52
ferrous Fe	mg/L	0	0.17	0.17	0.06	0.11	0.02	0.08	0.06	0.04
groundwater elevation	feet MSL	687.60	683.20	683.20	680.30	674.05	665.08	727.56	725.74	718.50
manganese (dissolved)	mg/L	<0.005	0.0158	0.015	0.19	0.034	0.0361	0.109	0.0511	0.182
ORP	mV	152.9	153.3	153.3	139.8	149.3	150	219.8	238.4	185.8
pH	su	5.12	4.95	4.95	4.74	4.81	4.88	5.11	4.98	4.15
specific conductance	umhos/cm	0.118	0.123	0.123	0.134	0.074	0.073	0.053	0.062	0.168
temperature	degrees C	15.74	16.95	16.95	18.66	19.11	21.92	20.68	21.8	18.2
total organic carbon	mg/L	1.9	<1	<1	<1	<1	<1	<1	<1	<1
turbidity	NTU	0.17	5.03	5.03	1.68	3.57	4.11	7.03	9.33	0.01

NA - Not Analyzed
degrees C - degress Celsius
feet MSL - feet above mean sea level
mg/L - milligrams per liter
mV - millivolts
NTU = nephelometric turbidity units
su - standard units
umhos/cm - micromhos/cm

Table 3
Summary of Baseline Performance Monitoring Results
April 2014
Auriga Spartanburg Facility
AECOM Project No. 60280417

Parameter	Unit	MW-128 4/2/2014	MW-130 4/1/2014	MW-132 4/2/2014	MW-132 Dup 4/2/2014	MW-134 4/2/2014	MW-136 3/31/2014	MW-138 3/31/2014	RW-113 4/1/2014	RW-115 4/2/2014
Volatile Organics and 1,4-Dioxane										
chloroform	mg/L	0.0077	0.0398	<0.005	<0.005	5.29	<0.005	0.148	<0.005	2.57
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.002	<0.002
methylene chloride	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Semivolatile Organics										
bis(2-ethylhexyl)phthalate	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.006	<0.006
di-n-octyl phthalate	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.01	<0.01
Field and Natural Attenuation Parameters										
alkalinity	mg/L	<5	8.7	13.1	12.6	8.3	13.1	8.9	64.8	33.4
chloride	mg/L	1.5	1.2	5.2	5.1	2.3	13.9	2.6	1.9	5.9
dissolved oxygen	mg/L	9.28	2.98	0.25	0.25	2.08	5.85	6.18	1.91	5.5
ferrous Fe	mg/L	0.08	0.04	0.01	0.01	0.02	0	0.05	0.05	0.69
groundwater elevation	feet MSL	717.63	698.93	697.62	697.62	688.53	688.51	676.86	683.78	681.50
manganese (dissolved)	mg/L	0.0208	0.0675	0.116	0.117	0.0538	0.132	0.0067	0.048	0.0125
ORP	mV	280.1	269.8	303.5	303.5	238.1	152.5	170.1	109.5	130.1
pH	su	4.21	5.15	4.62	4.62	4.85	4.89	4.95	7.68	5.95
specific conductance	umhos/cm	0.031	0.029	0.046	0.046	0.047	0.117	0.072	0.252	0.172
temperature	degrees C	23.37	24.28	21.98	21.98	23.13	18.87	15.2	20.64	19.68
total organic carbon	mg/L	<1	<1	1.1	<1	<1	1.1	1.4	1.3	<1
turbidity	NTU	9.73	16.85	4.57	4.57	12.78	1.33	0.46	0	7.38

NA - Not Analyzed
degrees C - degress Celsius
feet MSL - feet above mean sea level
mg/L - milligrams per liter
mV - millivolts
NTU = nephelometric turbidity units
su - standard units
umhos/cm - micromhos/cm

Table 3
Summary of Baseline Performance Monitoring Results
April 2014
Auriga Spartanburg Facility
AECOM Project No. 60280417

Parameter	Unit	RW-119 4/1/2014	RW-121 4/2/2014	RW-123 4/3/2014	RW-123 Dup 4/3/2014	RW-127 4/3/2014	RW-129 4/2/2014	RW-133 4/2/2014	RW-137 3/31/2014	RW-139 3/31/2014
Volatile Organics and 1,4-Dioxane										
chloroform	mg/L	0.214	0.115	0.0235	0.0224	1.06	0.575	0.0492	0.243	0.958
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	0.0079	0.0074	0.0086	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	0.0048	0.0034	NA	NA	NA	NA	NA	NA	NA
methylene chloride	mg/L	<0.005	<0.005	<0.005	<0.005	0.0189	0.0141	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Semivolatile Organics										
bis(2-ethylhexyl)phthalate	mg/L	<0.006	<0.006	NA	NA	NA	NA	NA	NA	NA
di-n-octyl phthalate	mg/L	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA
Field and Natural Attenuation Parameters										
alkalinity	mg/L	71.7	68.8	85.5	85.8	85.8	242	127	69.6	57.9
chloride	mg/L	3	2.6	2.8	2.7	11.6	13.2	4.9	6.3	4.3
dissolved oxygen	mg/L	8.2	1.95	0.47	0.47	1.17	0.2	2.58	0.84	0.46
ferrous Fe	mg/L	0.12	0	0	0	0	0.08	0.02	0.22	0.12
groundwater elevation	feet MSL	673.15	664.63	720.25	720.25	716.16	709.34	683.24	687.99	673.26
manganese (dissolved)	mg/L	0.0086	<0.005	0.0129	0.0128	0.0647	0.161	0.14	0.0549	0.0349
ORP	mV	127.5	116.4	44.5	44.5	137.2	3.5	158.9	119.8	131.6
pH	su	7.23	6.98	7.41	7.41	6.9	6.49	5.92	5.81	5.39
specific conductance	umhos/cm	0.269	0.232	0.161	0.161	0.369	0.433	0.211	0.217	0.195
temperature	degrees C	15.83	19.67	20.25	20.25	19.81	21.62	18.83	20.99	16.94
total organic carbon	mg/L	<1	2.7	<1	1.1	<1	1.2	1.1	1.9	1.3
turbidity	NTU	257.7	1.79	0.46	0.46	0.44	0.01	23.36	3.65	0.64

NA - Not Analyzed
degrees C - degress Celsius
feet MSL - feet above mean sea level
mg/L - milligrams per liter
mV - millivolts
NTU = nephelometric turbidity units
su - standard units
umhos/cm - micromhos/cm

4/25/2014

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MW-132
RW-133
FORMER DMT PLANT AREA
MGI GAS PROCESSING FACILITY
OUTFALL 003
RW-135 (DRY)
MW-134
RW-139
MW-138
MW-136
RW-137
RW-131 (DRY)
MW-130
RW-129
MW-128
RW-125 (DRY)
MW-124
MW-122
RW-123
RW-127
MW-126
I-85 (SOUTHBOUND)
I-85 (NORTHBOUND)
OUTFALL 004
RW-115
MW-114
MW-118
RW-119
RW-121
MW-120
RW-113
MW-112
MW-116
RW-117 (DRY)
CREEK
BRUCKNER ROAD

N
TRUE
PLANT

LEGEND

MONITORING WELL LOCATION

0' 300' 600'
SCALE

AECOM

FIGURE 1
LOCATIONS OF WELLS USED FOR SAMPLING
APRIL 2014

AURIGA SPARTANBURG FACILITY
SPARTANBURG, SOUTH CAROLINA

APRIL 2014 60280417

FORMER DMT PLANT AREA

MGI GAS PROCESSING FACILITY

OUTFALL 003

OUTFALL 004

I-85 (SOUTHBOUND)

I-85 (NORTHBOUND)

CREEK

BRUCKNER ROAD

MW-132
<0.005

MW-134
5.29

MW-136
<0.005

MW-138
0.148

MW-130
0.0398

MW-124
0.798

MW-128
0.0077

MW-122
0.0308

MW-126
2.0

MW-114
1.66

MW-118
0.697

MW-120
0.149

MW-112
2.0

MW-116
0.845

N
TRUE
PLANT

LEGEND

MONITORING WELL LOCATION

ALL RESULTS IN mg/L.

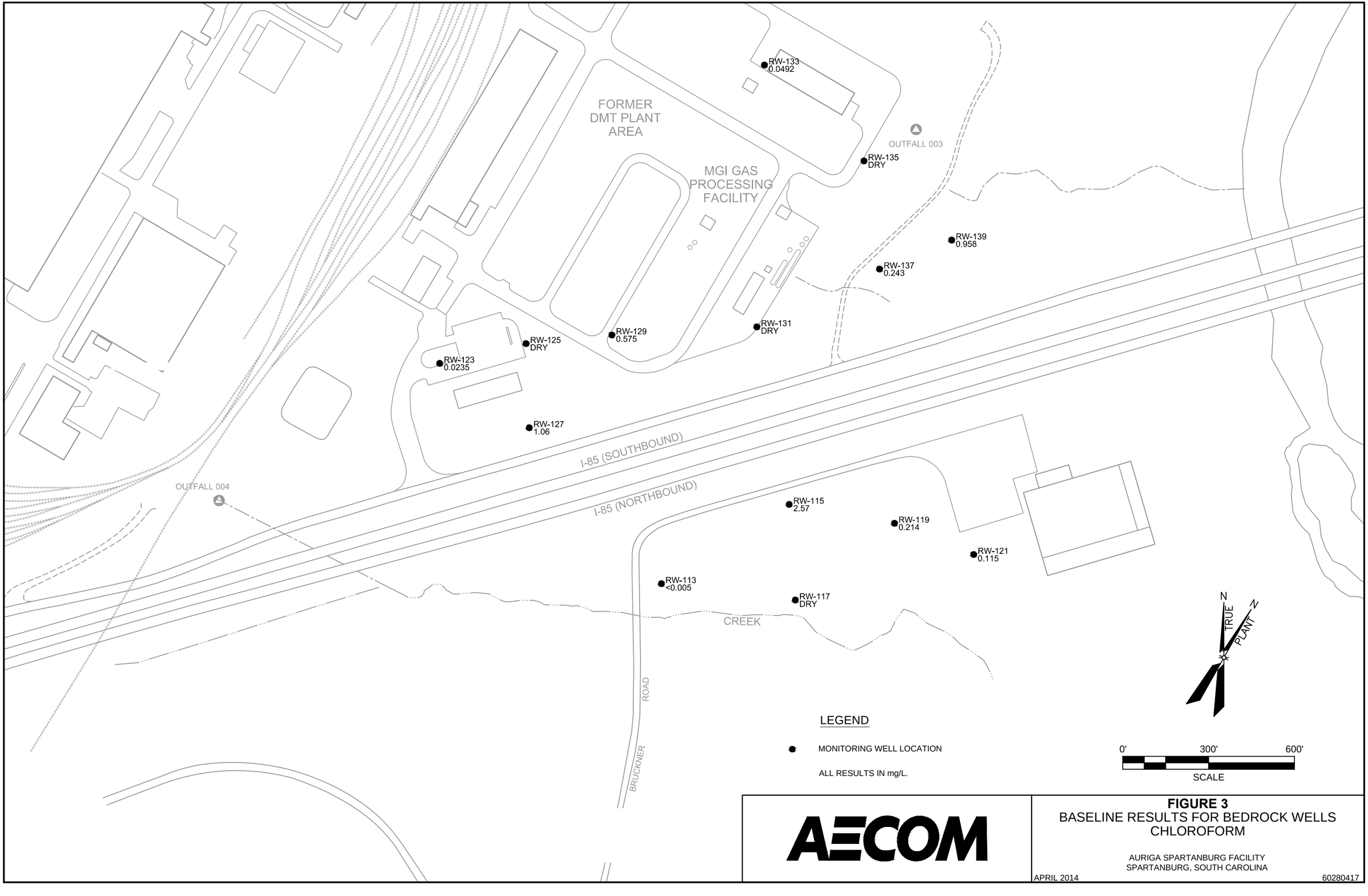
0' 300' 600'
SCALE

AECOM

FIGURE 2
BASELINE RESULTS FOR SAPROLITE WELLS
CHLOROFORM

AURIGA SPARTANBURG FACILITY
SPARTANBURG, SOUTH CAROLINA

APRIL 2014 60280417



4/25/2014

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FIGURE 3
BASELINE RESULTS FOR BEDROCK WELLS
CHLOROFORM

AURIGA SPARTANBURG FACILITY
SPARTANBURG, SOUTH CAROLINA

APRIL 2014

60280417

AECOM

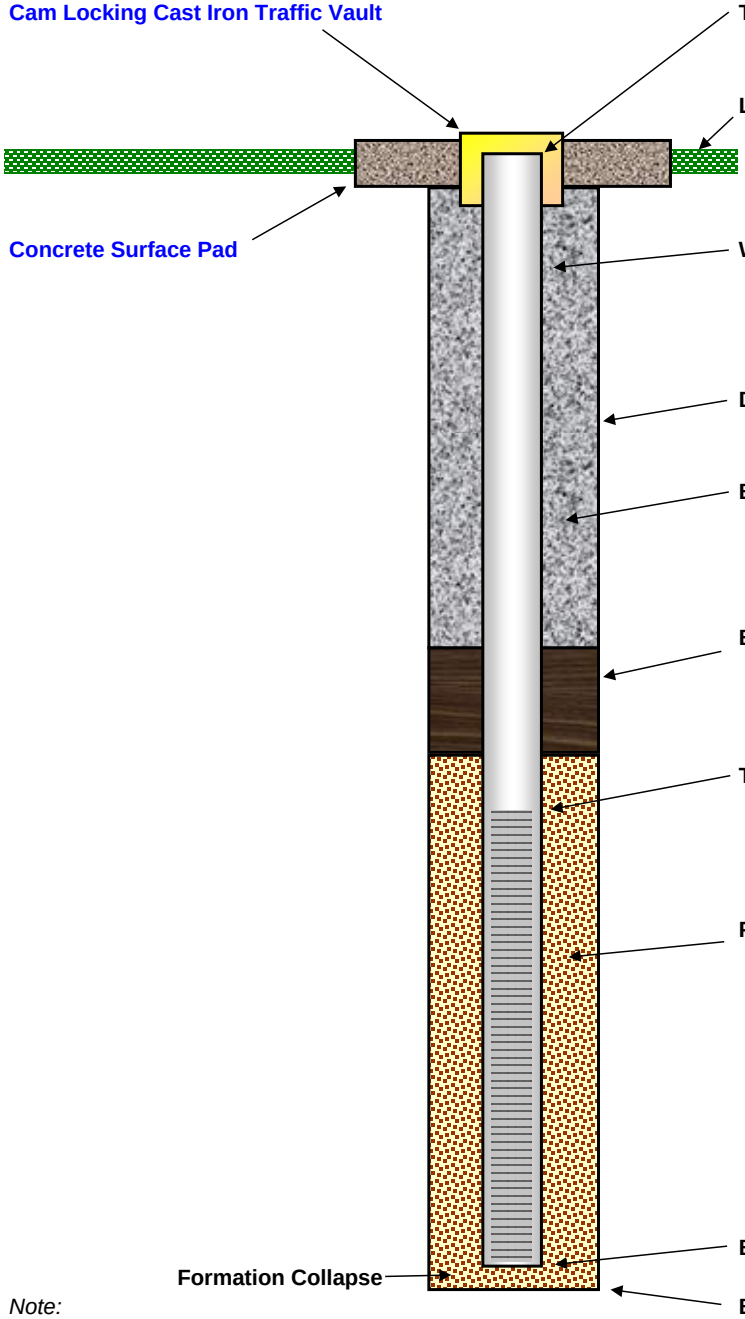
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-112

Location: **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/5/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Top Of Casing Elevation **699.73** ft **-0.24** ft Stickup

Land Surface Elevation **699.97** ft

Well Casing From **0.00** ft to **28.7** ft

Casing Type: SCH-40 PVC
Inside Diameter: **2 in.**

Diameter of Borehole (nominal)
8.0 in

Bentonite/Cement Grout
From **0.0** ft to **23.5** ft

Bentonite Seal
Type: **Holeplug**
From **23.5** ft to **26.5** ft

Top of Screen Depth **28.7** ft
Screen Type: SCH-40 PVC
Screen Slot Size: **0.010 in** ID **2.0** in
Screen Length: **10.0** ft
Bottom Plug **0.3** ft

Filter Sand for Screen
Sand Type: **Medium**

Filter sand From **26.5** ft to **39.0** ft

Bottom Well/Screen + 0.3 Plug Depth **39.0** ft

Bottom of Boring Depth **40.5** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-113

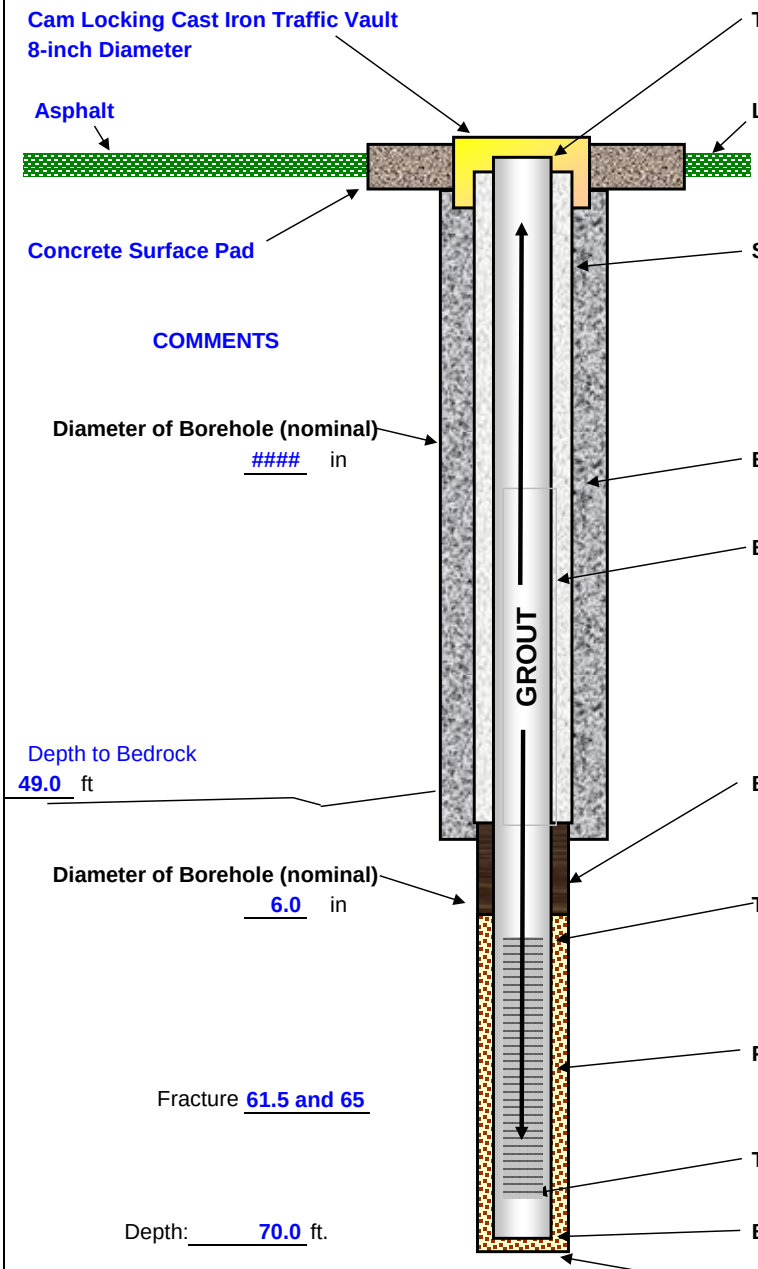
Location: | **Driller:** Dan Bergman | **Job Number:** 60280417

Surface Casing: 3/20/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/26/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
in

Depth to Bedrock
49.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture **61.5 and 65**

Depth: **70.0** ft.

Top Of Casing Elevation **702.44** ft **-0.28** ft Stickup

Land Surface Elevation **702.72** ft

Surface Casing From **0.0** ft to **55.0** ft

Casing Type: **Carbon Steel**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **55.0** ft

Bentonite/Cement Grout
From **0.0** ft to **52.6** ft

Bentonite Seal
Type: Hole Plug
From **52.6** ft to **57.6** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **59.7** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Bottom Plug: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **57.6** ft to **70.0** ft

Top of Sediment Sump/Bottom Screen Depth **69.7** ft
Type: 2-inch PVC

Bottom of Well Depth **70.0** ft

Bottom of Boring Depth **70.0** ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

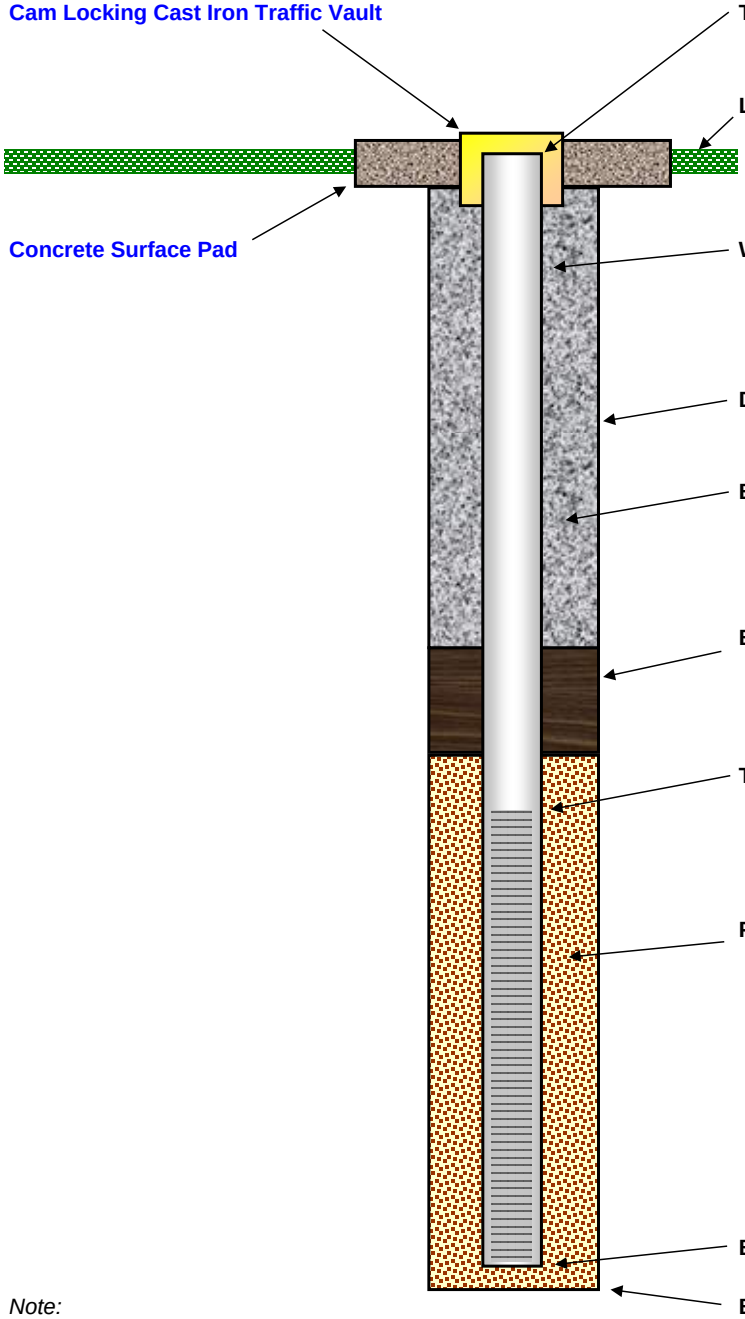
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-114

Location: Bruckner Rd **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/4/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 713.70 ft -0.44 ft Stickup

Land Surface Elevation 714.14 ft

Well Casing From 0.00 ft to 46.3 ft

Casing Type: SCH-40 PVC

Inside Diameter: 2 in.

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From 0.0 ft to 40.9 ft

Bentonite Seal

Type: Holeplug

From 40.9 ft to 43.1 ft

Top of Screen Depth 46.3 ft

Screen Type: SCH-40 PVC

Screen Slot Size: 0.010 in ID 2.0 in

Screen Length: 10.0 ft

Bottom Plug 0.3 ft

Filter Sand for Screen

Sand Type: Medium

Filter sand From 43.6 ft to 5.7 ft

Bottom Well/Screen + 0.3 Plug Depth 56.6 ft

Bottom of Boring Depth 57.0 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-115

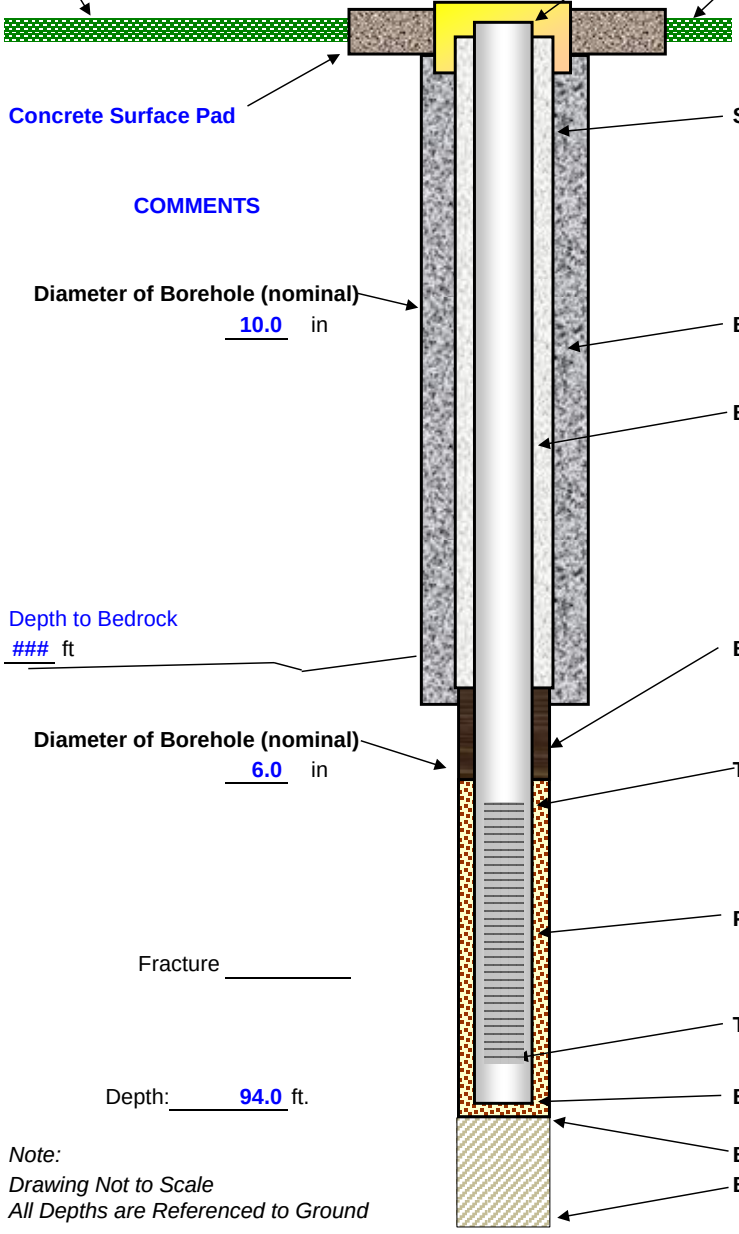
Location: Bruckner Road | **Driller:** Dan Bergman | **Job Number:** 60280417

Surface Casing: 3/14/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/26/2014

Rock Drilling:

Geologist: Mark Hartford/McIver Law | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
10.0 in

Depth to Bedrock
ft

Diameter of Borehole (nominal)
6.0 in

Fracture

Depth: **94.0** ft.

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

Top Of Casing Elevation **714.37** ft **-0.43** ft Stickup

Land Surface Elevation **714.80** ft

Surface Casing From **0.0** ft to **75.0** ft

Casing Type: **Carbon Steel**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **75.0** ft

Bentonite/Cement Grout
From **0.0** ft to **73.2** ft

Bentonite Seal
Type: Hole Plug
From **73.2** ft to **76.4** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **78.5** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Bottom Plug: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **76.4** ft to **94.0** ft

Top of Sediment Sump/Bottom Screen Depth **88.5** ft
Type: 2-inch PVC

Bottom of Well Depth **88.8** ft

Bottom of Sand Depth **94.0** ft

Bottom of Boring Depth **120.0** ft

AECOM

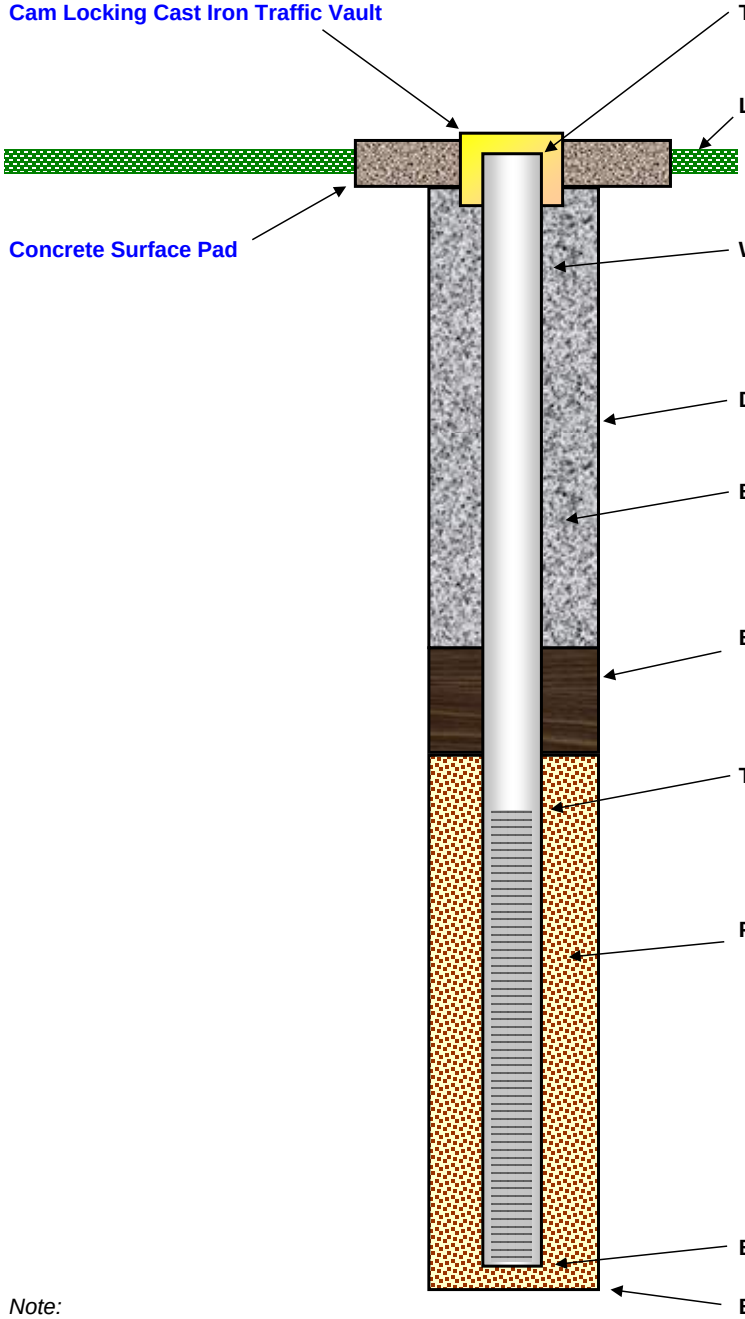
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-116

Location: Bruckner Rd **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/9/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **683.88** ft **-0.35** ft Stickup

Land Surface Elevation **684.23** ft

Well Casing From **0.00** ft to **21.0** ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to **15.5** ft

Bentonite Seal

Type: **Holeplug**

From **15.5** ft to **18.5** ft

Top of Screen Depth **21.0** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.3** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **18.5** ft to **31.5** ft

Bottom Well/Screen + Bottom Plug Depth **31.3** ft

Bottom of Boring Depth **31.5** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-117

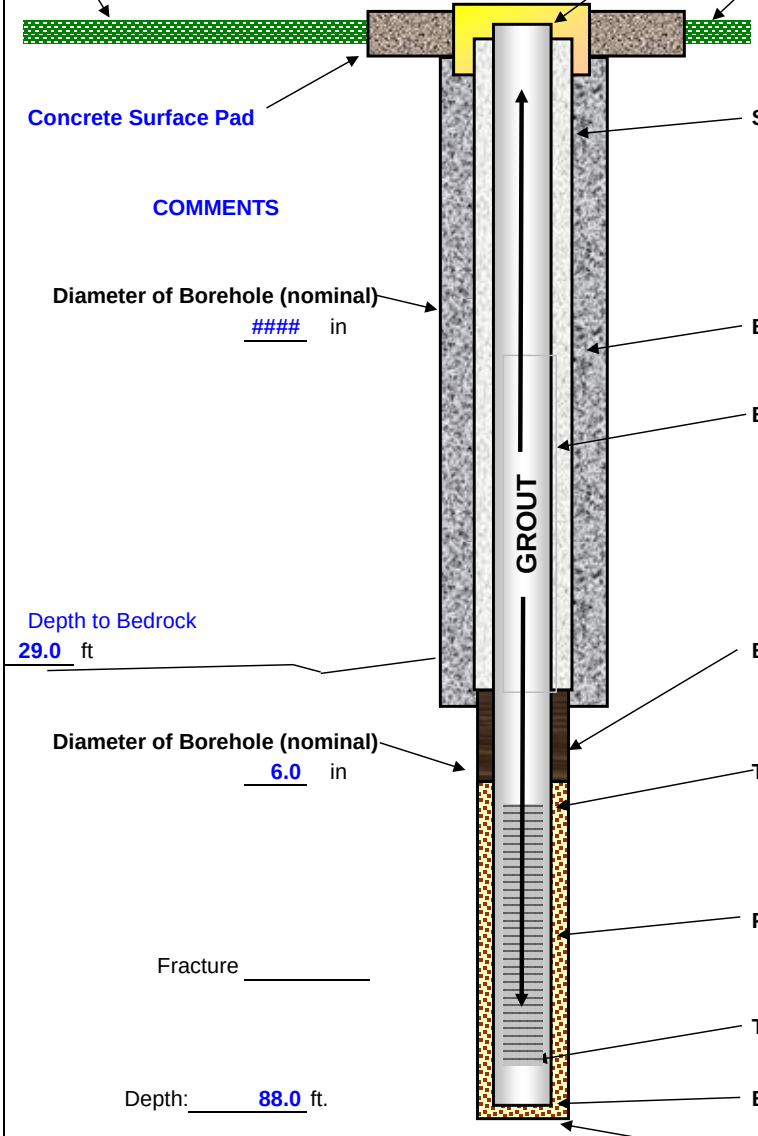
Location: Bruckner Road | **Driller:** Dan Bergman | **Job Number:** 60280417

Surface Casing: 3/10/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** Abandoned 3-26-14

Rock Drilling: 2/21/2014

Geologist: Mark Hartford/McIver Law | **Static Water Level:** _____ b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
in

Depth to Bedrock
29.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture _____

Depth: 88.0 ft.

Top Of Casing Elevation _____ ft _____ ft Stickup

Land Surface Elevation 684.12 ft

Surface Casing From 0.0 ft to 34.0 ft

Casing Type: Carbon Steel
Inside Diameter: 6-in.

Bentonite/Cement Grout
From 0.0 ft to 34.0 ft

Bentonite/Cement Grout
From 0.0 ft to 88.0 ft

Bentonite Seal
Type: Hole Plug
From _____ ft to _____ ft

Top of Screen
Screen Type: SCH 40 PVC Depth _____ ft
Screen Slot Size: 0.010 in
Screen Length: _____ ft ID _____ in
Plug Length: _____ ft

Filter Sand for Screen
Sand Type: medium
From _____ ft to _____ ft

Top of Sediment Sump/Bottom Screen Depth _____ ft
Type: 2-inch PVC

Bottom of Well Depth _____ ft

Bottom of Boring Depth 88.0 ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

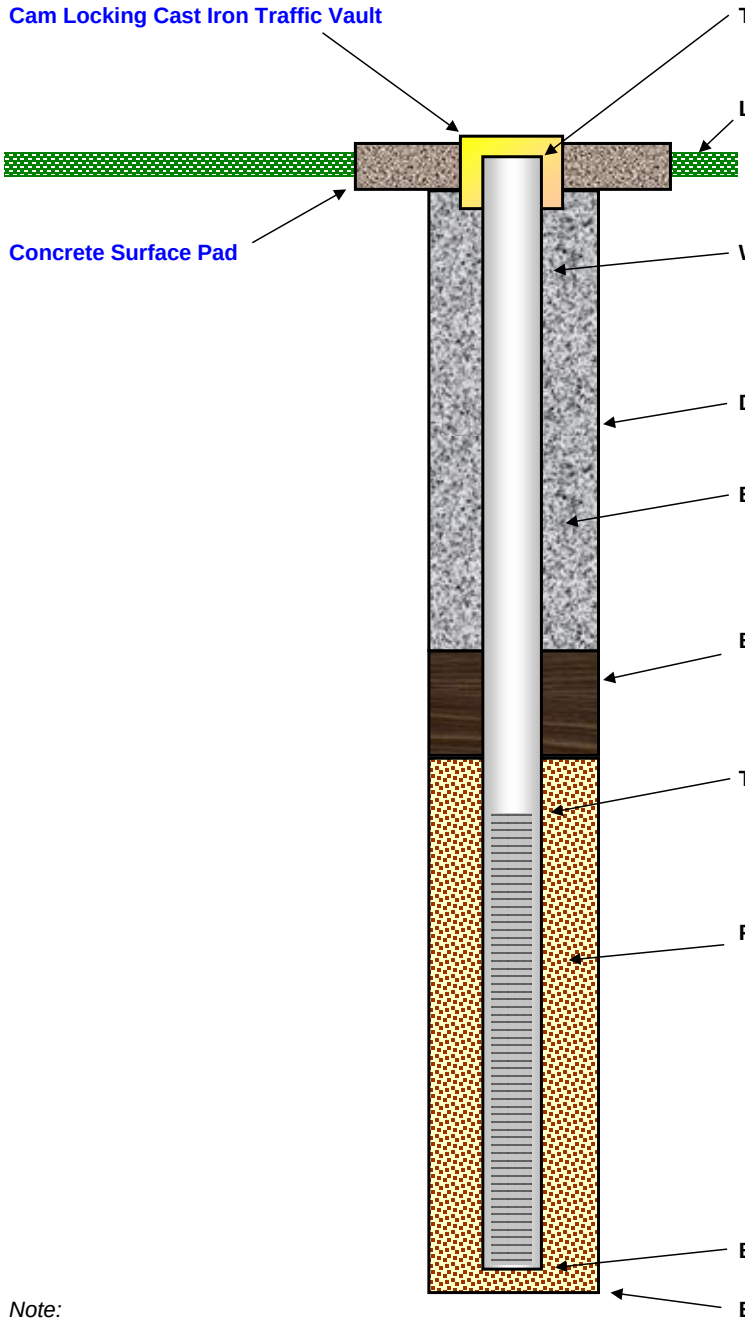
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-118

Location: **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/10/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **705.80** ft **-0.27** ft Stickup

Land Surface Elevation **706.07** ft

Well Casing From **0.00** ft to **34.0** ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to _____ ft

Bentonite Seal

Type: **Holeplug**

From **30.0** ft to **32.0** ft

Top of Screen Depth **34.0** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.3** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **32.0** ft to **44.3** ft

Bottom Well/Screen Depth **44.3** ft

Bottom of Boring Depth **44.3** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-119

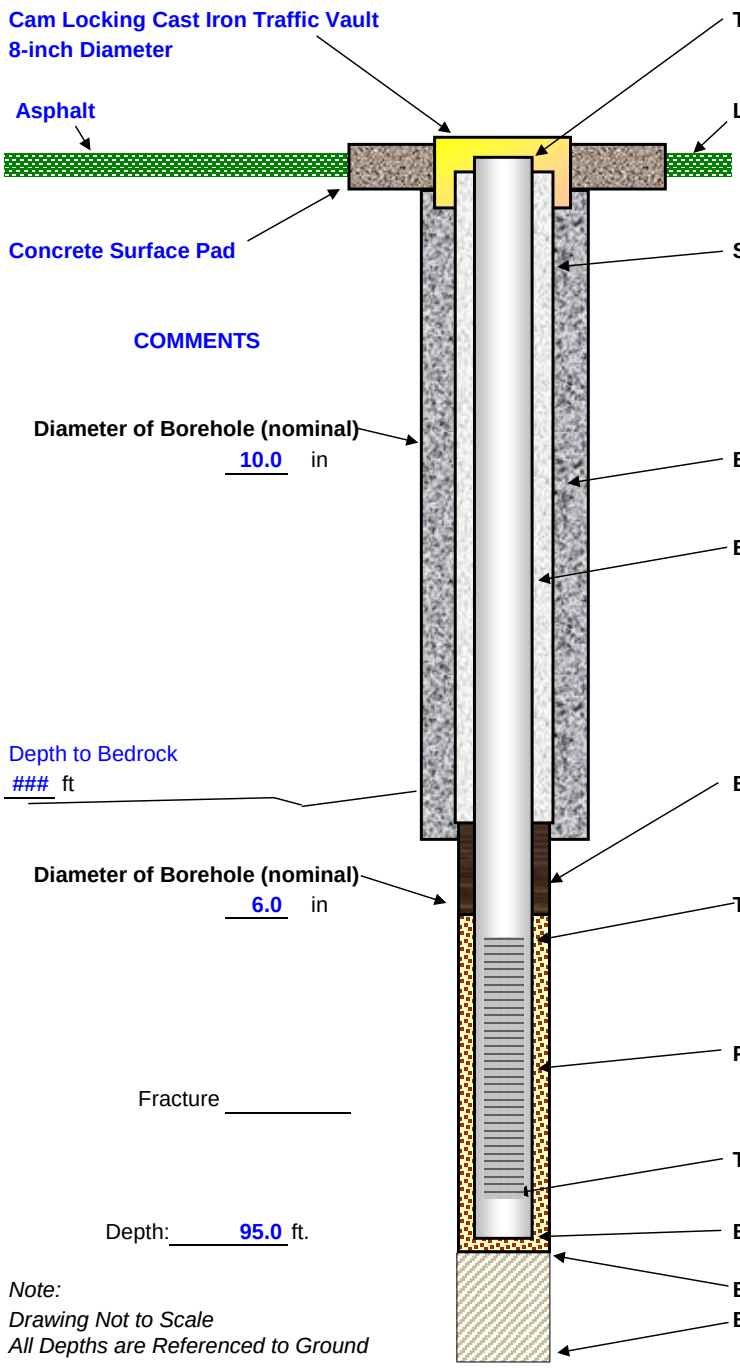
Location: Bruckner Road | **Driller:** Dan Bergman | **Job Number:** 60280417

Surface Casing: 3/6/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/26/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
10.0 in

Depth to Bedrock
ft

Diameter of Borehole (nominal)
6.0 in

Fracture _____

Depth: **95.0** ft.

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

Top Of Casing Elevation **704.48** ft **-0.36** ft Stickup

Land Surface Elevation **704.84** ft

Surface Casing From **0.0** ft to **64.0** ft

Casing Type: **Carbon Steel**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **64.0** ft

Bentonite/Cement Grout
From **0.0** ft to **72.1** ft

Bentonite Seal
Type: Hole Plug
From **72.1** ft to **77.7** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **80.0** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Bottom Plug: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **77.7** ft to **95.0** ft

Top of Sediment Sump/Bottom Screen Depth **90.0** ft
Type: 2-inch PVC

Bottom of Well Depth **90.3** ft

Bottom of Sand Depth **95.0** ft

Bottom of Boring Depth **118.0** ft

AECOM

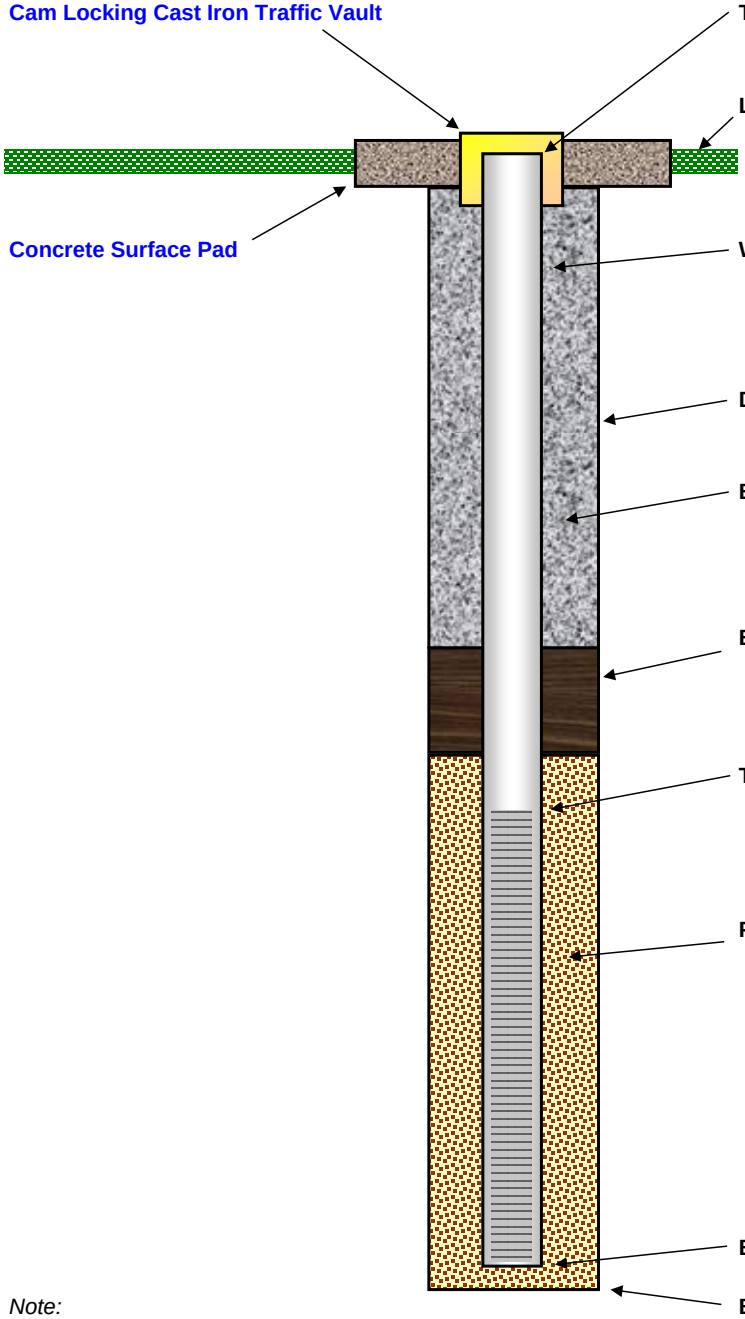
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-120

Location: **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/6/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **697.44** ft **-0.19** ft Stickup

Land Surface Elevation **697.63** ft

Well Casing From **0.00** ft to **44.7** ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to **39.7** ft

Bentonite Seal

Type: **Holeplug**

From **39.7** ft to **42.2** ft

Top of Screen Depth **44.7** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.3** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **42.2** ft to **56.0** ft

Bottom Well/Screen + Bottom Plug Depth **55.0** ft

Bottom of Boring Depth **56.0** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-121

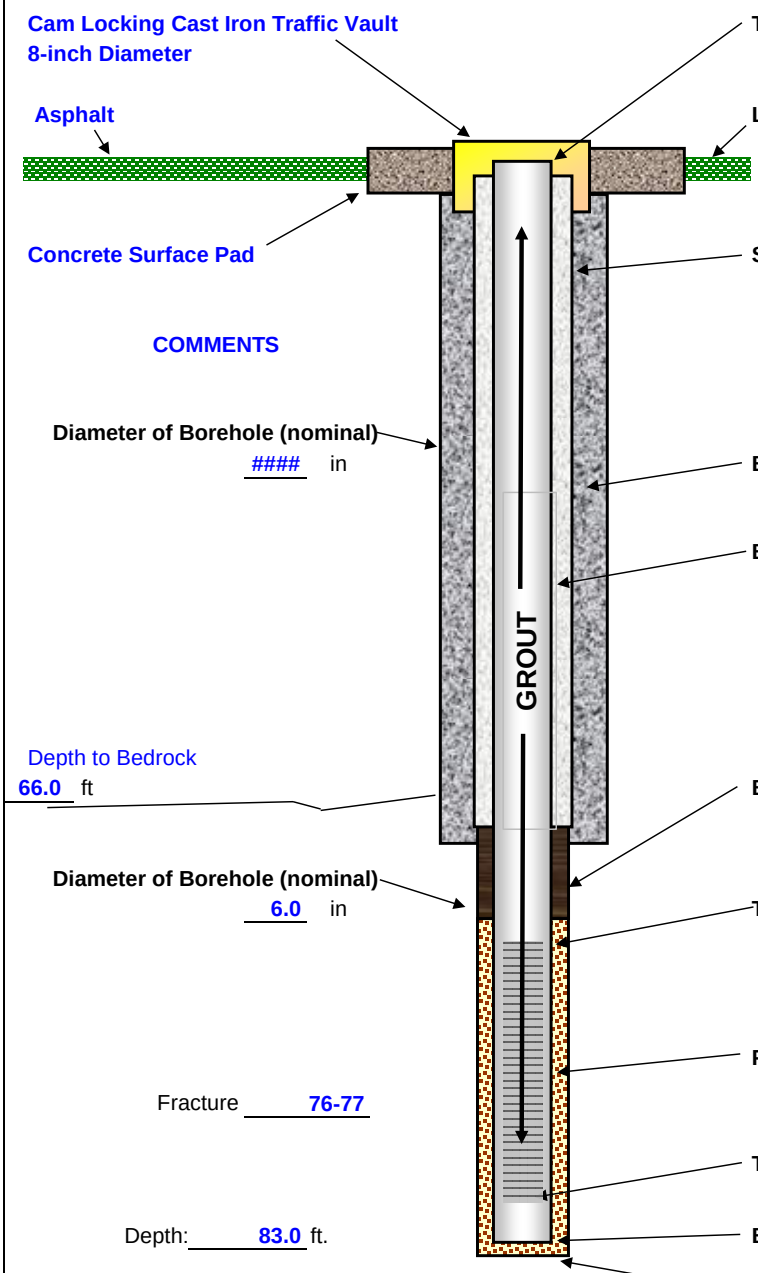
Location: Bruckner Road | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 3/4/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/26/2014

Rock Drilling:

Geologist: Mark Hartford/McIver Law | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
in

Depth to Bedrock
66.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture 76-77

Depth: 83.0 ft.

Top Of Casing Elevation 697.61 ft -0.70 ft Stickup

Land Surface Elevation 698.31 ft

Surface Casing From 0.0 ft to 69.5 ft

Casing Type: Carbon Steel
Inside Diameter: 6-in.

Bentonite/Cement Grout
From 0.0 ft to 69.5 ft

Bentonite/Cement Grout
From 0.0 ft to 67.7 ft

Bentonite Seal
Type: Hole Plug
From 67.7 ft to 73.0 ft

Top of Screen
Screen Type: SCH 40 PVC Depth 74.7 ft
Screen Slot Size: 0.010 in
Screen Length: 5.0 ft ID 2.0 in
Bottom Plug: 0.3 ft

Filter Sand for Screen
Sand Type: medium
From 73.0 ft to 83.0 ft

Top of Sediment Sump/Bottom Screen Depth 79.7 ft
Type: 2-inch PVC

Bottom of Well Depth 80.0 ft

Bottom of Boring Depth 83.0 ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

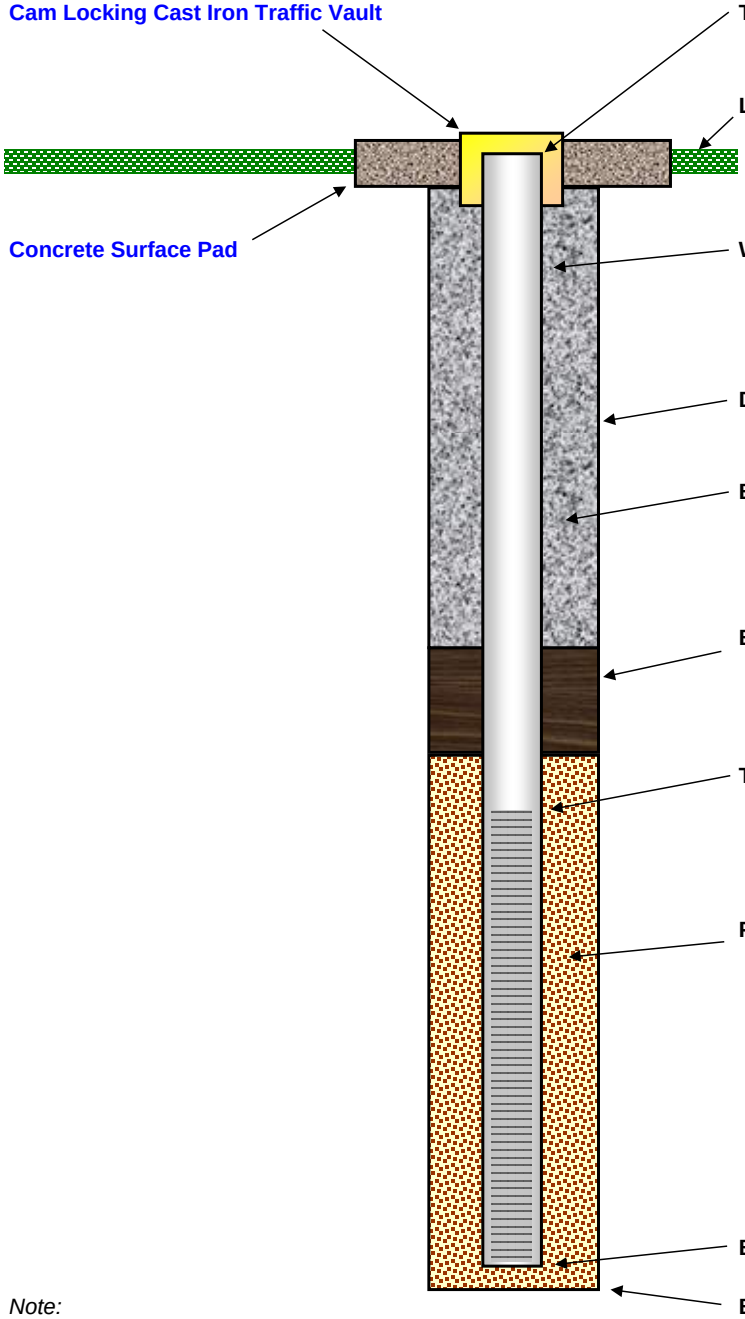
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-122

Location: Recreation Building **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/11/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 746.09 ft -0.33 ft Stickup

Land Surface Elevation 746.42 ft

Well Casing From 0.00 ft to 47.2 ft

Casing Type: SCH-40 PVC
Inside Diameter: 2 in.

Diameter of Borehole (nominal)
8.0 in

Bentonite/Cement Grout
From 0.0 ft to 42.2 ft

Bentonite Seal
Type: Holeplug
From 42.2 ft to 44.9 ft

Top of Screen Depth 47.2 ft
Screen Type: SCH-40 PVC
Screen Slot Size: 0.010 in ID 2.0 in
Screen Length: 10.0 ft
Bottom Plug 0.3 ft

Filter Sand for Screen
Sand Type: Medium

Filter sand From 44.9 ft to 58.0 ft

Bottom Well/Screen + Bottom Plug Depth 57.5 ft

Bottom of Boring Depth 58.0 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-123

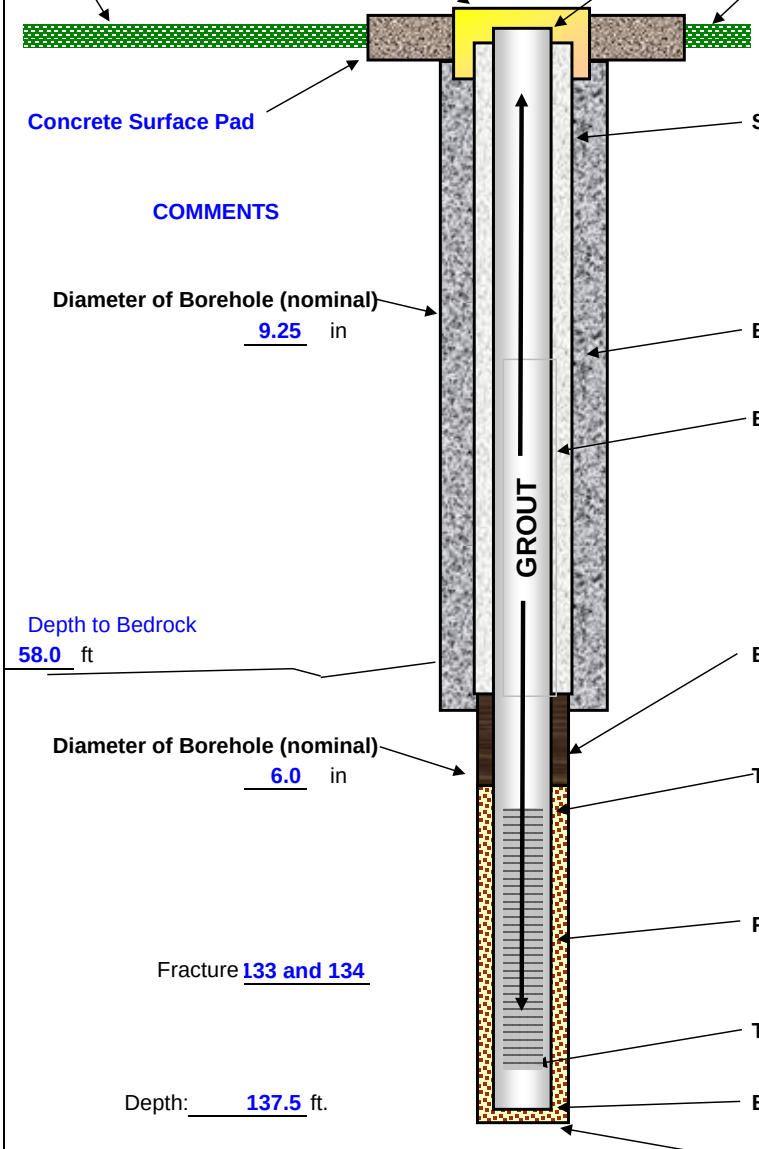
Location: Recreation Building | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 1/24/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/28/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.25 in

Depth to Bedrock
58.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture **133 and 134**

Depth: **137.5** ft.

Top Of Casing Elevation **745.65** ft **-0.18** ft Stickup

Land Surface Elevation **745.83** ft

Surface Casing From **0.0** ft to **60.0** ft

Casing Type: **SCH-40 PVC**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **60.0** ft

Bentonite/Cement Grout
From **0.0** ft to **116.0** ft

Bentonite Seal
Type: Hole Plug
From **116.0** ft to **120.0** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **127.0** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Plug Length: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **120.0** ft to **137.5** ft

Top of Sediment Sump/Bottom Screen Depth **137.0** ft
Type: 2-inch PVC

Bottom of Well Depth **137.3** ft

Bottom of Boring Depth **137.5** ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

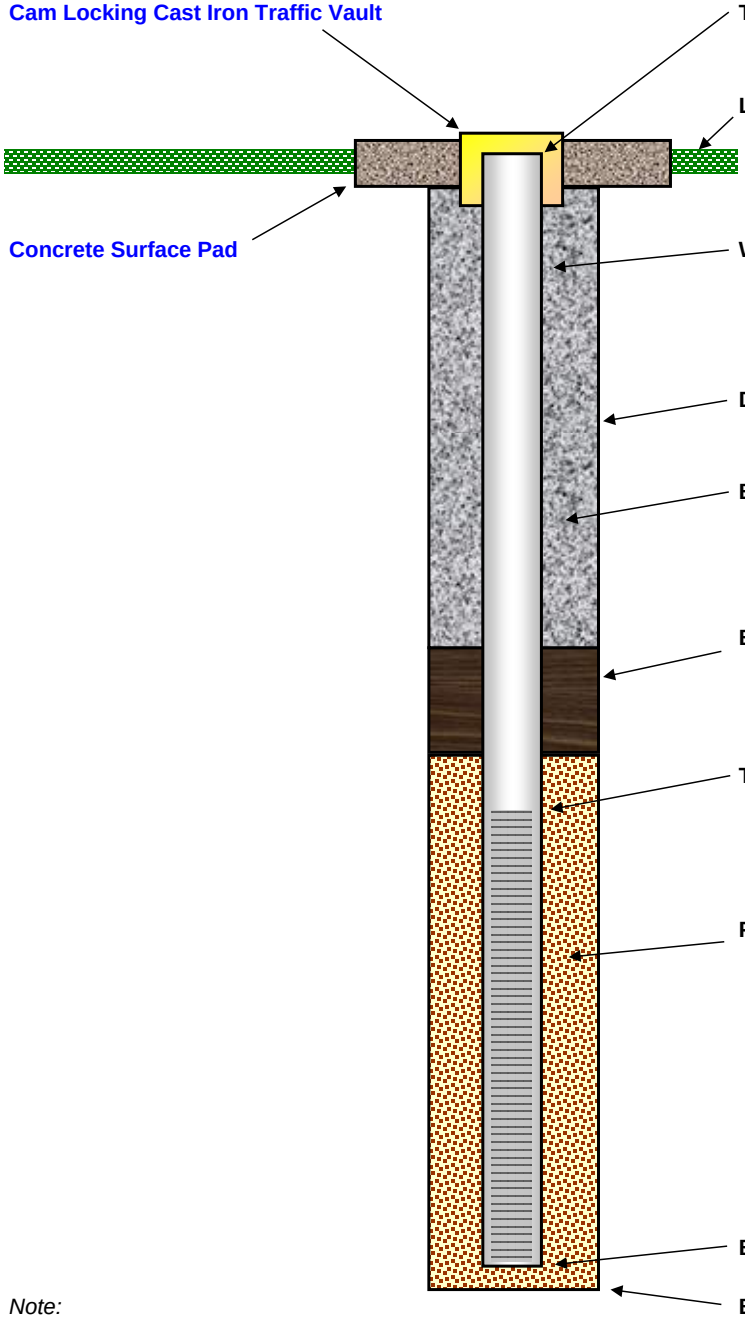
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-124

Location: Recreation Building **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/12/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 747.86 ft -0.23 ft Stickup

Land Surface Elevation 748.09 ft

Well Casing From 0.00 ft to 49.6 ft

Casing Type: SCH-40 PVC
Inside Diameter: 2 in.

Diameter of Borehole (nominal)
8.0 in

Bentonite/Cement Grout
From 0.0 ft to 44.0 ft

Bentonite Seal
Type: Holeplug
From 44.0 ft to 47.2 ft

Top of Screen Depth 49.6 ft
Screen Type: SCH-40 PVC
Screen Slot Size: 0.010 in ID 2.0 in
Screen Length: 10.0 ft
Bottom Plug 0.3 ft

Filter Sand for Screen
Sand Type: Medium

Filter sand From 47.7 ft to 60.5 ft

Bottom Well/Screen Depth 59.9 ft

Bottom of Boring Depth 60.5 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-125

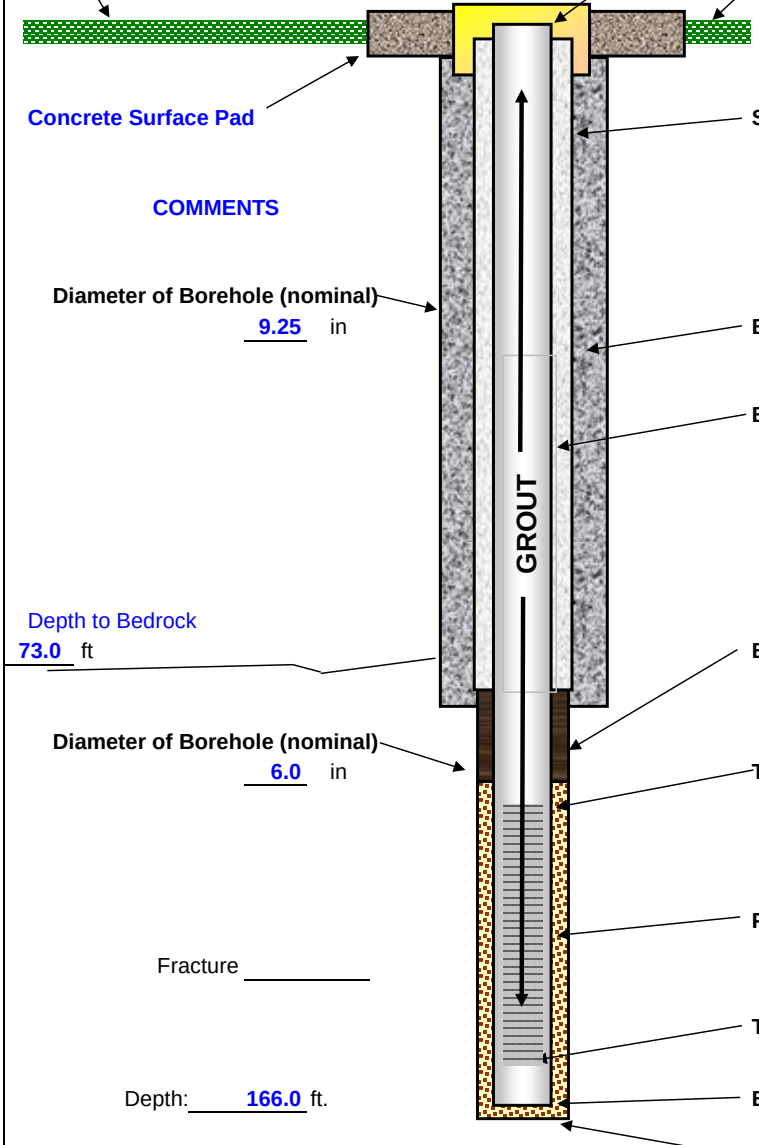
Location: Recreation Building | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 1/22/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** Abandoned 3-12-14

Rock Drilling: 2/21/2014

Geologist: Mark Hartford | **Static Water Level:** _____ b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.25 in

Depth to Bedrock
73.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture _____

Depth: 166.0 ft.

Top Of Casing Elevation _____ ft _____ ft Stickup

Land Surface Elevation 748.07 ft

Surface Casing From 0.0 ft to 76.0 ft

Casing Type: SCH-40 PVC
Inside Diameter: 6-in.

Bentonite/Cement Grout
From 0.0 ft to 76.0 ft

Bentonite/Cement Grout
From 0.0 ft to 166.0 ft

Bentonite Seal
Type: Hole Plug
From _____ ft to _____ ft

Top of Screen
Screen Type: SCH 40 PVC Depth _____ ft
Screen Slot Size: 0.010 in
Screen Length: _____ ft ID _____ in
Plug Length: _____ ft

Filter Sand for Screen
Sand Type: medium
From _____ ft to _____ ft

Top of Sediment Sump/Bottom Screen Depth _____ ft
Type: 2-inch PVC

Bottom of Well Depth _____ ft

Bottom of Boring Depth 166.0 ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

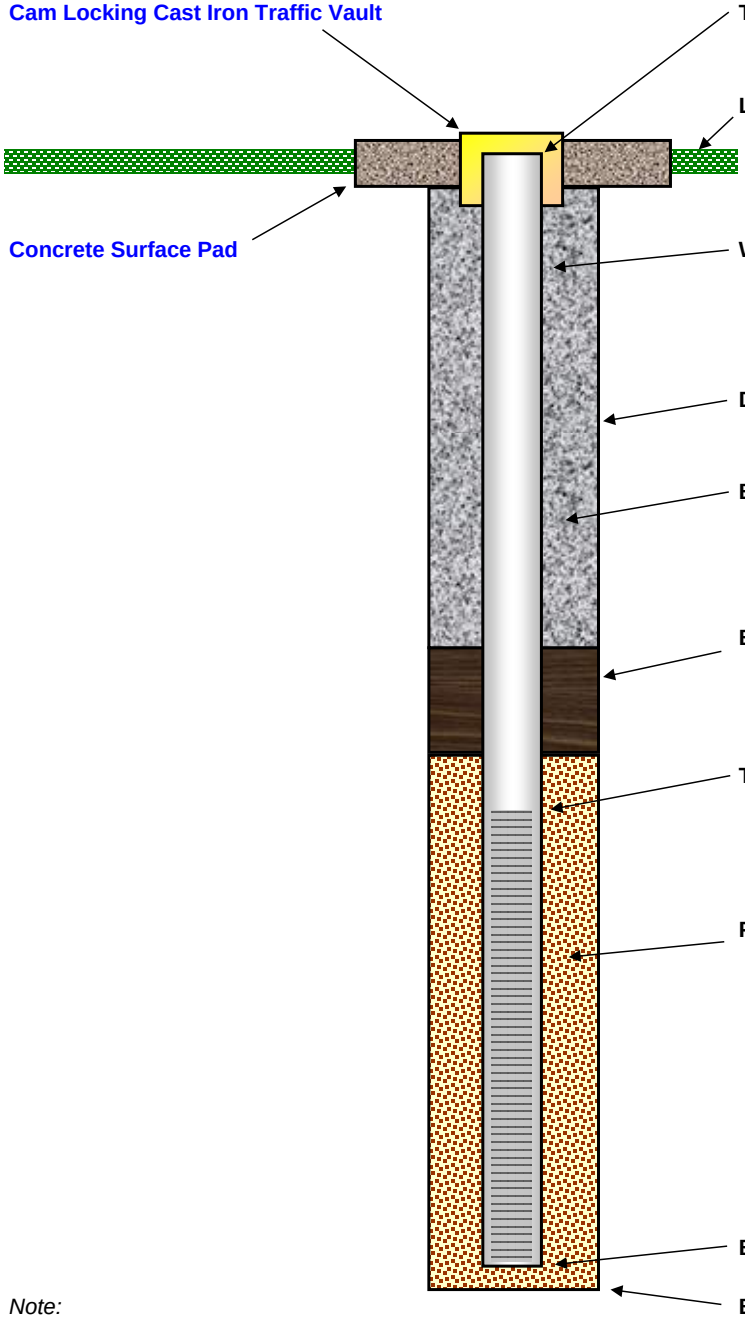
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-126

Location: Recreation Building **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/12/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 742.75 ft -0.34 ft Stickup

Land Surface Elevation 743.09 ft

Well Casing From 0.00 ft to 39.2 ft

Casing Type: SCH-40 PVC
Inside Diameter: 2 in.

Diameter of Borehole (nominal)
8.0 in

Bentonite/Cement Grout
From 0.0 ft to 34.0 ft

Bentonite Seal
Type: Holeplug
From 34.0 ft to 37.1 ft

Top of Screen Depth 39.2 ft
Screen Type: SCH-40 PVC
Screen Slot Size: 0.010 in ID 2.0 in
Screen Length: 10.0 ft
Bottom Plug 0.3 ft

Filter Sand for Screen
Sand Type: Medium

Filter sand From 37.1 ft to 49.5 ft

Bottom Well/Screen + Bottom Plug Depth 49.5 ft

Bottom of Boring Depth 50.0 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-127

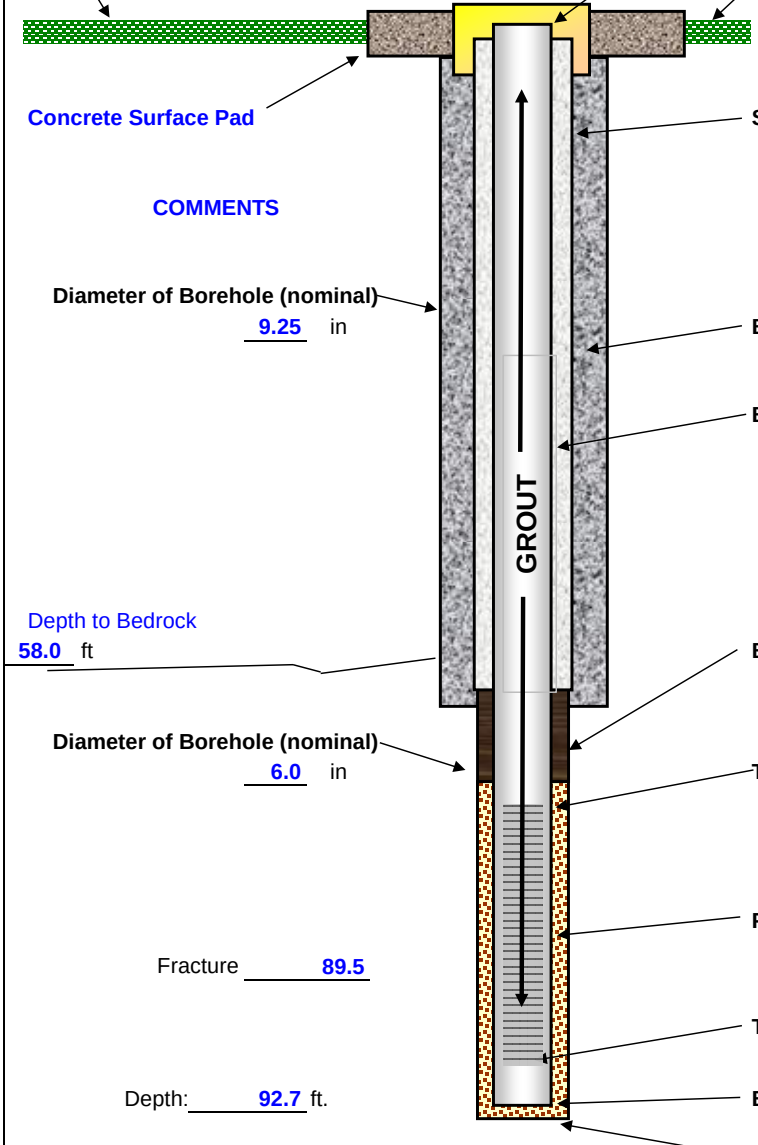
Location: Air Liquide | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 1/9/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/31/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.25 in

Depth to Bedrock
58.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture **89.5**

Depth: **92.7** ft.

Top Of Casing Elevation **742.69** ft **-0.26** ft Stickup

Land Surface Elevation **742.95** ft

Surface Casing From **0.0** ft to **60.0** ft

Casing Type: **SCH-40 PVC**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **60.0** ft

Bentonite/Cement Grout
From **0.0** ft to **74.3** ft

Bentonite Seal
Type: Hole Plug
From **74.3** ft to **79.7** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **82.4** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Plug Length: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **79.7** ft to **92.7** ft

Top of Sediment Sump/Bottom Screen Depth **92.4** ft
Type: 2-inch PVC

Bottom of Well Depth **92.7** ft

Bottom of Boring Depth **92.7** ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

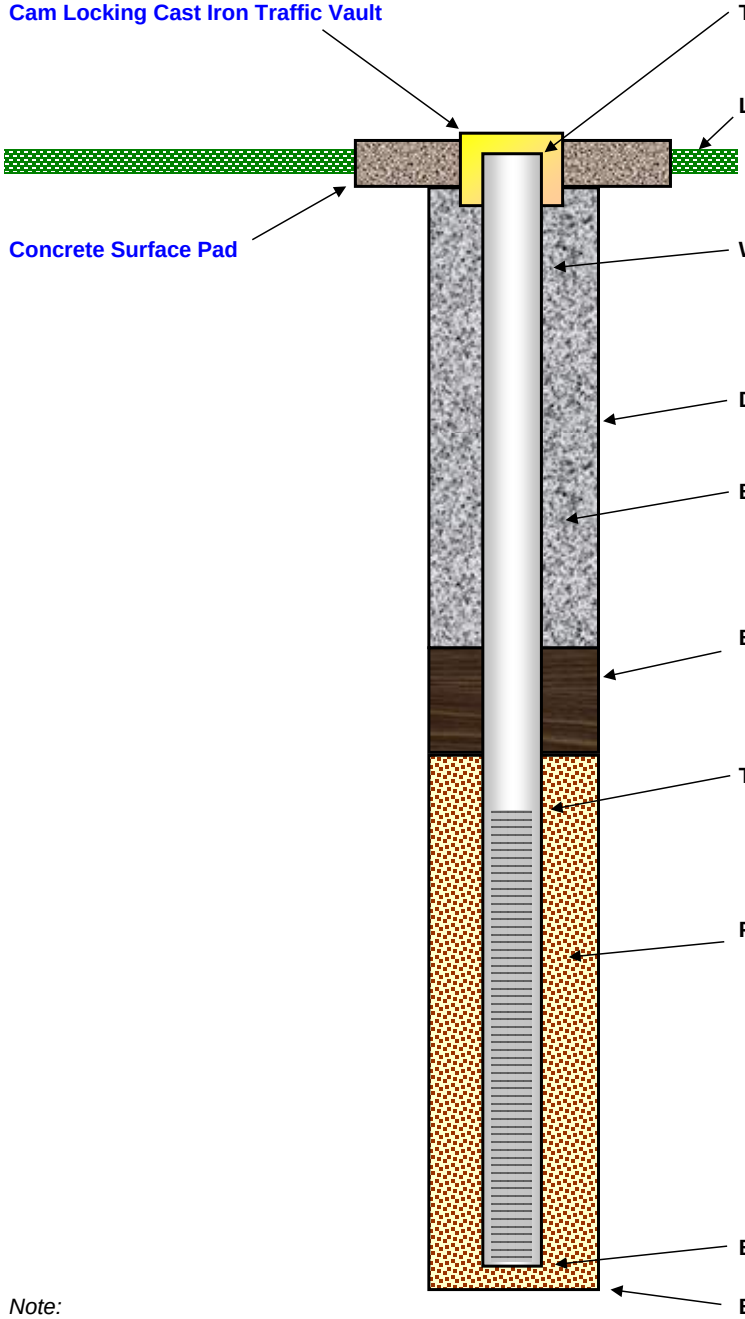
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-128

Location: Between Recreation Bu **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/17/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **751.56** ft **-0.47** ft Stickup

Land Surface Elevation **752.03** ft

Well Casing From **0.00** ft to **50.2** ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to **45.0** ft

Bentonite Seal

Type: **Holeplug**

From **45.0** ft to **47.5** ft

Top of Screen Depth **50.1** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.2** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **47.5** ft to **60.5** ft

Bottom Well/Screen Depth **60.3** ft

Bottom of Boring Depth **60.5** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-129

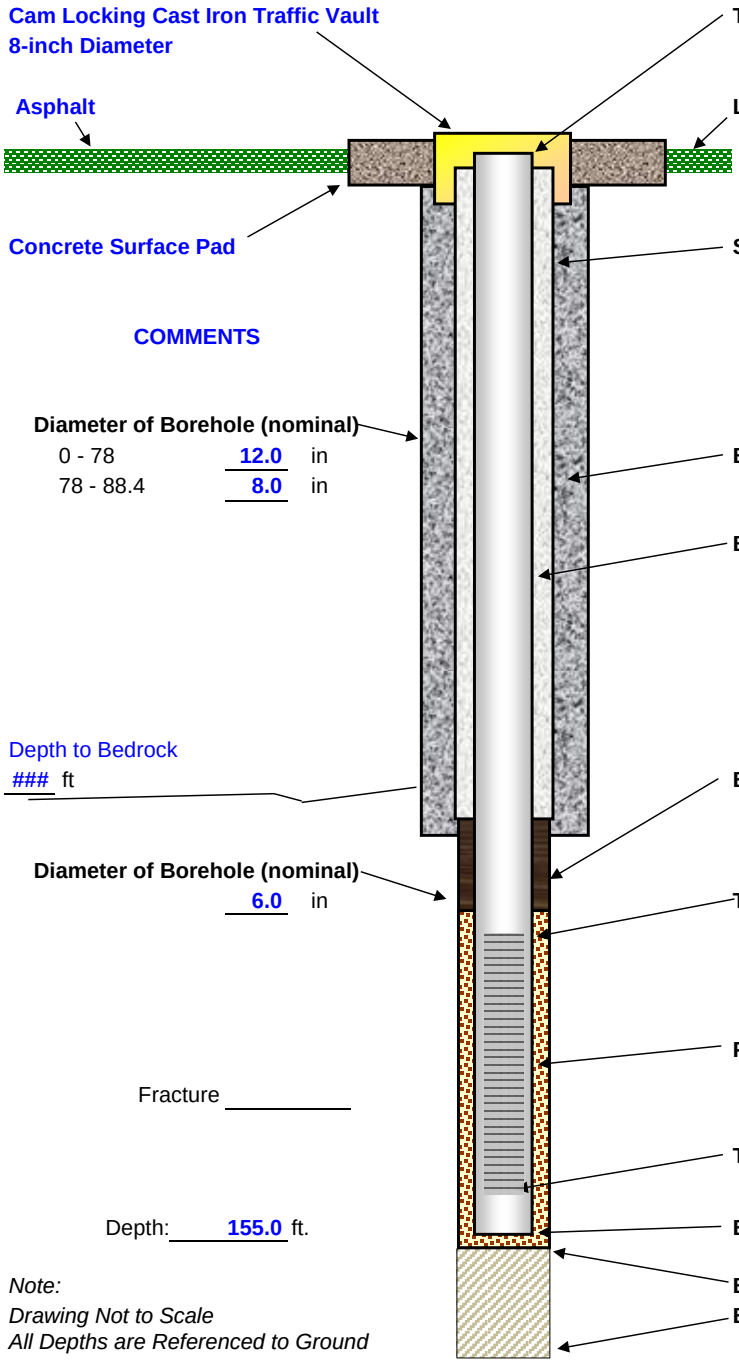
Location: | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 2/5/2014

Client: Celanese | **Drilling Method:** HSA/Air Rotary | **Date Completed:** 3/25/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
0 - 78 **12.0** in
78 - 88.4 **8.0** in

Depth to Bedrock
ft

Diameter of Borehole (nominal)
6.0 in

Fracture

Depth: **155.0** ft.

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

Top Of Casing Elevation **751.64** ft **-0.32** ft Stickup

Land Surface Elevation **751.96** ft

Surface Casing From **0.0** ft to **88.4** ft
Casing Type: **Carbon Steel**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **88.4** ft

Bentonite/Cement Grout
From **0.0** ft to **127.5** ft

Bentonite Seal
Type: Hole Plug
From **127.5** ft to **132.5** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **134.7** ft
Screen Slot Size: 0.010 in
Screen Length: **15.0** ft ID **2.0** in
Bottom Plug: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **132.0** ft to **155.0** ft

Top of Sediment Sump/Bottom Screen Depth **149.7** ft
Type: 2-inch PVC

Bottom of Well Depth **150.0** ft

Bottom of Sand Depth **155.0** ft

Bottom of Boring Depth **180.0** ft

AECOM

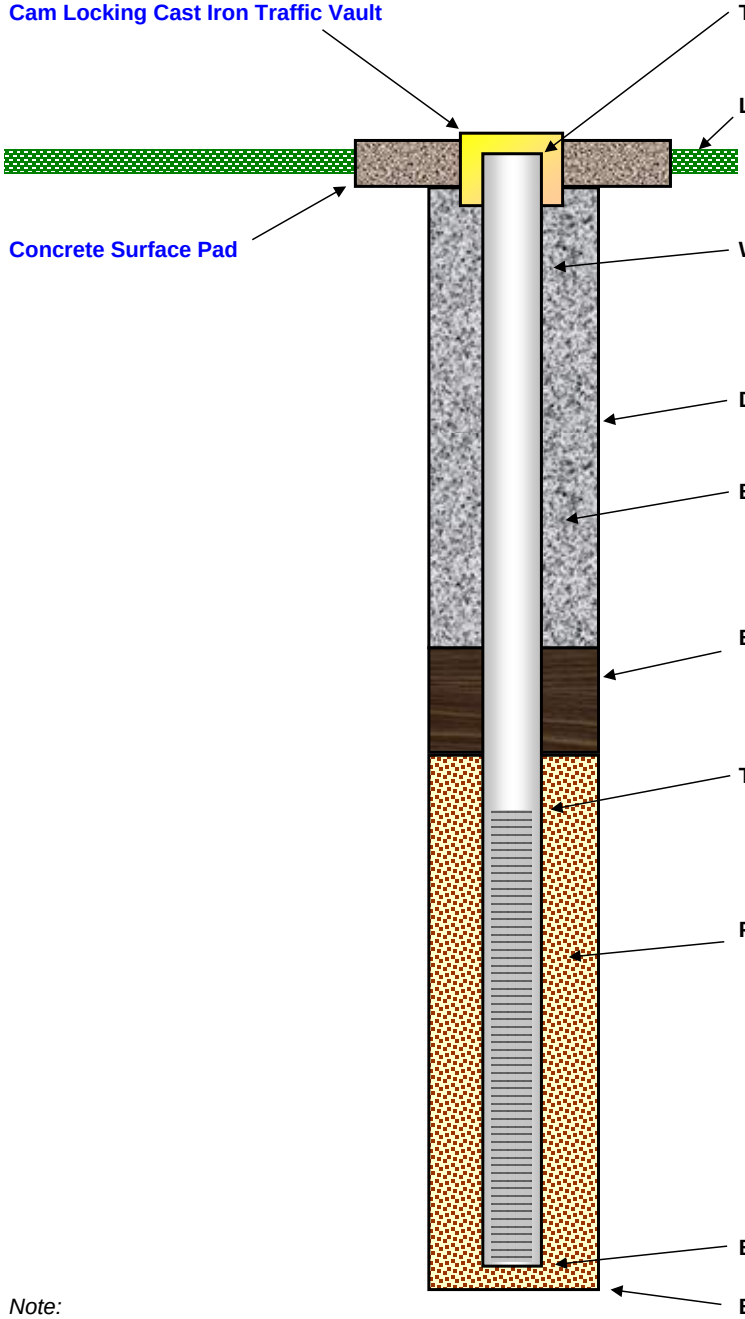
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-130

Location: Air Liquide **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/17/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **750.83** ft **-0.25** ft Stickup

Land Surface Elevation **751.08** ft

Well Casing From **0.00** ft to _____ ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to _____ ft

Bentonite Seal

Type: **Holeplug**

From **44.5** ft to **47.5** ft

Top of Screen Depth **50.5** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.2** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **47.5** ft to **60.7** ft

Bottom Well/Screen Depth **60.7** ft

Bottom of Boring Depth **60.7** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-131

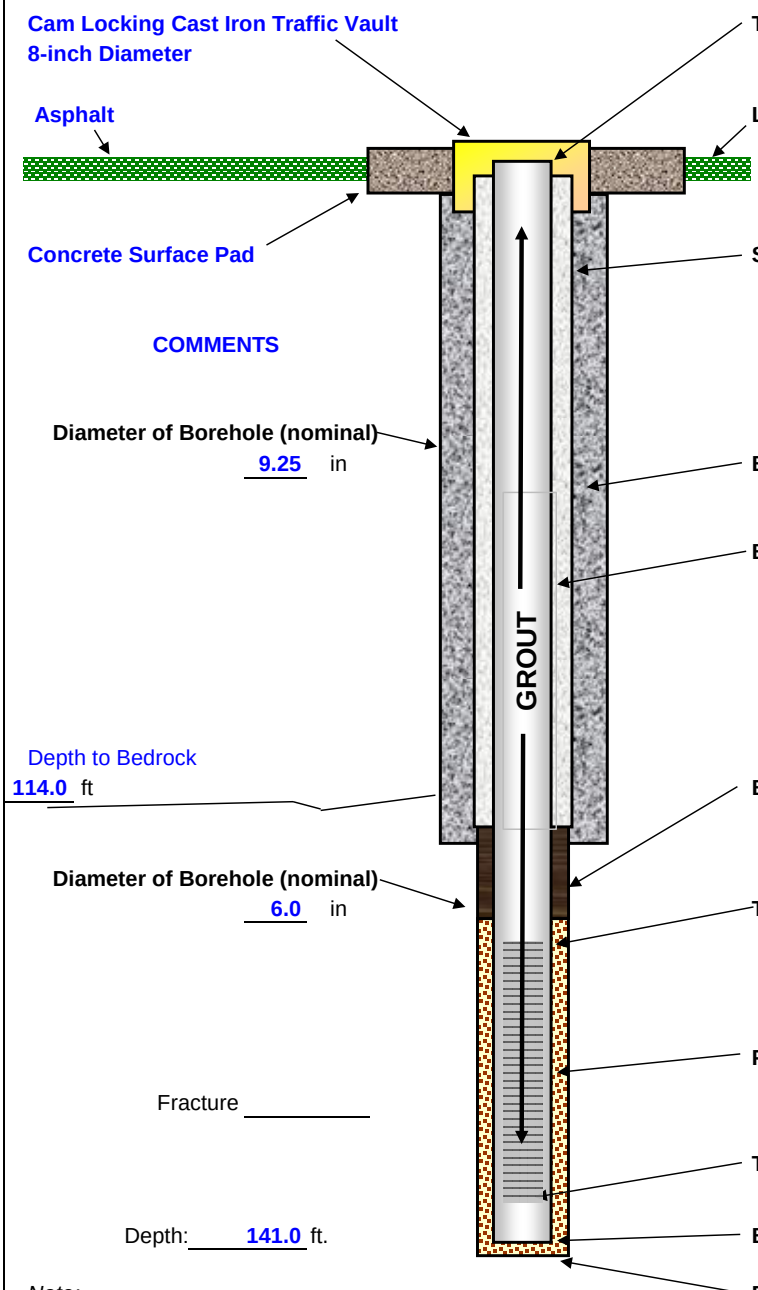
Location: Air Liquide | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 1/31/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/25/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.25 in

Depth to Bedrock
114.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture

Depth: 141.0 ft.

Top Of Casing Elevation ft — ft Stickup

Land Surface Elevation 751.13 ft

Surface Casing From 0.0 ft to 116.5 ft

Casing Type: Carbon Steel
Inside Diameter: 6-in.

Bentonite/Cement Grout
From 0.0 ft to 116.5 ft

Bentonite/Cement Grout
From 0.0 ft to 123.1 ft

Bentonite Seal
Type: Hole Plug
From 123.1 ft to 127.2 ft

Top of Screen
Screen Type: SCH 40 PVC Depth 130.0 ft
Screen Slot Size: 0.010 in
Screen Length: 10.0 ft ID 2.0 in
Plug Length: 0.3 ft

Filter Sand for Screen
Sand Type: medium
From 127.2 ft to 141.7 ft

Top of Sediment Sump/Bottom Screen Depth 140.0 ft
Type: 2-inch PVC

Bottom of Well Depth 140.3 ft

Bottom of Boring Depth 141.0 ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

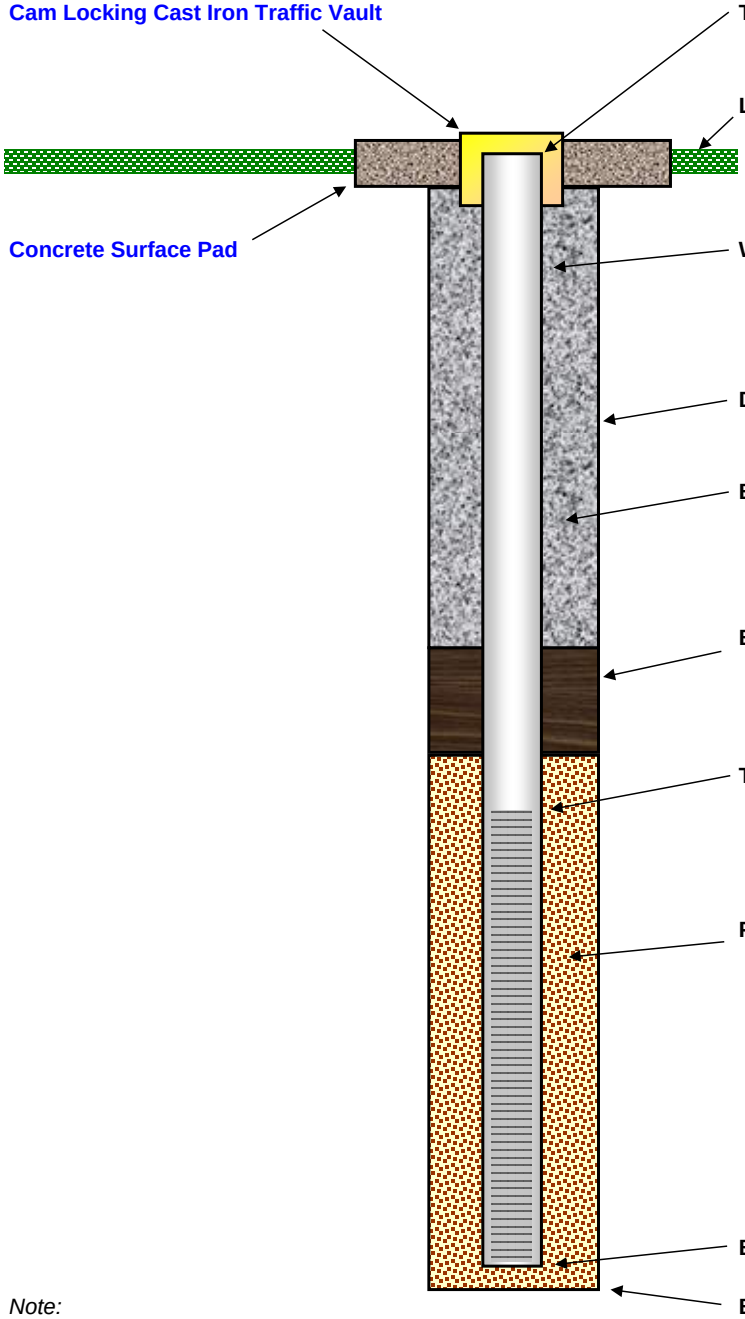
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-132

Location: Maintenance Building **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/18/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Top Of Casing Elevation 741.25 ft -0.26 ft Stickup

Land Surface Elevation 741.51 ft

Well Casing From 0.00 ft to 54.9 ft

Casing Type: SCH-40 PVC
Inside Diameter: 2 in.

Diameter of Borehole (nominal)
8.0 in

Bentonite/Cement Grout
From 0.0 ft to 49.6 ft

Bentonite Seal
Type: Holeplug
From 49.6 ft to 52.4 ft

Top of Screen Depth 54.9 ft
Screen Type: SCH-40 PVC
Screen Slot Size: 0.010 in ID 2.0 in
Screen Length: 10.0 ft
Bottom Plug _____ ft

Filter Sand for Screen
Sand Type: Medium

Filter sand From 52.4 ft to 65.5 ft

Bottom Well/Screen + Bottom Plug Depth 65.2 ft

Bottom of Boring Depth 65.5 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-133

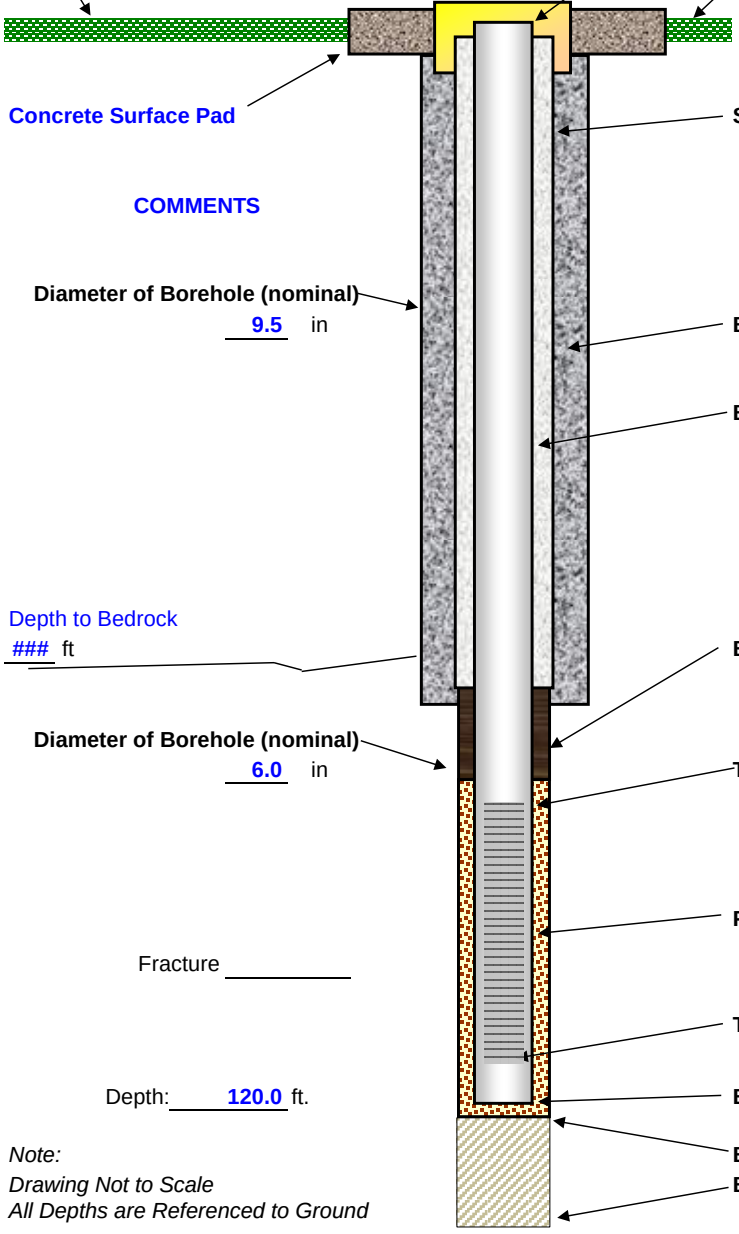
Location: | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 2/17/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 3/25/2014

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.5 in

Depth to Bedrock
ft

Diameter of Borehole (nominal)
6.0 in

Fracture

Depth: **120.0** ft.

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

Top Of Casing Elevation **741.18** ft **-0.41** ft Stickup

Land Surface Elevation **741.59** ft

Surface Casing From **0.0** ft to **88.0** ft

Casing Type: **Carbon Steel**
Inside Diameter: **6-in.**

Bentonite/Cement Grout
From **0.0** ft to **88.0** ft

Bentonite/Cement Grout
From **0.0** ft to **99.7** ft

Bentonite Seal
Type: Hole Plug
From **99.7** ft to **104.0** ft

Top of Screen
Screen Type: SCH 40 PVC Depth **107.0** ft
Screen Slot Size: 0.010 in
Screen Length: **10.0** ft ID **2.0** in
Plug Length: **0.3** ft

Filter Sand for Screen
Sand Type: medium
From **104.0** ft to **120.0** ft

Top of Sediment Sump/Bottom Screen Depth **117.0** ft
Type: 2-inch PVC

Bottom of Well Depth **117.3** ft

Bottom of Sand Depth **120.0** ft

Bottom of Boring Depth **162.0** ft

Depth **162.0** ft

AECOM

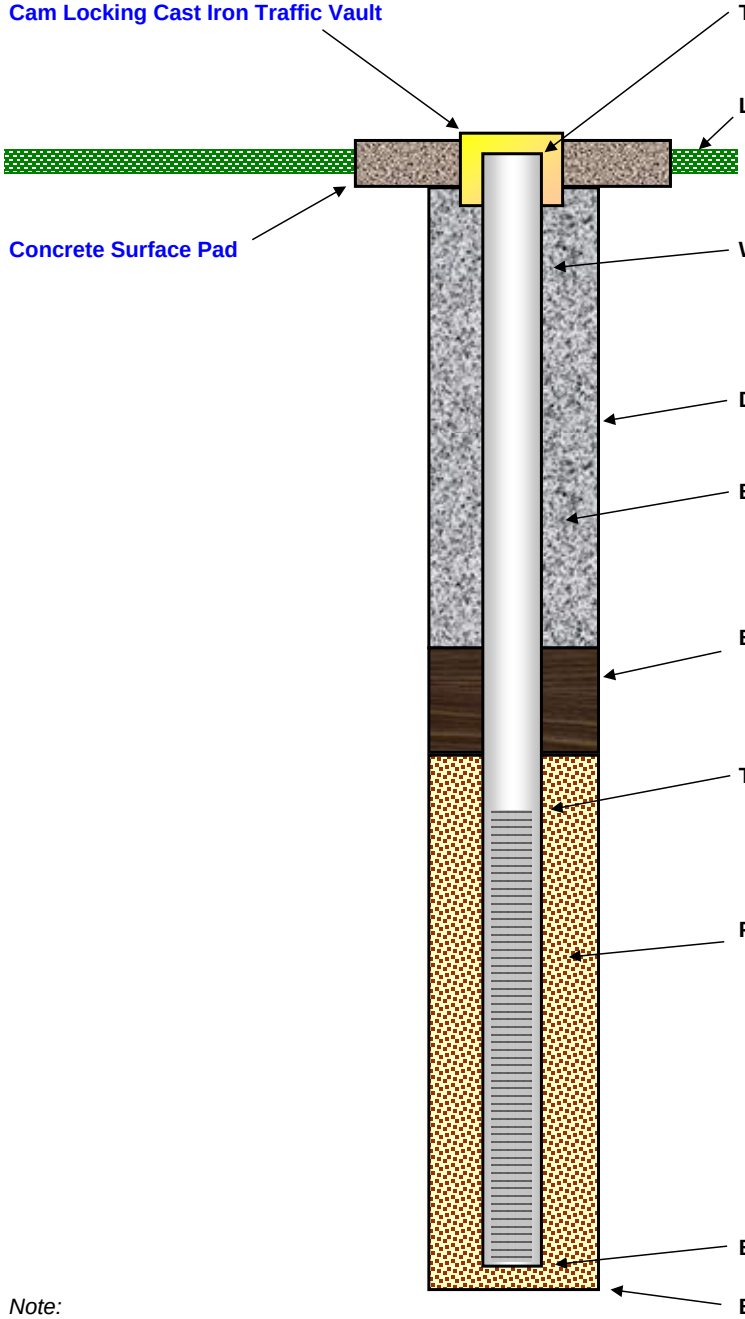
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-134

Location: South Side of Maintena **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/19/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 741.57 ft -0.39 ft Stickup

Land Surface Elevation 741.96 ft

Well Casing From 0.00 ft to 65.1 ft

Casing Type: SCH-40 PVC

Inside Diameter: 2 in.

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From 0.0 ft to 60.0 ft

Bentonite Seal

Type: Holeplug

From 60.0 ft to 62.8 ft

Top of Screen Depth 65.1 ft

Screen Type: SCH-40 PVC

Screen Slot Size: 0.010 in ID 2.0 in

Screen Length: 10.0 ft

Bottom Plug 0.3 ft

Filter Sand for Screen

Sand Type: Medium

Filter sand From 62.8 ft to 75.5 ft

Bottom Well/Screen + Bottom Plug Depth 75.4 ft

Bottom of Boring Depth 75.5 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

ABANDONED

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-135

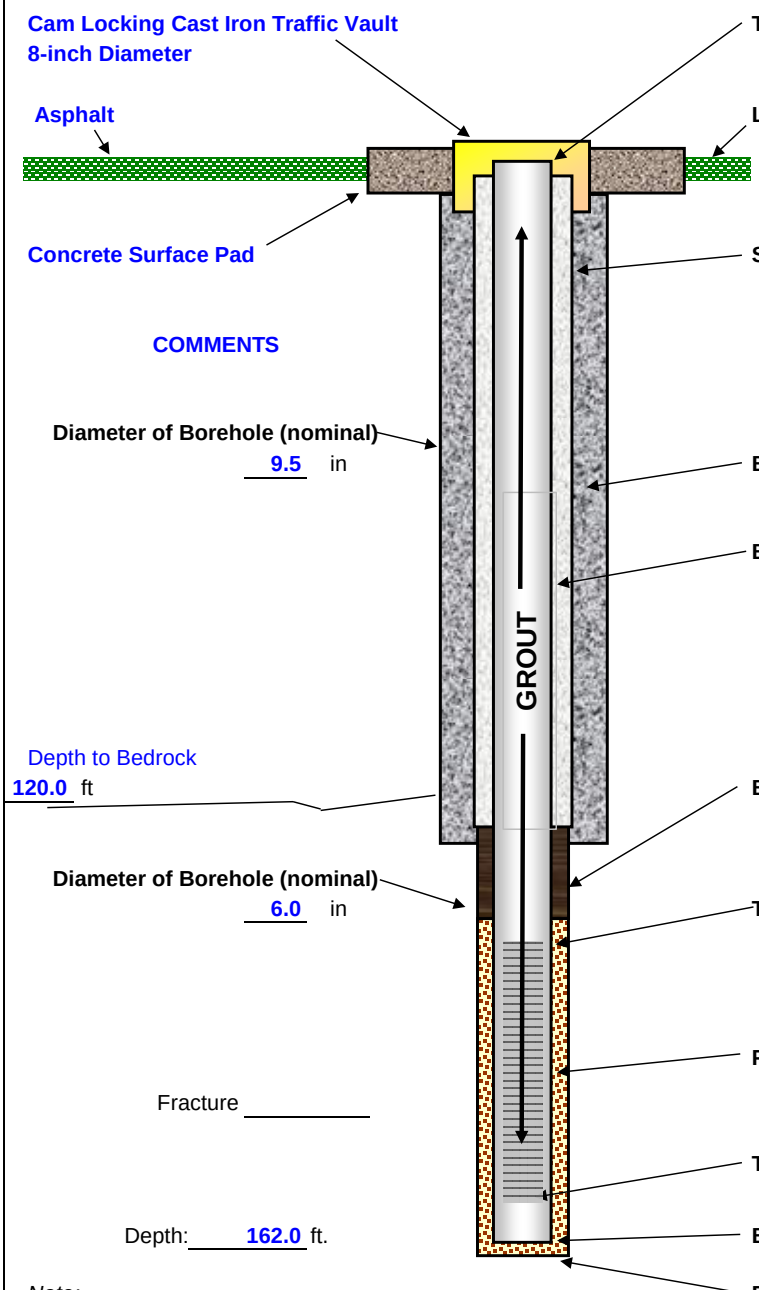
Location: Maintenance Bldg. | **Driller:** Tommy Burnette | **Job Number:** 60280417

Surface Casing: 2/18/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** Abandoned 3-27-14

Rock Drilling:

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Cam Locking Cast Iron Traffic Vault
8-inch Diameter

Asphalt

Concrete Surface Pad

COMMENTS

Diameter of Borehole (nominal)
9.5 in

Depth to Bedrock
120.0 ft

Diameter of Borehole (nominal)
6.0 in

Fracture

Depth: 162.0 ft.

Top Of Casing Elevation ft — ft Stickup

Land Surface Elevation ft

Surface Casing From 0.0 ft to 123.0 ft

Casing Type: Carbon Steel
Inside Diameter: 6-in.

Bentonite/Cement Grout
From 0.0 ft to 123.0 ft

Bentonite/Cement Grout
From 0.0 ft to 162.0 ft

Bentonite Seal
Type: Hole Plug
From ft to ft

Top of Screen
Screen Type: SCH 40 PVC Depth ft
Screen Slot Size: 0.010 in
Screen Length: ft ID in
Plug Length: ft

Filter Sand for Screen
Sand Type: medium
From ft to ft

Top of Sediment Sump/Bottom Screen Depth ft
Type: 2-inch PVC

Bottom of Well Depth ft

Bottom of Boring Depth ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground

AECOM

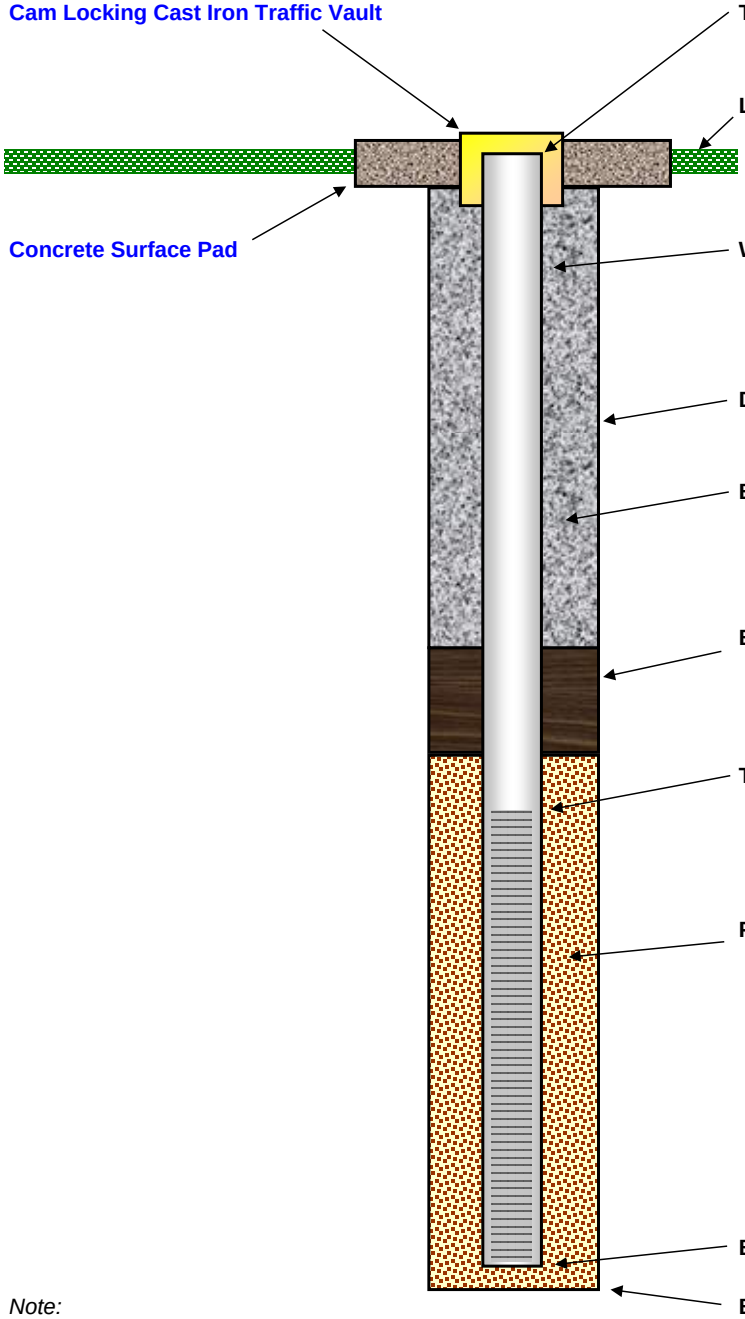
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-136

Location: East of Air Liquide **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/13/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation 711.23 ft -0.38 ft Stickup

Land Surface Elevation 711.61 ft

Well Casing From 0.00 ft to 50.2 ft

Casing Type: SCH-40 PVC

Inside Diameter: 2 in.

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From 0.0 ft to 43.0 ft

Bentonite Seal

Type: Holeplug

From 43.0 ft to 46.7 ft

Top of Screen Depth 50.2 ft

Screen Type: SCH-40 PVC

Screen Slot Size: 0.010 in ID 2.0 in

Screen Length: 10.0 ft

Bottom Plug 0.3 ft

Filter Sand for Screen

Sand Type: Medium

Filter sand From 46.7 ft to 61.0 ft

Bottom Well/Screen Depth 60.5 ft

Bottom of Boring Depth 61.0 ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

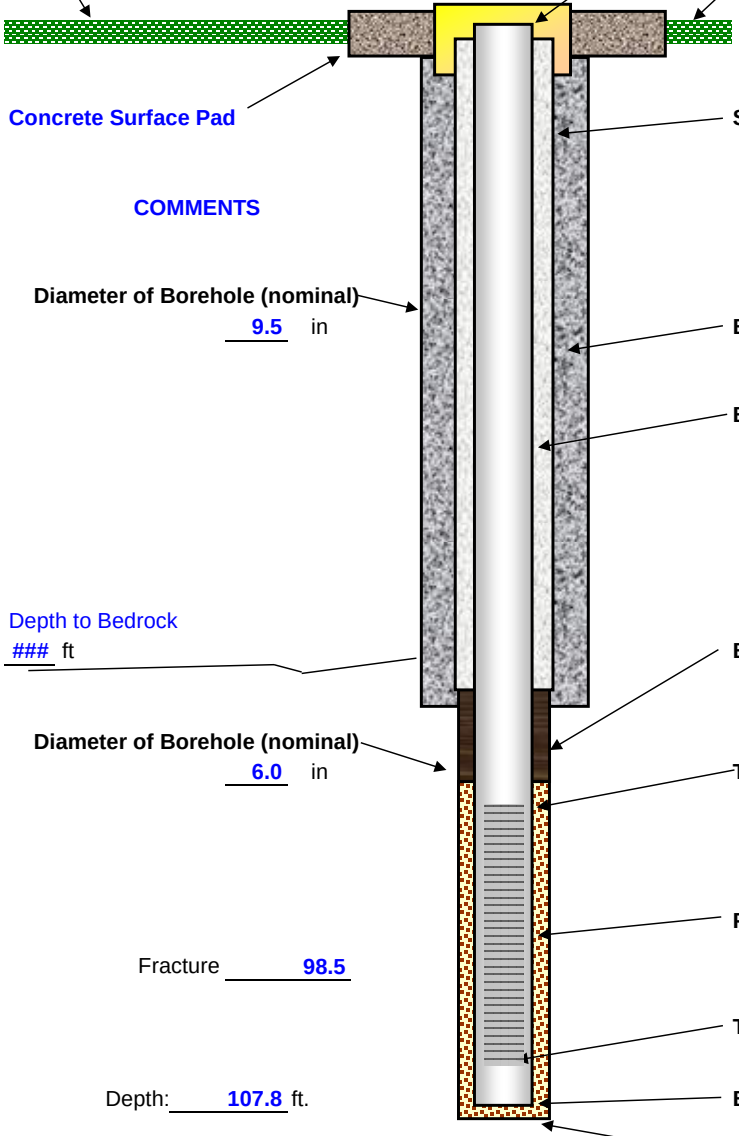
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-137

Location: EW-44 Area | **Driller:** Dan Bergman | **Job Number:** 60280417

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Surface Casing:** 2/19/2014 | **Date Completed:** 2/26/2014

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Rock Drilling:** 2/25/2014 | **Survey Datum:** NGVD '88



Top Of Casing Elevation 710.29 ft | -0.36 ft Stickup

Land Surface Elevation 710.65 ft

Surface Casing From 0.0 ft to 89.5 ft

Casing Type: Carbon Steel

Inside Diameter: 6-in.

Bentonite/Cement Grout From 0.0 ft to 89.5 ft

Bentonite/Cement Grout From 0.0 ft to 88.3 ft

Bentonite Seal

Type: Hole Plug

From 88.3 ft to 94.8 ft

Top of Screen

Screen Type: SCH 40 PVC | Depth 97.0 ft

Screen Slot Size: 0.010 in

Screen Length: 10.0 ft | ID 2.0 in

Plug Length: 0.3 ft

Filter Sand for Screen

Sand Type: medium

From 94.8 ft to 107.8 ft

Top of Sediment Sump/Bottom Screen Depth 107.0 ft

Type: 2-inch PVC

Bottom of Well Depth 107.3 ft

Bottom of Boring Depth 107.8 ft

Note:

Drawing Not to Scale

All Depths are Referenced to Ground

AECOM

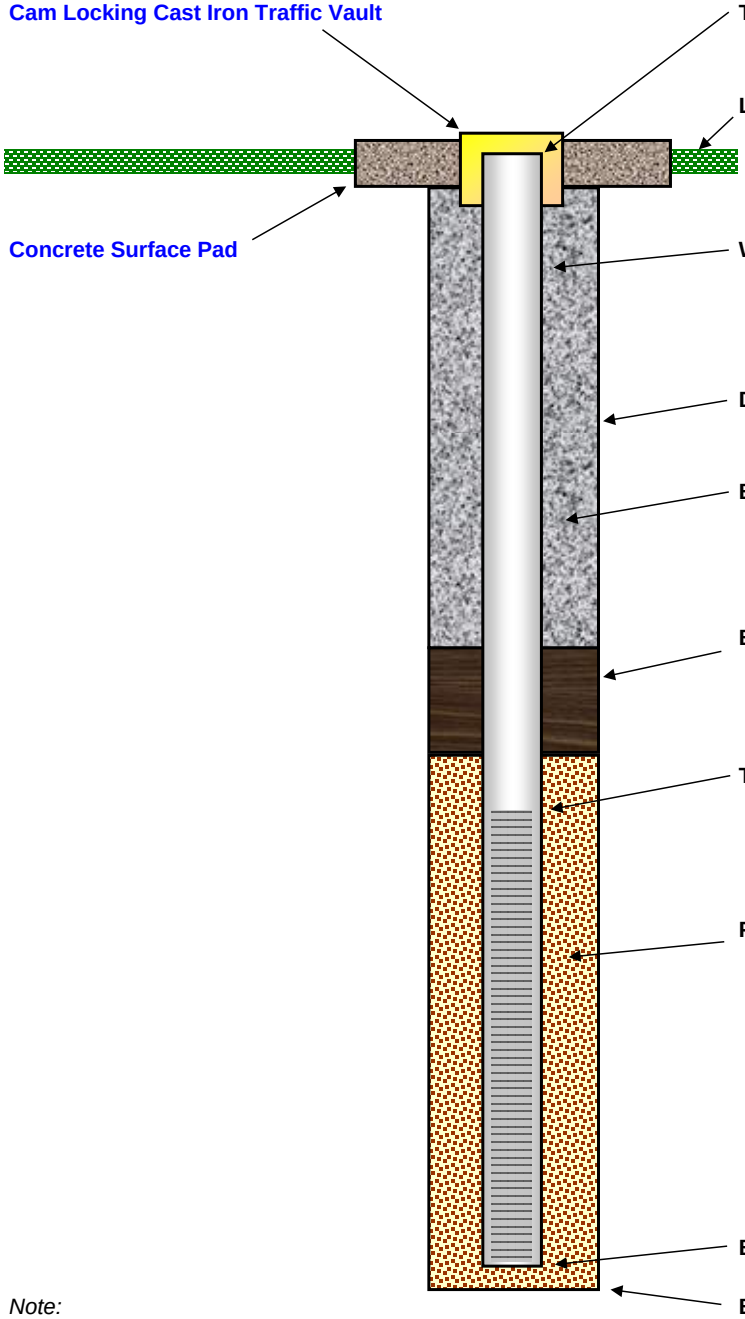
GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg **Drilling Co:** AE Drilling Services **Well Number:** MW-138

Location: East of Air Liquide **Driller:** Bergman **Job Number:** 60135440

Client: Celanese **Drilling Method:** Hollow Stem Auger **Date Completed:** 12/16/2013

Geologist: Mark Hartford **Static Water Level** _____ **b.TOC** **Survey Datum:** _____



Cam Locking Cast Iron Traffic Vault

Concrete Surface Pad

Top Of Casing Elevation **688.00** ft **-0.12** ft Stickup

Land Surface Elevation **688.12** ft

Well Casing From **0.00** ft to **49.3** ft

Casing Type: SCH-40 PVC

Inside Diameter: **2 in.**

Diameter of Borehole (nominal)

8.0 in

Bentonite/Cement Grout

From **0.0** ft to **43.5** ft

Bentonite Seal

Type: **Holeplug**

From **43.5** ft to **46.7** ft

Top of Screen Depth **49.3** ft

Screen Type: SCH-40 PVC

Screen Slot Size: **0.010 in** ID **2.0** in

Screen Length: **10.0** ft

Bottom Plug **0.3** ft

Filter Sand for Screen

Sand Type: **Medium**

Filter sand From **46.7** ft to **60.0** ft

Bottom Well/Screen Depth **59.6** ft

Bottom of Boring Depth **60.0** ft

Total Depth of Well, b. Top of Casing Depth _____ ft

Note:
Drawing Not to Scale
All Depths are Referenced to Ground Surface

AECOM

GROUNDWATER MONITORING WELL INSTALLATION DETAIL

Project Name: Auriga Spartanburg | **Drilling Co:** AE Drilling Services | **Well Number:** RW-139

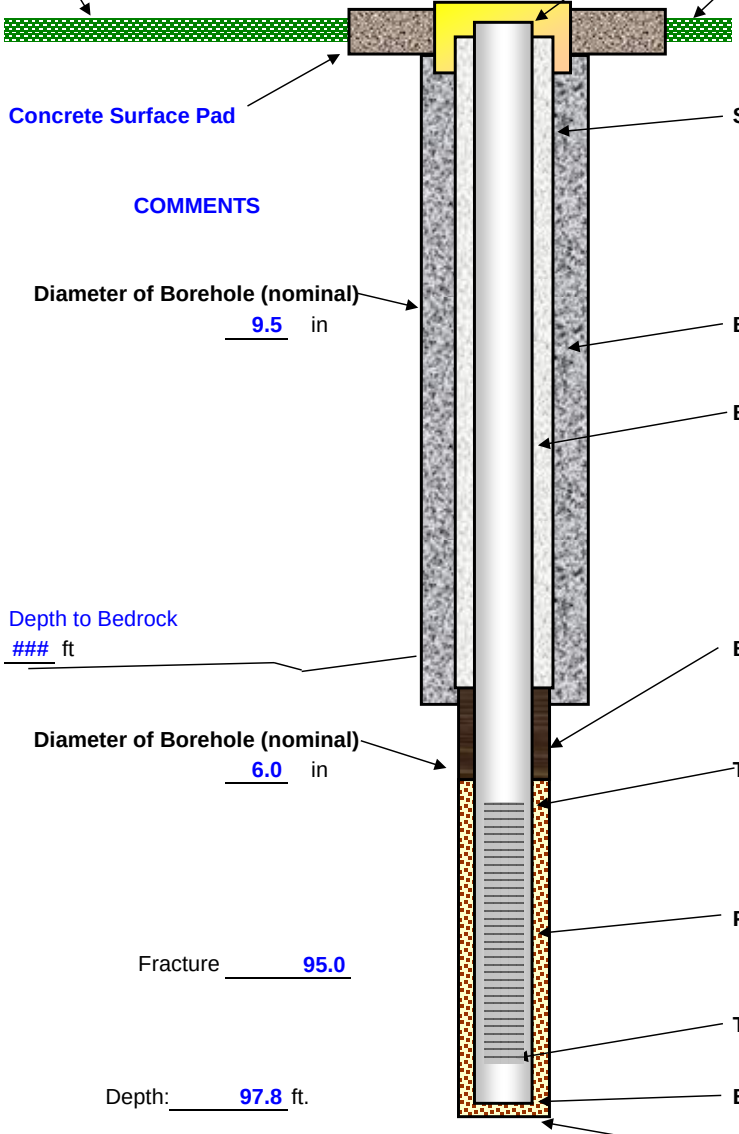
Location: | **Driller:** Dan Bergman | **Job Number:** 60280417

Surface Casing: 2/21/2014

Client: Celanese | **Drilling Method:** Mud/Air Rotary | **Date Completed:** 2/26/2014

Rock Drilling: 2/24/2014

Geologist: Mark Hartford | **Static Water Level:** b.TOC | **Survey Datum:** NGVD '88



Top Of Casing Elevation 687.02 ft -0.32 ft Stickup

Land Surface Elevation 687.34 ft

Surface Casing From 0.0 ft to 84.0 ft

Casing Type: Carbon Steel

Inside Diameter: 6-in.

Bentonite/Cement Grout

From 0.0 ft to 84.0 ft

Bentonite/Cement Grout

From 0.0 ft to 82.2 ft

Bentonite Seal

Type: Hole Plug

From 82.2 ft to 85.3 ft

Top of Screen

Screen Type: SCH 40 PVC Depth 87.5 ft

Screen Slot Size: 0.010 in

Screen Length: 10.0 ft ID 2.0 in

Plug Length: 0.3 ft

Filter Sand for Screen

Sand Type: medium

From 85.3 ft to 97.8 ft

Top of Sediment Sump/Bottom Screen Depth 97.5 ft

Type: 2-inch PVC

Bottom of Well Depth 97.8 ft

Bottom of Boring Depth 97.8 ft

Note:

Drawing Not to Scale

All Depths are Referenced to Ground

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

February 17, 2014

Mr. John McCord
Davis & Floyd Labs
P.O. Box 428
Greenwood, SC 29648

RE: Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Dear Mr. McCord:
Enclosed are the analytical results for sample(s) received by the laboratory on February 11, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

CERTIFICATIONS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

SAMPLE ANALYTE COUNT

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92189502001	**RW-129-105**	EPA 8260	MCK	4	PASI-C
92189502002	**RW-129-120**	EPA 8260	MCK	4	PASI-C
92189502003	**MW-0001**	EPA 8260	MCK	4	PASI-C

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

SUMMARY OF DETECTION

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92189502001	**RW-129-105**					
EPA 8260	Chloroform	3880	ug/L	250	02/14/14 13:10	
92189502002	**RW-129-120**					
EPA 8260	Chloroform	3290	ug/L	250	02/14/14 13:26	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

ANALYTICAL RESULTS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Sample: RW-129-105 **Lab ID: 92189502001** Collected: 02/10/14 15:05 Received: 02/11/14 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chloroform	**3880**	ug/L	250	50		02/14/14 13:10	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	50		02/14/14 13:10	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	50		02/14/14 13:10	17060-07-0	
Toluene-d8 (S)	96	%	70-130	50		02/14/14 13:10	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

ANALYTICAL RESULTS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Sample: RW-129-120 **Lab ID: 92189502002** Collected: 02/11/14 10:12 Received: 02/11/14 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chloroform	**3290**	ug/L	250	50		02/14/14 13:26	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	50		02/14/14 13:26	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	50		02/14/14 13:26	17060-07-0	
Toluene-d8 (S)	98	%	70-130	50		02/14/14 13:26	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

ANALYTICAL RESULTS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Sample: MW-0001 **Lab ID: 92189502003** Collected: 02/11/14 13:00 Received: 02/11/14 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chloroform	ND	ug/L	5.0	1		02/14/14 13:42	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		02/14/14 13:42	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		02/14/14 13:42	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/14/14 13:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

QUALITY CONTROL DATA

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

QC Batch: MSV/25798 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92189502001, 92189502002, 92189502003

METHOD BLANK: 1137514 Matrix: Water
Associated Lab Samples: 92189502001, 92189502002, 92189502003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	02/14/14 12:23	
1,2-Dichloroethane-d4 (S)	%	96	70-130	02/14/14 12:23	
4-Bromofluorobenzene (S)	%	99	70-130	02/14/14 12:23	
Toluene-d8 (S)	%	100	70-130	02/14/14 12:23	

LABORATORY CONTROL SAMPLE: 1137515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	20	19.1	96	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			98	70-130	

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

QUALIFIERS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

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.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189502

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92189502001	**RW-129-105**	EPA 8260	MSV/25798		
92189502002	**RW-129-120**	EPA 8260	MSV/25798		
92189502003	**MW-0001**	EPA 8260	MSV/25798		

Client Name: Davis + Floyd

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

Optional
Proj. Due Date:
Proj. Name:

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

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

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

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.4 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: CD 2/11/14

Temp should be above freezing to 6°C

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

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

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: VD Date: 2/11/14

SRF Review: VD Date: 2/12/14

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

WO#: 92189502

92189502

DAVIS FLOYD

Chain of Custody Record

Page ____ of ____

Laboratory Certifcation Numbers: SC - 24110, NC - 25, NELAP - E87633, TN - 2923, VA - 77
816 E. Durst Avenue, Greenwood, SC 29649 (864) 229-4413 Fax: (864) 229-7119
Email: Laboratory@davisfloyd.com Internet : www.davisfloyd.com

Office Use Only
Laboratory Work Request

Client	Project / Site Location	Copy To	PO / Quote Number	TC
AECOM	061576.08, Fmr HC / Spartanburg, SC			0

Contact: Mark Hartford
Report To: (678) 314-9431 Bryon Dahlgren

Reporting Requirements: [ ] Standard [X] Data Package (Specify Level: 1 2 3 4)
Turnaround Requirements: [ ] Standard [X] Rush (Specify: 3 Days)

Collected By: Mark Hartford

Atmospheric Conditions (Optional)

Special Instructions

State: SC

LOGIN: L

NOTICE: Composite Sampling Only

Date Initiated

Required Parameters, Containers and Preservatives (P*)

Sample Description	Sample Collection Time	Sample Collection Date	Sample Collection Time	Composite	Grab	Matrix Type	Number of Containers Total	P*	CONTAINERS: 3x40 G TFE	PARAMETERS: Chloroform	Indicate any known or expected hazards with a "X"	HOT	Comments	Fraction
RW-129-105		2-10-14	1585		X	5	3			X			92189500001	
RW-129-120		2-11-14	1012		X	5	3			X			002	
MW-0001		2-11-14	1300		X	5	2			X			003	

ENTER NUMBER OF SAMPLE CONTAINERS

Relinquished By	Date	Time	Relinquished By	Date	Time	Relinquished By	Date	Time	Shipped Via: UPS FEDEX CLIENT COURIER OTHER (D & F)
	2-11-14	1444		2-11-14	1625				
Received By	Date	Time	Received By	Date	Time	Received in Laboratory By	Date	Time	Tracking Number
	2-11-14	1444		2/11/14	1625				

Comments

Sample Chamber Temp. at Harvest
Circle: C or F

Flow Measurement (Note 1) / Time
Beginning
Ending
Start Date:
Multiplier

Note: Indicate immediate delivery for those shipments in which the temperature does not have adequate time to reach 4°C.

Receipt Information
Cooler ID (if available):
On Ice: (Yes) No Temp(C) 2.4
Immediate Delivery: Yes / No
Custody Seal: (Intact) / Broken / None

Matrix Type Definitions: 1 - Drinking Water 2 - Clean Water 5 - Groundwater 7 - Soil/Sediment 8 - Liquid Sludge 9 - Oil 12 - Air
(P) Preservative Definitions: A - None B - H2SO4 C - HCl D - HNO3 E - NaOH F - Filtered G - Na2S2O3

(Note 1) For Discharge Measurements

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

February 18, 2014

Steve Simpson
CNA Holdings
1455 OLD ALABAMA RD.
Suite 170
Roswell, GA 30076

RE: Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

Dear Steve Simpson:
Enclosed are the analytical results for sample(s) received by the laboratory on February 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Accounts Payable, CNA Holdings

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

CERTIFICATIONS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92189813001	**RW-129-150**	EPA 8260	CAH	4	PASI-C

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

Sample: RW-129-150 **Lab ID: 92189813001** Collected: 02/14/14 16:37 Received: 02/17/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chloroform	**1090**	ug/L	50.0	10		02/18/14 14:18	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		02/18/14 12:40	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		02/18/14 12:40	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		02/18/14 12:40	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

QC Batch: MSV/25824
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 92189813001

METHOD BLANK: 1139281 Matrix: Water
Associated Lab Samples: 92189813001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	02/18/14 11:33	
1,2-Dichloroethane-d4 (S)	%	101	70-130	02/18/14 11:33	
4-Bromofluorobenzene (S)	%	98	70-130	02/18/14 11:33	
Toluene-d8 (S)	%	101	70-130	02/18/14 11:33	

LABORATORY CONTROL SAMPLE: 1139282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	20	17.6	88	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			103	70-130	

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALIFIERS

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

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.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 061576.08 Fmr HC/Spartanburg
Pace Project No.: 92189813

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92189813001	**RW-129-150**	EPA 8260	MSV/25824		

REPORT OF LABORATORY ANALYSIS

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

Client Name: DAWS & Floyd CAEcom

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

Optional
Proj. Due Date:
Proj. Name:

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

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

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

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

Corrected Cooler Temp.: 6.0 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: AD 2/17/14

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. OS 2/18
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	AD 2/18 ☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

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

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: JG **Date:** 2/17/14

SRF Review: JG **Date:** 2/17/14

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

WO# : 92189813

92189813

DAVIS & FLOYD

Chain of Custody Record

Page _____ of _____

Client	Project / Site Location	Laboratory Certifcation Numbers: SC - 24110, NC - 25, NELAP - E87633, TN - 2923, VA - 77	Office Use Only
AECOM ,	061576.08, Fmr HC / Spartanburg, SC	816 E. Durst Avenue, Greenwood, SC 29649 (864) 229-4413 Fax: (864) 229-7119 Email: Laboratory@davisfloyd.com Internet : www.davisfloyd.com	Laboratory Work Request
Contact: Mark Hartford	Report To: Bryon Dahlgren	Copy To	Reporting Requirements: [ ] Standard [ ] Data Package (Specify Level: 1 2 3 4) Turnaround Requirements: [ ] Standard [X] Rush (Specify: 1 Day.)

Collected By	Atmospheric Conditions	PO / Quote Number	TC	Special Instructions	State
Mark Hartford	(Optional)		0		SC

NOTICE: Composite Sampling Only

Sample Description	Date Initiated / Sample Collection Time	Sample Collection Date	Sample Collection Time	Composite (Type)	Grab (Type)	Matrix Type (Type)	Number of Containers (Total)	PARAMETERS P*	CONTAINERS 3x40 G TFE C	Chloroform C	Indicate any known or expected hazards with a "X". HOT	Comments	LOGIN Fraction
RW-129-150		2-14-14	1637		X	5	3			X		9221949513001	

ENTER NUMBER OF SAMPLE CONTAINERS

Relinquished By	Date	Time	Relinquished By	Date	Time	Relinquished By	Date	Time	Shipped Via: UPS FEDEX CLIENT COURIER OTHER (D & F)
[signature]	2-14-14	0940	[signature]	2.17.14	1315				
Received By	**Date**	**Time**	**Received By**	**Date**	**Time**	**Received in Laboratory By**	**Date**	**Time**	**Tracking Number**
[signature]	2.17.14	0940	[signature]	2/17/14	1315				

Comments: 1 Day Turn Around Requested — Results to Bryon.dahlgren@aecom.com

Sample Chamber Temp. at Harvest — Circle: C or F

Flow Measurement (Note 1) / Time: Beginning; Ending; Start Date:; Multiplier

Note: Indicate immediate delivery for those shipments in whch the temperature does not have adequate time to reach 4'C.

Receipt Information: Cooler ID (if available): ; On Ice: (Yes) No Temp(C) 0.0; Immediate Delivery: Yes / No; Custody Seal: Intact / Broken / (None)

Matrix Type Definitions: 1 -Drinking Water 2 - Clean Water 5 - Groundwater 7 - Soil/Sediment 8 - Liquid Sludge 9 - Oil 12 - Air

(P) Preservative Definitions: A -None B - H2SO4 C - HCl D - HNO3 E - NaOH F - Filtered G - Na2S2O3

(Note 1) For Discharge Measurements

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

April 21, 2014

Bryon Dahlgren
AECOM
10 Patewood Drive, Bldg 6
Suite 500
Greenville, SC 29615

RE: Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Dear Bryon Dahlgren:
Enclosed are the analytical results for sample(s) received by the laboratory on March 19, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Aynsley Zollinger, AECOM

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

CERTIFICATIONS

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92193829001	**RW-115-90**	EPA 624	MCK	4	PASI-C
92193829002	**TRIP BLANK**	EPA 624	MCK	4	PASI-C

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Sample: RW-115-90 **Lab ID: 92193829001** Collected: 03/18/14 13:05 Received: 03/19/14 13:58 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624							
Chloroform	**2450**	ug/L	100	50		03/26/14 13:40	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	88	%	70-130	1		03/25/14 08:36	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		03/25/14 08:36	2037-26-5	
1,2-Dichloroethane-d4 (S)	378	%	70-130	1		03/25/14 08:36	17060-07-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Sample: TRIP BLANK **Lab ID: 92193829002** Collected: 03/18/14 17:25 Received: 03/19/14 13:58 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624							
Chloroform	ND	ug/L	2.0	1		03/25/14 05:21	67-66-3	
Surrogates								
4-Bromofluorobenzene (S)	90	%	70-130	1		03/25/14 05:21	460-00-4	
Toluene-d8 (S)	98	%	70-130	1		03/25/14 05:21	2037-26-5	
1,2-Dichloroethane-d4 (S)	368	%	70-130	1		03/25/14 05:21	17060-07-0	S3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

QC Batch: MSV/26200 Analysis Method: EPA 624
QC Batch Method: EPA 624 Analysis Description: 624 MSV
Associated Lab Samples: 92193829001, 92193829002

METHOD BLANK: 1163491 Matrix: Water
Associated Lab Samples: 92193829001, 92193829002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	2.0	03/25/14 03:27	
1,2-Dichloroethane-d4 (S)	%	100	70-130	03/25/14 03:27	
4-Bromofluorobenzene (S)	%	89	70-130	03/25/14 03:27	
Toluene-d8 (S)	%	97	70-130	03/25/14 03:27	

LABORATORY CONTROL SAMPLE: 1163492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	20	20.2	101	51-138	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1163493 1163494

Parameter	Units	92192752002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloroform	ug/L	9.3	20	20	36.6	36.0	137	133	51-166	2	
1,2-Dichloroethane-d4 (S)	%						380	101	70-130		S0
4-Bromofluorobenzene (S)	%						97	100	70-130		
Toluene-d8 (S)	%						99	99	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALIFIERS

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

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.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Celanese Spartanburg, SC
Pace Project No.: 92193829

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92193829001	**RW-115-90**	EPA 624	MSV/26200		
92193829002	**TRIP BLANK**	EPA 624	MSV/26200		

REPORT OF LABORATORY ANALYSIS

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: December 16, 2013 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.13**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Arcon

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

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

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

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

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

Corrected Cooler Temp.: 3.9 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: [illegible] 3/19/14

		Comments:
Chain of Custody Present:	☐Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☐Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☐Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☐N/A	7.
Sufficient Volume:	☐Yes ☐No ☐N/A	8.
Correct Containers Used:	☐Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☐Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
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. not our tb no date on vial
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: [signature] Date: 3/19/14

SRF Review: [signature] Date: 3/20/14

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

WO# : 92193829

92193829

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A
Required Client Information:

Company:	AECOM
Address:	10 Patewood Dr, Bldg. VI, Suite 500
	Greenville, SC 29615
Email To:	Bryon.dahlgren@aecom.com
Phone:	Fax:
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Bryon Dahlgren
Copy To:	
Purchase Order No.:	
Project Name:	Aucia Spartanburg, SC
Project Number:	60280417

Section C
Invoice Information:

Attention:	Bryon + Bill Client
Company Name:	- Celanese -
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	6042-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location
STATE: _____

Section D
Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D Required Client Information (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	VOL/CHLOROFORM	RCRA METALS	TCLP VOC, 1,4-Dioxane	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	RW-115-90	WT	G			3-18-14	1305	16	3			X						Y	3				001
2	Trip Blank					2-19-14	1725	-	2			X							2				002
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

92193829

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Mark Hartford	3-19-14	12:20		3/19/14		
		3-19-14	1588		3/19/14	15:58	3.5

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Hartford

SIGNATURE of SAMPLER: Mark Hartford

DATE Signed (MM/DD/YY): 3-18-14

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

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

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

April 15, 2014

Bryon Dahlgren
AECOM
10 Patewood Drive, Bldg 6
Suite 500
Greenville, SC 29615

RE: Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Dear Bryon Dahlgren:
Enclosed are the analytical results for sample(s) received by the laboratory on April 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Aynsley Zollinger, AECOM

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

CERTIFICATIONS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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

Greenwood Certification IDs
816 Durst Avenue East, Greenwood, SC 29649
South Carolina DHEC Certifiation 24110001
North Carolina Divison of Water Resources Certification number 25
Florida Certification number E87633
Virginia VELAP ID: 460250
Asbestos NVLAP accreditation: 101410-0

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92195574001	**MW-138**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574002	**RW-139**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574003	**RW-136**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574004	**RW-137**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574005	**MW-130**	EPA 9060A	CDC	1	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574006	**MW-301**	EPA 8260	CAH	53	PASI-C
92195574007	**RES PUMP RW-131**	EPA 8260	CAH	53	PASI-C
92195574008	**MW-112**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	RES	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195574009	**RW-113**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	RES	72	PASI-C

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-138 **Lab ID: 92195574001** Collected: 03/31/14 11:45 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:09	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:09	7440-44-0	
Total Organic Carbon	**1.4**	mg/L	1.0	1		04/08/14 14:09	7440-44-0	
Total Organic Carbon	**1.4**	mg/L	1.0	1		04/08/14 14:09	7440-44-0	
Mean Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:09	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**6.7**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:22	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/03/14 18:18	67-64-1	
Benzene	ND	ug/L	5.0	1		04/03/14 18:18	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/03/14 18:18	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/03/14 18:18	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/03/14 18:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/03/14 18:18	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/03/14 18:18	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/03/14 18:18	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/03/14 18:18	75-00-3	
Chloroform	**148**	ug/L	5.0	1		04/03/14 18:18	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/03/14 18:18	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/03/14 18:18	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/03/14 18:18	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/03/14 18:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/03/14 18:18	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/03/14 18:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/03/14 18:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:18	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/03/14 18:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/03/14 18:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/03/14 18:18	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/03/14 18:18	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/03/14 18:18	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/03/14 18:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/03/14 18:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/03/14 18:18	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-138 **Lab ID: 92195574001** Collected: 03/31/14 11:45 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/03/14 18:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/03/14 18:18	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/03/14 18:18	127-18-4	
Toluene	ND	ug/L	5.0	1		04/03/14 18:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:18	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/03/14 18:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/03/14 18:18	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/03/14 18:18	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/03/14 18:18	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/03/14 18:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/03/14 18:18	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/03/14 18:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/03/14 18:18	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/03/14 18:18	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**8.9**	mg/L	5.0	1		04/08/14 16:15		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.6**	mg/L	1.0	1		04/10/14 18:40	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-139 **Lab ID: 92195574002** Collected: 03/31/14 14:05 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:37	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:37	7440-44-0	
Total Organic Carbon	**1.2**	mg/L	1.0	1		04/08/14 14:37	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:37	7440-44-0	
Mean Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 14:37	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**34.9**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:25	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/03/14 18:34	67-64-1	
Benzene	ND	ug/L	5.0	1		04/03/14 18:34	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/03/14 18:34	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/03/14 18:34	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/03/14 18:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/03/14 18:34	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/03/14 18:34	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/03/14 18:34	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/03/14 18:34	75-00-3	
Chloroform	**958**	ug/L	50.0	10		04/04/14 14:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/03/14 18:34	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/03/14 18:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/03/14 18:34	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/03/14 18:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/03/14 18:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/03/14 18:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/03/14 18:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:34	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/03/14 18:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/03/14 18:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/03/14 18:34	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/03/14 18:34	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/03/14 18:34	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/03/14 18:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/03/14 18:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/03/14 18:34	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-139 **Lab ID: 92195574002** Collected: 03/31/14 14:05 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/03/14 18:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/03/14 18:34	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/03/14 18:34	127-18-4	
Toluene	ND	ug/L	5.0	1		04/03/14 18:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:34	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/03/14 18:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/03/14 18:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/03/14 18:34	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/03/14 18:34	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/03/14 18:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/03/14 18:34	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/03/14 18:34	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		04/03/14 18:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		04/03/14 18:34	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**57.9**	mg/L	5.0	1		04/08/14 16:24		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.3**	mg/L	1.0	1		04/10/14 18:40	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-136 **Lab ID: 92195574003** Collected: 03/31/14 15:45 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 15:06	7440-44-0	
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 15:06	7440-44-0	
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 15:06	7440-44-0	
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 15:06	7440-44-0	
Mean Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 15:06	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**132**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:28	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/03/14 18:50	67-64-1	
Benzene	ND	ug/L	5.0	1		04/03/14 18:50	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/03/14 18:50	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/03/14 18:50	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/03/14 18:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/03/14 18:50	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/03/14 18:50	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/03/14 18:50	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/03/14 18:50	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/03/14 18:50	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/03/14 18:50	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/03/14 18:50	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/03/14 18:50	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/03/14 18:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/03/14 18:50	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/03/14 18:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/03/14 18:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 18:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/03/14 18:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 18:50	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/03/14 18:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/03/14 18:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/03/14 18:50	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/03/14 18:50	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/03/14 18:50	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/03/14 18:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/03/14 18:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/03/14 18:50	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-136 **Lab ID: 92195574003** Collected: 03/31/14 15:45 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/03/14 18:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/03/14 18:50	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/03/14 18:50	127-18-4	
Toluene	ND	ug/L	5.0	1		04/03/14 18:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 18:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/03/14 18:50	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/03/14 18:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/03/14 18:50	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/03/14 18:50	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/03/14 18:50	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/03/14 18:50	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/03/14 18:50	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/03/14 18:50	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		04/03/14 18:50	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/03/14 18:50	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**13.1**	mg/L	5.0	1		04/08/14 16:34		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**13.9**	mg/L	1.0	1		04/10/14 18:41	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-137 **Lab ID: 92195574004** Collected: 03/31/14 17:10 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.8**	mg/L	1.0	1		04/08/14 15:34	7440-44-0	
Total Organic Carbon	**1.8**	mg/L	1.0	1		04/08/14 15:34	7440-44-0	
Total Organic Carbon	**1.8**	mg/L	1.0	1		04/08/14 15:34	7440-44-0	
Total Organic Carbon	**1.9**	mg/L	1.0	1		04/08/14 15:34	7440-44-0	
Mean Total Organic Carbon	**1.8**	mg/L	1.0	1		04/08/14 15:34	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**54.9**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:41	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/03/14 19:05	67-64-1	
Benzene	ND	ug/L	5.0	1		04/03/14 19:05	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/03/14 19:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/03/14 19:05	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/03/14 19:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/03/14 19:05	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/03/14 19:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/03/14 19:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/03/14 19:05	75-00-3	
Chloroform	**243**	ug/L	10.0	2		04/04/14 14:21	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/03/14 19:05	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/03/14 19:05	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/03/14 19:05	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/03/14 19:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/03/14 19:05	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/03/14 19:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/03/14 19:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/03/14 19:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/03/14 19:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 19:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 19:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/03/14 19:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/03/14 19:05	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/03/14 19:05	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/03/14 19:05	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/03/14 19:05	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/03/14 19:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/03/14 19:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/03/14 19:05	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-137 **Lab ID: 92195574004** Collected: 03/31/14 17:10 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/03/14 19:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/03/14 19:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/03/14 19:05	127-18-4	
Toluene	ND	ug/L	5.0	1		04/03/14 19:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/03/14 19:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/03/14 19:05	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/03/14 19:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/03/14 19:05	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/03/14 19:05	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/03/14 19:05	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/03/14 19:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/03/14 19:05	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/03/14 19:05	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		04/03/14 19:05	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		04/03/14 19:05	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**69.6**	mg/L	5.0	1		04/08/14 16:44		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**6.3**	mg/L	1.0	1		04/10/14 18:42	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-130 **Lab ID: 92195574005** Collected: 04/01/14 12:00 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 16:02	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**67.5**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:44	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 16:18	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 16:18	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 16:18	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 16:18	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 16:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 16:18	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 16:18	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 16:18	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 16:18	75-00-3	
Chloroform	**39.8**	ug/L	5.0	1		04/04/14 16:18	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 16:18	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 16:18	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 16:18	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 16:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 16:18	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 16:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 16:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:18	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 16:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 16:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 16:18	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 16:18	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 16:18	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 16:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 16:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 16:18	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 16:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 16:18	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 16:18	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 16:18	108-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-130 **Lab ID: 92195574005** Collected: 04/01/14 12:00 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:18	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 16:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 16:18	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 16:18	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 16:18	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 16:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 16:18	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/04/14 16:18	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		04/04/14 16:18	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		04/04/14 16:18	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**8.7**	mg/L	5.0	1		04/08/14 11:06		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.2**	mg/L	1.0	1		04/10/14 18:42	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-301 **Lab ID: 92195574006** Collected: 03/31/14 18:00 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/03/14 19:21	67-64-1	
Benzene	ND	ug/L	5.0	1		04/03/14 19:21	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/03/14 19:21	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/03/14 19:21	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/03/14 19:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/03/14 19:21	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/03/14 19:21	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/03/14 19:21	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/03/14 19:21	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/03/14 19:21	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/03/14 19:21	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/03/14 19:21	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/03/14 19:21	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/03/14 19:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/03/14 19:21	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/03/14 19:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/03/14 19:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/03/14 19:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/03/14 19:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/03/14 19:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 19:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/03/14 19:21	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/03/14 19:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/03/14 19:21	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/03/14 19:21	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/03/14 19:21	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/03/14 19:21	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/03/14 19:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/03/14 19:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/03/14 19:21	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/03/14 19:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/03/14 19:21	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/03/14 19:21	127-18-4	
Toluene	ND	ug/L	5.0	1		04/03/14 19:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/03/14 19:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/03/14 19:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/03/14 19:21	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/03/14 19:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/03/14 19:21	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/03/14 19:21	76-13-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-301 **Lab ID: 92195574006** Collected: 03/31/14 18:00 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Vinyl acetate	ND	ug/L	10.0	1		04/03/14 19:21	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/03/14 19:21	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/03/14 19:21	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/03/14 19:21	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/03/14 19:21	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		04/03/14 19:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RES PUMP RW-131 **Lab ID: 92195574007** Collected: 04/01/14 10:20 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	**66.8**	ug/L	25.0	1		04/04/14 16:34	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 16:34	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 16:34	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 16:34	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 16:34	74-83-9	
2-Butanone (MEK)	**30.1**	ug/L	10.0	1		04/04/14 16:34	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 16:34	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 16:34	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 16:34	75-00-3	
Chloroform	**329**	ug/L	20.0	4		04/07/14 15:45	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 16:34	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 16:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 16:34	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 16:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 16:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 16:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 16:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:34	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 16:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 16:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 16:34	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 16:34	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 16:34	108-87-2	
Methylene Chloride	**7.9**	ug/L	5.0	1		04/04/14 16:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 16:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 16:34	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 16:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 16:34	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 16:34	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 16:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:34	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 16:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 16:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 16:34	76-13-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RES PUMP RW-131 **Lab ID: 92195574007** Collected: 04/01/14 10:20 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 16:34	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 16:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 16:34	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/04/14 16:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/04/14 16:34	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		04/04/14 16:34	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-112 **Lab ID: 92195574008** Collected: 04/01/14 10:55 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.9**	mg/L	1.0	1		04/08/14 17:33	7440-44-0	
Total Organic Carbon	**1.5**	mg/L	1.0	1		04/08/14 17:33	7440-44-0	
Total Organic Carbon	**1.5**	mg/L	1.0	1		04/08/14 17:33	7440-44-0	
Total Organic Carbon	**1.4**	mg/L	1.0	1		04/08/14 17:33	7440-44-0	
Mean Total Organic Carbon	**1.6**	mg/L	1.0	1		04/08/14 17:33	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	ND	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:53	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 11:54	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-112 **Lab ID: 92195574008** Collected: 04/01/14 10:55 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/07/14 11:54	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 11:54	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 11:54	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 11:54	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 11:54	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/07/14 11:54	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 11:54	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	31	%	21-110	1	04/04/14 16:00	04/07/14 11:54	4165-60-0	
2-Fluorobiphenyl (S)	28	%	27-110	1	04/04/14 16:00	04/07/14 11:54	321-60-8	
Terphenyl-d14 (S)	76	%	31-107	1	04/04/14 16:00	04/07/14 11:54	1718-51-0	
Phenol-d6 (S)	12	%	10-110	1	04/04/14 16:00	04/07/14 11:54	13127-88-3	
2-Fluorophenol (S)	17	%	12-110	1	04/04/14 16:00	04/07/14 11:54	367-12-4	
2,4,6-Tribromophenol (S)	28	%	27-110	1	04/04/14 16:00	04/07/14 11:54	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 16:49	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 16:49	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 16:49	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 16:49	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 16:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 16:49	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 16:49	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 16:49	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-112 **Lab ID: 92195574008** Collected: 04/01/14 10:55 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 16:49	75-00-3	
Chloroform	**2000**	ug/L	100	20		04/07/14 16:01	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 16:49	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 16:49	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 16:49	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 16:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 16:49	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 16:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 16:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 16:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 16:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 16:49	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 16:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 16:49	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 16:49	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 16:49	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 16:49	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 16:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 16:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 16:49	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 16:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 16:49	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 16:49	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 16:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 16:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 16:49	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 16:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 16:49	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 16:49	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 16:49	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 16:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 16:49	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/04/14 16:49	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/04/14 16:49	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		04/04/14 16:49	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: MW-112 **Lab ID: 92195574008** Collected: 04/01/14 10:55 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 15:47	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%	50-150	1		04/08/14 15:47	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 15:47	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**21.5**	mg/L	5.0	1		04/08/14 11:36		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.5**	mg/L	1.0	1		04/10/14 18:46	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-113 **Lab ID: 92195574009** Collected: 04/01/14 12:15 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 18:02	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 18:02	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 18:02	7440-44-0	
Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 18:02	7440-44-0	
Mean Total Organic Carbon	**1.3**	mg/L	1.0	1		04/08/14 18:02	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**48.0**	ug/L	5.0	1	04/11/14 16:13	04/11/14 23:56	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 12:32	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-113 **Lab ID: 92195574009** Collected: 04/01/14 12:15 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/07/14 12:32	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 12:32	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 12:32	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/07/14 12:32	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/07/14 12:32	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/07/14 12:32	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/07/14 12:32	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	64	%	21-110	1	04/04/14 16:00	04/07/14 12:32	4165-60-0	
2-Fluorobiphenyl (S)	67	%	27-110	1	04/04/14 16:00	04/07/14 12:32	321-60-8	
Terphenyl-d14 (S)	84	%	31-107	1	04/04/14 16:00	04/07/14 12:32	1718-51-0	
Phenol-d6 (S)	23	%	10-110	1	04/04/14 16:00	04/07/14 12:32	13127-88-3	
2-Fluorophenol (S)	31	%	12-110	1	04/04/14 16:00	04/07/14 12:32	367-12-4	
2,4,6-Tribromophenol (S)	65	%	27-110	1	04/04/14 16:00	04/07/14 12:32	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 17:05	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 17:05	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 17:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 17:05	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 17:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 17:05	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 17:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 17:05	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-113 **Lab ID: 92195574009** Collected: 04/01/14 12:15 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 17:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/04/14 17:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 17:05	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 17:05	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 17:05	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 17:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 17:05	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 17:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 17:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 17:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 17:05	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 17:05	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 17:05	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 17:05	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 17:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 17:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 17:05	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 17:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 17:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 17:05	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 17:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:05	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 17:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 17:05	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 17:05	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 17:05	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 17:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 17:05	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		04/04/14 17:05	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		04/04/14 17:05	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/04/14 17:05	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Sample: RW-113 **Lab ID: 92195574009** Collected: 04/01/14 12:15 Received: 04/01/14 14:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 16:07	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%	50-150	1		04/08/14 16:07	17060-07-0	
Toluene-d8 (S)	96	%	50-150	1		04/08/14 16:07	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**64.8**	mg/L	5.0	1		04/08/14 11:45		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.9**	mg/L	1.0	1		04/10/14 18:47	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: GWD/1157 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC, GWD
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

METHOD BLANK: 1173364 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	

LABORATORY CONTROL SAMPLE: 1173365

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	50	48.0	96	75-125	
Total Organic Carbon	mg/L	50	48.2	96	75-125	
Total Organic Carbon	mg/L	50	47.7	95	75-125	
Total Organic Carbon	mg/L	50	47.8	96	75-125	
Total Organic Carbon	mg/L	50	48.4	97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173482 1173483

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mean Total Organic Carbon	mg/L	ND	50	50	49.5	49.8	97	98	75-125	1	
Total Organic Carbon	mg/L				48.9	49.7				2	
Total Organic Carbon	mg/L				49.2	49.9				1	
Total Organic Carbon	mg/L				50.0	49.9				0	
Total Organic Carbon	mg/L				49.7	49.7				0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: MPRP/15659 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Filtered
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

METHOD BLANK: 1176527 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	04/11/14 23:16	

LABORATORY CONTROL SAMPLE: 1176528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	500	452	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176529 1176530

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	67.5	500	500	483	475	83	82	75-125	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176531 1176532

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	36.1	500	500	448	449	82	83	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: MSV/26302 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574006

METHOD BLANK: 1170919 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/03/14 13:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/03/14 13:34	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/03/14 13:34	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/03/14 13:34	
1,1-Dichloroethane	ug/L	ND	5.0	04/03/14 13:34	
1,1-Dichloroethene	ug/L	ND	5.0	04/03/14 13:34	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/03/14 13:34	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/03/14 13:34	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
1,2-Dichloroethane	ug/L	ND	5.0	04/03/14 13:34	
1,2-Dichloropropane	ug/L	ND	5.0	04/03/14 13:34	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
2-Butanone (MEK)	ug/L	ND	10.0	04/03/14 13:34	
2-Hexanone	ug/L	ND	10.0	04/03/14 13:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/03/14 13:34	
Acetone	ug/L	ND	25.0	04/03/14 13:34	
Benzene	ug/L	ND	5.0	04/03/14 13:34	
Bromodichloromethane	ug/L	ND	5.0	04/03/14 13:34	
Bromoform	ug/L	ND	5.0	04/03/14 13:34	
Bromomethane	ug/L	ND	10.0	04/03/14 13:34	
Carbon disulfide	ug/L	ND	10.0	04/03/14 13:34	
Carbon tetrachloride	ug/L	ND	5.0	04/03/14 13:34	
Chlorobenzene	ug/L	ND	5.0	04/03/14 13:34	
Chloroethane	ug/L	ND	10.0	04/03/14 13:34	
Chloroform	ug/L	ND	5.0	04/03/14 13:34	
Chloromethane	ug/L	ND	5.0	04/03/14 13:34	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/03/14 13:34	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/03/14 13:34	
Cyclohexane	ug/L	ND	5.0	04/03/14 13:34	
Dibromochloromethane	ug/L	ND	5.0	04/03/14 13:34	
Dichlorodifluoromethane	ug/L	ND	5.0	04/03/14 13:34	
Ethylbenzene	ug/L	ND	5.0	04/03/14 13:34	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/03/14 13:34	
Methyl acetate	ug/L	ND	10.0	04/03/14 13:34	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/03/14 13:34	
Methylcyclohexane	ug/L	ND	10.0	04/03/14 13:34	
Methylene Chloride	ug/L	ND	5.0	04/03/14 13:34	
Styrene	ug/L	ND	5.0	04/03/14 13:34	
Tetrachloroethene	ug/L	ND	5.0	04/03/14 13:34	
Toluene	ug/L	ND	5.0	04/03/14 13:34	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

METHOD BLANK: 1170919 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/03/14 13:34	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/03/14 13:34	
Trichloroethene	ug/L	ND	5.0	04/03/14 13:34	
Trichlorofluoromethane	ug/L	ND	10.0	04/03/14 13:34	
Vinyl acetate	ug/L	ND	10.0	04/03/14 13:34	
Vinyl chloride	ug/L	ND	5.0	04/03/14 13:34	
Xylene (Total)	ug/L	ND	10.0	04/03/14 13:34	
1,2-Dichloroethane-d4 (S)	%	101	70-130	04/03/14 13:34	
4-Bromofluorobenzene (S)	%	100	70-130	04/03/14 13:34	
Toluene-d8 (S)	%	101	70-130	04/03/14 13:34	

LABORATORY CONTROL SAMPLE: 1170920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	52.6	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.2	102	70-130	
1,1,2-Trichloroethane	ug/L	50	50.9	102	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	59.4	119	70-130	
1,1-Dichloroethane	ug/L	50	48.6	97	70-130	
1,1-Dichloroethene	ug/L	50	47.3	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	57.6	115	70-130	
1,2,4-Trichlorobenzene	ug/L	50	50.7	101	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	52.5	105	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	53.5	107	70-130	
1,2-Dichlorobenzene	ug/L	50	50.4	101	70-130	
1,2-Dichloroethane	ug/L	50	50.0	100	70-130	
1,2-Dichloropropane	ug/L	50	49.8	100	70-130	
1,3-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,4-Dichlorobenzene	ug/L	50	49.8	100	70-130	
2-Butanone (MEK)	ug/L	100	96.0	96	70-130	
2-Hexanone	ug/L	100	102	102	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-130	
Acetone	ug/L	100	93.7	94	70-130	
Benzene	ug/L	50	51.4	103	70-130	
Bromodichloromethane	ug/L	50	49.8	100	70-130	
Bromoform	ug/L	50	53.3	107	70-130	
Bromomethane	ug/L	50	46.2	92	70-130	
Carbon disulfide	ug/L	50	47.7	95	70-130	
Carbon tetrachloride	ug/L	50	51.9	104	70-130	
Chlorobenzene	ug/L	50	50.6	101	70-130	
Chloroethane	ug/L	50	41.0	82	70-130	
Chloroform	ug/L	50	46.9	94	70-130	
Chloromethane	ug/L	50	36.3	73	70-130	
cis-1,2-Dichloroethene	ug/L	50	47.7	95	70-130	
cis-1,3-Dichloropropene	ug/L	50	50.0	100	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

LABORATORY CONTROL SAMPLE: 1170920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	54.6	109	70-130	
Dibromochloromethane	ug/L	50	53.2	106	70-130	
Dichlorodifluoromethane	ug/L	50	52.6	105	70-130	
Ethylbenzene	ug/L	50	50.8	102	70-130	
Isopropylbenzene (Cumene)	ug/L	50	53.1	106	70-130	
Methyl acetate	ug/L	50	39.5	79	70-130	
Methyl-tert-butyl ether	ug/L	50	52.4	105	70-130	
Methylcyclohexane	ug/L	50	59.0	118	70-130	
Methylene Chloride	ug/L	50	49.2	98	70-130	
Styrene	ug/L	50	52.4	105	70-130	
Tetrachloroethene	ug/L	50	54.8	110	70-130	
Toluene	ug/L	50	50.3	101	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.6	95	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.3	107	70-130	
Trichloroethene	ug/L	50	49.7	99	70-130	
Trichlorofluoromethane	ug/L	50	53.0	106	70-130	
Vinyl acetate	ug/L	100	109	109	70-130	
Vinyl chloride	ug/L	50	48.2	96	70-130	
Xylene (Total)	ug/L	150	155	103	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171585 1171586

Parameter	Units	92195343005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	66.8	55.6	134	111	70-130	18	M0
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	57.2	46.9	114	94	70-130	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	63.7	49.2	127	98	70-130	26	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	74.5	62.0	149	124	70-130	18	M0
1,1-Dichloroethane	ug/L	ND	50	50	62.3	49.8	125	100	70-130	22	
1,1-Dichloroethene	ug/L	ND	50	50	61.0	49.3	122	99	70-130	21	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	64.3	55.2	129	110	70-130	15	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	60.7	50.6	121	101	70-130	18	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	56.6	48.2	113	96	70-130	16	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	62.3	48.6	125	97	70-130	25	
1,2-Dichlorobenzene	ug/L	ND	50	50	61.0	49.0	122	98	70-130	22	
1,2-Dichloroethane	ug/L	ND	50	50	61.4	50.4	123	101	70-130	20	
1,2-Dichloropropane	ug/L	ND	50	50	63.0	49.4	126	99	70-130	24	
1,3-Dichlorobenzene	ug/L	ND	50	50	59.1	48.0	118	96	70-130	21	
1,4-Dichlorobenzene	ug/L	ND	50	50	59.8	50.0	120	100	70-130	18	
2-Butanone (MEK)	ug/L	ND	100	100	103	89.8	103	90	70-130	14	
2-Hexanone	ug/L	ND	100	100	110	91.8	110	92	70-130	18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	112	90.3	112	90	70-130	21	
Acetone	ug/L	ND	100	100	98.8	85.5	99	85	70-130	14	
Benzene	ug/L	ND	50	50	66.6	51.6	133	103	70-130	26	M0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171585 1171586

Parameter	Units	92195343005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	63.6	49.9	127	100	70-130	24	
Bromoform	ug/L	ND	50	50	61.5	49.7	123	99	70-130	21	
Bromomethane	ug/L	ND	50	50	72.7	55.1	145	110	70-130	27	M0
Carbon disulfide	ug/L	ND	50	50	61.8	49.9	124	100	70-130	21	
Carbon tetrachloride	ug/L	ND	50	50	69.4	54.2	139	108	70-130	25	M0
Chlorobenzene	ug/L	ND	50	50	61.9	49.4	124	99	70-130	23	
Chloroethane	ug/L	ND	50	50	56.7	44.9	113	90	70-130	23	
Chloroform	ug/L	7.0	50	50	69.2	57.6	124	101	70-130	18	
Chloromethane	ug/L	ND	50	50	49.0	37.0	98	74	70-130	28	
cis-1,2-Dichloroethene	ug/L	ND	50	50	60.8	49.0	122	98	70-130	21	
cis-1,3-Dichloropropene	ug/L	ND	50	50	63.1	48.5	126	97	70-130	26	
Cyclohexane	ug/L	ND	50	50	69.7	57.7	139	115	70-130	19	M0
Dibromochloromethane	ug/L	ND	50	50	63.5	49.3	127	99	70-130	25	
Dichlorodifluoromethane	ug/L	ND	50	50	73.4	60.7	147	121	70-130	19	M0
Ethylbenzene	ug/L	ND	50	50	62.0	50.7	124	101	70-130	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	65.9	52.9	132	106	70-130	22	M0
Methyl acetate	ug/L	ND	50	50	41.7	36.1	83	72	70-130	14	
Methyl-tert-butyl ether	ug/L	ND	50	50	62.4	50.5	125	101	70-130	21	
Methylcyclohexane	ug/L	ND	50	50	76.1	58.6	152	117	70-130	26	M0
Methylene Chloride	ug/L	ND	50	50	61.4	49.5	123	99	70-130	21	
Styrene	ug/L	ND	50	50	64.4	50.5	129	101	70-130	24	
Tetrachloroethene	ug/L	ND	50	50	66.2	54.6	132	109	70-130	19	M0
Toluene	ug/L	ND	50	50	64.4	50.0	129	100	70-130	25	
trans-1,2-Dichloroethene	ug/L	ND	50	50	60.0	49.1	120	98	70-130	20	
trans-1,3-Dichloropropene	ug/L	ND	50	50	65.8	51.2	132	102	70-130	25	M0
Trichloroethene	ug/L	ND	50	50	65.1	51.9	130	104	70-130	22	
Trichlorofluoromethane	ug/L	ND	50	50	68.4	55.6	137	111	70-130	21	M0
Vinyl acetate	ug/L	ND	100	100	130	105	130	105	70-130	22	
Vinyl chloride	ug/L	ND	50	50	59.5	50.0	119	100	70-130	17	
1,2-Dichloroethane-d4 (S)	%						97	100	70-130		
4-Bromofluorobenzene (S)	%						101	101	70-130		
Toluene-d8 (S)	%						102	100	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: MSV/26317 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195574005, 92195574007, 92195574008, 92195574009

METHOD BLANK: 1171666 Matrix: Water
Associated Lab Samples: 92195574005, 92195574007, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1-Dichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichloropropane	ug/L	ND	5.0	04/04/14 12:31	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
2-Butanone (MEK)	ug/L	ND	10.0	04/04/14 12:31	
2-Hexanone	ug/L	ND	10.0	04/04/14 12:31	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/04/14 12:31	
Acetone	ug/L	ND	25.0	04/04/14 12:31	
Benzene	ug/L	ND	5.0	04/04/14 12:31	
Bromodichloromethane	ug/L	ND	5.0	04/04/14 12:31	
Bromoform	ug/L	ND	5.0	04/04/14 12:31	
Bromomethane	ug/L	ND	10.0	04/04/14 12:31	
Carbon disulfide	ug/L	ND	10.0	04/04/14 12:31	
Carbon tetrachloride	ug/L	ND	5.0	04/04/14 12:31	
Chlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
Chloroethane	ug/L	ND	10.0	04/04/14 12:31	
Chloroform	ug/L	ND	5.0	04/04/14 12:31	
Chloromethane	ug/L	ND	5.0	04/04/14 12:31	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 12:31	
Cyclohexane	ug/L	ND	5.0	04/04/14 12:31	
Dibromochloromethane	ug/L	ND	5.0	04/04/14 12:31	
Dichlorodifluoromethane	ug/L	ND	5.0	04/04/14 12:31	
Ethylbenzene	ug/L	ND	5.0	04/04/14 12:31	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/04/14 12:31	
Methyl acetate	ug/L	ND	10.0	04/04/14 12:31	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/04/14 12:31	
Methylcyclohexane	ug/L	ND	10.0	04/04/14 12:31	
Methylene Chloride	ug/L	ND	5.0	04/04/14 12:31	
Styrene	ug/L	ND	5.0	04/04/14 12:31	
Tetrachloroethene	ug/L	ND	5.0	04/04/14 12:31	
Toluene	ug/L	ND	5.0	04/04/14 12:31	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

METHOD BLANK: 1171666 Matrix: Water
Associated Lab Samples: 92195574005, 92195574007, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 12:31	
Trichloroethene	ug/L	ND	5.0	04/04/14 12:31	
Trichlorofluoromethane	ug/L	ND	10.0	04/04/14 12:31	
Vinyl acetate	ug/L	ND	10.0	04/04/14 12:31	
Vinyl chloride	ug/L	ND	5.0	04/04/14 12:31	
Xylene (Total)	ug/L	ND	10.0	04/04/14 12:31	
1,2-Dichloroethane-d4 (S)	%	102	70-130	04/04/14 12:31	
4-Bromofluorobenzene (S)	%	99	70-130	04/04/14 12:31	
Toluene-d8 (S)	%	102	70-130	04/04/14 12:31	

LABORATORY CONTROL SAMPLE: 1171667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.8	96	70-130	
1,1,2-Trichloroethane	ug/L	50	51.7	103	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	60.8	122	70-130	
1,1-Dichloroethane	ug/L	50	49.8	100	70-130	
1,1-Dichloroethene	ug/L	50	47.3	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.3	107	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.6	99	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.7	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.2	104	70-130	
1,2-Dichlorobenzene	ug/L	50	50.3	101	70-130	
1,2-Dichloroethane	ug/L	50	51.6	103	70-130	
1,2-Dichloropropane	ug/L	50	51.1	102	70-130	
1,3-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,4-Dichlorobenzene	ug/L	50	51.2	102	70-130	
2-Butanone (MEK)	ug/L	100	95.5	95	70-130	
2-Hexanone	ug/L	100	91.7	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.3	92	70-130	
Acetone	ug/L	100	103	103	70-130	
Benzene	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	50.9	102	70-130	
Bromoform	ug/L	50	50.1	100	70-130	
Bromomethane	ug/L	50	49.9	100	70-130	
Carbon disulfide	ug/L	50	48.0	96	70-130	
Carbon tetrachloride	ug/L	50	55.1	110	70-130	
Chlorobenzene	ug/L	50	51.2	102	70-130	
Chloroethane	ug/L	50	45.7	91	70-130	
Chloroform	ug/L	50	50.2	100	70-130	
Chloromethane	ug/L	50	38.4	77	70-130	
cis-1,2-Dichloroethene	ug/L	50	48.9	98	70-130	
cis-1,3-Dichloropropene	ug/L	50	51.6	103	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

LABORATORY CONTROL SAMPLE: 1171667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	55.0	110	70-130	
Dibromochloromethane	ug/L	50	52.6	105	70-130	
Dichlorodifluoromethane	ug/L	50	58.2	116	70-130	
Ethylbenzene	ug/L	50	50.7	101	70-130	
Isopropylbenzene (Cumene)	ug/L	50	53.1	106	70-130	
Methyl acetate	ug/L	50	35.5	71	70-130	
Methyl-tert-butyl ether	ug/L	50	51.5	103	70-130	
Methylcyclohexane	ug/L	50	60.9	122	70-130	
Methylene Chloride	ug/L	50	51.1	102	70-130	
Styrene	ug/L	50	52.9	106	70-130	
Tetrachloroethene	ug/L	50	52.4	105	70-130	
Toluene	ug/L	50	51.8	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.8	98	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.4	107	70-130	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	53.1	106	70-130	
Vinyl acetate	ug/L	100	109	109	70-130	
Vinyl chloride	ug/L	50	48.3	97	70-130	
Xylene (Total)	ug/L	150	157	104	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172765 1172766

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	59.7	61.9	119	124	70-130	4	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	46.3	48.6	93	97	70-130	5	
1,1,2-Trichloroethane	ug/L	ND	50	50	50.5	51.6	101	103	70-130	2	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	65.7	72.4	131	145	70-130	10	M0
1,1-Dichloroethane	ug/L	ND	50	50	52.0	55.8	104	112	70-130	7	
1,1-Dichloroethene	ug/L	ND	50	50	56.0	59.6	104	111	70-130	6	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	53.1	55.7	106	111	70-130	5	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	49.0	51.7	98	103	70-130	5	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	48.6	48.9	97	98	70-130	1	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	48.8	49.6	98	99	70-130	1	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.2	49.9	98	100	70-130	1	
1,2-Dichloroethane	ug/L	ND	50	50	52.7	56.9	105	114	70-130	8	
1,2-Dichloropropane	ug/L	ND	50	50	49.1	51.1	98	102	70-130	4	
1,3-Dichlorobenzene	ug/L	ND	50	50	47.8	49.2	96	98	70-130	3	
1,4-Dichlorobenzene	ug/L	ND	50	50	48.6	51.0	97	102	70-130	5	
2-Butanone (MEK)	ug/L	ND	100	100	92.1	99.3	92	99	70-130	8	
2-Hexanone	ug/L	ND	100	100	88.6	92.4	89	92	70-130	4	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	92.5	95.7	93	96	70-130	3	
Acetone	ug/L	ND	100	100	84.6	94.3	85	94	70-130	11	
Benzene	ug/L	ND	50	50	53.9	55.3	108	111	70-130	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172765 1172766

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	51.8	53.2	104	106	70-130	3	
Bromoform	ug/L	ND	50	50	49.2	51.4	98	103	70-130	4	
Bromomethane	ug/L	ND	50	50	55.9	60.5	112	121	70-130	8	
Carbon disulfide	ug/L	ND	50	50	53.9	56.4	108	113	70-130	5	
Carbon tetrachloride	ug/L	ND	50	50	58.3	59.9	117	120	70-130	3	
Chlorobenzene	ug/L	ND	50	50	49.9	51.5	100	103	70-130	3	
Chloroethane	ug/L	ND	50	50	50.0	50.9	100	102	70-130	2	
Chloroform	ug/L	39.8	50	50	96.5	98.0	113	116	70-130	2	
Chloromethane	ug/L	ND	50	50	44.6	45.7	89	91	70-130	2	
cis-1,2-Dichloroethene	ug/L	ND	50	50	51.7	55.2	103	110	70-130	6	
cis-1,3-Dichloropropene	ug/L	ND	50	50	51.3	52.9	103	106	70-130	3	
Cyclohexane	ug/L	ND	50	50	61.7	64.3	123	129	70-130	4	
Dibromochloromethane	ug/L	ND	50	50	49.8	51.1	100	102	70-130	3	
Dichlorodifluoromethane	ug/L	ND	50	50	61.3	65.1	123	130	70-130	6	
Ethylbenzene	ug/L	ND	50	50	49.4	51.2	99	102	70-130	4	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	53.5	54.9	107	110	70-130	3	
Methyl acetate	ug/L	ND	50	50	35.4	38.6	71	77	70-130	9	
Methyl-tert-butyl ether	ug/L	ND	50	50	52.7	56.9	105	114	70-130	8	
Methylcyclohexane	ug/L	ND	50	50	62.5	64.0	125	128	70-130	2	
Methylene Chloride	ug/L	ND	50	50	51.6	55.0	103	110	70-130	6	
Styrene	ug/L	ND	50	50	50.6	51.6	101	103	70-130	2	
Tetrachloroethene	ug/L	ND	50	50	55.5	55.1	111	110	70-130	1	
Toluene	ug/L	ND	50	50	52.1	54.3	104	109	70-130	4	
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.3	54.6	105	109	70-130	4	
trans-1,3-Dichloropropene	ug/L	ND	50	50	52.5	55.9	105	112	70-130	6	
Trichloroethene	ug/L	ND	50	50	53.5	54.7	107	109	70-130	2	
Trichlorofluoromethane	ug/L	ND	50	50	61.8	64.3	124	129	70-130	4	
Vinyl acetate	ug/L	ND	100	100	110	119	110	119	70-130	8	
Vinyl chloride	ug/L	ND	50	50	52.8	56.2	106	112	70-130	6	
1,2-Dichloroethane-d4 (S)	%						106	106	70-130		
4-Bromofluorobenzene (S)	%						104	104	70-130		
Toluene-d8 (S)	%						102	101	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: MSV/26316
QC Batch Method: EPA 8260B Mod.
Analysis Method: EPA 8260B Mod.
Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92195574008, 92195574009

METHOD BLANK: 1171636 Matrix: Water
Associated Lab Samples: 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	04/08/14 12:41	
1,2-Dichloroethane-d4 (S)	%	102	50-150	04/08/14 12:41	
Toluene-d8 (S)	%	100	50-150	04/08/14 12:41	

LABORATORY CONTROL SAMPLE: 1171637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	22.2	111	50-150	
1,2-Dichloroethane-d4 (S)	%			100	50-150	
Toluene-d8 (S)	%			101	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171638 1171639

Parameter	Units	92195116002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	22.7	22.1	113	110	50-150	3	
1,2-Dichloroethane-d4 (S)	%						105	105	50-150		
Toluene-d8 (S)	%						94	94	50-150		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171640 1171641

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	2.3	20	20	25.5	26.8	116	123	50-150	5	
1,2-Dichloroethane-d4 (S)	%						101	103	50-150		
Toluene-d8 (S)	%						95	95	50-150		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: OEXT/26857 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92195574008, 92195574009

METHOD BLANK: 1171964 Matrix: Water
Associated Lab Samples: 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	04/07/14 16:26	
2,4,5-Trichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4,6-Trichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dimethylphenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dinitrophenol	ug/L	ND	50.0	04/07/14 16:26	
2,4-Dinitrotoluene	ug/L	ND	10.0	04/07/14 16:26	
2,6-Dinitrotoluene	ug/L	ND	10.0	04/07/14 16:26	
2-Chloronaphthalene	ug/L	ND	10.0	04/07/14 16:26	
2-Chlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2-Methylnaphthalene	ug/L	ND	10.0	04/07/14 16:26	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	04/07/14 16:26	
2-Nitroaniline	ug/L	ND	50.0	04/07/14 16:26	
2-Nitrophenol	ug/L	ND	10.0	04/07/14 16:26	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	04/07/14 16:26	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	04/07/14 16:26	
3-Nitroaniline	ug/L	ND	50.0	04/07/14 16:26	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	04/07/14 16:26	
4-Bromophenylphenyl ether	ug/L	ND	10.0	04/07/14 16:26	
4-Chloro-3-methylphenol	ug/L	ND	20.0	04/07/14 16:26	
4-Chloroaniline	ug/L	ND	20.0	04/07/14 16:26	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	04/07/14 16:26	
4-Nitroaniline	ug/L	ND	20.0	04/07/14 16:26	
4-Nitrophenol	ug/L	ND	50.0	04/07/14 16:26	
Acenaphthene	ug/L	ND	10.0	04/07/14 16:26	
Acenaphthylene	ug/L	ND	10.0	04/07/14 16:26	
Anthracene	ug/L	ND	10.0	04/07/14 16:26	
Atrazine	ug/L	ND	20.0	04/07/14 16:26	
Benzaldehyde	ug/L	ND	20.0	04/07/14 16:26	
Benzo(a)anthracene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(a)pyrene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(b)fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(g,h,i)perylene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(k)fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Biphenyl (Diphenyl)	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroisopropyl) ether	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	04/07/14 16:26	
Butylbenzylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Caprolactam	ug/L	ND	10.0	04/07/14 16:26	
Carbazole	ug/L	ND	10.0	04/07/14 16:26	
Chrysene	ug/L	ND	10.0	04/07/14 16:26	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

METHOD BLANK: 1171964 Matrix: Water
Associated Lab Samples: 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Di-n-butylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Di-n-octylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Dibenz(a,h)anthracene	ug/L	ND	10.0	04/07/14 16:26	
Dibenzofuran	ug/L	ND	10.0	04/07/14 16:26	
Diethylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Dimethylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Diphenyl ether (Phenyl ether)	ug/L	ND	20.0	04/07/14 16:26	
Fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Fluorene	ug/L	ND	10.0	04/07/14 16:26	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	04/07/14 16:26	
Hexachlorobenzene	ug/L	ND	10.0	04/07/14 16:26	
Hexachlorocyclopentadiene	ug/L	ND	10.0	04/07/14 16:26	
Hexachloroethane	ug/L	ND	10.0	04/07/14 16:26	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	04/07/14 16:26	
Isophorone	ug/L	ND	10.0	04/07/14 16:26	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	04/07/14 16:26	
N-Nitrosodiphenylamine	ug/L	ND	10.0	04/07/14 16:26	
Naphthalene	ug/L	ND	10.0	04/07/14 16:26	
Nitrobenzene	ug/L	ND	10.0	04/07/14 16:26	
Pentachlorophenol	ug/L	ND	25.0	04/07/14 16:26	
Phenanthrene	ug/L	ND	10.0	04/07/14 16:26	
Phenol	ug/L	ND	10.0	04/07/14 16:26	
Pyrene	ug/L	ND	10.0	04/07/14 16:26	
2,4,6-Tribromophenol (S)	%	66	27-110	04/07/14 16:26	
2-Fluorobiphenyl (S)	%	77	27-110	04/07/14 16:26	
2-Fluorophenol (S)	%	46	12-110	04/07/14 16:26	
Nitrobenzene-d5 (S)	%	79	21-110	04/07/14 16:26	
Phenol-d6 (S)	%	34	10-110	04/07/14 16:26	
Terphenyl-d14 (S)	%	102	31-107	04/07/14 16:26	

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	48.3	97	17-115	
2,4,5-Trichlorophenol	ug/L	50	47.9	96	23-116	
2,4,6-Trichlorophenol	ug/L	50	45.3	91	21-114	
2,4-Dichlorophenol	ug/L	50	35.1	70	22-120	
2,4-Dimethylphenol	ug/L	50	33.5	67	15-109	
2,4-Dinitrophenol	ug/L	250	282	113	10-103	L0
2,4-Dinitrotoluene	ug/L	50	51.5	103	24-119	
2,6-Dinitrotoluene	ug/L	50	50.4	101	25-116	
2-Chloronaphthalene	ug/L	50	49.5	99	18-110	
2-Chlorophenol	ug/L	50	43.0	86	10-104	
2-Methylnaphthalene	ug/L	50	33.9	68	16-110	
2-Methylphenol(o-Cresol)	ug/L	50	40.3	81	13-110	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/L	100	108	108	20-117	
2-Nitrophenol	ug/L	50	35.4	71	16-108	
3&4-Methylphenol(m&p Cresol)	ug/L	50	38.6	77	14-110	
3,3'-Dichlorobenzidine	ug/L	250	83.8	34	13-131	
3-Nitroaniline	ug/L	100	100	100	15-117	
4,6-Dinitro-2-methylphenol	ug/L	100	104	104	13-119	
4-Bromophenylphenyl ether	ug/L	50	39.4	79	23-120	
4-Chloro-3-methylphenol	ug/L	100	75.7	76	21-119	
4-Chloroaniline	ug/L	100	68.9	69	10-122	
4-Chlorophenylphenyl ether	ug/L	50	46.6	93	22-112	
4-Nitroaniline	ug/L	100	105	105	14-118	
4-Nitrophenol	ug/L	250	122	49	10-110	
Acenaphthene	ug/L	50	41.9	84	20-105	
Acenaphthylene	ug/L	50	44.5	89	23-106	
Anthracene	ug/L	50	43.5	87	25-120	
Atrazine	ug/L	50	40.4	81	17-115	
Benzaldehyde	ug/L	50	ND	0	17-115	L2
Benzo(a)anthracene	ug/L	50	46.0	92	21-128	
Benzo(a)pyrene	ug/L	50	48.6	97	25-116	
Benzo(b)fluoranthene	ug/L	50	49.2	98	23-117	
Benzo(g,h,i)perylene	ug/L	50	51.8	104	17-128	
Benzo(k)fluoranthene	ug/L	50	46.0	92	25-127	
Biphenyl (Diphenyl)	ug/L	50	43.7	87	17-115	
bis(2-Chloroethoxy)methane	ug/L	50	46.0	92	19-107	
bis(2-Chloroethyl) ether	ug/L	50	44.5	89	10-108	
bis(2-Chloroisopropyl) ether	ug/L	50	42.3	85	10-108	
bis(2-Ethylhexyl)phthalate	ug/L	50	47.0	94	16-123	
Butylbenzylphthalate	ug/L	50	46.0	92	20-118	
Caprolactam	ug/L	50	13.4	27	17-115	
Carbazole	ug/L	50	45.3	91	17-115	
Chrysene	ug/L	50	47.0	94	24-125	
Di-n-butylphthalate	ug/L	50	42.7	85	23-115	
Di-n-octylphthalate	ug/L	50	46.1	92	20-115	
Dibenz(a,h)anthracene	ug/L	50	51.0	102	18-131	
Dibenzofuran	ug/L	50	48.1	96	23-106	
Diethylphthalate	ug/L	50	45.3	91	24-115	
Dimethylphthalate	ug/L	50	45.1	90	22-113	
Diphenyl ether (Phenyl ether)	ug/L	50	46.4	93	17-115	
Fluoranthene	ug/L	50	44.9	90	24-125	
Fluorene	ug/L	50	45.5	91	24-114	
Hexachloro-1,3-butadiene	ug/L	50	30.2	60	10-110	
Hexachlorobenzene	ug/L	50	39.2	78	22-127	
Hexachlorocyclopentadiene	ug/L	50	45.7	91	10-110	
Hexachloroethane	ug/L	50	45.2	90	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	50	52.9	106	18-130	
Isophorone	ug/L	50	40.1	80	23-114	
N-Nitroso-di-n-propylamine	ug/L	50	46.6	93	21-114	
N-Nitrosodiphenylamine	ug/L	50	33.7	67	24-123	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	50	33.2	66	14-110	
Nitrobenzene	ug/L	50	38.5	77	16-106	
Pentachlorophenol	ug/L	250	83.3	33	10-123	
Phenanthrene	ug/L	50	42.8	86	25-119	
Phenol	ug/L	50	23.4	47	10-110	
Pyrene	ug/L	50	49.2	98	22-127	
2,4,6-Tribromophenol (S)	%			80	27-110	
2-Fluorobiphenyl (S)	%			89	27-110	
2-Fluorophenol (S)	%			60	12-110	
Nitrobenzene-d5 (S)	%			73	21-110	
Phenol-d6 (S)	%			45	10-110	
Terphenyl-d14 (S)	%			98	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171966 1171967

Parameter	Units	92195993004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	ND	100	100	91.2	83.7	91	84	50-150	9	
2,4,5-Trichlorophenol	ug/L	ND	100	100	94.4	102	94	102	19-105	8	
2,4,6-Trichlorophenol	ug/L	ND	100	100	87.3	91.7	87	92	13-108	5	
2,4-Dichlorophenol	ug/L	ND	100	100	68.4	80.1	68	80	29-111	16	
2,4-Dimethylphenol	ug/L	ND	100	100	64.1	68.6	64	69	21-103	7	
2,4-Dinitrophenol	ug/L	ND	500	500	506	445	101	89	10-109	13	
2,4-Dinitrotoluene	ug/L	ND	100	100	124	115	124	115	27-104	7	M1
2,6-Dinitrotoluene	ug/L	ND	100	100	117	121	117	121	28-101	3	M1
2-Chloronaphthalene	ug/L	ND	100	100	93.1	90.7	93	91	14-102	3	
2-Chlorophenol	ug/L	ND	100	100	101	116	101	116	16-110	14	M1
2-Methylnaphthalene	ug/L	ND	100	100	64.7	72.7	65	73	13-110	12	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	91.5	118	92	118	19-110	25	M1
2-Nitroaniline	ug/L	ND	200	200	223	229	112	115	26-103	3	M1
2-Nitrophenol	ug/L	ND	100	100	76.4	78.5	76	78	20-110	3	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	80.7	110	81	110	20-110	31	M1
3,3'-Dichlorobenzidine	ug/L	ND	500	500	228	242	46	48	25-112	6	
3-Nitroaniline	ug/L	ND	200	200	231	228	116	114	29-110	1	M1
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	185	192	92	96	10-117	4	
4-Bromophenylphenyl ether	ug/L	ND	100	100	71.5	79.7	71	80	20-105	11	
4-Chloro-3-methylphenol	ug/L	ND	200	200	140	183	70	92	22-110	27	
4-Chloroaniline	ug/L	ND	200	200	127	162	64	81	20-100	24	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	87.6	92.0	88	92	19-102	5	
4-Nitroaniline	ug/L	ND	200	200	292	265	146	133	29-110	10	M1
4-Nitrophenol	ug/L	ND	500	500	434	434	87	87	10-110	0	
Acenaphthene	ug/L	ND	100	100	82.7	85.8	83	86	17-100	4	
Acenaphthylene	ug/L	ND	100	100	86.7	90.6	87	91	21-100	4	
Anthracene	ug/L	ND	100	100	87.0	89.8	87	90	24-109	3	
Atrazine	ug/L	ND	100	100	113	115	113	115	50-150	2	
Benzaldehyde	ug/L	ND	100	100	ND	ND	3	3	50-150		M0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171966 1171967

Parameter	Units	92195993004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzo(a)anthracene	ug/L	ND	100	100	89.0	91.2	89	91	22-117	2	
Benzo(a)pyrene	ug/L	ND	100	100	98.0	100	98	100	23-104	2	
Benzo(b)fluoranthene	ug/L	ND	100	100	108	103	108	103	23-103	4	M1
Benzo(g,h,i)perylene	ug/L	ND	100	100	90.1	94.1	90	94	18-111	4	
Benzo(k)fluoranthene	ug/L	ND	100	100	80.8	86.4	81	86	22-113	7	
Biphenyl (Diphenyl)	ug/L	ND	100	100	85.4	83.9	85	84	50-150	2	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	81.4	83.5	81	84	22-110	3	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	89.1	101	89	101	16-110	13	
bis(2-Chloroisopropyl) ether	ug/L	ND	100	100	88.9	95.1	89	95	14-110	7	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	74.6	68.9	75	69	23-102	8	
Butylbenzylphthalate	ug/L	ND	100	100	85.0	81.6	85	82	25-110	4	
Caprolactam	ug/L	ND	100	100	46.7	73.0	47	73	50-150	44	M1,R1
Carbazole	ug/L	ND	100	100	114	120	114	120	50-150	5	
Chrysene	ug/L	ND	100	100	90.6	93.6	91	94	23-115	3	
Di-n-butylphthalate	ug/L	ND	100	100	98.4	98.9	98	99	26-110	0	
Di-n-octylphthalate	ug/L	ND	100	100	86.0	83.3	86	83	22-110	3	
Dibenz(a,h)anthracene	ug/L	ND	100	100	93.3	97.2	93	97	21-112	4	
Dibenzofuran	ug/L	ND	100	100	94.0	99.0	94	99	19-102	5	
Diethylphthalate	ug/L	ND	100	100	94.8	93.0	95	93	29-110	2	
Dimethylphthalate	ug/L	ND	100	100	89.6	92.2	90	92	27-110	3	
Diphenyl ether (Phenyl ether)	ug/L	ND	100	100	84.5	85.1	85	85	50-150	1	
Fluoranthene	ug/L	ND	100	100	117	123	117	123	23-112	5	M1
Fluorene	ug/L	ND	100	100	95.8	96.8	96	97	22-104	1	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	74.0	68.0	74	68	10-110	8	
Hexachlorobenzene	ug/L	ND	100	100	78.3	85.9	78	86	21-116	9	
Hexachlorocyclopentadiene	ug/L	ND	100	100	91.1	76.5	91	76	10-110	17	
Hexachloroethane	ug/L	ND	100	100	93.5	98.3	93	98	10-110	5	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	96.4	100	96	100	20-113	4	
Isophorone	ug/L	ND	100	100	68.9	74.6	69	75	50-150	8	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	83.4	102	83	102	21-105	20	
N-Nitrosodiphenylamine	ug/L	ND	100	100	63.7	70.2	64	70	23-107	10	
Naphthalene	ug/L	ND	100	100	68.4	69.3	68	69	10-110	1	
Nitrobenzene	ug/L	ND	100	100	65.7	65.2	66	65	20-110	1	
Pentachlorophenol	ug/L	ND	500	500	198	200	40	40	10-118	1	
Phenanthrene	ug/L	ND	100	100	81.7	85.0	82	85	24-106	4	
Phenol	ug/L	ND	100	100	63.4	85.4	63	85	12-110	30	
Pyrene	ug/L	ND	100	100	70.5	67.3	71	67	24-114	5	
2,4,6-Tribromophenol (S)	%						95	101	27-110		
2-Fluorobiphenyl (S)	%						86	83	27-110		
2-Fluorophenol (S)	%						70	79	12-110		
Nitrobenzene-d5 (S)	%						67	67	21-110		
Phenol-d6 (S)	%						57	79	10-110		
Terphenyl-d14 (S)	%						70	67	31-107		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: WET/30400 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

METHOD BLANK: 1173393 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	04/08/14 10:46	

LABORATORY CONTROL SAMPLE: 1173394

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.0	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173395 1173396

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	8.7	50	50	58.5	58.4	100	99	75-125	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173397 1173398

Parameter	Units	92195574009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	64.8	50	50	115	112	99	94	75-125	2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

QC Batch: WETA/18648 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

METHOD BLANK: 1175975 Matrix: Water
Associated Lab Samples: 92195574001, 92195574002, 92195574003, 92195574004, 92195574005, 92195574008, 92195574009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	04/10/14 18:32	

LABORATORY CONTROL SAMPLE: 1175976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.9	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1175977 1175978

Parameter	Units	92195508005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	30.8	20	20	55.5	56.0	123	126	75-125	1	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1175979 1175980

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	1.2	20	20	22.8	22.7	108	107	75-125	1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALIFIERS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

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.

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
PASI-C	Pace Analytical Services - Charlotte
PASI-G	Pace Analytical Services - Greenwood

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195574

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92195574001	**MW-138**	EPA 9060A	GWD/1157		
92195574002	**RW-139**	EPA 9060A	GWD/1157		
92195574003	**RW-136**	EPA 9060A	GWD/1157		
92195574004	**RW-137**	EPA 9060A	GWD/1157		
92195574005	**MW-130**	EPA 9060A	GWD/1157		
92195574008	**MW-112**	EPA 9060A	GWD/1157		
92195574009	**RW-113**	EPA 9060A	GWD/1157		
92195574001	**MW-138**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574002	**RW-139**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574003	**RW-136**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574004	**RW-137**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574005	**MW-130**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574008	**MW-112**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574009	**RW-113**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92195574008	**MW-112**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195574009	**RW-113**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195574001	**MW-138**	EPA 8260	MSV/26302		
92195574002	**RW-139**	EPA 8260	MSV/26302		
92195574003	**RW-136**	EPA 8260	MSV/26302		
92195574004	**RW-137**	EPA 8260	MSV/26302		
92195574005	**MW-130**	EPA 8260	MSV/26317		
92195574006	**MW-301**	EPA 8260	MSV/26302		
92195574007	**RES PUMP RW-131**	EPA 8260	MSV/26317		
92195574008	**MW-112**	EPA 8260	MSV/26317		
92195574009	**RW-113**	EPA 8260	MSV/26317		
92195574008	**MW-112**	EPA 8260B Mod.	MSV/26316		
92195574009	**RW-113**	EPA 8260B Mod.	MSV/26316		
92195574001	**MW-138**	SM 2320B	WET/30400		
92195574002	**RW-139**	SM 2320B	WET/30400		
92195574003	**RW-136**	SM 2320B	WET/30400		
92195574004	**RW-137**	SM 2320B	WET/30400		
92195574005	**MW-130**	SM 2320B	WET/30400		
92195574008	**MW-112**	SM 2320B	WET/30400		
92195574009	**RW-113**	SM 2320B	WET/30400		
92195574001	**MW-138**	SM 4500-Cl-E	WETA/18648		
92195574002	**RW-139**	SM 4500-Cl-E	WETA/18648		
92195574003	**RW-136**	SM 4500-Cl-E	WETA/18648		
92195574004	**RW-137**	SM 4500-Cl-E	WETA/18648		
92195574005	**MW-130**	SM 4500-Cl-E	WETA/18648		
92195574008	**MW-112**	SM 4500-Cl-E	WETA/18648		
92195574009	**RW-113**	SM 4500-Cl-E	WETA/18648		

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: December 16, 2013 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.13**	Issuing Authority: Pace Huntersville Quality Office

Client Name: AECOM

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

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

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

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

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

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

Temp should be above freezing to 6°C

Comments:

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: CJD 4/1/14

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
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: Date: 4/1/14

SRF Review: Date: 4/2/14

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

WO# : 92195574

92195574

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: 60280417
Chain of Custody Number (1):
LIMS Number:

Project Name / Location: Auriga, Spartanburg SC

Client Name: Celanese

Collected by: Justin Butler / Randy Morgan

Project Manager: Bryon Dahlgren

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCS 8260	TOC	Alkalinity	Chloride	Dissolved Manganese	1,4 Dioxane (8260 SIM)	Dow Therm A						COMMENTS	Cooler ID
MW-138	31-Mar-2014	1145		X			X	X	X	X	X								Dissolved Manganese Field Filtered	001
RW-139	31-Mar-2014	1405		X			X	X	X	X	X									002
MW-136	31-Mar-2014	1545		X			X	X	X	X	X									003
RW-137	31-Mar-2014	1710		X			X	X	X	X	X									004
MW-301	31-Mar-2014	1800		X			X													010
MW-112	1-APR-2014	1055		X			X	X	X	X	X	X	X							007
Residual Pump RW-131	1-APR-2014	1070		X			X													014
MW-130	1-Apr-2014	1200		X			X	X	X	X	X									015
MW-130-MS	1-Apr-2014	1200		X			X	X	X	X	X									
MW-130-MSD	1-Apr-2014	1200		X			X	X	X	X	X									
RW-113	1-APR-2014	1215		X			X	X	X	X	X	X	X							009

Sample Analysis Requested

Quality Assurance Samples

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.		4/1/14	1300		4/1/14	1305
2.		4/1/14	1455		4/1/14	1455
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:	XX	Shipped:	
Method of Shipment:	Pace Courier	Airbill #:	
Analytical Lab:	Pace Analytical	Location:	Huntersville, NC
Lab Recipient:		Date:	Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

April 17, 2014

Bryon Dahlgren
AECOM
10 Patewood Drive, Bldg 6
Suite 500
Greenville, SC 29615

RE: Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Dear Bryon Dahlgren:
Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Aynsley Zollinger, AECOM

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

CERTIFICATIONS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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

Greenwood Certification IDs
816 Durst Avenue East, Greenwood, SC 29649
South Carolina Laboratory ID #: 24562
North Carolina Divison of Water Resources Certification number 25
Florida Certification number E87633
Virginia VELAP ID: 460250
Asbestos NVLAP accreditation: 101410-0

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92196006001	**MW-120**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006002	**RW-121**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006003	**RW-129**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006005	**MW-128**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006006	**RW-133**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006007	**RW-403**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006008	**RW-123**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006009	**MW-126**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006010	**MW-122**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006011	**RW-127**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006012	**MW-124**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92196006013	**MW-303**	EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C

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ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-120 **Lab ID: 92196006001** Collected: 04/02/14 15:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 00:19	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 00:19	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 00:19	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 00:19	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 00:19	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**36.1**	ug/L	5.0	1	04/11/14 16:13	04/12/14 00:30	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 22:15	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-120 **Lab ID: 92196006001** Collected: 04/02/14 15:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/07/14 13:15	04/11/14 22:15	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15		
Naphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 22:15	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 22:15	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 22:15	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 22:15	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/07/14 13:15	04/11/14 22:15	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	85-01-8	
Phenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 22:15	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	49	%	21-110	1	04/07/14 13:15	04/11/14 22:15	4165-60-0	
2-Fluorobiphenyl (S)	45	%	27-110	1	04/07/14 13:15	04/11/14 22:15	321-60-8	
Terphenyl-d14 (S)	63	%	31-107	1	04/07/14 13:15	04/11/14 22:15	1718-51-0	
Phenol-d6 (S)	17	%	10-110	1	04/07/14 13:15	04/11/14 22:15	13127-88-3	
2-Fluorophenol (S)	25	%	12-110	1	04/07/14 13:15	04/11/14 22:15	367-12-4	
2,4,6-Tribromophenol (S)	73	%	27-110	1	04/07/14 13:15	04/11/14 22:15	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 03:29	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 03:29	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 03:29	75-27-4	M1
Bromoform	ND	ug/L	5.0	1		04/08/14 03:29	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 03:29	74-83-9	R1
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 03:29	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 03:29	75-15-0	M1
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 03:29	56-23-5	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-120 **Lab ID: 92196006001** Collected: 04/02/14 15:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 03:29	75-00-3	
Chloroform	**149**	ug/L	5.0	1		04/08/14 03:29	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 03:29	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 03:29	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 03:29	96-12-8	M1
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 03:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 03:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 03:29	75-71-8	M1
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 03:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:29	10061-01-5	M1
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:29	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 03:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 03:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 03:29	98-82-8	M1
Methyl acetate	ND	ug/L	10.0	1		04/08/14 03:29	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 03:29	108-87-2	M1
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 03:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 03:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 03:29	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/08/14 03:29	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 03:29	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 03:29	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 03:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:29	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:29	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 03:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 03:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 03:29	76-13-1	M1
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 03:29	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 03:29	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 03:29	1330-20-7	MS
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		04/08/14 03:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/08/14 03:29	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 03:29	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-120 **Lab ID: 92196006001** Collected: 04/02/14 15:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**2.3**	ug/L	2.0	1		04/08/14 18:53	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	50-150	1		04/08/14 18:53	17060-07-0	
Toluene-d8 (S)	96	%	50-150	1		04/08/14 18:53	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**14.8**	mg/L	5.0	1		04/15/14 10:50		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.8**	mg/L	1.0	1		04/16/14 17:12	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-121 **Lab ID: 92196006002** Collected: 04/02/14 17:10 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**2.7**	mg/L	1.0	1		04/09/14 01:50	7440-44-0	
Total Organic Carbon	**2.5**	mg/L	1.0	1		04/09/14 01:50	7440-44-0	
Total Organic Carbon	**2.5**	mg/L	1.0	1		04/09/14 01:50	7440-44-0	
Total Organic Carbon	**2.5**	mg/L	1.0	1		04/09/14 01:50	7440-44-0	
Mean Total Organic Carbon	**2.5**	mg/L	1.0	1		04/09/14 01:50	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	ND	ug/L	5.0	1	04/11/14 16:13	04/12/14 00:39	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 23:56	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-121 **Lab ID: 92196006002** Collected: 04/02/14 17:10 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/07/14 13:15	04/11/14 23:56	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56		
Naphthalene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 23:56	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 23:56	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/07/14 13:15	04/11/14 23:56	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/07/14 13:15	04/11/14 23:56	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/07/14 13:15	04/11/14 23:56	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	85-01-8	
Phenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/07/14 13:15	04/11/14 23:56	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	66	%	21-110	1	04/07/14 13:15	04/11/14 23:56	4165-60-0	
2-Fluorobiphenyl (S)	62	%	27-110	1	04/07/14 13:15	04/11/14 23:56	321-60-8	
Terphenyl-d14 (S)	69	%	31-107	1	04/07/14 13:15	04/11/14 23:56	1718-51-0	
Phenol-d6 (S)	26	%	10-110	1	04/07/14 13:15	04/11/14 23:56	13127-88-3	
2-Fluorophenol (S)	34	%	12-110	1	04/07/14 13:15	04/11/14 23:56	367-12-4	
2,4,6-Tribromophenol (S)	85	%	27-110	1	04/07/14 13:15	04/11/14 23:56	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 03:45	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 03:45	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 03:45	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 03:45	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 03:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 03:45	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 03:45	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 03:45	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-121 **Lab ID: 92196006002** Collected: 04/02/14 17:10 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 03:45	75-00-3	
Chloroform	**115**	ug/L	5.0	1		04/08/14 03:45	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 03:45	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 03:45	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 03:45	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 03:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 03:45	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 03:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 03:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:45	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 03:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 03:45	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 03:45	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 03:45	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 03:45	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 03:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 03:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 03:45	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/08/14 03:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 03:45	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 03:45	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 03:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:45	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 03:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 03:45	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 03:45	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 03:45	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 03:45	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 03:45	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		04/08/14 03:45	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		04/08/14 03:45	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		04/08/14 03:45	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-121 **Lab ID: 92196006002** Collected: 04/02/14 17:10 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**3.4**	ug/L	2.0	1		04/08/14 19:14	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	50-150	1		04/08/14 19:14	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 19:14	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**68.8**	mg/L	5.0	1		04/15/14 12:41		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.6**	mg/L	1.0	1		04/16/14 17:14	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-129 **Lab ID: 92196006003** Collected: 04/02/14 15:30 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.0**	mg/L	1.0	1		04/09/14 02:18	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:18	7440-44-0	
Total Organic Carbon	**1.2**	mg/L	1.0	1		04/09/14 02:18	7440-44-0	
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/09/14 02:18	7440-44-0	
Mean Total Organic Carbon	**1.1**	mg/L	1.0	1		04/09/14 02:18	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**161**	ug/L	5.0	1	04/11/14 16:13	04/12/14 00:42	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 04:01	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 04:01	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 04:01	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 04:01	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 04:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 04:01	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 04:01	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 04:01	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 04:01	75-00-3	
Chloroform	**575**	ug/L	25.0	5		04/09/14 13:39	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 04:01	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 04:01	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 04:01	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 04:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 04:01	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 04:01	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 04:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:01	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 04:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 04:01	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 04:01	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 04:01	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 04:01	108-87-2	
Methylene Chloride	**14.1**	ug/L	5.0	1		04/08/14 04:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 04:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 04:01	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-129 **Lab ID: 92196006003** Collected: 04/02/14 15:30 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 04:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 04:01	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 04:01	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 04:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:01	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:01	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 04:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 04:01	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 04:01	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 04:01	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 04:01	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 04:01	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/08/14 04:01	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		04/08/14 04:01	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		04/08/14 04:01	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**242**	mg/L	5.0	1		04/15/14 12:51		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**13.2**	mg/L	1.0	1		04/16/14 17:15	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-128 **Lab ID: 92196006005** Collected: 04/02/14 17:23 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:46	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:46	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:46	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:46	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 02:46	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**20.8**	ug/L	5.0	1	04/11/14 16:13	04/12/14 00:45	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 04:16	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 04:16	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 04:16	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 04:16	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 04:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 04:16	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 04:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 04:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 04:16	75-00-3	
Chloroform	**7.7**	ug/L	5.0	1		04/08/14 04:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 04:16	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 04:16	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 04:16	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 04:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 04:16	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 04:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 04:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 04:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 04:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 04:16	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 04:16	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 04:16	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 04:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 04:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 04:16	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-128 **Lab ID: 92196006005** Collected: 04/02/14 17:23 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 04:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 04:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 04:16	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 04:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:16	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 04:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 04:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 04:16	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 04:16	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 04:16	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 04:16	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/08/14 04:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		04/08/14 04:16	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 04:16	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		04/15/14 13:23		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.5**	mg/L	1.0	1		04/16/14 17:17	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-133 **Lab ID: 92196006006** Collected: 04/02/14 17:45 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/09/14 04:51	7440-44-0	
Total Organic Carbon	**1.0**	mg/L	1.0	1		04/09/14 04:51	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 04:51	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 04:51	7440-44-0	
Mean Total Organic Carbon	**1.0**	mg/L	1.0	1		04/09/14 04:51	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**140**	ug/L	5.0	1	04/11/14 16:13	04/12/14 00:49	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 04:32	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 04:32	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 04:32	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 04:32	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 04:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 04:32	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 04:32	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 04:32	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 04:32	75-00-3	
Chloroform	**49.2**	ug/L	5.0	1		04/08/14 04:32	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 04:32	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 04:32	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 04:32	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 04:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 04:32	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 04:32	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 04:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:32	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 04:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 04:32	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 04:32	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 04:32	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 04:32	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 04:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 04:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 04:32	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-133 **Lab ID: 92196006006** Collected: 04/02/14 17:45 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 04:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 04:32	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 04:32	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 04:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:32	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 04:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 04:32	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 04:32	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 04:32	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 04:32	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 04:32	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/08/14 04:32	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		04/08/14 04:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		04/08/14 04:32	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**127**	mg/L	5.0	1		04/15/14 13:53		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.9**	mg/L	1.0	1		04/16/14 17:18	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-403 **Lab ID: 92196006007** Collected: 04/03/14 08:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/09/14 06:21	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:21	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:21	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:21	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:21	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**12.8**	ug/L	5.0	1	04/11/14 16:13	04/12/14 01:01	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 22:49	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 22:49	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 22:49	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 22:49	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 22:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 22:49	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 22:49	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 22:49	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 22:49	75-00-3	
Chloroform	**22.4**	ug/L	5.0	1		04/08/14 22:49	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 22:49	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 22:49	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 22:49	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 22:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 22:49	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 22:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 22:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 22:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 22:49	75-35-4	
cis-1,2-Dichloroethene	**7.4**	ug/L	5.0	1		04/08/14 22:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 22:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 22:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 22:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 22:49	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 22:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 22:49	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 22:49	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 22:49	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 22:49	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 22:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 22:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 22:49	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-403 **Lab ID: 92196006007** Collected: 04/03/14 08:00 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 22:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 22:49	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 22:49	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 22:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 22:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 22:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 22:49	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 22:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 22:49	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 22:49	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 22:49	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 22:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 22:49	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/08/14 22:49	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		04/08/14 22:49	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 22:49	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**85.8**	mg/L	5.0	1		04/15/14 14:04		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.7**	mg/L	1.0	1		04/16/14 17:18	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-123 **Lab ID: 92196006008** Collected: 04/03/14 08:43 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:49	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:49	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:49	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:49	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 06:49	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**12.9**	ug/L	5.0	1	04/11/14 16:14	04/12/14 01:13	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 23:05	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 23:05	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 23:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 23:05	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 23:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 23:05	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 23:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 23:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 23:05	75-00-3	
Chloroform	**23.5**	ug/L	5.0	1		04/08/14 23:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 23:05	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 23:05	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 23:05	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 23:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 23:05	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 23:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 23:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 23:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 23:05	75-35-4	
cis-1,2-Dichloroethene	**7.9**	ug/L	5.0	1		04/08/14 23:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 23:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 23:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 23:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 23:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 23:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 23:05	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 23:05	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 23:05	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 23:05	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 23:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 23:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 23:05	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-123 **Lab ID: 92196006008** Collected: 04/03/14 08:43 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 23:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 23:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 23:05	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 23:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 23:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 23:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 23:05	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 23:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 23:05	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 23:05	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 23:05	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 23:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 23:05	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/08/14 23:05	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		04/08/14 23:05	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 23:05	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**85.5**	mg/L	5.0	1		04/15/14 14:14		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.8**	mg/L	1.0	1		04/16/14 17:19	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-126 **Lab ID: 92196006009** Collected: 04/03/14 08:55 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:17	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:17	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:17	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:17	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:17	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**182**	ug/L	5.0	1	04/11/14 16:14	04/12/14 01:22	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/09/14 02:44	67-64-1	
Benzene	ND	ug/L	5.0	1		04/09/14 02:44	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/09/14 02:44	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/09/14 02:44	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/09/14 02:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/09/14 02:44	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/09/14 02:44	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/09/14 02:44	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/09/14 02:44	75-00-3	
Chloroform	**2000**	ug/L	100	20		04/10/14 03:58	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/09/14 02:44	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/09/14 02:44	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/09/14 02:44	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/09/14 02:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/09/14 02:44	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/09/14 02:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/09/14 02:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/09/14 02:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/09/14 02:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 02:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 02:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/09/14 02:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 02:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 02:44	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/09/14 02:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/09/14 02:44	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/09/14 02:44	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/09/14 02:44	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/09/14 02:44	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/09/14 02:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/09/14 02:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/09/14 02:44	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-126 **Lab ID: 92196006009** Collected: 04/03/14 08:55 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/09/14 02:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/09/14 02:44	79-34-5	
Tetrachloroethene	**5.4**	ug/L	5.0	1		04/09/14 02:44	127-18-4	
Toluene	ND	ug/L	5.0	1		04/09/14 02:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/09/14 02:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/09/14 02:44	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/09/14 02:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/09/14 02:44	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/09/14 02:44	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/09/14 02:44	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/09/14 02:44	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/09/14 02:44	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/09/14 02:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		04/09/14 02:44	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		04/09/14 02:44	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**7.9**	mg/L	5.0	1		04/15/14 14:24		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**13.9**	mg/L	1.0	1		04/16/14 17:20	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-122 **Lab ID: 92196006010** Collected: 04/03/14 10:07 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:45	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:45	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:45	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:45	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 07:45	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**109**	ug/L	5.0	1	04/11/14 16:14	04/12/14 01:25	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/09/14 02:59	67-64-1	
Benzene	ND	ug/L	5.0	1		04/09/14 02:59	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/09/14 02:59	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/09/14 02:59	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/09/14 02:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/09/14 02:59	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/09/14 02:59	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/09/14 02:59	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/09/14 02:59	75-00-3	
Chloroform	**30.8**	ug/L	5.0	1		04/09/14 02:59	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/09/14 02:59	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/09/14 02:59	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/09/14 02:59	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/09/14 02:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/09/14 02:59	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/09/14 02:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/09/14 02:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/09/14 02:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/09/14 02:59	75-35-4	
cis-1,2-Dichloroethene	**18.3**	ug/L	5.0	1		04/09/14 02:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 02:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/09/14 02:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 02:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 02:59	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/09/14 02:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/09/14 02:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/09/14 02:59	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/09/14 02:59	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/09/14 02:59	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/09/14 02:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/09/14 02:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/09/14 02:59	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-122 **Lab ID: 92196006010** Collected: 04/03/14 10:07 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/09/14 02:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/09/14 02:59	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/09/14 02:59	127-18-4	
Toluene	ND	ug/L	5.0	1		04/09/14 02:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 02:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/09/14 02:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/09/14 02:59	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/09/14 02:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/09/14 02:59	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/09/14 02:59	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/09/14 02:59	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/09/14 02:59	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/09/14 02:59	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/09/14 02:59	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		04/09/14 02:59	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		04/09/14 02:59	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**15.8**	mg/L	5.0	1		04/15/14 14:33		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**3.3**	mg/L	1.0	1		04/16/14 17:21	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-127 **Lab ID: 92196006011** Collected: 04/03/14 10:15 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:13	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:13	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:13	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:13	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:13	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**64.7**	ug/L	5.0	1	04/11/14 16:14	04/12/14 01:29	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/09/14 03:15	67-64-1	
Benzene	ND	ug/L	5.0	1		04/09/14 03:15	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/09/14 03:15	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/09/14 03:15	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/09/14 03:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/09/14 03:15	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/09/14 03:15	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/09/14 03:15	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/09/14 03:15	75-00-3	
Chloroform	**1060**	ug/L	50.0	10		04/10/14 04:15	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/09/14 03:15	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/09/14 03:15	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/09/14 03:15	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/09/14 03:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/09/14 03:15	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/09/14 03:15	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/09/14 03:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/09/14 03:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/09/14 03:15	75-35-4	
cis-1,2-Dichloroethene	**8.6**	ug/L	5.0	1		04/09/14 03:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 03:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/09/14 03:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 03:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 03:15	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/09/14 03:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/09/14 03:15	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/09/14 03:15	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/09/14 03:15	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/09/14 03:15	108-87-2	
Methylene Chloride	**18.9**	ug/L	5.0	1		04/09/14 03:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/09/14 03:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/09/14 03:15	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: RW-127 **Lab ID: 92196006011** Collected: 04/03/14 10:15 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/09/14 03:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/09/14 03:15	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/09/14 03:15	127-18-4	
Toluene	ND	ug/L	5.0	1		04/09/14 03:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/09/14 03:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/09/14 03:15	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/09/14 03:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/09/14 03:15	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/09/14 03:15	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/09/14 03:15	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/09/14 03:15	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/09/14 03:15	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/09/14 03:15	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/09/14 03:15	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		04/09/14 03:15	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**85.8**	mg/L	5.0	1		04/15/14 14:42		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**11.6**	mg/L	1.0	1		04/16/14 17:21	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-124 **Lab ID: 92196006012** Collected: 04/03/14 11:25 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:41	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:41	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:41	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:41	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/09/14 08:41	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**51.1**	ug/L	5.0	1	04/11/14 16:14	04/12/14 01:41	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/09/14 03:31	67-64-1	
Benzene	ND	ug/L	5.0	1		04/09/14 03:31	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/09/14 03:31	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/09/14 03:31	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/09/14 03:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/09/14 03:31	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/09/14 03:31	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/09/14 03:31	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/09/14 03:31	75-00-3	
Chloroform	**798**	ug/L	50.0	10		04/10/14 04:31	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/09/14 03:31	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/09/14 03:31	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/09/14 03:31	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/09/14 03:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/09/14 03:31	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/09/14 03:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/09/14 03:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/09/14 03:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/09/14 03:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 03:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/09/14 03:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/09/14 03:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 03:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/09/14 03:31	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/09/14 03:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/09/14 03:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/09/14 03:31	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/09/14 03:31	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/09/14 03:31	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/09/14 03:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/09/14 03:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/09/14 03:31	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-124 **Lab ID: 92196006012** Collected: 04/03/14 11:25 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/09/14 03:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/09/14 03:31	79-34-5	
Tetrachloroethene	**6.7**	ug/L	5.0	1		04/09/14 03:31	127-18-4	
Toluene	ND	ug/L	5.0	1		04/09/14 03:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/09/14 03:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/09/14 03:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/09/14 03:31	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/09/14 03:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/09/14 03:31	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/09/14 03:31	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/09/14 03:31	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/09/14 03:31	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/09/14 03:31	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		04/09/14 03:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/09/14 03:31	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/09/14 03:31	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		04/15/14 14:52		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**7.0**	mg/L	1.0	1		04/16/14 17:22	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-303 **Lab ID: 92196006013** Collected: 04/02/14 13:30 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 04:47	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 04:47	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 04:47	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 04:47	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 04:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 04:47	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 04:47	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 04:47	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 04:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/08/14 04:47	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 04:47	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 04:47	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 04:47	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 04:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 04:47	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 04:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 04:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 04:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 04:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 04:47	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 04:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 04:47	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 04:47	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 04:47	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 04:47	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 04:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 04:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 04:47	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/08/14 04:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 04:47	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 04:47	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 04:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 04:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 04:47	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 04:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 04:47	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 04:47	76-13-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Sample: MW-303 **Lab ID: 92196006013** Collected: 04/02/14 13:30 Received: 04/03/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 04:47	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 04:47	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 04:47	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/08/14 04:47	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		04/08/14 04:47	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		04/08/14 04:47	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 19:34	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	50-150	1		04/08/14 19:34	17060-07-0	
Toluene-d8 (S)	94	%	50-150	1		04/08/14 19:34	2037-26-5	

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: GWD/1158 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC, GWD
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005

METHOD BLANK: 1173372 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	

LABORATORY CONTROL SAMPLE: 1173373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	50	47.3	95	75-125	
Total Organic Carbon	mg/L	50	47.0	94	75-125	
Total Organic Carbon	mg/L	50	47.5	95	75-125	
Total Organic Carbon	mg/L	50	47.7	95	75-125	
Total Organic Carbon	mg/L	50	47.2	94	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173493 1173494

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mean Total Organic Carbon	mg/L	ND	50	50	49.3	49.7	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	49.2	49.8	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	49.2	49.7	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	48.8	49.8	96	98	75-125	2	
Total Organic Carbon	mg/L	ND	50	50	49.8	49.7	98	98	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
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QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: GWD/1159 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC, GWD
Associated Lab Samples: 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

METHOD BLANK: 1173781 Matrix: Water
Associated Lab Samples: 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	ND	1.0	04/09/14 04:23	
Total Organic Carbon	mg/L	ND	1.0	04/09/14 04:23	
Total Organic Carbon	mg/L	ND	1.0	04/09/14 04:23	
Total Organic Carbon	mg/L	ND	1.0	04/09/14 04:23	
Total Organic Carbon	mg/L	ND	1.0	04/09/14 04:23	

LABORATORY CONTROL SAMPLE: 1173782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	50	47.9	96	75-125	
Total Organic Carbon	mg/L	50	48.1	96	75-125	
Total Organic Carbon	mg/L	50	47.6	95	75-125	
Total Organic Carbon	mg/L	50	47.9	96	75-125	
Total Organic Carbon	mg/L	50	48.0	96	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173783 1173784

Parameter	Units	92196006006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mean Total Organic Carbon	mg/L	1.0	50	50	49.7	49.3	97	97	75-125	1	
Total Organic Carbon	mg/L	1.1	50	50	49.4	49.3	97	96	75-125	0	
Total Organic Carbon	mg/L	ND	50	50	50.0	49.2	98	96	75-125	1	
Total Organic Carbon	mg/L	1.0	50	50	49.6	49.0	97	96	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	49.9	49.7	98	97	75-125	0	

Pace Analytical Services, Inc.
816 Durst Avenue East
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(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MPRP/15659 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Filtered
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007

METHOD BLANK: 1176527 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	04/11/14 23:16	

LABORATORY CONTROL SAMPLE: 1176528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	500	452	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176529 1176530

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	67.5	500	500	483	475	83	82	75-125	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176531 1176532

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	36.1	500	500	448	449	82	83	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MPRP/15660 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Filtered
Associated Lab Samples: 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

METHOD BLANK: 1176533 Matrix: Water
Associated Lab Samples: 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	04/12/14 01:07	

LABORATORY CONTROL SAMPLE: 1176534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	500	452	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176535 1176536

Parameter	Units	92196006008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	12.9	500	500	435	421	84	82	75-125	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MSV/26342 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006013

METHOD BLANK: 1172974 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1-Dichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
1,2,3-Trichlorobenzene	ug/L	5.7	5.0	04/08/14 01:25	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichloropropane	ug/L	ND	5.0	04/08/14 01:25	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
2-Butanone (MEK)	ug/L	ND	10.0	04/08/14 01:25	
2-Hexanone	ug/L	ND	10.0	04/08/14 01:25	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/08/14 01:25	
Acetone	ug/L	ND	25.0	04/08/14 01:25	
Benzene	ug/L	ND	5.0	04/08/14 01:25	
Bromodichloromethane	ug/L	ND	5.0	04/08/14 01:25	
Bromoform	ug/L	ND	5.0	04/08/14 01:25	
Bromomethane	ug/L	ND	10.0	04/08/14 01:25	
Carbon disulfide	ug/L	ND	10.0	04/08/14 01:25	
Carbon tetrachloride	ug/L	ND	5.0	04/08/14 01:25	
Chlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
Chloroethane	ug/L	ND	10.0	04/08/14 01:25	
Chloroform	ug/L	ND	5.0	04/08/14 01:25	
Chloromethane	ug/L	ND	5.0	04/08/14 01:25	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 01:25	
Cyclohexane	ug/L	ND	5.0	04/08/14 01:25	
Dibromochloromethane	ug/L	ND	5.0	04/08/14 01:25	
Dichlorodifluoromethane	ug/L	ND	5.0	04/08/14 01:25	
Ethylbenzene	ug/L	ND	5.0	04/08/14 01:25	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/08/14 01:25	
Methyl acetate	ug/L	ND	10.0	04/08/14 01:25	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/08/14 01:25	
Methylcyclohexane	ug/L	ND	10.0	04/08/14 01:25	
Methylene Chloride	ug/L	ND	5.0	04/08/14 01:25	
Styrene	ug/L	ND	5.0	04/08/14 01:25	
Tetrachloroethene	ug/L	ND	5.0	04/08/14 01:25	
Toluene	ug/L	ND	5.0	04/08/14 01:25	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

METHOD BLANK: 1172974 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 01:25	
Trichloroethene	ug/L	ND	5.0	04/08/14 01:25	
Trichlorofluoromethane	ug/L	ND	10.0	04/08/14 01:25	
Vinyl acetate	ug/L	ND	10.0	04/08/14 01:25	
Vinyl chloride	ug/L	ND	5.0	04/08/14 01:25	
Xylene (Total)	ug/L	ND	10.0	04/08/14 01:25	
1,2-Dichloroethane-d4 (S)	%	101	70-130	04/08/14 01:25	
4-Bromofluorobenzene (S)	%	100	70-130	04/08/14 01:25	
Toluene-d8 (S)	%	100	70-130	04/08/14 01:25	

LABORATORY CONTROL SAMPLE: 1172975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	70-130	
1,1,2-Trichloroethane	ug/L	50	47.1	94	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	49.9	100	70-130	
1,1-Dichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethene	ug/L	50	47.6	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.1	100	70-130	
1,2,4-Trichlorobenzene	ug/L	50	48.5	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	42.9	86	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.0	100	70-130	
1,2-Dichlorobenzene	ug/L	50	47.6	95	70-130	
1,2-Dichloroethane	ug/L	50	47.9	96	70-130	
1,2-Dichloropropane	ug/L	50	48.2	96	70-130	
1,3-Dichlorobenzene	ug/L	50	46.0	92	70-130	
1,4-Dichlorobenzene	ug/L	50	47.8	96	70-130	
2-Butanone (MEK)	ug/L	100	99.0	99	70-130	
2-Hexanone	ug/L	100	92.5	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.3	96	70-130	
Acetone	ug/L	100	92.0	92	70-130	
Benzene	ug/L	50	50.5	101	70-130	
Bromodichloromethane	ug/L	50	48.0	96	70-130	
Bromoform	ug/L	50	47.5	95	70-130	
Bromomethane	ug/L	50	45.3	91	70-130	
Carbon disulfide	ug/L	50	47.8	96	70-130	
Carbon tetrachloride	ug/L	50	49.9	100	70-130	
Chlorobenzene	ug/L	50	48.9	98	70-130	
Chloroethane	ug/L	50	46.6	93	70-130	
Chloroform	ug/L	50	47.3	95	70-130	
Chloromethane	ug/L	50	47.2	94	70-130	
cis-1,2-Dichloroethene	ug/L	50	47.1	94	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

LABORATORY CONTROL SAMPLE: 1172975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	48.6	97	70-130	
Dibromochloromethane	ug/L	50	49.0	98	70-130	
Dichlorodifluoromethane	ug/L	50	50.1	100	70-130	
Ethylbenzene	ug/L	50	48.7	97	70-130	
Isopropylbenzene (Cumene)	ug/L	50	51.2	102	70-130	
Methyl acetate	ug/L	50	47.9	96	70-130	
Methyl-tert-butyl ether	ug/L	50	49.9	100	70-130	
Methylcyclohexane	ug/L	50	50.4	101	70-130	
Methylene Chloride	ug/L	50	50.2	100	70-130	
Styrene	ug/L	50	50.5	101	70-130	
Tetrachloroethene	ug/L	50	48.9	98	70-130	
Toluene	ug/L	50	49.1	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.4	95	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	
Trichloroethene	ug/L	50	46.0	92	70-130	
Trichlorofluoromethane	ug/L	50	50.2	100	70-130	
Vinyl acetate	ug/L	100	96.5	97	70-130	
Vinyl chloride	ug/L	50	51.7	103	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174574 1174575

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	52.4	67.0	105	134	70-130	24	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	46.5	60.0	93	120	70-130	25	
1,1,2-Trichloroethane	ug/L	ND	50	50	49.2	62.4	98	125	70-130	24	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	54.1	68.4	108	137	70-130	23	M1
1,1-Dichloroethane	ug/L	ND	50	50	48.2	60.7	96	121	70-130	23	
1,1-Dichloroethene	ug/L	ND	50	50	50.9	63.7	102	127	70-130	22	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	48.3	63.5	97	127	70-130	27	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	48.0	62.3	96	125	70-130	26	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	ND	59.4	3	119	70-130		M1
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	49.8	63.2	100	126	70-130	24	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.2	63.3	98	127	70-130	25	
1,2-Dichloroethane	ug/L	ND	50	50	47.5	61.8	95	124	70-130	26	
1,2-Dichloropropane	ug/L	ND	50	50	49.0	61.7	98	123	70-130	23	
1,3-Dichlorobenzene	ug/L	ND	50	50	48.4	62.5	97	125	70-130	26	
1,4-Dichlorobenzene	ug/L	ND	50	50	48.2	61.8	96	124	70-130	25	
2-Butanone (MEK)	ug/L	ND	100	100	92.0	115	92	115	70-130	22	
2-Hexanone	ug/L	ND	100	100	97.1	121	97	121	70-130	22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.8	119	96	119	70-130	22	
Acetone	ug/L	ND	100	100	91.7	120	92	120	70-130	26	
Benzene	ug/L	ND	50	50	50.4	62.3	101	125	70-130	21	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174574 1174575

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	52.5	67.0	105	134	70-130	24	M1
Bromoform	ug/L	ND	50	50	44.4	58.4	89	117	70-130	27	
Bromomethane	ug/L	ND	50	50	39.6	57.9	79	116	70-130	38	R1
Carbon disulfide	ug/L	ND	50	50	53.1	68.6	106	137	70-130	25	M1
Carbon tetrachloride	ug/L	ND	50	50	54.3	68.8	109	138	70-130	23	M1
Chlorobenzene	ug/L	ND	50	50	48.4	60.6	97	121	70-130	22	
Chloroethane	ug/L	ND	50	50	42.6	51.9	85	104	70-130	20	
Chloroform	ug/L	149	50	50	215	231	132	164	70-130	7	E
Chloromethane	ug/L	ND	50	50	42.1	56.3	84	113	70-130	29	
cis-1,2-Dichloroethene	ug/L	ND	50	50	46.9	59.8	94	120	70-130	24	
cis-1,3-Dichloropropene	ug/L	ND	50	50	52.2	66.1	104	132	70-130	23	M1
Cyclohexane	ug/L	ND	50	50	50.6	63.7	101	127	70-130	23	
Dibromochloromethane	ug/L	ND	50	50	46.7	59.4	93	119	70-130	24	
Dichlorodifluoromethane	ug/L	ND	50	50	55.7	70.0	111	140	70-130	23	M1
Ethylbenzene	ug/L	ND	50	50	49.9	62.9	100	126	70-130	23	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	52.4	66.4	105	133	70-130	24	M1
Methyl acetate	ug/L	ND	50	50	42.2	52.7	84	105	70-130	22	
Methyl-tert-butyl ether	ug/L	ND	50	50	47.8	61.5	96	123	70-130	25	
Methylcyclohexane	ug/L	ND	50	50	52.0	65.4	104	131	70-130	23	M1
Methylene Chloride	ug/L	ND	50	50	47.6	60.1	95	120	70-130	23	
Styrene	ug/L	ND	50	50	52.1	66.1	104	132	70-130	24	M1
Tetrachloroethene	ug/L	ND	50	50	51.3	64.4	103	129	70-130	23	
Toluene	ug/L	ND	50	50	50.2	62.1	100	124	70-130	21	
trans-1,2-Dichloroethene	ug/L	ND	50	50	49.6	61.8	99	124	70-130	22	
trans-1,3-Dichloropropene	ug/L	ND	50	50	47.1	60.5	94	121	70-130	25	
Trichloroethene	ug/L	ND	50	50	50.2	62.0	100	124	70-130	21	
Trichlorofluoromethane	ug/L	ND	50	50	49.3	62.0	99	124	70-130	23	
Vinyl acetate	ug/L	ND	100	100	96.8	123	97	123	70-130	24	
Vinyl chloride	ug/L	ND	50	50	49.1	61.1	98	122	70-130	22	
1,2-Dichloroethane-d4 (S)	%						95	97	70-130		
4-Bromofluorobenzene (S)	%						102	102	70-130		
Toluene-d8 (S)	%						103	102	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MSV/26364 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92196006007, 92196006008

METHOD BLANK: 1174058 Matrix: Water
Associated Lab Samples: 92196006007, 92196006008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/08/14 19:42	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/08/14 19:42	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/08/14 19:42	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/08/14 19:42	
1,1-Dichloroethane	ug/L	ND	5.0	04/08/14 19:42	
1,1-Dichloroethene	ug/L	ND	5.0	04/08/14 19:42	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/08/14 19:42	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/08/14 19:42	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
1,2-Dichloroethane	ug/L	ND	5.0	04/08/14 19:42	
1,2-Dichloropropane	ug/L	ND	5.0	04/08/14 19:42	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
2-Butanone (MEK)	ug/L	ND	10.0	04/08/14 19:42	
2-Hexanone	ug/L	ND	10.0	04/08/14 19:42	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/08/14 19:42	
Acetone	ug/L	ND	25.0	04/08/14 19:42	
Benzene	ug/L	ND	5.0	04/08/14 19:42	
Bromodichloromethane	ug/L	ND	5.0	04/08/14 19:42	
Bromoform	ug/L	ND	5.0	04/08/14 19:42	
Bromomethane	ug/L	ND	10.0	04/08/14 19:42	
Carbon disulfide	ug/L	ND	10.0	04/08/14 19:42	
Carbon tetrachloride	ug/L	ND	5.0	04/08/14 19:42	
Chlorobenzene	ug/L	ND	5.0	04/08/14 19:42	
Chloroethane	ug/L	ND	10.0	04/08/14 19:42	
Chloroform	ug/L	ND	5.0	04/08/14 19:42	
Chloromethane	ug/L	ND	5.0	04/08/14 19:42	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 19:42	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 19:42	
Cyclohexane	ug/L	ND	5.0	04/08/14 19:42	
Dibromochloromethane	ug/L	ND	5.0	04/08/14 19:42	
Dichlorodifluoromethane	ug/L	ND	5.0	04/08/14 19:42	
Ethylbenzene	ug/L	ND	5.0	04/08/14 19:42	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/08/14 19:42	
Methyl acetate	ug/L	ND	10.0	04/08/14 19:42	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/08/14 19:42	
Methylcyclohexane	ug/L	ND	10.0	04/08/14 19:42	
Methylene Chloride	ug/L	ND	5.0	04/08/14 19:42	
Styrene	ug/L	ND	5.0	04/08/14 19:42	
Tetrachloroethene	ug/L	ND	5.0	04/08/14 19:42	
Toluene	ug/L	ND	5.0	04/08/14 19:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

METHOD BLANK: 1174058 Matrix: Water
Associated Lab Samples: 92196006007, 92196006008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 19:42	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 19:42	
Trichloroethene	ug/L	ND	5.0	04/08/14 19:42	
Trichlorofluoromethane	ug/L	ND	10.0	04/08/14 19:42	
Vinyl acetate	ug/L	ND	10.0	04/08/14 19:42	
Vinyl chloride	ug/L	ND	5.0	04/08/14 19:42	
Xylene (Total)	ug/L	ND	10.0	04/08/14 19:42	
1,2-Dichloroethane-d4 (S)	%	100	70-130	04/08/14 19:42	
4-Bromofluorobenzene (S)	%	98	70-130	04/08/14 19:42	
Toluene-d8 (S)	%	100	70-130	04/08/14 19:42	

LABORATORY CONTROL SAMPLE: 1174059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.8	104	70-130	
1,1,2-Trichloroethane	ug/L	50	54.0	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	54.4	109	70-130	
1,1-Dichloroethane	ug/L	50	52.4	105	70-130	
1,1-Dichloroethene	ug/L	50	51.8	104	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.7	107	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.3	105	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.8	102	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.3	105	70-130	
1,2-Dichlorobenzene	ug/L	50	52.6	105	70-130	
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
1,2-Dichloropropane	ug/L	50	54.1	108	70-130	
1,3-Dichlorobenzene	ug/L	50	51.2	102	70-130	
1,4-Dichlorobenzene	ug/L	50	53.0	106	70-130	
2-Butanone (MEK)	ug/L	100	105	105	70-130	
2-Hexanone	ug/L	100	100	100	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	70-130	
Acetone	ug/L	100	104	104	70-130	
Benzene	ug/L	50	55.1	110	70-130	
Bromodichloromethane	ug/L	50	51.4	103	70-130	
Bromoform	ug/L	50	53.0	106	70-130	
Bromomethane	ug/L	50	53.9	108	70-130	
Carbon disulfide	ug/L	50	52.6	105	70-130	
Carbon tetrachloride	ug/L	50	53.5	107	70-130	
Chlorobenzene	ug/L	50	53.6	107	70-130	
Chloroethane	ug/L	50	49.0	98	70-130	
Chloroform	ug/L	50	52.8	106	70-130	
Chloromethane	ug/L	50	51.1	102	70-130	
cis-1,2-Dichloroethene	ug/L	50	50.7	101	70-130	
cis-1,3-Dichloropropene	ug/L	50	51.6	103	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

LABORATORY CONTROL SAMPLE: 1174059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	53.4	107	70-130	
Dibromochloromethane	ug/L	50	51.9	104	70-130	
Dichlorodifluoromethane	ug/L	50	52.4	105	70-130	
Ethylbenzene	ug/L	50	51.7	103	70-130	
Isopropylbenzene (Cumene)	ug/L	50	54.9	110	70-130	
Methyl acetate	ug/L	50	52.1	104	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Methylcyclohexane	ug/L	50	52.7	105	70-130	
Methylene Chloride	ug/L	50	54.1	108	70-130	
Styrene	ug/L	50	54.2	108	70-130	
Tetrachloroethene	ug/L	50	53.8	108	70-130	
Toluene	ug/L	50	53.4	107	70-130	
trans-1,2-Dichloroethene	ug/L	50	50.1	100	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.1	106	70-130	
Trichloroethene	ug/L	50	52.8	106	70-130	
Trichlorofluoromethane	ug/L	50	51.6	103	70-130	
Vinyl acetate	ug/L	100	101	101	70-130	
Vinyl chloride	ug/L	50	53.9	108	70-130	
Xylene (Total)	ug/L	150	160	107	70-130	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174832 1174833

Parameter	Units	92196170017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	67.7	63.4	135	127	70-130	7	M0
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	55.0	50.9	110	102	70-130	8	
1,1,2-Trichloroethane	ug/L	ND	50	50	58.7	55.8	117	112	70-130	5	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	65.4	61.6	131	123	70-130	6	M0
1,1-Dichloroethane	ug/L	ND	50	50	57.0	53.4	114	107	70-130	6	
1,1-Dichloroethene	ug/L	ND	50	50	61.0	58.0	122	116	70-130	5	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	57.0	52.4	114	105	70-130	8	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	56.5	51.8	113	104	70-130	9	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	62.3	56.5	125	113	70-130	10	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	60.6	56.2	121	112	70-130	7	
1,2-Dichlorobenzene	ug/L	ND	50	50	58.7	54.7	117	109	70-130	7	
1,2-Dichloroethane	ug/L	ND	50	50	62.1	57.5	124	115	70-130	8	
1,2-Dichloropropane	ug/L	ND	50	50	54.8	52.1	110	104	70-130	5	
1,3-Dichlorobenzene	ug/L	ND	50	50	57.7	54.4	115	109	70-130	6	
1,4-Dichlorobenzene	ug/L	ND	50	50	56.0	53.6	112	107	70-130	4	
2-Butanone (MEK)	ug/L	ND	100	100	117	101	117	101	70-130	14	
2-Hexanone	ug/L	ND	100	100	122	108	122	108	70-130	12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	118	106	118	106	70-130	11	
Acetone	ug/L	ND	100	100	154	124	148	117	70-130	22	M0
Benzene	ug/L	ND	50	50	57.7	53.8	115	108	70-130	7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174832 1174833

Parameter	Units	92196170017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	66.3	62.5	133	125	70-130	6	M0
Bromoform	ug/L	ND	50	50	55.6	51.9	111	104	70-130	7	
Bromomethane	ug/L	ND	50	50	51.9	56.9	104	114	70-130	9	
Carbon disulfide	ug/L	ND	50	50	59.8	57.9	120	116	70-130	3	
Carbon tetrachloride	ug/L	ND	50	50	69.9	66.0	140	132	70-130	6	M0
Chlorobenzene	ug/L	ND	50	50	56.4	53.6	113	107	70-130	5	
Chloroethane	ug/L	ND	50	50	50.4	48.3	101	97	70-130	4	
Chloroform	ug/L	ND	50	50	59.4	55.8	119	112	70-130	6	
Chloromethane	ug/L	ND	50	50	49.4	47.3	99	95	70-130	4	
cis-1,2-Dichloroethene	ug/L	ND	50	50	56.5	53.2	113	106	70-130	6	
cis-1,3-Dichloropropene	ug/L	ND	50	50	60.5	57.7	121	115	70-130	5	
Cyclohexane	ug/L	ND	50	50	57.7	53.2	115	106	70-130	8	
Dibromochloromethane	ug/L	ND	50	50	57.8	54.7	116	109	70-130	6	
Dichlorodifluoromethane	ug/L	ND	50	50	68.0	64.0	136	128	70-130	6	M0
Ethylbenzene	ug/L	10.3	50	50	66.2	60.9	112	101	70-130	8	
Isopropylbenzene (Cumene)	ug/L	9.7	50	50	68.7	63.3	118	107	70-130	8	
Methyl acetate	ug/L	ND	50	50	44.2	63.8	88	128	70-130	36	R1
Methyl-tert-butyl ether	ug/L	ND	50	50	60.7	56.8	121	114	70-130	7	
Methylcyclohexane	ug/L	ND	50	50	58.1	53.0	116	106	70-130	9	
Methylene Chloride	ug/L	ND	50	50	54.7	51.5	109	103	70-130	6	
Styrene	ug/L	ND	50	50	60.9	56.7	122	113	70-130	7	
Tetrachloroethene	ug/L	ND	50	50	60.8	56.8	122	114	70-130	7	
Toluene	ug/L	ND	50	50	57.7	54.8	115	110	70-130	5	
trans-1,2-Dichloroethene	ug/L	ND	50	50	57.4	53.5	115	107	70-130	7	
trans-1,3-Dichloropropene	ug/L	ND	50	50	57.4	54.3	115	109	70-130	6	
Trichloroethene	ug/L	ND	50	50	59.3	56.7	119	113	70-130	5	
Trichlorofluoromethane	ug/L	ND	50	50	58.2	57.6	116	115	70-130	1	
Vinyl acetate	ug/L	ND	100	100	88.8	80.1	89	80	70-130	10	
Vinyl chloride	ug/L	ND	50	50	54.4	51.7	109	103	70-130	5	
1,2-Dichloroethane-d4 (S)	%						103	102	70-130		
4-Bromofluorobenzene (S)	%						103	105	70-130		
Toluene-d8 (S)	%						102	102	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MSV/26365 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92196006009, 92196006010, 92196006011, 92196006012

METHOD BLANK: 1174078 Matrix: Water
Associated Lab Samples: 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/08/14 19:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/08/14 19:26	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/08/14 19:26	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/08/14 19:26	
1,1-Dichloroethane	ug/L	ND	5.0	04/08/14 19:26	
1,1-Dichloroethene	ug/L	ND	5.0	04/08/14 19:26	
1,2,3-Trichlorobenzene	ug/L	6.9	5.0	04/08/14 19:26	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/08/14 19:26	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/08/14 19:26	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/08/14 19:26	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:26	
1,2-Dichloroethane	ug/L	ND	5.0	04/08/14 19:26	
1,2-Dichloropropane	ug/L	ND	5.0	04/08/14 19:26	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:26	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/08/14 19:26	
2-Butanone (MEK)	ug/L	ND	10.0	04/08/14 19:26	
2-Hexanone	ug/L	ND	10.0	04/08/14 19:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/08/14 19:26	
Acetone	ug/L	ND	25.0	04/08/14 19:26	
Benzene	ug/L	ND	5.0	04/08/14 19:26	
Bromodichloromethane	ug/L	ND	5.0	04/08/14 19:26	
Bromoform	ug/L	ND	5.0	04/08/14 19:26	
Bromomethane	ug/L	ND	10.0	04/08/14 19:26	
Carbon disulfide	ug/L	ND	10.0	04/08/14 19:26	
Carbon tetrachloride	ug/L	ND	5.0	04/08/14 19:26	
Chlorobenzene	ug/L	ND	5.0	04/08/14 19:26	
Chloroethane	ug/L	ND	10.0	04/08/14 19:26	
Chloroform	ug/L	ND	5.0	04/08/14 19:26	
Chloromethane	ug/L	ND	5.0	04/08/14 19:26	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 19:26	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 19:26	
Cyclohexane	ug/L	ND	5.0	04/08/14 19:26	
Dibromochloromethane	ug/L	ND	5.0	04/08/14 19:26	
Dichlorodifluoromethane	ug/L	ND	5.0	04/08/14 19:26	
Ethylbenzene	ug/L	ND	5.0	04/08/14 19:26	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/08/14 19:26	
Methyl acetate	ug/L	ND	10.0	04/08/14 19:26	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/08/14 19:26	
Methylcyclohexane	ug/L	ND	10.0	04/08/14 19:26	
Methylene Chloride	ug/L	ND	5.0	04/08/14 19:26	
Styrene	ug/L	ND	5.0	04/08/14 19:26	
Tetrachloroethene	ug/L	ND	5.0	04/08/14 19:26	
Toluene	ug/L	ND	5.0	04/08/14 19:26	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

METHOD BLANK: 1174078 Matrix: Water
Associated Lab Samples: 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 19:26	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 19:26	
Trichloroethene	ug/L	ND	5.0	04/08/14 19:26	
Trichlorofluoromethane	ug/L	ND	10.0	04/08/14 19:26	
Vinyl acetate	ug/L	ND	10.0	04/08/14 19:26	
Vinyl chloride	ug/L	ND	5.0	04/08/14 19:26	
Xylene (Total)	ug/L	ND	10.0	04/08/14 19:26	
1,2-Dichloroethane-d4 (S)	%	98	70-130	04/08/14 19:26	
4-Bromofluorobenzene (S)	%	99	70-130	04/08/14 19:26	
Toluene-d8 (S)	%	99	70-130	04/08/14 19:26	

LABORATORY CONTROL SAMPLE: 1174079

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.2	106	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.6	105	70-130	
1,1,2-Trichloroethane	ug/L	50	54.0	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	55.7	111	70-130	
1,1-Dichloroethane	ug/L	50	52.2	104	70-130	
1,1-Dichloroethene	ug/L	50	51.1	102	70-130	
1,2,3-Trichlorobenzene	ug/L	50	57.8	116	70-130	
1,2,4-Trichlorobenzene	ug/L	50	55.1	110	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.5	103	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	53.9	108	70-130	
1,2-Dichlorobenzene	ug/L	50	54.0	108	70-130	
1,2-Dichloroethane	ug/L	50	53.4	107	70-130	
1,2-Dichloropropane	ug/L	50	53.9	108	70-130	
1,3-Dichlorobenzene	ug/L	50	51.4	103	70-130	
1,4-Dichlorobenzene	ug/L	50	52.7	105	70-130	
2-Butanone (MEK)	ug/L	100	99.4	99	70-130	
2-Hexanone	ug/L	100	98.7	99	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-130	
Acetone	ug/L	100	104	104	70-130	
Benzene	ug/L	50	54.6	109	70-130	
Bromodichloromethane	ug/L	50	52.7	105	70-130	
Bromoform	ug/L	50	53.5	107	70-130	
Bromomethane	ug/L	50	54.9	110	70-130	
Carbon disulfide	ug/L	50	53.1	106	70-130	
Carbon tetrachloride	ug/L	50	54.0	108	70-130	
Chlorobenzene	ug/L	50	54.6	109	70-130	
Chloroethane	ug/L	50	48.2	96	70-130	
Chloroform	ug/L	50	53.3	107	70-130	
Chloromethane	ug/L	50	51.9	104	70-130	
cis-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.1	106	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

LABORATORY CONTROL SAMPLE: 1174079

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	52.8	106	70-130	
Dibromochloromethane	ug/L	50	53.5	107	70-130	
Dichlorodifluoromethane	ug/L	50	52.9	106	70-130	
Ethylbenzene	ug/L	50	55.2	110	70-130	
Isopropylbenzene (Cumene)	ug/L	50	55.7	111	70-130	
Methyl acetate	ug/L	50	50.5	101	70-130	
Methyl-tert-butyl ether	ug/L	50	54.6	109	70-130	
Methylcyclohexane	ug/L	50	57.0	114	70-130	
Methylene Chloride	ug/L	50	55.5	111	70-130	
Styrene	ug/L	50	55.1	110	70-130	
Tetrachloroethene	ug/L	50	54.6	109	70-130	
Toluene	ug/L	50	54.3	109	70-130	
trans-1,2-Dichloroethene	ug/L	50	50.6	101	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.4	107	70-130	
Trichloroethene	ug/L	50	53.7	107	70-130	
Trichlorofluoromethane	ug/L	50	51.9	104	70-130	
Vinyl acetate	ug/L	100	99.7	100	70-130	
Vinyl chloride	ug/L	50	53.0	106	70-130	
Xylene (Total)	ug/L	150	167	111	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174829 1174830

Parameter	Units	92196067002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	67.2	66.9	134	134	70-130	0	M0
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	55.0	55.6	110	111	70-130	1	
1,1,2-Trichloroethane	ug/L	ND	50	50	59.4	60.9	119	122	70-130	2	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	62.7	64.8	125	130	70-130	3	
1,1-Dichloroethane	ug/L	ND	50	50	56.7	57.9	113	116	70-130	2	
1,1-Dichloroethene	ug/L	ND	50	50	62.2	61.7	124	123	70-130	1	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	50.6	57.8	101	116	70-130	13	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	49.5	57.4	99	115	70-130	15	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	60.1	58.0	120	116	70-130	4	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	60.3	60.6	121	121	70-130	0	
1,2-Dichlorobenzene	ug/L	ND	50	50	55.5	58.3	111	117	70-130	5	
1,2-Dichloroethane	ug/L	ND	50	50	62.7	63.1	125	126	70-130	1	
1,2-Dichloropropane	ug/L	ND	50	50	55.9	57.1	112	114	70-130	2	
1,3-Dichlorobenzene	ug/L	ND	50	50	53.3	58.0	107	116	70-130	8	
1,4-Dichlorobenzene	ug/L	ND	50	50	53.5	56.5	107	113	70-130	5	
2-Butanone (MEK)	ug/L	ND	100	100	109	109	109	109	70-130	0	
2-Hexanone	ug/L	ND	100	100	119	119	119	119	70-130	0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	115	116	115	116	70-130	0	
Acetone	ug/L	ND	100	100	123	118	123	118	70-130	4	
Benzene	ug/L	ND	50	50	56.0	57.6	112	115	70-130	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174829 1174830

Parameter	Units	92196067002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	66.8	68.9	134	138	70-130	3	M0
Bromoform	ug/L	ND	50	50	56.4	57.3	113	115	70-130	2	
Bromomethane	ug/L	ND	50	50	63.8	67.2	128	134	70-130	5	M0
Carbon disulfide	ug/L	ND	50	50	62.4	62.2	125	124	70-130	0	
Carbon tetrachloride	ug/L	ND	50	50	70.6	69.7	141	139	70-130	1	M0
Chlorobenzene	ug/L	ND	50	50	55.6	57.3	111	115	70-130	3	
Chloroethane	ug/L	ND	50	50	49.8	51.8	100	104	70-130	4	
Chloroform	ug/L	ND	50	50	58.4	60.1	117	120	70-130	3	
Chloromethane	ug/L	ND	50	50	50.7	52.0	101	104	70-130	3	
cis-1,2-Dichloroethene	ug/L	ND	50	50	55.5	57.4	111	115	70-130	3	
cis-1,3-Dichloropropene	ug/L	ND	50	50	60.4	62.7	121	125	70-130	4	
Cyclohexane	ug/L	ND	50	50	53.6	55.1	107	110	70-130	3	
Dibromochloromethane	ug/L	ND	50	50	58.1	59.7	116	119	70-130	3	
Dichlorodifluoromethane	ug/L	ND	50	50	65.2	67.3	130	135	70-130	3	M0
Ethylbenzene	ug/L	ND	50	50	56.5	58.5	111	115	70-130	3	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	57.7	61.8	115	124	70-130	7	
Methyl acetate	ug/L	ND	50	50	37.4	41.9	75	84	70-130	12	
Methyl-tert-butyl ether	ug/L	ND	50	50	61.1	61.9	122	124	70-130	1	
Methylcyclohexane	ug/L	ND	50	50	50.3	56.8	101	114	70-130	12	
Methylene Chloride	ug/L	ND	50	50	52.8	55.7	106	111	70-130	5	
Styrene	ug/L	ND	50	50	58.0	61.2	116	122	70-130	5	
Tetrachloroethene	ug/L	ND	50	50	58.4	60.5	117	121	70-130	4	
Toluene	ug/L	ND	50	50	56.3	58.1	113	116	70-130	3	
trans-1,2-Dichloroethene	ug/L	ND	50	50	57.3	57.5	115	115	70-130	0	
trans-1,3-Dichloropropene	ug/L	ND	50	50	58.7	59.7	117	119	70-130	2	
Trichloroethene	ug/L	ND	50	50	59.5	59.5	119	119	70-130	0	
Trichlorofluoromethane	ug/L	ND	50	50	59.8	60.8	120	122	70-130	2	
Vinyl acetate	ug/L	ND	100	100	98.5	99.4	99	99	70-130	1	
Vinyl chloride	ug/L	ND	50	50	54.9	55.1	110	110	70-130	0	
1,2-Dichloroethane-d4 (S)	%						103	102	70-130		
4-Bromofluorobenzene (S)	%						104	105	70-130		
Toluene-d8 (S)	%						103	103	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: MSV/26316 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92196006001, 92196006002, 92196006013

METHOD BLANK: 1171636 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	04/08/14 12:41	
1,2-Dichloroethane-d4 (S)	%	102	50-150	04/08/14 12:41	
Toluene-d8 (S)	%	100	50-150	04/08/14 12:41	

LABORATORY CONTROL SAMPLE: 1171637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	22.2	111	50-150	
1,2-Dichloroethane-d4 (S)	%			100	50-150	
Toluene-d8 (S)	%			101	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171638 1171639

Parameter	Units	92195116002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	22.7	22.1	113	110	50-150	3	
1,2-Dichloroethane-d4 (S)	%						105	105	50-150		
Toluene-d8 (S)	%						94	94	50-150		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171640 1171641

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	2.3	20	20	25.5	26.8	116	123	50-150	5	
1,2-Dichloroethane-d4 (S)	%						101	103	50-150		
Toluene-d8 (S)	%						95	95	50-150		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: OEXT/26889
QC Batch Method: EPA 3510
Analysis Method: EPA 8270
Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92196006001, 92196006002

METHOD BLANK: 1172890
Matrix: Water
Associated Lab Samples: 92196006001, 92196006002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	04/11/14 21:07	
2,4,5-Trichlorophenol	ug/L	ND	10.0	04/11/14 21:07	
2,4,6-Trichlorophenol	ug/L	ND	10.0	04/11/14 21:07	
2,4-Dichlorophenol	ug/L	ND	10.0	04/11/14 21:07	
2,4-Dimethylphenol	ug/L	ND	10.0	04/11/14 21:07	
2,4-Dinitrophenol	ug/L	ND	50.0	04/11/14 21:07	
2,4-Dinitrotoluene	ug/L	ND	10.0	04/11/14 21:07	
2,6-Dinitrotoluene	ug/L	ND	10.0	04/11/14 21:07	
2-Chloronaphthalene	ug/L	ND	10.0	04/11/14 21:07	
2-Chlorophenol	ug/L	ND	10.0	04/11/14 21:07	
2-Methylnaphthalene	ug/L	ND	10.0	04/11/14 21:07	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	04/11/14 21:07	
2-Nitroaniline	ug/L	ND	50.0	04/11/14 21:07	
2-Nitrophenol	ug/L	ND	10.0	04/11/14 21:07	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	04/11/14 21:07	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	04/11/14 21:07	
3-Nitroaniline	ug/L	ND	50.0	04/11/14 21:07	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	04/11/14 21:07	
4-Bromophenylphenyl ether	ug/L	ND	10.0	04/11/14 21:07	
4-Chloro-3-methylphenol	ug/L	ND	20.0	04/11/14 21:07	
4-Chloroaniline	ug/L	ND	20.0	04/11/14 21:07	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	04/11/14 21:07	
4-Nitroaniline	ug/L	ND	20.0	04/11/14 21:07	
4-Nitrophenol	ug/L	ND	50.0	04/11/14 21:07	
Acenaphthene	ug/L	ND	10.0	04/11/14 21:07	
Acenaphthylene	ug/L	ND	10.0	04/11/14 21:07	
Anthracene	ug/L	ND	10.0	04/11/14 21:07	
Atrazine	ug/L	ND	20.0	04/11/14 21:07	
Benzaldehyde	ug/L	ND	20.0	04/11/14 21:07	
Benzo(a)anthracene	ug/L	ND	10.0	04/11/14 21:07	
Benzo(a)pyrene	ug/L	ND	10.0	04/11/14 21:07	
Benzo(b)fluoranthene	ug/L	ND	10.0	04/11/14 21:07	
Benzo(g,h,i)perylene	ug/L	ND	10.0	04/11/14 21:07	
Benzo(k)fluoranthene	ug/L	ND	10.0	04/11/14 21:07	
Biphenyl (Diphenyl)	ug/L	ND	10.0	04/11/14 21:07	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	04/11/14 21:07	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	04/11/14 21:07	
bis(2-Chloroisopropyl) ether	ug/L	ND	10.0	04/11/14 21:07	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	04/11/14 21:07	
Butylbenzylphthalate	ug/L	ND	10.0	04/11/14 21:07	
Caprolactam	ug/L	ND	10.0	04/11/14 21:07	
Carbazole	ug/L	ND	10.0	04/11/14 21:07	
Chrysene	ug/L	ND	10.0	04/11/14 21:07	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

METHOD BLANK: 1172890 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Di-n-butylphthalate	ug/L	ND	10.0	04/11/14 21:07	
Di-n-octylphthalate	ug/L	ND	10.0	04/11/14 21:07	
Dibenz(a,h)anthracene	ug/L	ND	10.0	04/11/14 21:07	
Dibenzofuran	ug/L	ND	10.0	04/11/14 21:07	
Diethylphthalate	ug/L	ND	10.0	04/11/14 21:07	
Dimethylphthalate	ug/L	ND	10.0	04/11/14 21:07	
Diphenyl ether (Phenyl ether)	ug/L	ND	20.0	04/11/14 21:07	
Fluoranthene	ug/L	ND	10.0	04/11/14 21:07	
Fluorene	ug/L	ND	10.0	04/11/14 21:07	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	04/11/14 21:07	
Hexachlorobenzene	ug/L	ND	10.0	04/11/14 21:07	
Hexachlorocyclopentadiene	ug/L	ND	10.0	04/11/14 21:07	
Hexachloroethane	ug/L	ND	10.0	04/11/14 21:07	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	04/11/14 21:07	
Isophorone	ug/L	ND	10.0	04/11/14 21:07	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	04/11/14 21:07	
N-Nitrosodiphenylamine	ug/L	ND	10.0	04/11/14 21:07	
Naphthalene	ug/L	ND	10.0	04/11/14 21:07	
Nitrobenzene	ug/L	ND	10.0	04/11/14 21:07	
Pentachlorophenol	ug/L	ND	25.0	04/11/14 21:07	
Phenanthrene	ug/L	ND	10.0	04/11/14 21:07	
Phenol	ug/L	ND	10.0	04/11/14 21:07	
Pyrene	ug/L	ND	10.0	04/11/14 21:07	
2,4,6-Tribromophenol (S)	%	51	27-110	04/11/14 21:07	
2-Fluorobiphenyl (S)	%	36	27-110	04/11/14 21:07	
2-Fluorophenol (S)	%	23	12-110	04/11/14 21:07	
Nitrobenzene-d5 (S)	%	39	21-110	04/11/14 21:07	
Phenol-d6 (S)	%	16	10-110	04/11/14 21:07	
Terphenyl-d14 (S)	%	69	31-107	04/11/14 21:07	

LABORATORY CONTROL SAMPLE: 1172891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	42.0	84	17-115	
2,4,5-Trichlorophenol	ug/L	50	48.6	97	23-116	
2,4,6-Trichlorophenol	ug/L	50	45.0	90	21-114	
2,4-Dichlorophenol	ug/L	50	40.1	80	22-120	
2,4-Dimethylphenol	ug/L	50	35.5	71	15-109	
2,4-Dinitrophenol	ug/L	250	230	92	10-103	
2,4-Dinitrotoluene	ug/L	50	55.3	111	24-119	
2,6-Dinitrotoluene	ug/L	50	58.0	116	25-116	
2-Chloronaphthalene	ug/L	50	46.7	93	18-110	
2-Chlorophenol	ug/L	50	45.5	91	10-104	
2-Methylnaphthalene	ug/L	50	37.4	75	16-110	
2-Methylphenol(o-Cresol)	ug/L	50	42.4	85	13-110	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

LABORATORY CONTROL SAMPLE: 1172891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/L	100	108	108	20-117	
2-Nitrophenol	ug/L	50	40.0	80	16-108	
3&4-Methylphenol(m&p Cresol)	ug/L	50	37.3	75	14-110	
3,3'-Dichlorobenzidine	ug/L	250	107	43	13-131	
3-Nitroaniline	ug/L	100	99.6	100	15-117	
4,6-Dinitro-2-methylphenol	ug/L	100	93.8	94	13-119	
4-Bromophenylphenyl ether	ug/L	50	42.1	84	23-120	
4-Chloro-3-methylphenol	ug/L	100	86.6	87	21-119	
4-Chloroaniline	ug/L	100	70.3	70	10-122	
4-Chlorophenylphenyl ether	ug/L	50	45.5	91	22-112	
4-Nitroaniline	ug/L	100	110	110	14-118	
4-Nitrophenol	ug/L	250	118	47	10-110	
Acenaphthene	ug/L	50	43.5	87	20-105	
Acenaphthylene	ug/L	50	45.1	90	23-106	
Anthracene	ug/L	50	44.8	90	25-120	
Atrazine	ug/L	50	49.5	99	17-115	
Benzaldehyde	ug/L	50	ND	4	17-115	L2
Benzo(a)anthracene	ug/L	50	46.6	93	21-128	
Benzo(a)pyrene	ug/L	50	48.2	96	25-116	
Benzo(b)fluoranthene	ug/L	50	49.4	99	23-117	
Benzo(g,h,i)perylene	ug/L	50	42.9	86	17-128	
Benzo(k)fluoranthene	ug/L	50	41.6	83	25-127	
Biphenyl (Diphenyl)	ug/L	50	43.4	87	17-115	
bis(2-Chloroethoxy)methane	ug/L	50	41.3	83	19-107	
bis(2-Chloroethyl) ether	ug/L	50	47.6	95	10-108	
bis(2-Chloroisopropyl) ether	ug/L	50	40.6	81	10-108	
bis(2-Ethylhexyl)phthalate	ug/L	50	50.6	101	16-123	
Butylbenzylphthalate	ug/L	50	55.5	111	20-118	
Caprolactam	ug/L	50	19.8	40	17-115	
Carbazole	ug/L	50	51.7	103	17-115	
Chrysene	ug/L	50	47.4	95	24-125	
Di-n-butylphthalate	ug/L	50	48.3	97	23-115	
Di-n-octylphthalate	ug/L	50	49.8	100	20-115	
Dibenz(a,h)anthracene	ug/L	50	45.6	91	18-131	
Dibenzofuran	ug/L	50	49.6	99	23-106	
Diethylphthalate	ug/L	50	45.9	92	24-115	
Dimethylphthalate	ug/L	50	46.1	92	22-113	
Diphenyl ether (Phenyl ether)	ug/L	50	43.9	88	17-115	
Fluoranthene	ug/L	50	50.2	100	24-125	
Fluorene	ug/L	50	47.9	96	24-114	
Hexachloro-1,3-butadiene	ug/L	50	33.2	66	10-110	
Hexachlorobenzene	ug/L	50	44.9	90	22-127	
Hexachlorocyclopentadiene	ug/L	50	38.6	77	10-110	
Hexachloroethane	ug/L	50	47.5	95	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.6	93	18-130	
Isophorone	ug/L	50	37.8	76	23-114	
N-Nitroso-di-n-propylamine	ug/L	50	41.6	83	21-114	
N-Nitrosodiphenylamine	ug/L	50	36.7	73	24-123	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

LABORATORY CONTROL SAMPLE: 1172891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	50	34.9	70	14-110	
Nitrobenzene	ug/L	50	33.1	66	16-106	
Pentachlorophenol	ug/L	250	94.8	38	10-123	
Phenanthrene	ug/L	50	42.6	85	25-119	
Phenol	ug/L	50	24.3	49	10-110	
Pyrene	ug/L	50	43.3	87	22-127	
2,4,6-Tribromophenol (S)	%			102	27-110	
2-Fluorobiphenyl (S)	%			86	27-110	
2-Fluorophenol (S)	%			54	12-110	
Nitrobenzene-d5 (S)	%			68	21-110	
Phenol-d6 (S)	%			41	10-110	
Terphenyl-d14 (S)	%			88	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172892 1172893

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	ND	100	100	84.0	78.5	84	79	50-150	7	
2,4,5-Trichlorophenol	ug/L	ND	100	100	96.3	94.3	96	94	19-105	2	
2,4,6-Trichlorophenol	ug/L	ND	100	100	87.3	88.5	87	88	13-108	1	
2,4-Dichlorophenol	ug/L	ND	100	100	75.5	85.4	76	85	29-111	12	
2,4-Dimethylphenol	ug/L	ND	100	100	68.1	75.7	68	76	21-103	11	
2,4-Dinitrophenol	ug/L	ND	500	500	455	496	91	99	10-109	9	
2,4-Dinitrotoluene	ug/L	ND	100	100	112	110	112	110	27-104	1	M1
2,6-Dinitrotoluene	ug/L	ND	100	100	116	116	116	116	28-101	0	M1
2-Chloronaphthalene	ug/L	ND	100	100	89.8	89.3	90	89	14-102	1	
2-Chlorophenol	ug/L	ND	100	100	86.5	95.5	86	96	16-110	10	
2-Methylnaphthalene	ug/L	ND	100	100	70.6	78.4	71	78	13-110	11	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	78.8	99.3	79	99	19-110	23	
2-Nitroaniline	ug/L	ND	200	200	219	217	109	109	26-103	1	M1
2-Nitrophenol	ug/L	ND	100	100	80.8	76.8	81	77	20-110	5	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	70.9	96.2	71	96	20-110	30	
3,3'-Dichlorobenzidine	ug/L	ND	500	500	215	203	43	41	25-112	6	
3-Nitroaniline	ug/L	ND	200	200	208	208	104	104	29-110	0	
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	182	192	91	96	10-117	5	
4-Bromophenylphenyl ether	ug/L	ND	100	100	82.4	82.1	82	82	20-105	0	
4-Chloro-3-methylphenol	ug/L	ND	200	200	172	203	86	101	22-110	17	
4-Chloroaniline	ug/L	ND	200	200	138	153	69	76	20-100	10	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	90.0	89.3	90	89	19-102	1	
4-Nitroaniline	ug/L	ND	200	200	227	227	114	113	29-110	0	M1
4-Nitrophenol	ug/L	ND	500	500	319	364	64	73	10-110	13	
Acenaphthene	ug/L	ND	100	100	83.7	84.4	84	84	17-100	1	
Acenaphthylene	ug/L	ND	100	100	87.3	87.0	87	87	21-100	0	
Anthracene	ug/L	ND	100	100	88.7	87.3	89	87	24-109	2	
Atrazine	ug/L	ND	100	100	95.6	100	96	100	50-150	5	
Benzaldehyde	ug/L	ND	100	100	ND	ND	4	4	50-150		M0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172892 1172893

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzo(a)anthracene	ug/L	ND	100	100	91.2	87.7	91	88	22-117	4	
Benzo(a)pyrene	ug/L	ND	100	100	96.1	94.5	96	94	23-104	2	
Benzo(b)fluoranthene	ug/L	ND	100	100	101	96.9	101	97	23-103	4	
Benzo(g,h,i)perylene	ug/L	ND	100	100	86.2	88.5	86	88	18-111	3	
Benzo(k)fluoranthene	ug/L	ND	100	100	81.0	83.7	81	84	22-113	3	
Biphenyl (Diphenyl)	ug/L	ND	100	100	81.7	81.3	82	81	50-150	0	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	82.5	81.9	83	82	22-110	1	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	84.3	86.4	84	86	16-110	2	
bis(2-Chloroisopropyl) ether	ug/L	ND	100	100	77.4	79.4	77	79	14-110	3	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	113	111	113	111	23-102	1	M1
Butylbenzylphthalate	ug/L	ND	100	100	102	102	102	102	25-110	0	
Caprolactam	ug/L	ND	100	100	54.6	77.3	55	77	50-150	34	R1
Carbazole	ug/L	ND	100	100	99.8	96.3	100	96	50-150	4	
Chrysene	ug/L	ND	100	100	92.1	90.1	92	90	23-115	2	
Di-n-butylphthalate	ug/L	ND	100	100	94.9	95.0	95	95	26-110	0	
Di-n-octylphthalate	ug/L	ND	100	100	137	130	137	130	22-110	6	M1
Dibenz(a,h)anthracene	ug/L	ND	100	100	92.0	93.0	92	93	21-112	1	
Dibenzofuran	ug/L	ND	100	100	96.4	96.8	96	97	19-102	0	
Diethylphthalate	ug/L	ND	100	100	91.8	90.7	92	91	29-110	1	
Dimethylphthalate	ug/L	ND	100	100	91.9	89.8	92	90	27-110	2	
Diphenyl ether (Phenyl ether)	ug/L	ND	100	100	85.9	86.2	86	86	50-150	0	
Fluoranthene	ug/L	ND	100	100	96.1	93.9	96	94	23-112	2	
Fluorene	ug/L	ND	100	100	96.9	94.9	97	95	22-104	2	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	71.1	62.4	71	62	10-110	13	
Hexachlorobenzene	ug/L	ND	100	100	87.7	85.9	88	86	21-116	2	
Hexachlorocyclopentadiene	ug/L	ND	100	100	75.3	69.2	75	69	10-110	8	
Hexachloroethane	ug/L	ND	100	100	94.0	93.8	94	94	10-110	0	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	94.2	94.6	94	95	20-113	0	
Isophorone	ug/L	ND	100	100	73.0	78.4	73	78	50-150	7	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	69.0	84.1	69	84	21-105	20	
N-Nitrosodiphenylamine	ug/L	ND	100	100	71.4	70.3	71	70	23-107	1	
Naphthalene	ug/L	ND	100	100	70.0	67.5	70	68	10-110	4	
Nitrobenzene	ug/L	ND	100	100	70.4	64.3	70	64	20-110	9	
Pentachlorophenol	ug/L	ND	500	500	188	185	38	37	10-118	1	
Phenanthrene	ug/L	ND	100	100	84.1	82.4	84	82	24-106	2	
Phenol	ug/L	ND	100	100	53.4	69.3	53	69	12-110	26	
Pyrene	ug/L	ND	100	100	86.0	87.0	86	87	24-114	1	
2,4,6-Tribromophenol (S)	%						100	99	27-110		
2-Fluorobiphenyl (S)	%						82	81	27-110		
2-Fluorophenol (S)	%						61	69	12-110		
Nitrobenzene-d5 (S)	%						70	64	21-110		
Phenol-d6 (S)	%						47	63	10-110		
Terphenyl-d14 (S)	%						83	88	31-107		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: WET/30516 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

METHOD BLANK: 1178159 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	04/15/14 10:30	

LABORATORY CONTROL SAMPLE: 1178160

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1178161 1178162

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	14.8	50	50	67.1	67.0	105	104	75-125	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1178163 1178164

Parameter	Units	92196824001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	13.1	50	50	66.0	67.0	106	108	75-125	1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

QC Batch: WETA/18711 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

METHOD BLANK: 1179261 Matrix: Water
Associated Lab Samples: 92196006001, 92196006002, 92196006003, 92196006005, 92196006006, 92196006007, 92196006008, 92196006009, 92196006010, 92196006011, 92196006012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	04/16/14 17:06	

LABORATORY CONTROL SAMPLE: 1179262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1179263 1179264

Parameter	Units	92195647006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	4.5	20	20	24.4	24.7	99	101	75-125	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1179265 1179266

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	2.8	20	20	22.7	22.7	100	100	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALIFIERS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

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.

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
PASI-C	Pace Analytical Services - Charlotte
PASI-G	Pace Analytical Services - Greenwood

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
R1	RPD value was outside control limits.

Pace Analytical Services, Inc.
816 Durst Avenue East
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(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92196006001	**MW-120**	EPA 9060A	GWD/1158		
92196006002	**RW-121**	EPA 9060A	GWD/1158		
92196006003	**RW-129**	EPA 9060A	GWD/1158		
92196006005	**MW-128**	EPA 9060A	GWD/1158		
92196006006	**RW-133**	EPA 9060A	GWD/1159		
92196006007	**RW-403**	EPA 9060A	GWD/1159		
92196006008	**RW-123**	EPA 9060A	GWD/1159		
92196006009	**MW-126**	EPA 9060A	GWD/1159		
92196006010	**MW-122**	EPA 9060A	GWD/1159		
92196006011	**RW-127**	EPA 9060A	GWD/1159		
92196006012	**MW-124**	EPA 9060A	GWD/1159		
92196006001	**MW-120**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006002	**RW-121**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006003	**RW-129**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006005	**MW-128**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006006	**RW-133**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006007	**RW-403**	EPA 3010	MPRP/15659	EPA 6010	ICP/14186
92196006008	**RW-123**	EPA 3010	MPRP/15660	EPA 6010	ICP/14187
92196006009	**MW-126**	EPA 3010	MPRP/15660	EPA 6010	ICP/14187
92196006010	**MW-122**	EPA 3010	MPRP/15660	EPA 6010	ICP/14187
92196006011	**RW-127**	EPA 3010	MPRP/15660	EPA 6010	ICP/14187
92196006012	**MW-124**	EPA 3010	MPRP/15660	EPA 6010	ICP/14187
92196006001	**MW-120**	EPA 3510	OEXT/26889	EPA 8270	MSSV/8963
92196006002	**RW-121**	EPA 3510	OEXT/26889	EPA 8270	MSSV/8963
92196006001	**MW-120**	EPA 8260	MSV/26342		
92196006002	**RW-121**	EPA 8260	MSV/26342		
92196006003	**RW-129**	EPA 8260	MSV/26342		
92196006005	**MW-128**	EPA 8260	MSV/26342		
92196006006	**RW-133**	EPA 8260	MSV/26342		
92196006007	**RW-403**	EPA 8260	MSV/26364		
92196006008	**RW-123**	EPA 8260	MSV/26364		
92196006009	**MW-126**	EPA 8260	MSV/26365		
92196006010	**MW-122**	EPA 8260	MSV/26365		
92196006011	**RW-127**	EPA 8260	MSV/26365		
92196006012	**MW-124**	EPA 8260	MSV/26365		
92196006013	**MW-303**	EPA 8260	MSV/26342		
92196006001	**MW-120**	EPA 8260B Mod.	MSV/26316		
92196006002	**RW-121**	EPA 8260B Mod.	MSV/26316		
92196006013	**MW-303**	EPA 8260B Mod.	MSV/26316		
92196006001	**MW-120**	SM 2320B	WET/30516		
92196006002	**RW-121**	SM 2320B	WET/30516		
92196006003	**RW-129**	SM 2320B	WET/30516		
92196006005	**MW-128**	SM 2320B	WET/30516		
92196006006	**RW-133**	SM 2320B	WET/30516		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92196006

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92196006007	**RW-403**	SM 2320B	WET/30516		
92196006008	**RW-123**	SM 2320B	WET/30516		
92196006009	**MW-126**	SM 2320B	WET/30516		
92196006010	**MW-122**	SM 2320B	WET/30516		
92196006011	**RW-127**	SM 2320B	WET/30516		
92196006012	**MW-124**	SM 2320B	WET/30516		
92196006001	**MW-120**	SM 4500-Cl-E	WETA/18711		
92196006002	**RW-121**	SM 4500-Cl-E	WETA/18711		
92196006003	**RW-129**	SM 4500-Cl-E	WETA/18711		
92196006005	**MW-128**	SM 4500-Cl-E	WETA/18711		
92196006006	**RW-133**	SM 4500-Cl-E	WETA/18711		
92196006007	**RW-403**	SM 4500-Cl-E	WETA/18711		
92196006008	**RW-123**	SM 4500-Cl-E	WETA/18711		
92196006009	**MW-126**	SM 4500-Cl-E	WETA/18711		
92196006010	**MW-122**	SM 4500-Cl-E	WETA/18711		
92196006011	**RW-127**	SM 4500-Cl-E	WETA/18711		
92196006012	**MW-124**	SM 4500-Cl-E	WETA/18711		

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

Client Name: AECOM

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

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

Optional
Proj. Due Date:
Proj. Name:

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

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

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 1.5 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: GD 4/3/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests (NO)	☑Yes	☐No	☐N/A	11. 4/3/14
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT				
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. 4/3/14 NO time /Date on TB
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: JD Date: 4/3/14

SRF Review: JD Date: 4/4/14

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

WO#: 92196006

AECOM

Chain of Custody and Analytical Request

Page of
Project Number: 60280417
Chain of Custody Number [1]:
LIMS Number:

Project Name / Location: Auriga, Spartanburg SC

Client Name: Celanese

Collected by: Justin Butler / Randy Morgan

Project Manager: Bryon Dahlgren

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCS 8260	TOC	Alkalinity	Chloride	Dissolved Manganese	1,4 Dioxane (8260 SIM)	Dow Therm A					COMMENTS	Cooler ID
							Sample Analysis Requested											Quality Assurance Samples	
MW-303	02-APR-2014	1330		X			X					X						Dissolved Manganese Field Filter	013
MW-120	02-APR-2014	1500		X			X	X	X	X	X	X	X					9219600 6 001	
MW-120 MS	02-APR-2014	1500		X			X	X	X	X	X	X	X						
MW-120 MSD	02-APR-2014	1500		X			X	X	X	X	X	X	X						
RW-129	02-APR-2014	1530		X			X	X	X	X	X							003	
RW-121	02-APR-2014	1710		X			X	X	X	X	X	X	X					002	
MW-128	02-APR-2014	1723		X			X	X	X	X	X							005	
RW-133	02-APR-2014	1745		X			X	X	X	X	X							006	
RW-403	03-APR-2014	0800		X			X	X	X	X	X							007	
RW-123	03-APR-2014	0843		X			X	X	X	X	X							008	
MW-126	03-APR-2014	0855		X			X	X	X	X	Y							009	
MW-122	03-APR-2014	1007		X			X	X	X	X	X							010	
RW-127	03-APR-2014	1015		X			X	X	X	X	Y							011	
MW-124	03-APR-2014	1125		X			X	X	X	X	X							012	

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received By (signed)	Date	Time
1.		4/3/14	1435		4/3/14	14:35
2.		4/3/14	1615		4/3/14	1615
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:	XX	Shipped:	
Method of Shipment:	Pace Courier	Airbill #:	
Analytical Lab:	Pace Analytical	Location:	Huntersville, NC
Lab Recipient:		Date:	Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

April 17, 2014

Bryon Dahlgren
AECOM
10 Patewood Drive, Bldg 6
Suite 500
Greenville, SC 29615

RE: Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Dear Bryon Dahlgren:
Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Aynsley Zollinger, AECOM

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

CERTIFICATIONS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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

Greenwood Certification IDs
816 Durst Avenue East, Greenwood, SC 29649
South Carolina Laboratory ID #: 24562
North Carolina Divison of Water Resources Certification number 25
Florida Certification number E87633
Virginia VELAP ID: 460250
Asbestos NVLAP accreditation: 101410-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92195702001	**MW-302**	EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
92195702002	**MW-116**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702003	**MW-118**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702004	**RW-119**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702005	**MW-114**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702006	**MW-402**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

SAMPLE ANALYTE COUNT

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92195702007	**RW-115**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8270	BPJ	72	PASI-C
		EPA 8260	CAH	53	PASI-C
		EPA 8260B Mod.	MCK	3	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702008	**MW-401**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702009	**MW-132**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
92195702010	**MW-134**	EPA 9060A	CDC	5	PASI-G
		EPA 6010	JMW	1	PASI-A
		EPA 8260	CAH	53	PASI-C
		SM 2320B	MDW	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-302 **Lab ID: 92195702001** Collected: 04/01/14 13:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 17:21	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 17:21	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 17:21	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 17:21	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 17:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 17:21	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 17:21	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 17:21	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 17:21	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/04/14 17:21	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 17:21	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 17:21	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 17:21	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 17:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 17:21	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 17:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 17:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:21	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 17:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 17:21	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 17:21	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 17:21	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 17:21	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 17:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 17:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 17:21	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 17:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 17:21	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 17:21	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 17:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:21	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 17:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 17:21	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 17:21	76-13-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-302 **Lab ID: 92195702001** Collected: 04/01/14 13:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 17:21	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 17:21	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 17:21	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/04/14 17:21	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		04/04/14 17:21	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		04/04/14 17:21	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 16:28	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	50-150	1		04/08/14 16:28	17060-07-0	
Toluene-d8 (S)	96	%	50-150	1		04/08/14 16:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-116 **Lab ID: 92195702002** Collected: 04/01/14 14:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:30	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:30	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**190**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:18	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 19:32	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-116 **Lab ID: 92195702002** Collected: 04/01/14 14:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/12/14 19:32	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 19:32	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 19:32	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 19:32	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 19:32	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/12/14 19:32	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 19:32	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	40	%	21-110	1	04/04/14 16:00	04/12/14 19:32	4165-60-0	
2-Fluorobiphenyl (S)	37	%	27-110	1	04/04/14 16:00	04/12/14 19:32	321-60-8	
Terphenyl-d14 (S)	62	%	31-107	1	04/04/14 16:00	04/12/14 19:32	1718-51-0	
Phenol-d6 (S)	22	%	10-110	1	04/04/14 16:00	04/12/14 19:32	13127-88-3	
2-Fluorophenol (S)	23	%	12-110	1	04/04/14 16:00	04/12/14 19:32	367-12-4	
2,4,6-Tribromophenol (S)	43	%	27-110	1	04/04/14 16:00	04/12/14 19:32	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 17:36	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 17:36	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 17:36	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 17:36	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 17:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 17:36	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 17:36	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 17:36	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-116 **Lab ID: 92195702002** Collected: 04/01/14 14:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 17:36	75-00-3	
Chloroform	**845**	ug/L	50.0	10		04/07/14 17:03	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 17:36	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 17:36	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 17:36	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 17:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 17:36	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 17:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 17:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:36	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 17:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 17:36	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 17:36	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 17:36	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 17:36	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 17:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 17:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 17:36	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 17:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 17:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 17:36	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 17:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:36	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 17:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 17:36	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 17:36	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 17:36	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 17:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 17:36	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/04/14 17:36	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		04/04/14 17:36	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		04/04/14 17:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-116 **Lab ID: 92195702002** Collected: 04/01/14 14:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 16:49	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	110	%	50-150	1		04/08/14 16:49	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 16:49	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**23.6**	mg/L	5.0	1		04/11/14 11:15		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.1**	mg/L	1.0	1		04/10/14 19:05	16887-00-6	

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-118 **Lab ID: 92195702003** Collected: 04/01/14 17:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:58	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 18:58	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**34.0**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:27	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:05	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-118 **Lab ID: 92195702003** Collected: 04/01/14 17:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	**20.0**	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	101-84-8	
bis(2-Ethylhexyl)phthalate	**6.8**	ug/L	6.0	1	04/04/14 16:00	04/12/14 20:05	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:05	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:05	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:05	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:05	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/12/14 20:05	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:05	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	83	%	21-110	1	04/04/14 16:00	04/12/14 20:05	4165-60-0	
2-Fluorobiphenyl (S)	84	%	27-110	1	04/04/14 16:00	04/12/14 20:05	321-60-8	
Terphenyl-d14 (S)	73	%	31-107	1	04/04/14 16:00	04/12/14 20:05	1718-51-0	
Phenol-d6 (S)	37	%	10-110	1	04/04/14 16:00	04/12/14 20:05	13127-88-3	
2-Fluorophenol (S)	46	%	12-110	1	04/04/14 16:00	04/12/14 20:05	367-12-4	
2,4,6-Tribromophenol (S)	90	%	27-110	1	04/04/14 16:00	04/12/14 20:05	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/04/14 17:52	67-64-1	
Benzene	ND	ug/L	5.0	1		04/04/14 17:52	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/04/14 17:52	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/04/14 17:52	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/04/14 17:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/04/14 17:52	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/04/14 17:52	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/04/14 17:52	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-118 **Lab ID: 92195702003** Collected: 04/01/14 17:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/04/14 17:52	75-00-3	
Chloroform	**697**	ug/L	25.0	5		04/07/14 16:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/04/14 17:52	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/04/14 17:52	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/04/14 17:52	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/04/14 17:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/04/14 17:52	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/04/14 17:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/04/14 17:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/04/14 17:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/04/14 17:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/04/14 17:52	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/04/14 17:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/04/14 17:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/04/14 17:52	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/04/14 17:52	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/04/14 17:52	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/04/14 17:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/04/14 17:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/04/14 17:52	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/04/14 17:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/04/14 17:52	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/04/14 17:52	127-18-4	
Toluene	ND	ug/L	5.0	1		04/04/14 17:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/04/14 17:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/04/14 17:52	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/04/14 17:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/04/14 17:52	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/04/14 17:52	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/04/14 17:52	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/04/14 17:52	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/04/14 17:52	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		04/04/14 17:52	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		04/04/14 17:52	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		04/04/14 17:52	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-118 **Lab ID: 92195702003** Collected: 04/01/14 17:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 17:09	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	50-150	1		04/08/14 17:09	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 17:09	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**11.7**	mg/L	5.0	1		04/11/14 11:26		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**3.3**	mg/L	1.0	1		04/10/14 19:05	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-119 **Lab ID: 92195702004** Collected: 04/01/14 18:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 19:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 19:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 19:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 19:26	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 19:26	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**8.6**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:39	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:39	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-119 **Lab ID: 92195702004** Collected: 04/01/14 18:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/12/14 20:39	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:39	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:39	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/12/14 20:39	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/12/14 20:39	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/12/14 20:39	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/12/14 20:39	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	71	%	21-110	1	04/04/14 16:00	04/12/14 20:39	4165-60-0	
2-Fluorobiphenyl (S)	71	%	27-110	1	04/04/14 16:00	04/12/14 20:39	321-60-8	
Terphenyl-d14 (S)	62	%	31-107	1	04/04/14 16:00	04/12/14 20:39	1718-51-0	
Phenol-d6 (S)	26	%	10-110	1	04/04/14 16:00	04/12/14 20:39	13127-88-3	
2-Fluorophenol (S)	37	%	12-110	1	04/04/14 16:00	04/12/14 20:39	367-12-4	
2,4,6-Tribromophenol (S)	75	%	27-110	1	04/04/14 16:00	04/12/14 20:39	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/05/14 05:35	67-64-1	
Benzene	ND	ug/L	5.0	1		04/05/14 05:35	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/05/14 05:35	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/05/14 05:35	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/05/14 05:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/05/14 05:35	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/05/14 05:35	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/05/14 05:35	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-119 **Lab ID: 92195702004** Collected: 04/01/14 18:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/05/14 05:35	75-00-3	
Chloroform	**214**	ug/L	10.0	2		04/07/14 15:29	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/05/14 05:35	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/05/14 05:35	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/05/14 05:35	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/05/14 05:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/05/14 05:35	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/05/14 05:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/05/14 05:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/05/14 05:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/05/14 05:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/05/14 05:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/05/14 05:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/05/14 05:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/05/14 05:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/05/14 05:35	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/05/14 05:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/05/14 05:35	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/05/14 05:35	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/05/14 05:35	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/05/14 05:35	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/05/14 05:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/05/14 05:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/05/14 05:35	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/05/14 05:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/05/14 05:35	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/05/14 05:35	127-18-4	
Toluene	ND	ug/L	5.0	1		04/05/14 05:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/05/14 05:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/05/14 05:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/05/14 05:35	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/05/14 05:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/05/14 05:35	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/05/14 05:35	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/05/14 05:35	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/05/14 05:35	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/05/14 05:35	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/05/14 05:35	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		04/05/14 05:35	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/05/14 05:35	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-119 **Lab ID: 92195702004** Collected: 04/01/14 18:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**4.8**	ug/L	2.0	1		04/08/14 17:30	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%	50-150	1		04/08/14 17:30	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 17:30	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**71.7**	mg/L	5.0	1		04/11/14 11:35		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**3.0**	mg/L	1.0	1		04/16/14 16:24	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-114 **Lab ID: 92195702005** Collected: 04/02/14 09:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:30	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:30	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:30	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**15.8**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:42	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:08	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-114 **Lab ID: 92195702005** Collected: 04/02/14 09:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	**12.7**	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/14/14 13:08	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:08	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:08	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:08	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:08	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/14/14 13:08	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:08	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	63	%	21-110	1	04/04/14 16:00	04/14/14 13:08	4165-60-0	
2-Fluorobiphenyl (S)	62	%	27-110	1	04/04/14 16:00	04/14/14 13:08	321-60-8	
Terphenyl-d14 (S)	90	%	31-107	1	04/04/14 16:00	04/14/14 13:08	1718-51-0	
Phenol-d6 (S)	21	%	10-110	1	04/04/14 16:00	04/14/14 13:08	13127-88-3	
2-Fluorophenol (S)	31	%	12-110	1	04/04/14 16:00	04/14/14 13:08	367-12-4	
2,4,6-Tribromophenol (S)	82	%	27-110	1	04/04/14 16:00	04/14/14 13:08	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/07/14 21:30	67-64-1	
Benzene	ND	ug/L	5.0	1		04/07/14 21:30	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/07/14 21:30	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/07/14 21:30	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/07/14 21:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/07/14 21:30	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/07/14 21:30	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/07/14 21:30	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-114 **Lab ID: 92195702005** Collected: 04/02/14 09:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/07/14 21:30	75-00-3	
Chloroform	**1660**	ug/L	100	20		04/08/14 14:20	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/07/14 21:30	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/07/14 21:30	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/07/14 21:30	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/07/14 21:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/07/14 21:30	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/07/14 21:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/07/14 21:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/07/14 21:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/07/14 21:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/07/14 21:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/07/14 21:30	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/07/14 21:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/07/14 21:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/07/14 21:30	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/07/14 21:30	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/07/14 21:30	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/07/14 21:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/07/14 21:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/07/14 21:30	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/07/14 21:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/07/14 21:30	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/07/14 21:30	127-18-4	
Toluene	ND	ug/L	5.0	1		04/07/14 21:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/07/14 21:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/07/14 21:30	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/07/14 21:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/07/14 21:30	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/07/14 21:30	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/07/14 21:30	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/07/14 21:30	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/07/14 21:30	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-130	1		04/07/14 21:30	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		04/07/14 21:30	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		04/07/14 21:30	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-114 **Lab ID: 92195702005** Collected: 04/02/14 09:25 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 17:51	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	50-150	1		04/08/14 17:51	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 17:51	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**16.3**	mg/L	5.0	1		04/11/14 11:45		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**7.2**	mg/L	1.0	1		04/16/14 16:26	16887-00-6	

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ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-402 **Lab ID: 92195702006** Collected: 04/02/14 09:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:58	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:58	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 21:58	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**15.0**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:45	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:42	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-402 **Lab ID: 92195702006** Collected: 04/02/14 09:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	**12.9**	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/14/14 13:42	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:42	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:42	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 13:42	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 13:42	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/14/14 13:42	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 13:42	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	76	%	21-110	1	04/04/14 16:00	04/14/14 13:42	4165-60-0	
2-Fluorobiphenyl (S)	79	%	27-110	1	04/04/14 16:00	04/14/14 13:42	321-60-8	
Terphenyl-d14 (S)	96	%	31-107	1	04/04/14 16:00	04/14/14 13:42	1718-51-0	
Phenol-d6 (S)	30	%	10-110	1	04/04/14 16:00	04/14/14 13:42	13127-88-3	
2-Fluorophenol (S)	39	%	12-110	1	04/04/14 16:00	04/14/14 13:42	367-12-4	
2,4,6-Tribromophenol (S)	81	%	27-110	1	04/04/14 16:00	04/14/14 13:42	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/07/14 21:46	67-64-1	
Benzene	ND	ug/L	5.0	1		04/07/14 21:46	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/07/14 21:46	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/07/14 21:46	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/07/14 21:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/07/14 21:46	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/07/14 21:46	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/07/14 21:46	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-402 **Lab ID: 92195702006** Collected: 04/02/14 09:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/07/14 21:46	75-00-3	
Chloroform	**1490**	ug/L	100	20		04/08/14 14:37	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/07/14 21:46	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/07/14 21:46	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/07/14 21:46	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/07/14 21:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/07/14 21:46	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/07/14 21:46	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/07/14 21:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/07/14 21:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/07/14 21:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/07/14 21:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/07/14 21:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/07/14 21:46	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/07/14 21:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/07/14 21:46	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/07/14 21:46	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/07/14 21:46	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/07/14 21:46	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/07/14 21:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/07/14 21:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/07/14 21:46	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/07/14 21:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/07/14 21:46	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/07/14 21:46	127-18-4	
Toluene	ND	ug/L	5.0	1		04/07/14 21:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/07/14 21:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/07/14 21:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/07/14 21:46	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/07/14 21:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/07/14 21:46	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/07/14 21:46	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/07/14 21:46	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/07/14 21:46	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/07/14 21:46	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-130	1		04/07/14 21:46	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		04/07/14 21:46	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		04/07/14 21:46	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-402 **Lab ID: 92195702006** Collected: 04/02/14 09:55 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 18:11	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%	50-150	1		04/08/14 18:11	17060-07-0	
Toluene-d8 (S)	95	%	50-150	1		04/08/14 18:11	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**15.1**	mg/L	5.0	1		04/11/14 11:54		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**7.2**	mg/L	1.0	1		04/16/14 16:27	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-115 **Lab ID: 92195702007** Collected: 04/02/14 12:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:26	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:26	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:26	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**12.5**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:49	7439-96-5	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	208-96-8	
Anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	120-12-7	
Atrazine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	85-68-7	
Caprolactam	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	105-60-2	
Carbazole	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	108-60-1	
2-Chloronaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	7005-72-3	
Chrysene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 14:17	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	606-20-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-115 **Lab ID: 92195702007** Collected: 04/02/14 12:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Di-n-octylphthalate	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	117-84-0	
Diphenyl ether (Phenyl ether)	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	101-84-8	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	1	04/04/14 16:00	04/14/14 14:17	117-81-7	
Fluoranthene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	206-44-0	
Fluorene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	193-39-5	
Isophorone	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	78-59-1	
2-Methylnaphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17		
Naphthalene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 14:17	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 14:17	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	1	04/04/14 16:00	04/14/14 14:17	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1	04/04/14 16:00	04/14/14 14:17	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	86-30-6	
Pentachlorophenol	ND	ug/L	25.0	1	04/04/14 16:00	04/14/14 14:17	87-86-5	
Phenanthrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	85-01-8	
Phenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	108-95-2	
Pyrene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	95-94-3	
2,4,5-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1	04/04/14 16:00	04/14/14 14:17	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	63	%	21-110	1	04/04/14 16:00	04/14/14 14:17	4165-60-0	
2-Fluorobiphenyl (S)	62	%	27-110	1	04/04/14 16:00	04/14/14 14:17	321-60-8	
Terphenyl-d14 (S)	73	%	31-107	1	04/04/14 16:00	04/14/14 14:17	1718-51-0	
Phenol-d6 (S)	24	%	10-110	1	04/04/14 16:00	04/14/14 14:17	13127-88-3	
2-Fluorophenol (S)	33	%	12-110	1	04/04/14 16:00	04/14/14 14:17	367-12-4	
2,4,6-Tribromophenol (S)	70	%	27-110	1	04/04/14 16:00	04/14/14 14:17	118-79-6	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 02:27	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 02:27	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 02:27	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 02:27	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 02:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 02:27	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 02:27	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 02:27	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-115 **Lab ID: 92195702007** Collected: 04/02/14 12:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 02:27	75-00-3	
Chloroform	**2570**	ug/L	125	25		04/09/14 13:06	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 02:27	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 02:27	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 02:27	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 02:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 02:27	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 02:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 02:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:27	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 02:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 02:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 02:27	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 02:27	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 02:27	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 02:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 02:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 02:27	1634-04-4	
Styrene	ND	ug/L	5.0	1		04/08/14 02:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 02:27	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 02:27	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 02:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:27	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 02:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 02:27	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 02:27	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 02:27	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 02:27	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 02:27	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/08/14 02:27	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		04/08/14 02:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 02:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: RW-115 **Lab ID: 92195702007** Collected: 04/02/14 12:00 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		04/08/14 18:32	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%	50-150	1		04/08/14 18:32	17060-07-0	
Toluene-d8 (S)	94	%	50-150	1		04/08/14 18:32	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**33.4**	mg/L	5.0	1		04/11/14 12:04		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.9**	mg/L	1.0	1		04/16/14 16:29	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-401 **Lab ID: 92195702008** Collected: 04/02/14 08:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:55	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:55	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:55	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:55	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 22:55	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**117**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:52	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 02:43	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 02:43	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 02:43	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 02:43	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 02:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 02:43	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 02:43	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 02:43	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 02:43	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/08/14 02:43	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 02:43	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 02:43	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 02:43	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 02:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 02:43	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 02:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 02:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:43	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 02:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 02:43	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 02:43	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 02:43	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 02:43	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 02:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 02:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 02:43	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-401 **Lab ID: 92195702008** Collected: 04/02/14 08:30 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 02:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 02:43	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 02:43	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 02:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:43	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 02:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 02:43	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 02:43	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 02:43	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 02:43	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 02:43	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/08/14 02:43	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		04/08/14 02:43	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 02:43	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**12.6**	mg/L	5.0	1		04/11/14 12:15		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.1**	mg/L	1.0	1		04/16/14 16:30	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-132 **Lab ID: 92195702009** Collected: 04/02/14 10:15 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	**1.1**	mg/L	1.0	1		04/08/14 23:23	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:23	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:23	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:23	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:23	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**116**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:55	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 02:58	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 02:58	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 02:58	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 02:58	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 02:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 02:58	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 02:58	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 02:58	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 02:58	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/08/14 02:58	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 02:58	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 02:58	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 02:58	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 02:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 02:58	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 02:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 02:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 02:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 02:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 02:58	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 02:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 02:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 02:58	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 02:58	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 02:58	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 02:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 02:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 02:58	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-132 **Lab ID: 92195702009** Collected: 04/02/14 10:15 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 02:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 02:58	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 02:58	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 02:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 02:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 02:58	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 02:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 02:58	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 02:58	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 02:58	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 02:58	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 02:58	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		04/08/14 02:58	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		04/08/14 02:58	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		04/08/14 02:58	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**13.1**	mg/L	5.0	1		04/11/14 12:24		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.2**	mg/L	1.0	1		04/16/14 16:30	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-134 **Lab ID: 92195702010** Collected: 04/02/14 11:40 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Carbon, GWD	Analytical Method: EPA 9060A							
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:51	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:51	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:51	7440-44-0	
Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:51	7440-44-0	
Mean Total Organic Carbon	ND	mg/L	1.0	1		04/08/14 23:51	7440-44-0	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	**53.8**	ug/L	5.0	1	04/15/14 13:09	04/15/14 15:58	7439-96-5	
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/08/14 03:14	67-64-1	
Benzene	ND	ug/L	5.0	1		04/08/14 03:14	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/08/14 03:14	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/08/14 03:14	75-25-2	
Bromomethane	ND	ug/L	10.0	1		04/08/14 03:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/08/14 03:14	78-93-3	
Carbon disulfide	ND	ug/L	10.0	1		04/08/14 03:14	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/08/14 03:14	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	108-90-7	
Chloroethane	ND	ug/L	10.0	1		04/08/14 03:14	75-00-3	
Chloroform	**5290**	ug/L	250	50		04/09/14 13:23	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/08/14 03:14	74-87-3	
Cyclohexane	ND	ug/L	5.0	1		04/08/14 03:14	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		04/08/14 03:14	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	1		04/08/14 03:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		04/08/14 03:14	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		04/08/14 03:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/08/14 03:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/08/14 03:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/08/14 03:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/08/14 03:14	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/08/14 03:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/08/14 03:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		04/08/14 03:14	98-82-8	
Methyl acetate	ND	ug/L	10.0	1		04/08/14 03:14	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1		04/08/14 03:14	108-87-2	
Methylene Chloride	ND	ug/L	5.0	1		04/08/14 03:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/08/14 03:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		04/08/14 03:14	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

ANALYTICAL RESULTS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Sample: MW-134 **Lab ID: 92195702010** Collected: 04/02/14 11:40 Received: 04/02/14 14:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Styrene	ND	ug/L	5.0	1		04/08/14 03:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/08/14 03:14	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/08/14 03:14	127-18-4	
Toluene	ND	ug/L	5.0	1		04/08/14 03:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		04/08/14 03:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/08/14 03:14	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/08/14 03:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	1		04/08/14 03:14	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	1		04/08/14 03:14	76-13-1	
Vinyl acetate	ND	ug/L	10.0	1		04/08/14 03:14	108-05-4	
Vinyl chloride	ND	ug/L	5.0	1		04/08/14 03:14	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		04/08/14 03:14	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		04/08/14 03:14	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		04/08/14 03:14	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		04/08/14 03:14	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**8.3**	mg/L	5.0	1		04/11/14 12:52		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.3**	mg/L	1.0	1		04/16/14 16:31	16887-00-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: GWD/1157 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC, GWD
Associated Lab Samples: 92195702002, 92195702003, 92195702004

METHOD BLANK: 1173364 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003, 92195702004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 13:41	

LABORATORY CONTROL SAMPLE: 1173365

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	50	48.0	96	75-125	
Total Organic Carbon	mg/L	50	48.2	96	75-125	
Total Organic Carbon	mg/L	50	47.7	95	75-125	
Total Organic Carbon	mg/L	50	47.8	96	75-125	
Total Organic Carbon	mg/L	50	48.4	97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173482 1173483

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mean Total Organic Carbon	mg/L	ND	50	50	49.5	49.8	97	98	75-125	1	
Total Organic Carbon	mg/L				48.9	49.7				2	
Total Organic Carbon	mg/L				49.2	49.9				1	
Total Organic Carbon	mg/L				50.0	49.9				0	
Total Organic Carbon	mg/L				49.7	49.7				0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: GWD/1158 Analysis Method: EPA 9060A
QC Batch Method: EPA 9060A Analysis Description: 9060 TOC, GWD
Associated Lab Samples: 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

METHOD BLANK: 1173372 Matrix: Water
Associated Lab Samples: 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mean Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	
Total Organic Carbon	mg/L	ND	1.0	04/08/14 21:02	

LABORATORY CONTROL SAMPLE: 1173373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mean Total Organic Carbon	mg/L	50	47.3	95	75-125	
Total Organic Carbon	mg/L	50	47.0	94	75-125	
Total Organic Carbon	mg/L	50	47.5	95	75-125	
Total Organic Carbon	mg/L	50	47.7	95	75-125	
Total Organic Carbon	mg/L	50	47.2	94	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173493 1173494

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mean Total Organic Carbon	mg/L	ND	50	50	49.3	49.7	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	49.2	49.8	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	49.2	49.7	97	98	75-125	1	
Total Organic Carbon	mg/L	ND	50	50	48.8	49.8	96	98	75-125	2	
Total Organic Carbon	mg/L	ND	50	50	49.8	49.7	98	98	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MPRP/15688 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Filtered
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

METHOD BLANK: 1178192 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	04/15/14 15:12	

LABORATORY CONTROL SAMPLE: 1178193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	500	440	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1178194 1178195

Parameter	Units	92195702002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Manganese, Dissolved	ug/L	190	500	500	599	602	82	82	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MSV/26317 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195702001, 92195702002, 92195702003

METHOD BLANK: 1171666 Matrix: Water
Associated Lab Samples: 92195702001, 92195702002, 92195702003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1-Dichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,1-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichloroethane	ug/L	ND	5.0	04/04/14 12:31	
1,2-Dichloropropane	ug/L	ND	5.0	04/04/14 12:31	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
2-Butanone (MEK)	ug/L	ND	10.0	04/04/14 12:31	
2-Hexanone	ug/L	ND	10.0	04/04/14 12:31	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/04/14 12:31	
Acetone	ug/L	ND	25.0	04/04/14 12:31	
Benzene	ug/L	ND	5.0	04/04/14 12:31	
Bromodichloromethane	ug/L	ND	5.0	04/04/14 12:31	
Bromoform	ug/L	ND	5.0	04/04/14 12:31	
Bromomethane	ug/L	ND	10.0	04/04/14 12:31	
Carbon disulfide	ug/L	ND	10.0	04/04/14 12:31	
Carbon tetrachloride	ug/L	ND	5.0	04/04/14 12:31	
Chlorobenzene	ug/L	ND	5.0	04/04/14 12:31	
Chloroethane	ug/L	ND	10.0	04/04/14 12:31	
Chloroform	ug/L	ND	5.0	04/04/14 12:31	
Chloromethane	ug/L	ND	5.0	04/04/14 12:31	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 12:31	
Cyclohexane	ug/L	ND	5.0	04/04/14 12:31	
Dibromochloromethane	ug/L	ND	5.0	04/04/14 12:31	
Dichlorodifluoromethane	ug/L	ND	5.0	04/04/14 12:31	
Ethylbenzene	ug/L	ND	5.0	04/04/14 12:31	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/04/14 12:31	
Methyl acetate	ug/L	ND	10.0	04/04/14 12:31	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/04/14 12:31	
Methylcyclohexane	ug/L	ND	10.0	04/04/14 12:31	
Methylene Chloride	ug/L	ND	5.0	04/04/14 12:31	
Styrene	ug/L	ND	5.0	04/04/14 12:31	
Tetrachloroethene	ug/L	ND	5.0	04/04/14 12:31	
Toluene	ug/L	ND	5.0	04/04/14 12:31	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

METHOD BLANK: 1171666 Matrix: Water
Associated Lab Samples: 92195702001, 92195702002, 92195702003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 12:31	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 12:31	
Trichloroethene	ug/L	ND	5.0	04/04/14 12:31	
Trichlorofluoromethane	ug/L	ND	10.0	04/04/14 12:31	
Vinyl acetate	ug/L	ND	10.0	04/04/14 12:31	
Vinyl chloride	ug/L	ND	5.0	04/04/14 12:31	
Xylene (Total)	ug/L	ND	10.0	04/04/14 12:31	
1,2-Dichloroethane-d4 (S)	%	102	70-130	04/04/14 12:31	
4-Bromofluorobenzene (S)	%	99	70-130	04/04/14 12:31	
Toluene-d8 (S)	%	102	70-130	04/04/14 12:31	

LABORATORY CONTROL SAMPLE: 1171667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.8	96	70-130	
1,1,2-Trichloroethane	ug/L	50	51.7	103	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	60.8	122	70-130	
1,1-Dichloroethane	ug/L	50	49.8	100	70-130	
1,1-Dichloroethene	ug/L	50	47.3	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.3	107	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.6	99	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.7	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.2	104	70-130	
1,2-Dichlorobenzene	ug/L	50	50.3	101	70-130	
1,2-Dichloroethane	ug/L	50	51.6	103	70-130	
1,2-Dichloropropane	ug/L	50	51.1	102	70-130	
1,3-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,4-Dichlorobenzene	ug/L	50	51.2	102	70-130	
2-Butanone (MEK)	ug/L	100	95.5	95	70-130	
2-Hexanone	ug/L	100	91.7	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.3	92	70-130	
Acetone	ug/L	100	103	103	70-130	
Benzene	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	50.9	102	70-130	
Bromoform	ug/L	50	50.1	100	70-130	
Bromomethane	ug/L	50	49.9	100	70-130	
Carbon disulfide	ug/L	50	48.0	96	70-130	
Carbon tetrachloride	ug/L	50	55.1	110	70-130	
Chlorobenzene	ug/L	50	51.2	102	70-130	
Chloroethane	ug/L	50	45.7	91	70-130	
Chloroform	ug/L	50	50.2	100	70-130	
Chloromethane	ug/L	50	38.4	77	70-130	
cis-1,2-Dichloroethene	ug/L	50	48.9	98	70-130	
cis-1,3-Dichloropropene	ug/L	50	51.6	103	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1171667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	55.0	110	70-130	
Dibromochloromethane	ug/L	50	52.6	105	70-130	
Dichlorodifluoromethane	ug/L	50	58.2	116	70-130	
Ethylbenzene	ug/L	50	50.7	101	70-130	
Isopropylbenzene (Cumene)	ug/L	50	53.1	106	70-130	
Methyl acetate	ug/L	50	35.5	71	70-130	
Methyl-tert-butyl ether	ug/L	50	51.5	103	70-130	
Methylcyclohexane	ug/L	50	60.9	122	70-130	
Methylene Chloride	ug/L	50	51.1	102	70-130	
Styrene	ug/L	50	52.9	106	70-130	
Tetrachloroethene	ug/L	50	52.4	105	70-130	
Toluene	ug/L	50	51.8	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.8	98	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.4	107	70-130	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	53.1	106	70-130	
Vinyl acetate	ug/L	100	109	109	70-130	
Vinyl chloride	ug/L	50	48.3	97	70-130	
Xylene (Total)	ug/L	150	157	104	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172765 1172766

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	59.7	61.9	119	124	70-130	4	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	46.3	48.6	93	97	70-130	5	
1,1,2-Trichloroethane	ug/L	ND	50	50	50.5	51.6	101	103	70-130	2	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	65.7	72.4	131	145	70-130	10	M0
1,1-Dichloroethane	ug/L	ND	50	50	52.0	55.8	104	112	70-130	7	
1,1-Dichloroethene	ug/L	ND	50	50	56.0	59.6	104	111	70-130	6	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	53.1	55.7	106	111	70-130	5	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	49.0	51.7	98	103	70-130	5	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	48.6	48.9	97	98	70-130	1	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	48.8	49.6	98	99	70-130	1	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.2	49.9	98	100	70-130	1	
1,2-Dichloroethane	ug/L	ND	50	50	52.7	56.9	105	114	70-130	8	
1,2-Dichloropropane	ug/L	ND	50	50	49.1	51.1	98	102	70-130	4	
1,3-Dichlorobenzene	ug/L	ND	50	50	47.8	49.2	96	98	70-130	3	
1,4-Dichlorobenzene	ug/L	ND	50	50	48.6	51.0	97	102	70-130	5	
2-Butanone (MEK)	ug/L	ND	100	100	92.1	99.3	92	99	70-130	8	
2-Hexanone	ug/L	ND	100	100	88.6	92.4	89	92	70-130	4	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	92.5	95.7	93	96	70-130	3	
Acetone	ug/L	ND	100	100	84.6	94.3	85	94	70-130	11	
Benzene	ug/L	ND	50	50	53.9	55.3	108	111	70-130	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1172765 1172766

Parameter	Units	92195574005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	51.8	53.2	104	106	70-130	3	
Bromoform	ug/L	ND	50	50	49.2	51.4	98	103	70-130	4	
Bromomethane	ug/L	ND	50	50	55.9	60.5	112	121	70-130	8	
Carbon disulfide	ug/L	ND	50	50	53.9	56.4	108	113	70-130	5	
Carbon tetrachloride	ug/L	ND	50	50	58.3	59.9	117	120	70-130	3	
Chlorobenzene	ug/L	ND	50	50	49.9	51.5	100	103	70-130	3	
Chloroethane	ug/L	ND	50	50	50.0	50.9	100	102	70-130	2	
Chloroform	ug/L	39.8	50	50	96.5	98.0	113	116	70-130	2	
Chloromethane	ug/L	ND	50	50	44.6	45.7	89	91	70-130	2	
cis-1,2-Dichloroethene	ug/L	ND	50	50	51.7	55.2	103	110	70-130	6	
cis-1,3-Dichloropropene	ug/L	ND	50	50	51.3	52.9	103	106	70-130	3	
Cyclohexane	ug/L	ND	50	50	61.7	64.3	123	129	70-130	4	
Dibromochloromethane	ug/L	ND	50	50	49.8	51.1	100	102	70-130	3	
Dichlorodifluoromethane	ug/L	ND	50	50	61.3	65.1	123	130	70-130	6	
Ethylbenzene	ug/L	ND	50	50	49.4	51.2	99	102	70-130	4	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	53.5	54.9	107	110	70-130	3	
Methyl acetate	ug/L	ND	50	50	35.4	38.6	71	77	70-130	9	
Methyl-tert-butyl ether	ug/L	ND	50	50	52.7	56.9	105	114	70-130	8	
Methylcyclohexane	ug/L	ND	50	50	62.5	64.0	125	128	70-130	2	
Methylene Chloride	ug/L	ND	50	50	51.6	55.0	103	110	70-130	6	
Styrene	ug/L	ND	50	50	50.6	51.6	101	103	70-130	2	
Tetrachloroethene	ug/L	ND	50	50	55.5	55.1	111	110	70-130	1	
Toluene	ug/L	ND	50	50	52.1	54.3	104	109	70-130	4	
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.3	54.6	105	109	70-130	4	
trans-1,3-Dichloropropene	ug/L	ND	50	50	52.5	55.9	105	112	70-130	6	
Trichloroethene	ug/L	ND	50	50	53.5	54.7	107	109	70-130	2	
Trichlorofluoromethane	ug/L	ND	50	50	61.8	64.3	124	129	70-130	4	
Vinyl acetate	ug/L	ND	100	100	110	119	110	119	70-130	8	
Vinyl chloride	ug/L	ND	50	50	52.8	56.2	106	112	70-130	6	
1,2-Dichloroethane-d4 (S)	%						106	106	70-130		
4-Bromofluorobenzene (S)	%						104	104	70-130		
Toluene-d8 (S)	%						102	101	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MSV/26326
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195702004

METHOD BLANK: 1171951
Matrix: Water
Associated Lab Samples: 92195702004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/04/14 22:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/04/14 22:03	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/04/14 22:03	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/04/14 22:03	
1,1-Dichloroethane	ug/L	ND	5.0	04/04/14 22:03	
1,1-Dichloroethene	ug/L	ND	5.0	04/04/14 22:03	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/04/14 22:03	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/04/14 22:03	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
1,2-Dichloroethane	ug/L	ND	5.0	04/04/14 22:03	
1,2-Dichloropropane	ug/L	ND	5.0	04/04/14 22:03	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
2-Butanone (MEK)	ug/L	ND	10.0	04/04/14 22:03	
2-Hexanone	ug/L	ND	10.0	04/04/14 22:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/04/14 22:03	
Acetone	ug/L	ND	25.0	04/04/14 22:03	
Benzene	ug/L	ND	5.0	04/04/14 22:03	
Bromodichloromethane	ug/L	ND	5.0	04/04/14 22:03	
Bromoform	ug/L	ND	5.0	04/04/14 22:03	
Bromomethane	ug/L	ND	10.0	04/04/14 22:03	
Carbon disulfide	ug/L	ND	10.0	04/04/14 22:03	
Carbon tetrachloride	ug/L	ND	5.0	04/04/14 22:03	
Chlorobenzene	ug/L	ND	5.0	04/04/14 22:03	
Chloroethane	ug/L	ND	10.0	04/04/14 22:03	
Chloroform	ug/L	ND	5.0	04/04/14 22:03	
Chloromethane	ug/L	ND	5.0	04/04/14 22:03	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 22:03	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 22:03	
Cyclohexane	ug/L	ND	5.0	04/04/14 22:03	
Dibromochloromethane	ug/L	ND	5.0	04/04/14 22:03	
Dichlorodifluoromethane	ug/L	ND	5.0	04/04/14 22:03	
Ethylbenzene	ug/L	ND	5.0	04/04/14 22:03	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/04/14 22:03	
Methyl acetate	ug/L	ND	10.0	04/04/14 22:03	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/04/14 22:03	
Methylcyclohexane	ug/L	ND	10.0	04/04/14 22:03	
Methylene Chloride	ug/L	ND	5.0	04/04/14 22:03	
Styrene	ug/L	ND	5.0	04/04/14 22:03	
Tetrachloroethene	ug/L	ND	5.0	04/04/14 22:03	
Toluene	ug/L	ND	5.0	04/04/14 22:03	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

METHOD BLANK: 1171951 Matrix: Water
Associated Lab Samples: 92195702004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/04/14 22:03	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/04/14 22:03	
Trichloroethene	ug/L	ND	5.0	04/04/14 22:03	
Trichlorofluoromethane	ug/L	ND	10.0	04/04/14 22:03	
Vinyl acetate	ug/L	ND	10.0	04/04/14 22:03	
Vinyl chloride	ug/L	ND	5.0	04/04/14 22:03	
Xylene (Total)	ug/L	ND	10.0	04/04/14 22:03	
1,2-Dichloroethane-d4 (S)	%	103	70-130	04/04/14 22:03	
4-Bromofluorobenzene (S)	%	101	70-130	04/04/14 22:03	
Toluene-d8 (S)	%	101	70-130	04/04/14 22:03	

LABORATORY CONTROL SAMPLE: 1171952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.7	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.2	98	70-130	
1,1,2-Trichloroethane	ug/L	50	50.0	100	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	60.0	120	70-130	
1,1-Dichloroethane	ug/L	50	49.5	99	70-130	
1,1-Dichloroethene	ug/L	50	49.0	98	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.6	107	70-130	
1,2,4-Trichlorobenzene	ug/L	50	48.6	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.2	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.1	100	70-130	
1,2-Dichlorobenzene	ug/L	50	48.7	97	70-130	
1,2-Dichloroethane	ug/L	50	51.6	103	70-130	
1,2-Dichloropropane	ug/L	50	48.0	96	70-130	
1,3-Dichlorobenzene	ug/L	50	47.2	94	70-130	
1,4-Dichlorobenzene	ug/L	50	48.0	96	70-130	
2-Butanone (MEK)	ug/L	100	95.3	95	70-130	
2-Hexanone	ug/L	100	94.5	94	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.0	94	70-130	
Acetone	ug/L	100	93.5	94	70-130	
Benzene	ug/L	50	50.6	101	70-130	
Bromodichloromethane	ug/L	50	48.4	97	70-130	
Bromoform	ug/L	50	50.3	101	70-130	
Bromomethane	ug/L	50	55.2	110	70-130	
Carbon disulfide	ug/L	50	50.2	100	70-130	
Carbon tetrachloride	ug/L	50	51.6	103	70-130	
Chlorobenzene	ug/L	50	48.8	98	70-130	
Chloroethane	ug/L	50	47.0	94	70-130	
Chloroform	ug/L	50	49.1	98	70-130	
Chloromethane	ug/L	50	41.3	83	70-130	
cis-1,2-Dichloroethene	ug/L	50	49.3	99	70-130	
cis-1,3-Dichloropropene	ug/L	50	47.8	96	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1171952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	55.1	110	70-130	
Dibromochloromethane	ug/L	50	49.1	98	70-130	
Dichlorodifluoromethane	ug/L	50	64.9	130	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
Isopropylbenzene (Cumene)	ug/L	50	52.0	104	70-130	
Methyl acetate	ug/L	50	37.6	75	70-130	
Methyl-tert-butyl ether	ug/L	50	53.5	107	70-130	
Methylcyclohexane	ug/L	50	55.6	111	70-130	
Methylene Chloride	ug/L	50	52.0	104	70-130	
Styrene	ug/L	50	50.7	101	70-130	
Tetrachloroethene	ug/L	50	51.4	103	70-130	
Toluene	ug/L	50	49.0	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.7	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.4	103	70-130	
Trichloroethene	ug/L	50	49.9	100	70-130	
Trichlorofluoromethane	ug/L	50	55.8	112	70-130	
Vinyl acetate	ug/L	100	111	111	70-130	
Vinyl chloride	ug/L	50	50.8	102	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1172767

Parameter	Units	92195665001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	50	66.4	133	70-130	M0
1,1,2,2-Tetrachloroethane	ug/L	ND	50	49.0	98	70-130	
1,1,2-Trichloroethane	ug/L	ND	50	55.7	111	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	74.4	149	70-130	M0
1,1-Dichloroethane	ug/L	ND	50	59.9	120	70-130	
1,1-Dichloroethene	ug/L	ND	50	59.4	119	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	50	57.4	115	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	50	52.9	106	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	48.5	97	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	50	52.5	105	70-130	
1,2-Dichlorobenzene	ug/L	ND	50	51.8	104	70-130	
1,2-Dichloroethane	ug/L	ND	50	60.7	121	70-130	
1,2-Dichloropropane	ug/L	ND	50	53.6	107	70-130	
1,3-Dichlorobenzene	ug/L	ND	50	50.3	101	70-130	
1,4-Dichlorobenzene	ug/L	ND	50	51.8	104	70-130	
2-Butanone (MEK)	ug/L	ND	100	107	107	70-130	
2-Hexanone	ug/L	ND	100	91.8	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	103	103	70-130	
Acetone	ug/L	ND	100	99.7	100	70-130	
Benzene	ug/L	ND	50	59.1	118	70-130	
Bromodichloromethane	ug/L	ND	50	58.0	116	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

MATRIX SPIKE SAMPLE: 1172767

Parameter	Units	92195665001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	ND	50	53.5	107	70-130	
Bromomethane	ug/L	ND	50	66.8	134	70-130	M0
Carbon disulfide	ug/L	ND	50	60.6	121	70-130	
Carbon tetrachloride	ug/L	ND	50	64.3	129	70-130	
Chlorobenzene	ug/L	ND	50	52.3	105	70-130	
Chloroethane	ug/L	ND	50	55.0	110	70-130	
Chloroform	ug/L	ND	50	60.0	120	70-130	
Chloromethane	ug/L	ND	50	47.9	96	70-130	
cis-1,2-Dichloroethene	ug/L	ND	50	58.4	117	70-130	
cis-1,3-Dichloropropene	ug/L	ND	50	55.8	112	70-130	
Cyclohexane	ug/L	ND	50	66.3	133	70-130	M0
Dibromochloromethane	ug/L	ND	50	53.7	107	70-130	
Dichlorodifluoromethane	ug/L	ND	50	68.5	137	70-130	M0
Ethylbenzene	ug/L	ND	50	51.5	103	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	50	55.3	111	70-130	
Methyl acetate	ug/L	ND	50	42.2	84	70-130	
Methyl-tert-butyl ether	ug/L	ND	50	60.4	121	70-130	
Methylcyclohexane	ug/L	ND	50	67.2	134	70-130	M0
Methylene Chloride	ug/L	ND	50	58.6	117	70-130	
Styrene	ug/L	ND	50	54.3	109	70-130	
Tetrachloroethene	ug/L	ND	50	56.8	114	70-130	
Toluene	ug/L	ND	50	57.6	115	70-130	
trans-1,2-Dichloroethene	ug/L	ND	50	58.7	117	70-130	
trans-1,3-Dichloropropene	ug/L	ND	50	59.8	120	70-130	
Trichloroethene	ug/L	ND	50	58.4	117	70-130	
Trichlorofluoromethane	ug/L	ND	50	68.1	136	70-130	M0
Vinyl acetate	ug/L	ND	100	124	124	70-130	
Vinyl chloride	ug/L	ND	50	59.0	118	70-130	
1,2-Dichloroethane-d4 (S)	%				108	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1172768

Parameter	Units	92195665002 Result	Dup Result	RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	ND	ND		
1,1-Dichloroethene	ug/L	ND	ND		
1,2,3-Trichlorobenzene	ug/L	ND	ND		
1,2,4-Trichlorobenzene	ug/L	ND	ND		
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1,2-Dichlorobenzene	ug/L	ND	ND		
1,2-Dichloroethane	ug/L	ND	ND		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

SAMPLE DUPLICATE: 1172768

Parameter	Units	92195665002 Result	Dup Result	RPD	Qualifiers
1,2-Dichloropropane	ug/L	ND	ND		
1,3-Dichlorobenzene	ug/L	ND	ND		
1,4-Dichlorobenzene	ug/L	ND	ND		
2-Butanone (MEK)	ug/L	ND	ND		
2-Hexanone	ug/L	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		
Acetone	ug/L	ND	ND		
Benzene	ug/L	ND	ND		
Bromodichloromethane	ug/L	ND	ND		
Bromoform	ug/L	ND	ND		
Bromomethane	ug/L	ND	ND		
Carbon disulfide	ug/L	ND	ND		
Carbon tetrachloride	ug/L	ND	ND		
Chlorobenzene	ug/L	ND	ND		
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	ND	ND		
cis-1,3-Dichloropropene	ug/L	ND	ND		
Cyclohexane	ug/L	ND	ND		
Dibromochloromethane	ug/L	ND	ND		
Dichlorodifluoromethane	ug/L	ND	ND		
Ethylbenzene	ug/L	ND	ND		
Isopropylbenzene (Cumene)	ug/L	ND	ND		
Methyl acetate	ug/L	ND	ND		
Methyl-tert-butyl ether	ug/L	ND	ND		
Methylcyclohexane	ug/L	ND	ND		
Methylene Chloride	ug/L	ND	ND		
Styrene	ug/L	ND	ND		
Tetrachloroethene	ug/L	ND	ND		
Toluene	ug/L	ND	ND		
trans-1,2-Dichloroethene	ug/L	ND	ND		
trans-1,3-Dichloropropene	ug/L	ND	ND		
Trichloroethene	ug/L	ND	ND		
Trichlorofluoromethane	ug/L	ND	ND		
Vinyl acetate	ug/L	ND	ND		
Vinyl chloride	ug/L	ND	ND		
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	102	106	4	
4-Bromofluorobenzene (S)	%	98	102	4	
Toluene-d8 (S)	%	102	100	1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MSV/26340 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195702005, 92195702006

METHOD BLANK: 1172788 Matrix: Water
Associated Lab Samples: 92195702005, 92195702006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/07/14 12:21	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/07/14 12:21	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/07/14 12:21	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/07/14 12:21	
1,1-Dichloroethane	ug/L	ND	5.0	04/07/14 12:21	
1,1-Dichloroethene	ug/L	ND	5.0	04/07/14 12:21	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/07/14 12:21	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/07/14 12:21	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
1,2-Dichloroethane	ug/L	ND	5.0	04/07/14 12:21	
1,2-Dichloropropane	ug/L	ND	5.0	04/07/14 12:21	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
2-Butanone (MEK)	ug/L	ND	10.0	04/07/14 12:21	
2-Hexanone	ug/L	ND	10.0	04/07/14 12:21	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/07/14 12:21	
Acetone	ug/L	ND	25.0	04/07/14 12:21	
Benzene	ug/L	ND	5.0	04/07/14 12:21	
Bromodichloromethane	ug/L	ND	5.0	04/07/14 12:21	
Bromoform	ug/L	ND	5.0	04/07/14 12:21	
Bromomethane	ug/L	ND	10.0	04/07/14 12:21	
Carbon disulfide	ug/L	ND	10.0	04/07/14 12:21	
Carbon tetrachloride	ug/L	ND	5.0	04/07/14 12:21	
Chlorobenzene	ug/L	ND	5.0	04/07/14 12:21	
Chloroethane	ug/L	ND	10.0	04/07/14 12:21	
Chloroform	ug/L	ND	5.0	04/07/14 12:21	
Chloromethane	ug/L	ND	5.0	04/07/14 12:21	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/07/14 12:21	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/07/14 12:21	
Cyclohexane	ug/L	ND	5.0	04/07/14 12:21	
Dibromochloromethane	ug/L	ND	5.0	04/07/14 12:21	
Dichlorodifluoromethane	ug/L	ND	5.0	04/07/14 12:21	
Ethylbenzene	ug/L	ND	5.0	04/07/14 12:21	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/07/14 12:21	
Methyl acetate	ug/L	ND	10.0	04/07/14 12:21	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/07/14 12:21	
Methylcyclohexane	ug/L	ND	10.0	04/07/14 12:21	
Methylene Chloride	ug/L	ND	5.0	04/07/14 12:21	
Styrene	ug/L	ND	5.0	04/07/14 12:21	
Tetrachloroethene	ug/L	ND	5.0	04/07/14 12:21	
Toluene	ug/L	ND	5.0	04/07/14 12:21	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

METHOD BLANK: 1172788 Matrix: Water
Associated Lab Samples: 92195702005, 92195702006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/07/14 12:21	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/07/14 12:21	
Trichloroethene	ug/L	ND	5.0	04/07/14 12:21	
Trichlorofluoromethane	ug/L	ND	10.0	04/07/14 12:21	
Vinyl acetate	ug/L	ND	10.0	04/07/14 12:21	
Vinyl chloride	ug/L	ND	5.0	04/07/14 12:21	
Xylene (Total)	ug/L	ND	10.0	04/07/14 12:21	
1,2-Dichloroethane-d4 (S)	%	105	70-130	04/07/14 12:21	
4-Bromofluorobenzene (S)	%	101	70-130	04/07/14 12:21	
Toluene-d8 (S)	%	101	70-130	04/07/14 12:21	

LABORATORY CONTROL SAMPLE: 1172789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	54.1	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.0	98	70-130	
1,1,2-Trichloroethane	ug/L	50	52.5	105	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	58.5	117	70-130	
1,1-Dichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethene	ug/L	50	47.4	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	52.0	104	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.7	93	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.3	97	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.8	104	70-130	
1,2-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,2-Dichloroethane	ug/L	50	54.5	109	70-130	
1,2-Dichloropropane	ug/L	50	48.7	97	70-130	
1,3-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,4-Dichlorobenzene	ug/L	50	48.4	97	70-130	
2-Butanone (MEK)	ug/L	100	92.3	92	70-130	
2-Hexanone	ug/L	100	89.0	89	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.8	96	70-130	
Acetone	ug/L	100	95.8	96	70-130	
Benzene	ug/L	50	50.7	101	70-130	
Bromodichloromethane	ug/L	50	52.7	105	70-130	
Bromoform	ug/L	50	51.8	104	70-130	
Bromomethane	ug/L	50	46.2	92	70-130	
Carbon disulfide	ug/L	50	48.0	96	70-130	
Carbon tetrachloride	ug/L	50	53.9	108	70-130	
Chlorobenzene	ug/L	50	49.9	100	70-130	
Chloroethane	ug/L	50	45.5	91	70-130	
Chloroform	ug/L	50	51.1	102	70-130	
Chloromethane	ug/L	50	41.9	84	70-130	
cis-1,2-Dichloroethene	ug/L	50	50.1	100	70-130	
cis-1,3-Dichloropropene	ug/L	50	51.2	102	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1172789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	53.8	108	70-130	
Dibromochloromethane	ug/L	50	52.1	104	70-130	
Dichlorodifluoromethane	ug/L	50	53.5	107	70-130	
Ethylbenzene	ug/L	50	49.1	98	70-130	
Isopropylbenzene (Cumene)	ug/L	50	52.2	104	70-130	
Methyl acetate	ug/L	50	39.7	79	70-130	
Methyl-tert-butyl ether	ug/L	50	54.7	109	70-130	
Methylcyclohexane	ug/L	50	56.5	113	70-130	
Methylene Chloride	ug/L	50	51.3	103	70-130	
Styrene	ug/L	50	51.6	103	70-130	
Tetrachloroethene	ug/L	50	51.4	103	70-130	
Toluene	ug/L	50	50.8	102	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.8	96	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.7	107	70-130	
Trichloroethene	ug/L	50	51.1	102	70-130	
Trichlorofluoromethane	ug/L	50	53.1	106	70-130	
Vinyl acetate	ug/L	100	115	115	70-130	
Vinyl chloride	ug/L	50	47.7	95	70-130	
Xylene (Total)	ug/L	150	154	102	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173344 1173345

Parameter	Units	92196171004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	67.4	63.0	135	126	70-130	7	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	60.9	57.5	122	115	70-130	6	
1,1,2-Trichloroethane	ug/L	ND	50	50	63.0	60.4	126	121	70-130	4	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	72.2	65.6	144	131	70-130	10	M1
1,1-Dichloroethane	ug/L	ND	50	50	61.1	57.4	122	115	70-130	6	
1,1-Dichloroethene	ug/L	ND	50	50	67.8	63.0	136	126	70-130	7	M1
1,2,3-Trichlorobenzene	ug/L	ND	50	50	62.0	59.1	124	118	70-130	5	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	61.9	58.5	124	117	70-130	6	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	60.8	59.0	122	118	70-130	3	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	63.7	60.8	127	122	70-130	5	
1,2-Dichlorobenzene	ug/L	ND	50	50	63.6	60.9	127	122	70-130	4	
1,2-Dichloroethane	ug/L	ND	50	50	61.3	57.9	123	116	70-130	6	
1,2-Dichloropropane	ug/L	ND	50	50	61.6	59.7	123	119	70-130	3	
1,3-Dichlorobenzene	ug/L	ND	50	50	63.0	60.0	126	120	70-130	5	
1,4-Dichlorobenzene	ug/L	ND	50	50	62.6	59.0	125	118	70-130	6	
2-Butanone (MEK)	ug/L	ND	100	100	118	119	118	119	70-130	1	
2-Hexanone	ug/L	ND	100	100	126	122	126	122	70-130	3	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	122	118	122	118	70-130	3	
Acetone	ug/L	ND	100	100	120	127	116	123	70-130	5	
Benzene	ug/L	ND	50	50	62.7	60.1	125	120	70-130	4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1173344 1173345

Parameter	Units	92196171004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	67.2	64.7	134	129	70-130	4	M1
Bromoform	ug/L	ND	50	50	57.6	55.3	115	111	70-130	4	
Bromomethane	ug/L	ND	50	50	53.8	56.3	108	113	70-130	4	
Carbon disulfide	ug/L	ND	50	50	73.7	69.2	147	138	70-130	6	M1
Carbon tetrachloride	ug/L	ND	50	50	68.3	65.1	137	130	70-130	5	M1
Chlorobenzene	ug/L	ND	50	50	62.0	59.4	124	119	70-130	4	
Chloroethane	ug/L	ND	50	50	52.6	48.4	105	97	70-130	8	
Chloroform	ug/L	ND	50	50	60.9	58.5	122	117	70-130	4	
Chloromethane	ug/L	ND	50	50	58.6	58.0	117	116	70-130	1	
cis-1,2-Dichloroethene	ug/L	ND	50	50	60.7	57.4	121	115	70-130	6	
cis-1,3-Dichloropropene	ug/L	ND	50	50	65.5	63.2	131	126	70-130	4	M1
Cyclohexane	ug/L	ND	50	50	65.5	60.2	131	120	70-130	8	M1
Dibromochloromethane	ug/L	ND	50	50	60.2	56.7	120	113	70-130	6	
Dichlorodifluoromethane	ug/L	ND	50	50	73.1	66.5	146	133	70-130	9	M1
Ethylbenzene	ug/L	ND	50	50	64.3	61.0	129	122	70-130	5	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	66.3	63.3	133	127	70-130	5	M1
Methyl acetate	ug/L	ND	50	50	49.7	46.7	99	93	70-130	6	
Methyl-tert-butyl ether	ug/L	ND	50	50	62.1	58.2	124	116	70-130	6	
Methylcyclohexane	ug/L	ND	50	50	65.3	60.9	131	122	70-130	7	M1
Methylene Chloride	ug/L	ND	50	50	63.2	60.0	126	120	70-130	5	
Styrene	ug/L	ND	50	50	67.4	64.0	135	128	70-130	5	M1
Tetrachloroethene	ug/L	ND	50	50	65.4	61.8	131	124	70-130	6	M1
Toluene	ug/L	ND	50	50	62.3	59.7	125	119	70-130	4	
trans-1,2-Dichloroethene	ug/L	ND	50	50	63.7	59.0	127	118	70-130	8	
trans-1,3-Dichloropropene	ug/L	ND	50	50	60.0	57.6	120	115	70-130	4	
Trichloroethene	ug/L	ND	50	50	62.8	60.8	126	122	70-130	3	
Trichlorofluoromethane	ug/L	ND	50	50	63.1	57.3	126	115	70-130	10	
Vinyl acetate	ug/L	ND	100	100	125	117	125	117	70-130	7	
Vinyl chloride	ug/L	ND	50	50	65.7	60.2	131	120	70-130	9	M1
1,2-Dichloroethane-d4 (S)	%						96	96	70-130		
4-Bromofluorobenzene (S)	%						102	102	70-130		
Toluene-d8 (S)	%						101	101	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MSV/26342 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92195702007, 92195702008, 92195702009, 92195702010

METHOD BLANK: 1172974 Matrix: Water
Associated Lab Samples: 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1-Dichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,1-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
1,2,3-Trichlorobenzene	ug/L	5.7	5.0	04/08/14 01:25	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichloroethane	ug/L	ND	5.0	04/08/14 01:25	
1,2-Dichloropropane	ug/L	ND	5.0	04/08/14 01:25	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
2-Butanone (MEK)	ug/L	ND	10.0	04/08/14 01:25	
2-Hexanone	ug/L	ND	10.0	04/08/14 01:25	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/08/14 01:25	
Acetone	ug/L	ND	25.0	04/08/14 01:25	
Benzene	ug/L	ND	5.0	04/08/14 01:25	
Bromodichloromethane	ug/L	ND	5.0	04/08/14 01:25	
Bromoform	ug/L	ND	5.0	04/08/14 01:25	
Bromomethane	ug/L	ND	10.0	04/08/14 01:25	
Carbon disulfide	ug/L	ND	10.0	04/08/14 01:25	
Carbon tetrachloride	ug/L	ND	5.0	04/08/14 01:25	
Chlorobenzene	ug/L	ND	5.0	04/08/14 01:25	
Chloroethane	ug/L	ND	10.0	04/08/14 01:25	
Chloroform	ug/L	ND	5.0	04/08/14 01:25	
Chloromethane	ug/L	ND	5.0	04/08/14 01:25	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 01:25	
Cyclohexane	ug/L	ND	5.0	04/08/14 01:25	
Dibromochloromethane	ug/L	ND	5.0	04/08/14 01:25	
Dichlorodifluoromethane	ug/L	ND	5.0	04/08/14 01:25	
Ethylbenzene	ug/L	ND	5.0	04/08/14 01:25	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	04/08/14 01:25	
Methyl acetate	ug/L	ND	10.0	04/08/14 01:25	
Methyl-tert-butyl ether	ug/L	ND	5.0	04/08/14 01:25	
Methylcyclohexane	ug/L	ND	10.0	04/08/14 01:25	
Methylene Chloride	ug/L	ND	5.0	04/08/14 01:25	
Styrene	ug/L	ND	5.0	04/08/14 01:25	
Tetrachloroethene	ug/L	ND	5.0	04/08/14 01:25	
Toluene	ug/L	ND	5.0	04/08/14 01:25	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

METHOD BLANK: 1172974 Matrix: Water
Associated Lab Samples: 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/08/14 01:25	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/08/14 01:25	
Trichloroethene	ug/L	ND	5.0	04/08/14 01:25	
Trichlorofluoromethane	ug/L	ND	10.0	04/08/14 01:25	
Vinyl acetate	ug/L	ND	10.0	04/08/14 01:25	
Vinyl chloride	ug/L	ND	5.0	04/08/14 01:25	
Xylene (Total)	ug/L	ND	10.0	04/08/14 01:25	
1,2-Dichloroethane-d4 (S)	%	101	70-130	04/08/14 01:25	
4-Bromofluorobenzene (S)	%	100	70-130	04/08/14 01:25	
Toluene-d8 (S)	%	100	70-130	04/08/14 01:25	

LABORATORY CONTROL SAMPLE: 1172975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	70-130	
1,1,2-Trichloroethane	ug/L	50	47.1	94	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	49.9	100	70-130	
1,1-Dichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethene	ug/L	50	47.6	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.1	100	70-130	
1,2,4-Trichlorobenzene	ug/L	50	48.5	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	42.9	86	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.0	100	70-130	
1,2-Dichlorobenzene	ug/L	50	47.6	95	70-130	
1,2-Dichloroethane	ug/L	50	47.9	96	70-130	
1,2-Dichloropropane	ug/L	50	48.2	96	70-130	
1,3-Dichlorobenzene	ug/L	50	46.0	92	70-130	
1,4-Dichlorobenzene	ug/L	50	47.8	96	70-130	
2-Butanone (MEK)	ug/L	100	99.0	99	70-130	
2-Hexanone	ug/L	100	92.5	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.3	96	70-130	
Acetone	ug/L	100	92.0	92	70-130	
Benzene	ug/L	50	50.5	101	70-130	
Bromodichloromethane	ug/L	50	48.0	96	70-130	
Bromoform	ug/L	50	47.5	95	70-130	
Bromomethane	ug/L	50	45.3	91	70-130	
Carbon disulfide	ug/L	50	47.8	96	70-130	
Carbon tetrachloride	ug/L	50	49.9	100	70-130	
Chlorobenzene	ug/L	50	48.9	98	70-130	
Chloroethane	ug/L	50	46.6	93	70-130	
Chloroform	ug/L	50	47.3	95	70-130	
Chloromethane	ug/L	50	47.2	94	70-130	
cis-1,2-Dichloroethene	ug/L	50	47.1	94	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1172975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyclohexane	ug/L	50	48.6	97	70-130	
Dibromochloromethane	ug/L	50	49.0	98	70-130	
Dichlorodifluoromethane	ug/L	50	50.1	100	70-130	
Ethylbenzene	ug/L	50	48.7	97	70-130	
Isopropylbenzene (Cumene)	ug/L	50	51.2	102	70-130	
Methyl acetate	ug/L	50	47.9	96	70-130	
Methyl-tert-butyl ether	ug/L	50	49.9	100	70-130	
Methylcyclohexane	ug/L	50	50.4	101	70-130	
Methylene Chloride	ug/L	50	50.2	100	70-130	
Styrene	ug/L	50	50.5	101	70-130	
Tetrachloroethene	ug/L	50	48.9	98	70-130	
Toluene	ug/L	50	49.1	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.4	95	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	
Trichloroethene	ug/L	50	46.0	92	70-130	
Trichlorofluoromethane	ug/L	50	50.2	100	70-130	
Vinyl acetate	ug/L	100	96.5	97	70-130	
Vinyl chloride	ug/L	50	51.7	103	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174574 1174575

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	52.4	67.0	105	134	70-130	24	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	46.5	60.0	93	120	70-130	25	
1,1,2-Trichloroethane	ug/L	ND	50	50	49.2	62.4	98	125	70-130	24	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	54.1	68.4	108	137	70-130	23	M1
1,1-Dichloroethane	ug/L	ND	50	50	48.2	60.7	96	121	70-130	23	
1,1-Dichloroethene	ug/L	ND	50	50	50.9	63.7	102	127	70-130	22	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	48.3	63.5	97	127	70-130	27	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	48.0	62.3	96	125	70-130	26	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	ND	59.4	3	119	70-130		M1
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	49.8	63.2	100	126	70-130	24	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.2	63.3	98	127	70-130	25	
1,2-Dichloroethane	ug/L	ND	50	50	47.5	61.8	95	124	70-130	26	
1,2-Dichloropropane	ug/L	ND	50	50	49.0	61.7	98	123	70-130	23	
1,3-Dichlorobenzene	ug/L	ND	50	50	48.4	62.5	97	125	70-130	26	
1,4-Dichlorobenzene	ug/L	ND	50	50	48.2	61.8	96	124	70-130	25	
2-Butanone (MEK)	ug/L	ND	100	100	92.0	115	92	115	70-130	22	
2-Hexanone	ug/L	ND	100	100	97.1	121	97	121	70-130	22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.8	119	96	119	70-130	22	
Acetone	ug/L	ND	100	100	91.7	120	92	120	70-130	26	
Benzene	ug/L	ND	50	50	50.4	62.3	101	125	70-130	21	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1174574 1174575

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromodichloromethane	ug/L	ND	50	50	52.5	67.0	105	134	70-130	24	M1
Bromoform	ug/L	ND	50	50	44.4	58.4	89	117	70-130	27	
Bromomethane	ug/L	ND	50	50	39.6	57.9	79	116	70-130	38	R1
Carbon disulfide	ug/L	ND	50	50	53.1	68.6	106	137	70-130	25	M1
Carbon tetrachloride	ug/L	ND	50	50	54.3	68.8	109	138	70-130	23	M1
Chlorobenzene	ug/L	ND	50	50	48.4	60.6	97	121	70-130	22	
Chloroethane	ug/L	ND	50	50	42.6	51.9	85	104	70-130	20	
Chloroform	ug/L	149	50	50	215	231	132	164	70-130	7	E
Chloromethane	ug/L	ND	50	50	42.1	56.3	84	113	70-130	29	
cis-1,2-Dichloroethene	ug/L	ND	50	50	46.9	59.8	94	120	70-130	24	
cis-1,3-Dichloropropene	ug/L	ND	50	50	52.2	66.1	104	132	70-130	23	M1
Cyclohexane	ug/L	ND	50	50	50.6	63.7	101	127	70-130	23	
Dibromochloromethane	ug/L	ND	50	50	46.7	59.4	93	119	70-130	24	
Dichlorodifluoromethane	ug/L	ND	50	50	55.7	70.0	111	140	70-130	23	M1
Ethylbenzene	ug/L	ND	50	50	49.9	62.9	100	126	70-130	23	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	52.4	66.4	105	133	70-130	24	M1
Methyl acetate	ug/L	ND	50	50	42.2	52.7	84	105	70-130	22	
Methyl-tert-butyl ether	ug/L	ND	50	50	47.8	61.5	96	123	70-130	25	
Methylcyclohexane	ug/L	ND	50	50	52.0	65.4	104	131	70-130	23	M1
Methylene Chloride	ug/L	ND	50	50	47.6	60.1	95	120	70-130	23	
Styrene	ug/L	ND	50	50	52.1	66.1	104	132	70-130	24	M1
Tetrachloroethene	ug/L	ND	50	50	51.3	64.4	103	129	70-130	23	
Toluene	ug/L	ND	50	50	50.2	62.1	100	124	70-130	21	
trans-1,2-Dichloroethene	ug/L	ND	50	50	49.6	61.8	99	124	70-130	22	
trans-1,3-Dichloropropene	ug/L	ND	50	50	47.1	60.5	94	121	70-130	25	
Trichloroethene	ug/L	ND	50	50	50.2	62.0	100	124	70-130	21	
Trichlorofluoromethane	ug/L	ND	50	50	49.3	62.0	99	124	70-130	23	
Vinyl acetate	ug/L	ND	100	100	96.8	123	97	123	70-130	24	
Vinyl chloride	ug/L	ND	50	50	49.1	61.1	98	122	70-130	22	
1,2-Dichloroethane-d4 (S)	%						95	97	70-130		
4-Bromofluorobenzene (S)	%						102	102	70-130		
Toluene-d8 (S)	%						103	102	70-130		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: MSV/26316 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92195702001, 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007

METHOD BLANK: 1171636 Matrix: Water
Associated Lab Samples: 92195702001, 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	04/08/14 12:41	
1,2-Dichloroethane-d4 (S)	%	102	50-150	04/08/14 12:41	
Toluene-d8 (S)	%	100	50-150	04/08/14 12:41	

LABORATORY CONTROL SAMPLE: 1171637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	22.2	111	50-150	
1,2-Dichloroethane-d4 (S)	%			100	50-150	
Toluene-d8 (S)	%			101	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171638 1171639

Parameter	Units	92195116002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	22.7	22.1	113	110	50-150	3	
1,2-Dichloroethane-d4 (S)	%						105	105	50-150		
Toluene-d8 (S)	%						94	94	50-150		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171640 1171641

Parameter	Units	92196006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	2.3	20	20	25.5	26.8	116	123	50-150	5	
1,2-Dichloroethane-d4 (S)	%						101	103	50-150		
Toluene-d8 (S)	%						95	95	50-150		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: OEXT/26857 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007

METHOD BLANK: 1171964 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	04/07/14 16:26	
2,4,5-Trichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4,6-Trichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dichlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dimethylphenol	ug/L	ND	10.0	04/07/14 16:26	
2,4-Dinitrophenol	ug/L	ND	50.0	04/07/14 16:26	
2,4-Dinitrotoluene	ug/L	ND	10.0	04/07/14 16:26	
2,6-Dinitrotoluene	ug/L	ND	10.0	04/07/14 16:26	
2-Chloronaphthalene	ug/L	ND	10.0	04/07/14 16:26	
2-Chlorophenol	ug/L	ND	10.0	04/07/14 16:26	
2-Methylnaphthalene	ug/L	ND	10.0	04/07/14 16:26	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	04/07/14 16:26	
2-Nitroaniline	ug/L	ND	50.0	04/07/14 16:26	
2-Nitrophenol	ug/L	ND	10.0	04/07/14 16:26	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	04/07/14 16:26	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	04/07/14 16:26	
3-Nitroaniline	ug/L	ND	50.0	04/07/14 16:26	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	04/07/14 16:26	
4-Bromophenylphenyl ether	ug/L	ND	10.0	04/07/14 16:26	
4-Chloro-3-methylphenol	ug/L	ND	20.0	04/07/14 16:26	
4-Chloroaniline	ug/L	ND	20.0	04/07/14 16:26	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	04/07/14 16:26	
4-Nitroaniline	ug/L	ND	20.0	04/07/14 16:26	
4-Nitrophenol	ug/L	ND	50.0	04/07/14 16:26	
Acenaphthene	ug/L	ND	10.0	04/07/14 16:26	
Acenaphthylene	ug/L	ND	10.0	04/07/14 16:26	
Anthracene	ug/L	ND	10.0	04/07/14 16:26	
Atrazine	ug/L	ND	20.0	04/07/14 16:26	
Benzaldehyde	ug/L	ND	20.0	04/07/14 16:26	
Benzo(a)anthracene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(a)pyrene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(b)fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(g,h,i)perylene	ug/L	ND	10.0	04/07/14 16:26	
Benzo(k)fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Biphenyl (Diphenyl)	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Chloroisopropyl) ether	ug/L	ND	10.0	04/07/14 16:26	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	04/07/14 16:26	
Butylbenzylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Caprolactam	ug/L	ND	10.0	04/07/14 16:26	
Carbazole	ug/L	ND	10.0	04/07/14 16:26	
Chrysene	ug/L	ND	10.0	04/07/14 16:26	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

METHOD BLANK: 1171964 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Di-n-butylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Di-n-octylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Dibenz(a,h)anthracene	ug/L	ND	10.0	04/07/14 16:26	
Dibenzofuran	ug/L	ND	10.0	04/07/14 16:26	
Diethylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Dimethylphthalate	ug/L	ND	10.0	04/07/14 16:26	
Diphenyl ether (Phenyl ether)	ug/L	ND	20.0	04/07/14 16:26	
Fluoranthene	ug/L	ND	10.0	04/07/14 16:26	
Fluorene	ug/L	ND	10.0	04/07/14 16:26	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	04/07/14 16:26	
Hexachlorobenzene	ug/L	ND	10.0	04/07/14 16:26	
Hexachlorocyclopentadiene	ug/L	ND	10.0	04/07/14 16:26	
Hexachloroethane	ug/L	ND	10.0	04/07/14 16:26	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	04/07/14 16:26	
Isophorone	ug/L	ND	10.0	04/07/14 16:26	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	04/07/14 16:26	
N-Nitrosodiphenylamine	ug/L	ND	10.0	04/07/14 16:26	
Naphthalene	ug/L	ND	10.0	04/07/14 16:26	
Nitrobenzene	ug/L	ND	10.0	04/07/14 16:26	
Pentachlorophenol	ug/L	ND	25.0	04/07/14 16:26	
Phenanthrene	ug/L	ND	10.0	04/07/14 16:26	
Phenol	ug/L	ND	10.0	04/07/14 16:26	
Pyrene	ug/L	ND	10.0	04/07/14 16:26	
2,4,6-Tribromophenol (S)	%	66	27-110	04/07/14 16:26	
2-Fluorobiphenyl (S)	%	77	27-110	04/07/14 16:26	
2-Fluorophenol (S)	%	46	12-110	04/07/14 16:26	
Nitrobenzene-d5 (S)	%	79	21-110	04/07/14 16:26	
Phenol-d6 (S)	%	34	10-110	04/07/14 16:26	
Terphenyl-d14 (S)	%	102	31-107	04/07/14 16:26	

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	48.3	97	17-115	
2,4,5-Trichlorophenol	ug/L	50	47.9	96	23-116	
2,4,6-Trichlorophenol	ug/L	50	45.3	91	21-114	
2,4-Dichlorophenol	ug/L	50	35.1	70	22-120	
2,4-Dimethylphenol	ug/L	50	33.5	67	15-109	
2,4-Dinitrophenol	ug/L	250	282	113	10-103	L0
2,4-Dinitrotoluene	ug/L	50	51.5	103	24-119	
2,6-Dinitrotoluene	ug/L	50	50.4	101	25-116	
2-Chloronaphthalene	ug/L	50	49.5	99	18-110	
2-Chlorophenol	ug/L	50	43.0	86	10-104	
2-Methylnaphthalene	ug/L	50	33.9	68	16-110	
2-Methylphenol(o-Cresol)	ug/L	50	40.3	81	13-110	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/L	100	108	108	20-117	
2-Nitrophenol	ug/L	50	35.4	71	16-108	
3&4-Methylphenol(m&p Cresol)	ug/L	50	38.6	77	14-110	
3,3'-Dichlorobenzidine	ug/L	250	83.8	34	13-131	
3-Nitroaniline	ug/L	100	100	100	15-117	
4,6-Dinitro-2-methylphenol	ug/L	100	104	104	13-119	
4-Bromophenylphenyl ether	ug/L	50	39.4	79	23-120	
4-Chloro-3-methylphenol	ug/L	100	75.7	76	21-119	
4-Chloroaniline	ug/L	100	68.9	69	10-122	
4-Chlorophenylphenyl ether	ug/L	50	46.6	93	22-112	
4-Nitroaniline	ug/L	100	105	105	14-118	
4-Nitrophenol	ug/L	250	122	49	10-110	
Acenaphthene	ug/L	50	41.9	84	20-105	
Acenaphthylene	ug/L	50	44.5	89	23-106	
Anthracene	ug/L	50	43.5	87	25-120	
Atrazine	ug/L	50	40.4	81	17-115	
Benzaldehyde	ug/L	50	ND	0	17-115	L2
Benzo(a)anthracene	ug/L	50	46.0	92	21-128	
Benzo(a)pyrene	ug/L	50	48.6	97	25-116	
Benzo(b)fluoranthene	ug/L	50	49.2	98	23-117	
Benzo(g,h,i)perylene	ug/L	50	51.8	104	17-128	
Benzo(k)fluoranthene	ug/L	50	46.0	92	25-127	
Biphenyl (Diphenyl)	ug/L	50	43.7	87	17-115	
bis(2-Chloroethoxy)methane	ug/L	50	46.0	92	19-107	
bis(2-Chloroethyl) ether	ug/L	50	44.5	89	10-108	
bis(2-Chloroisopropyl) ether	ug/L	50	42.3	85	10-108	
bis(2-Ethylhexyl)phthalate	ug/L	50	47.0	94	16-123	
Butylbenzylphthalate	ug/L	50	46.0	92	20-118	
Caprolactam	ug/L	50	13.4	27	17-115	
Carbazole	ug/L	50	45.3	91	17-115	
Chrysene	ug/L	50	47.0	94	24-125	
Di-n-butylphthalate	ug/L	50	42.7	85	23-115	
Di-n-octylphthalate	ug/L	50	46.1	92	20-115	
Dibenz(a,h)anthracene	ug/L	50	51.0	102	18-131	
Dibenzofuran	ug/L	50	48.1	96	23-106	
Diethylphthalate	ug/L	50	45.3	91	24-115	
Dimethylphthalate	ug/L	50	45.1	90	22-113	
Diphenyl ether (Phenyl ether)	ug/L	50	46.4	93	17-115	
Fluoranthene	ug/L	50	44.9	90	24-125	
Fluorene	ug/L	50	45.5	91	24-114	
Hexachloro-1,3-butadiene	ug/L	50	30.2	60	10-110	
Hexachlorobenzene	ug/L	50	39.2	78	22-127	
Hexachlorocyclopentadiene	ug/L	50	45.7	91	10-110	
Hexachloroethane	ug/L	50	45.2	90	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	50	52.9	106	18-130	
Isophorone	ug/L	50	40.1	80	23-114	
N-Nitroso-di-n-propylamine	ug/L	50	46.6	93	21-114	
N-Nitrosodiphenylamine	ug/L	50	33.7	67	24-123	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

LABORATORY CONTROL SAMPLE: 1171965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	50	33.2	66	14-110	
Nitrobenzene	ug/L	50	38.5	77	16-106	
Pentachlorophenol	ug/L	250	83.3	33	10-123	
Phenanthrene	ug/L	50	42.8	86	25-119	
Phenol	ug/L	50	23.4	47	10-110	
Pyrene	ug/L	50	49.2	98	22-127	
2,4,6-Tribromophenol (S)	%			80	27-110	
2-Fluorobiphenyl (S)	%			89	27-110	
2-Fluorophenol (S)	%			60	12-110	
Nitrobenzene-d5 (S)	%			73	21-110	
Phenol-d6 (S)	%			45	10-110	
Terphenyl-d14 (S)	%			98	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171966 1171967

Parameter	Units	92195993004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	ND	100	100	91.2	83.7	91	84	50-150	9	
2,4,5-Trichlorophenol	ug/L	ND	100	100	94.4	102	94	102	19-105	8	
2,4,6-Trichlorophenol	ug/L	ND	100	100	87.3	91.7	87	92	13-108	5	
2,4-Dichlorophenol	ug/L	ND	100	100	68.4	80.1	68	80	29-111	16	
2,4-Dimethylphenol	ug/L	ND	100	100	64.1	68.6	64	69	21-103	7	
2,4-Dinitrophenol	ug/L	ND	500	500	506	445	101	89	10-109	13	
2,4-Dinitrotoluene	ug/L	ND	100	100	124	115	124	115	27-104	7	M1
2,6-Dinitrotoluene	ug/L	ND	100	100	117	121	117	121	28-101	3	M1
2-Chloronaphthalene	ug/L	ND	100	100	93.1	90.7	93	91	14-102	3	
2-Chlorophenol	ug/L	ND	100	100	101	116	101	116	16-110	14	M1
2-Methylnaphthalene	ug/L	ND	100	100	64.7	72.7	65	73	13-110	12	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	91.5	118	92	118	19-110	25	M1
2-Nitroaniline	ug/L	ND	200	200	223	229	112	115	26-103	3	M1
2-Nitrophenol	ug/L	ND	100	100	76.4	78.5	76	78	20-110	3	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	80.7	110	81	110	20-110	31	M1
3,3'-Dichlorobenzidine	ug/L	ND	500	500	228	242	46	48	25-112	6	
3-Nitroaniline	ug/L	ND	200	200	231	228	116	114	29-110	1	M1
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	185	192	92	96	10-117	4	
4-Bromophenylphenyl ether	ug/L	ND	100	100	71.5	79.7	71	80	20-105	11	
4-Chloro-3-methylphenol	ug/L	ND	200	200	140	183	70	92	22-110	27	
4-Chloroaniline	ug/L	ND	200	200	127	162	64	81	20-100	24	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	87.6	92.0	88	92	19-102	5	
4-Nitroaniline	ug/L	ND	200	200	292	265	146	133	29-110	10	M1
4-Nitrophenol	ug/L	ND	500	500	434	434	87	87	10-110	0	
Acenaphthene	ug/L	ND	100	100	82.7	85.8	83	86	17-100	4	
Acenaphthylene	ug/L	ND	100	100	86.7	90.6	87	91	21-100	4	
Anthracene	ug/L	ND	100	100	87.0	89.8	87	90	24-109	3	
Atrazine	ug/L	ND	100	100	113	115	113	115	50-150	2	
Benzaldehyde	ug/L	ND	100	100	ND	ND	3	3	50-150		M0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1171966 1171967

Parameter	Units	92195993004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzo(a)anthracene	ug/L	ND	100	100	89.0	91.2	89	91	22-117	2	
Benzo(a)pyrene	ug/L	ND	100	100	98.0	100	98	100	23-104	2	
Benzo(b)fluoranthene	ug/L	ND	100	100	108	103	108	103	23-103	4	M1
Benzo(g,h,i)perylene	ug/L	ND	100	100	90.1	94.1	90	94	18-111	4	
Benzo(k)fluoranthene	ug/L	ND	100	100	80.8	86.4	81	86	22-113	7	
Biphenyl (Diphenyl)	ug/L	ND	100	100	85.4	83.9	85	84	50-150	2	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	81.4	83.5	81	84	22-110	3	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	89.1	101	89	101	16-110	13	
bis(2-Chloroisopropyl) ether	ug/L	ND	100	100	88.9	95.1	89	95	14-110	7	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	74.6	68.9	75	69	23-102	8	
Butylbenzylphthalate	ug/L	ND	100	100	85.0	81.6	85	82	25-110	4	
Caprolactam	ug/L	ND	100	100	46.7	73.0	47	73	50-150	44	M1,R1
Carbazole	ug/L	ND	100	100	114	120	114	120	50-150	5	
Chrysene	ug/L	ND	100	100	90.6	93.6	91	94	23-115	3	
Di-n-butylphthalate	ug/L	ND	100	100	98.4	98.9	98	99	26-110	0	
Di-n-octylphthalate	ug/L	ND	100	100	86.0	83.3	86	83	22-110	3	
Dibenz(a,h)anthracene	ug/L	ND	100	100	93.3	97.2	93	97	21-112	4	
Dibenzofuran	ug/L	ND	100	100	94.0	99.0	94	99	19-102	5	
Diethylphthalate	ug/L	ND	100	100	94.8	93.0	95	93	29-110	2	
Dimethylphthalate	ug/L	ND	100	100	89.6	92.2	90	92	27-110	3	
Diphenyl ether (Phenyl ether)	ug/L	ND	100	100	84.5	85.1	85	85	50-150	1	
Fluoranthene	ug/L	ND	100	100	117	123	117	123	23-112	5	M1
Fluorene	ug/L	ND	100	100	95.8	96.8	96	97	22-104	1	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	74.0	68.0	74	68	10-110	8	
Hexachlorobenzene	ug/L	ND	100	100	78.3	85.9	78	86	21-116	9	
Hexachlorocyclopentadiene	ug/L	ND	100	100	91.1	76.5	91	76	10-110	17	
Hexachloroethane	ug/L	ND	100	100	93.5	98.3	93	98	10-110	5	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	96.4	100	96	100	20-113	4	
Isophorone	ug/L	ND	100	100	68.9	74.6	69	75	50-150	8	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	83.4	102	83	102	21-105	20	
N-Nitrosodiphenylamine	ug/L	ND	100	100	63.7	70.2	64	70	23-107	10	
Naphthalene	ug/L	ND	100	100	68.4	69.3	68	69	10-110	1	
Nitrobenzene	ug/L	ND	100	100	65.7	65.2	66	65	20-110	1	
Pentachlorophenol	ug/L	ND	500	500	198	200	40	40	10-118	1	
Phenanthrene	ug/L	ND	100	100	81.7	85.0	82	85	24-106	4	
Phenol	ug/L	ND	100	100	63.4	85.4	63	85	12-110	30	
Pyrene	ug/L	ND	100	100	70.5	67.3	71	67	24-114	5	
2,4,6-Tribromophenol (S)	%						95	101	27-110		
2-Fluorobiphenyl (S)	%						86	83	27-110		
2-Fluorophenol (S)	%						70	79	12-110		
Nitrobenzene-d5 (S)	%						67	67	21-110		
Phenol-d6 (S)	%						57	79	10-110		
Terphenyl-d14 (S)	%						70	67	31-107		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: WET/30472 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

METHOD BLANK: 1176325 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003, 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	04/11/14 10:11	

LABORATORY CONTROL SAMPLE: 1176326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176327 1176328

Parameter	Units	92196432001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	46.7	50	50	96.2	98.2	99	103	75-125	2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1176329 1176330

Parameter	Units	92196432004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	mg/L	106	50	50	151	155	91	99	75-125	3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: WETA/18649 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92195702002, 92195702003

METHOD BLANK: 1175993 Matrix: Water
Associated Lab Samples: 92195702002, 92195702003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	04/10/14 18:55	

LABORATORY CONTROL SAMPLE: 1175994

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: 1175995 1175996

Parameter	Units	92196224008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	67.0	20	20	87.1	87.8	101	104	75-125	1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

QC Batch: WETA/18710 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

METHOD BLANK: 1179255 Matrix: Water
Associated Lab Samples: 92195702004, 92195702005, 92195702006, 92195702007, 92195702008, 92195702009, 92195702010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	04/16/14 16:20	

LABORATORY CONTROL SAMPLE: 1179256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1179257 1179258

Parameter	Units	92195024001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	2.1	20	20	23.2	23.3	106	106	75-125	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1179259 1179260

Parameter	Units	92195702004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	3.0	20	20	23.4	23.4	102	102	75-125	0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALIFIERS

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

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.

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
PASI-C	Pace Analytical Services - Charlotte
PASI-G	Pace Analytical Services - Greenwood

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92195702002	**MW-116**	EPA 9060A	GWD/1157		
92195702003	**MW-118**	EPA 9060A	GWD/1157		
92195702004	**RW-119**	EPA 9060A	GWD/1157		
92195702005	**MW-114**	EPA 9060A	GWD/1158		
92195702006	**MW-402**	EPA 9060A	GWD/1158		
92195702007	**RW-115**	EPA 9060A	GWD/1158		
92195702008	**MW-401**	EPA 9060A	GWD/1158		
92195702009	**MW-132**	EPA 9060A	GWD/1158		
92195702010	**MW-134**	EPA 9060A	GWD/1158		
92195702002	**MW-116**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702003	**MW-118**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702004	**RW-119**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702005	**MW-114**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702006	**MW-402**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702007	**RW-115**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702008	**MW-401**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702009	**MW-132**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702010	**MW-134**	EPA 3010	MPRP/15688	EPA 6010	ICP/14207
92195702002	**MW-116**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702003	**MW-118**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702004	**RW-119**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702005	**MW-114**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702006	**MW-402**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702007	**RW-115**	EPA 3510	OEXT/26857	EPA 8270	MSSV/8944
92195702001	**MW-302**	EPA 8260	MSV/26317		
92195702002	**MW-116**	EPA 8260	MSV/26317		
92195702003	**MW-118**	EPA 8260	MSV/26317		
92195702004	**RW-119**	EPA 8260	MSV/26326		
92195702005	**MW-114**	EPA 8260	MSV/26340		
92195702006	**MW-402**	EPA 8260	MSV/26340		
92195702007	**RW-115**	EPA 8260	MSV/26342		
92195702008	**MW-401**	EPA 8260	MSV/26342		
92195702009	**MW-132**	EPA 8260	MSV/26342		
92195702010	**MW-134**	EPA 8260	MSV/26342		
92195702001	**MW-302**	EPA 8260B Mod.	MSV/26316		
92195702002	**MW-116**	EPA 8260B Mod.	MSV/26316		
92195702003	**MW-118**	EPA 8260B Mod.	MSV/26316		
92195702004	**RW-119**	EPA 8260B Mod.	MSV/26316		
92195702005	**MW-114**	EPA 8260B Mod.	MSV/26316		
92195702006	**MW-402**	EPA 8260B Mod.	MSV/26316		
92195702007	**RW-115**	EPA 8260B Mod.	MSV/26316		
92195702002	**MW-116**	SM 2320B	WET/30472		
92195702003	**MW-118**	SM 2320B	WET/30472		
92195702004	**RW-119**	SM 2320B	WET/30472		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
816 Durst Avenue East
Greenwood, SC 29649
(864)229-4413

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AURIGA, SPARTANBURG SC
Pace Project No.: 92195702

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92195702005	**MW-114**	SM 2320B	WET/30472		
92195702006	**MW-402**	SM 2320B	WET/30472		
92195702007	**RW-115**	SM 2320B	WET/30472		
92195702008	**MW-401**	SM 2320B	WET/30472		
92195702009	**MW-132**	SM 2320B	WET/30472		
92195702010	**MW-134**	SM 2320B	WET/30472		
92195702002	**MW-116**	SM 4500-Cl-E	WETA/18649		
92195702003	**MW-118**	SM 4500-Cl-E	WETA/18649		
92195702004	**RW-119**	SM 4500-Cl-E	WETA/18710		
92195702005	**MW-114**	SM 4500-Cl-E	WETA/18710		
92195702006	**MW-402**	SM 4500-Cl-E	WETA/18710		
92195702007	**RW-115**	SM 4500-Cl-E	WETA/18710		
92195702008	**MW-401**	SM 4500-Cl-E	WETA/18710		
92195702009	**MW-132**	SM 4500-Cl-E	WETA/18710		
92195702010	**MW-134**	SM 4500-Cl-E	WETA/18710		

Pace Analytical

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

Client Name: AECOM

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

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

Optional
Proj. Due Date:
Proj. Name:

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

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

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

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

Date and Initials of person examining contents: 4/2/14

Temp should be above freezing to 6°C

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

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

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: JB Date: 4/2/14

SRF Review: JD Date: 4/3/14

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

WO#: 92195702

AECOM

Chain of Custody and Analytical Request

Page of
Project Number: 60280417
Chain of Custody Number [1]:
LIMS Number:

Project Name / Location: Auriga, Spartanburg SC

Client Name: Celanese

Collected by: Justin Butler / Randy Morgan

Project Manager: Bryon Dahlgren

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information	VOCS 8260	TOC	Alkalinity	Chloride	Dissolved Manganese	1,4 Dioxane (8260 SIM)	Dow Therm A					COMMENTS	Cooler ID
																		92195702	
MW-302	1-APR-2014	1300		X			X					X						Dissolved Manganese Field Filtered	001
RW-116	1-APR-2014	1455		X			X	X	X	X	X	X	X						002
MW-118	1-APR-2014	1730		X			X	X	X	X	X	X	X						003
RW-119	1-APR-2014	1825		X			X	X	X	X	X	X	X						004
MW-401	2-APR-2014	830		X			X	X	X	X	X								008
MW-114	2-APR-2014	925		X			X	X	X	X	X	X	X						005
MW-402	2-APR-2014	955		X			X	X	X	X	X	X	X						006
MW-132	2-APR-2014	1015		X			X	X	X	X	X								009
MW-134	2-APR-2014	1140		X			X	X	X	X	X								010
RW-115	2-APR-2014	1200		X			X	X	X	X	X	X	X						OUT

4/2/14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.		4/2/14	1245		4/2/14	1245
2.		4/2/14	1405		4/2/14	1405
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: XX
Method of Shipment: Pace Courier
Analytical Lab: Pace Analytical
Lab Recipient:

Shipped:
Airbill #:
Location: Huntersville, NC
Date: Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 01-19-2004-01)

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-3-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Daniel Bergman, Terry Crossman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	Meet with EFM to sort out bottleneck.
815	Call Eric Ash to send field filters for EFM.
830	Empty Purge water from yesterdays sampling at WWTP
900	Re-stake Brockman wells - move as Needed and label
930	McIver Law & AE Drilling on S.G
1000	H&S Meeting
1100	Offload EQuipment and Supplies in storage Shed behind buildings.
1130	Mob to mound S.G Water for back of wells.
1200	Lunch
1230	Clear MW-114 Location
1330	Drill MW-114 - Refusal at 57'
1630	Install 2 IN PVC well w 10' Screen to 56.7' Add one bag sand
1700	Off S.G Rain

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-3-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-4-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Daniel Bergmen / Glen Gibson

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	Unload additional empty drums.
830	IHS Meeting
900	Sand MW-114 7 Bags - 43.6'
930	Bentonite MW-114 1 Bag 40.9'
1000	Grout well 15 40lb bags + ½ bag gel
1310	Lunch
1400	Empty purge water at WWTP " From McIver wells yesterday
1410	Bruckner drillers build Decon Pad -
1500	Decon
1530	Clean Augers to MW-112
1615	Set up Rig on MW-112
1700	Stop at 15'
1730	Move drums Inside Bldg.

FIELD REPRESENTATIVES SIGNATURE: DATE: 12-4-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-5-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergman, Terry Cremmen

BRIEF SUMMARY OF WORK PERFORMED: Well Install

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	on site
805	Safety meeting
810	Resume drilling MW-11R
930	TD MW-11R at 40' Ref refusal
945	Install MW-11R inside Augers to 39'
950	10' screen 0.3 Plug - 7.5 Bags to 26.5'
1030	1 Bag hyd plug @ 23.5
1130	Grout well 7 Bags Portland 4 gal/
1200	Lunch Pinchem 5 w last strand
1300	Move Augers to DECON / DECON
1430	Clear access to MW-12U Decide to drill to 55 if possible
	Because location was offset to high elevation area
1530	Drill MW-12U to 56'
1700	Move Drum inside Bldg - 3 Drum from MW-11R &
	1 from MW-11Y

FIELD REPRESENTATIVES SIGNATURE: Marc Hartford DATE: 12-5-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-6-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Daniel Bergman, Creasman, E. Hammond

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	ON S. To
815	HCS Meeting
830	Install MW-120 Screen + Plug 44.7-55
930	Install Sand 7 Bags to ~~44'~~ 42.2
1015	Bentonite 1 Bag to ~~40'~~ 39.7
1100	Clean access to MW-116. Cut approx. 20 2-3 in Diam. trees and 3 6-10" trees (diameter).
1200	Grout MW-120 14 Bags + gel - 2 Batches
	MW-120 Generated 3 Drums of soil.
1240	Clean up MW-120 area
1310	Lunch
1340	Decon.
1430	Set up on MW-116
1500	Drill MW-116
1550	TD @ 32' Refusal
1600	Move 3 Drums from MW-120 inside & 1 Drum from MW-116
1615	Run off site

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-6-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-9-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services R. Morgan

SUBCONTRACTOR PERSONNEL ON SITE: TJ, Gary, John, David

BRIEF SUMMARY OF WORK PERFORMED: Well installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1030	On S.G - Drill. Crew NRI Training this morning
11:00	HRS meeting
1130	Lunch
1230	Install MW-116 - Rain
	well to 31.3 10' Screen + 0.3 Ply 8 Bags sand to 18.5
1401	1 Bag Volcplug to 15.5
1430	Grout MW-116 - 6 Bags
1500	Move to MW-118 Set up Rig
1445	Gormon offsite to purchase 20 bales of straw for erosion control
1530	- Rain Delay
1600	Spread 15 Bales of straw on mud around MW-116
1630	offsite - Rain - Moved one MW-116 soil drum inside the buildings

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-9-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-10-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Creasman, Bogman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On S.G. = Decon
845	H&S meeting
900	Drill MW-118 to 44.3 Auger Refusal Generated 3 Drums
930	Install MW-118 Screen Dia 34-44.3
940	Sand well to 32.1 7 Bags sand
1115	Boleplug @ —— 1 Bag
1130	Lunch
1230	Grout MW-118
1330	Clean up. Spread straw.
1430	Put 3 Drum from MW-118 inside Bldg
	15 Drum soil from MW-112-120 inside Bldg.
1445	Haul Drill Rig to Auriga - Gorman
1500	Take down decon PAD.
1510	Put 3 Decon water Drum inside Building - Well water
	pump into a waste tank and haul to auriga
1600	Move to DMT area
	- 28 Com locking cast iron hand hole were delivered
1615	Tim Jamison at Rec. Bldg area - Said he would issue
	Permit in the Morning
1630	Setup Rig on MW-122
1700	Off S.G.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-10-13

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 12-11-13

PROJECT & LOCATION: Amiga S.G Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Mark Hanford
R Morgan

SUBCONTRACTOR: AE Drilling

SUBCONTRACTOR PERSONNEL ON SITE: Don Bergmon, T Cranium

BRIEF SUMMARY OF WORK PERFORMED: _____

TIME	DESCRIPTION OF ACTIVTIES
730	On S.G - Amiga Work Permit
800	H&S Meet Calibrate GT RAE 3000 100.6 on Isobutylene
815	Drill MW-122 4 Soil Drums
940	Auger Refusal at 58 ft
1000	Fill water tank. Gather well materials and drums
1100	Install MW-122 10' screen + 0.3 Bottom Plug to 57.5
1110	Sand well 1 Bag to 44.9 ft
1140	Hydrate well 1 Bag to 42.2
1200	Lunch
1315	Grout MW-122 7 Bags
1400	move rig to MW-124
1415	decon augers / Pickup pallets for Drum storage at Boneyard
1530	Drill MW-124 to 60.5
1700	Install MW-124 to 60'
1710	Sand well - Added 3 Bags of sand. 55.5
1730	Off S.G
	Randy Morgan
	Develop MW-114 126 Gal
	MW-112 119 Gal
	Dispose of Units at LWTP

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: 12-11-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-11-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		plu equipment - leave for Auriga Spartanburg
	0720	arrive on site
	0730	met Mark and drilling crew
	0753	safety briefing
0830		at Bruckner Site
		calibrate YSI 556
		DO% saturation @ 18.01C 9.39
		Conductivity 17.67 1.278
		Ph 7.02 7.02
		Ph 4.00 4.00
		Ph 10.05 9.95
		ORP 237.5 237.5
		Turbidity accepts all standards 100, 10.0, 0.02 NTUs
0845		begin to develop MW-114 w/ teflon reusable bailer
0920		begin to develop MW-114 w/ grundfos pump
1045		complete developing MW-114 126.6 gals removed
		decon the teflon bailer / grundfos pump
1125		at Auriga site WWTP to empty development water
	1145	at MW-122 location where Mark is to cover for Him while
		he's in a meeting during lunch
1200		lunch
1300		back on site to cover for Mark w/ drillers
1440		leave to go back to Bruckner site

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 11 2013

AECOM

Auriga Spartanburg SC

DAILY REPORT

PROJECT NUMBER: 60280417.610 DATE: Dec 11 2013 REPORT NUMBER: _____

Well development

Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1500		begin to develop MW-112 w/ bailer
1525		Begin to develop MW-112 w/ grundfos pump
1655		Complete developing MW-112
		decon pump / teflon bailer
1730		at Auriga WWTP to empty development water
	1743	off site
	1830	at AECOM office

Randy Morgan Dec 11, 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-12-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergmen, Crewman

BRIEF SUMMARY OF WORK PERFORMED: Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On S.t
740	HRS Meeting · Safe work Permit
810	Continue Setup MW-124 4 more Bags total 7 to 47.2
~	TD well @ 66.5 10' screen + 0.3 Plug
920	Add one Bag Hole Plug @ 44'
930	Drill Crew off-S.t to purchase portland cement
1030	Grout MW-124 1 Bag 47 lb + Gel = 50 gal
1110	Clean up.
1140	Lunch
1240	Decon Augers / 2nd AE Crew to yard Grout @ Bruckner
1340	Drill MW-126 @ 50' AR
1530	Install MW-126 16' screen + 0.3 Bottom Plug to 49.5'
1540	Sand well 7 Bags @ 37.1
1610	Bentonite well 1 Bag @ 34
—	Clean up / Pull Plugs.
1645	Grout MW-126 6 Bags + Gal. 47# Bags
1725	Off S.t
	Roundup.
	MW-116 - 65.5
	MW-120 - In Progress

FIELD REPRESENTATIVES SIGNATURE: DATE: 12-12-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-13-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: D Bergman, TJ Creasman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
700	On S. t
740	H&S Meeting
750	Move to Setup to Drill MW-136
800	Calibrate PID - Isobutylene 99.9 PPM
900	Drill MW-136 to ~~60.5~~ 61 4 Drums Soil
1030	Install MW-136 ~~to 60.5~~ 2 in well 10' screen + 0.3 Bottom Plug
1040	Sand Well to 46.7 - 7 Bags
1140	Hole Plug to 43 1 Bag
1200	Lunch
1250	Grout well 1 Bag + Gell
1330	Decon Augers
1415	Clean Access to MW-138
1430	Setup on MW-138 4 Drums Soil
1445	Drill MW-138
1620	Install MW-138 16' Screen + 0.3 Plug - to 59.6
1630	Sand well to 49.9. Will top off Monday
1700	Driller pack up.
	- Rowdy well development
	MW-126 finished - total 40.75 Gal
	MW-118 purged 43 gal
	MW-121 purged - 208 Gal

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-13-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 12, 13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave for Auriga Spartanburg SC
	0710	onsite calibrate YSI 556
		DO% Saturated air @ 20.11 8.85
		Conductivity 1.278 @ 19.48 1.278
		Ph 7.02 @ 19.63 7.02
		Ph 4.00 4.00
		Ph 10.05 10.02
		ORP 237.5 237.5
		Turbidity meter accepts all standards 1000/10.0, 0.02 NTU
0735		at Home depot to get barb fitting for ½ Poly tubing to
		pump development water to truck from creek area.
0800	0	on site take equipment to MW-116 at creek to muddy to drive
0815		begin to develop MW-116 w/ bailer, bailed out 10 gals
0905		began to develop MW-116 w/ groundhog pump max rate .5 GPM
	1052	complete developing MW-116
1100		begin to pull up the 250' poly run through the wood and
		Decon pump / tefton bailer
	1125	complete activites at MW-116
1145	1245	lunch w/ Mark Hartford
1250		empty poly tank of development water from MW116
1310		truck won't start had it checked at Advance everything checks out
1340		at Buckner site AE Drilling crew on site to finish
		grouting up wells and the pads

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 12-12-13

AECOM

Aurora Spartanburg

DAILY REPORT

PROJECT NUMBER: _____ DATE: Dec 12, 13 REPORT NUMBER: _____

well development

Page #: 2 of 2

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1400		at MW-120 AE Drilling grouts up well before I start developing
1418		begin to develop MW-120 (W) bailer
		~~Begin to develop MW-120 w/ grundfos pump RM~~
1430		MW-120 almost dry wait for recovery to pump
1445	1515	begin to develop MW-118 w/ bailer almost dry
1530		back at MW-120 to develop w/ grundfos pump very low yield pumping rate started at .40 GPM had to turn down to .25 still goes dry - pump dry allow to recover
	1700	stop developing MW-120 today will need to return on 12-13-13 to finish
	1715	empty the poly tank at Aurora WWTP
	1728	off site to get gas for generator
	1820	at AECOM ~~Switch out~~ Van Truck for Van due to mechanical problems
	1845	End of day.

Randy Morgan Dec 13 13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 13, 2013 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave for Auriga Spartanburg
0710		calibrate YSI #56
		DO% saturated air - @ 19.95 8.89
		Conductivity 1.278 @ 19.31 1.278
		ph 7.02 @ 19.48 7.02
		ph 4.00 4.00
		ph 10.05 10.01
		ORP 237.5 237.5
		Turbidity meter accepts all standards 1000, 10.0 0.02 NTUs
0730		set back up on MW120 to continue developing w/ grundfos
0745		pumped 1.0 GPM dry allow to recover to pump and again
	0845	considered MW-120 complete of developing
0900	1030	off site
1030		at MW-118 set pump and begin to develop (bailed in 12-12-13)
		well is low yield, pump at .5 gal minute + it dry - (surging)
		turn off for recovery - repeat until developed
1145		John Wakeman w/ AECOM on site to get walk thru of
		Bruckner bldg as client (celanese) instructed him to do have us
		show him around and what information to fill out for another site.
1200		back at MW-118 continue developing w/ pump
	1245	Consider MW-118 developed.
1300		decon pump
1325		empty purge water at Auriga WWTP

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 13, 2013

AECOM

Auriga Spartanburg

DAILY REPORT

PROJECT NUMBER: _____ DATE: Dec 13, 2013 REPORT NUMBER: _____

Well development

Page #: 2 of 2

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1325		my badge would not work they did not up date it could
		not get in to empty purge water called Phil w/ Auriga
		Mark took me to Wells MW136 + MW-138 are to be
		and showed me area.
1430		at MW-122 begin to bail w/ teflon bailer
1452		begin developing MW-122 w/ grundfos
1525		had to empty development water - badge is now working
		was pumping rate of 3 GPM turn down after
		surging several volume out - clear right up
	1625	complete developing MW-122
		decon teflon bailer / grundfos pump
		empty development water at LWTP

Randy Morgan Dec 13, 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-16-13. REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford Morgan

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Bergman, Crossman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1300	Hartford on Sta - See R Morgan for AM activities.
—	Completing MW-138
1310	H&S orientation w/ L Auriga - Permit
1330	Decon.
—	Gary Winborne buddy Pack.
1400	Move Drums & storage area Black drums on pallets near WWTP in Bermed area.
	MW-138 - 5 ; MW-136 - 4 ; MW-122 - 4; MW-124 - 4
	MW-126 - 3 = 20
1515	Set up to drill MW-128
1525	Cal RAE 30w 100.1 BSM
1535	Drill MW-128 to 60'
1705	Secure pump / drum.
1730	at 65.6'.
	Gary Winborne prepared 4 Packs
	on Brinkman for Palmy
	Randy Develop
	MW-124 - 97 Gal
	MW-126 175.5 Gal

FIELD REPRESENTATIVES SIGNATURE: Mari Hartford DATE: 12-16-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 16, 2013 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development / (oversight MW-138)

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave AECOM for Auriga Spartanburg
	0708	arrive on site
0715		calibrate YSI 556
		DO% Saturated air @ 20.40° 8.76
		Conductivity 1.278 @ 20.53 1.278
		Ph 7.01 @ 20.57 7.02
		Ph 4.00 4.00
		Ph 10.05 10.03
		ORP 237.5 237.5
		Turbidity meter accepts all standards
		at MW-124 tag bottom & WL well was under pressure
		waiting for stabilization.
0753		begin to bail develop MW~~-124~~ (124)
0805		begin developing MW124 w/ grundfos pump
0821		Mark called will be in late I need to be w/ driller when
		they show up
	0910	drillers on site - unloading drums & supplies
	0935	finish developing MW-124
		decon teflon bailer & grundfos pump
0953		at MW-138 to oversight well completion
	1000	finish putting sand up to 46.7' BGS
	1008	bentonite up to 43.5' BGS
	1047	begin to mix grout - portland cement (6 Bags)

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 16 2013

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: Dec 16 2013 REPORT NUMBER: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1057		begin grouting well
	1112	complete grouting MW-138
	1125	move rig to decon area
1145	1230	lunch
		drillers moving augers to decon area to decon & drums
		to drum storage area
1245		R Morgan at MW-126 to begin developing
1245		begin to develop MW-126 w/ bailer
1320		begin developing w/ grounfos pump
	1525	complete developing MW-126
~~1525~~	1530	empty development water
1553		at MW-136 begin to develop with bailer
1610		begin developing MW-126 w/ grundfos pump rm
	1700	stopped developing will continue on Dec 17 2013
1710		empty purge water (development water)
	1730	off site to equipment center for more tubing
		and DI water
	1830	at AECOM office end of day.

Randy Morgan Dec 16 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-17-13. REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford Morgan

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Bergman, Creasman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Install & Decon

Gary Winbourn - Pad construction ~~to~~ Bruckner.

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On S.G
745	H.S. meet. - Safe work Permit
800	Tailgate Decon Pad
815	Prep to install MW-128 - Cal PID - 101.1 PPM
820	Install MW-128 10' screen + 0.2 Plug TD of 60.3
825	Sand MW-128 7.5 Bags to 47.5
920	Tobolaplug 1 Bg to 45
1015	Pump Grout MW-128 3 94# Bags + Gel. Batch #1
1035	Pump Grout MW-128 3 94 Bags + Gel Batch #2
1100	Build Decon Pad inside Fence - / Decon Auger
1140	Lunch
1230	Decon. Spread 7 Bales Straw at MW-138 Access.
	- need to order load of gravel for Jan for this loc.
1320	Cut Asphalt at MW-130 - Air Liquide
1400	Drill MW-130 to 60.1 - 6 Soil Mixer
1600	Install MW-130 to 60.3 with 10' Screen + 0.2 Bottom Plug
1610	Sand MW-130 to 47.5' - 7 Bag
1620	Bentonite MW-130 to 44.5 1 Bags
	- Gary Winbourn completed well Pads at Bruckner
	- Randy Morgan finished development
	MW-136, MW-138 & MW-128
	MW-136 - 74.5 GAL
	MW-138 206 GAL
	MW-128 69 GAL

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-17-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 17, 2013 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave for Auriga Spartanburg
0708		arrive on site - calibrate YSI 556
		DO% saturated air @ 19.41 8.94
		Conductivity 1.278 @ 19.64 1.278
		Ph 7.02 @ 19.76 7.02
		Ph 4.00 4.00
		Ph 10.05 10.01
		ORP 237.5 237.5
		Turbidity meter accepts all Standards 1000, 10.0, 0.02 NTU's
0726		at MW-136 continue to develop w/ grundfos
0734		begin purging - developing MW-136
	0900	Completed developing MW-136 decon pump + teflon bailer
0915		at MW-138 begin to develop w/ bailer
0935		begin developing MW-136 w/ grundfos pump (very high producer)
	1130	Complete developing MW-136
	1145	empty 2nd tank of water
		decon pump + teflon bailer
1200		lunch w/ mark - purchase straw to put out at MW-138
1245		spread straw
1337		at MW-128 begin to develop w/ teflon bailer
1358		low yield well begin developing w/ grundfos pump keep turning pump off to allow well to recharge
	1630	Complete developing MW-128

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 17, 2013

AECOM

Aurora Spartanburg

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 17, 2013 REPORT NUMBER: 2 of 2

Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1641		decon pump & teflon bailer
1650		empty development water
	1730	off site to Greenville
	1813	at AECOM office

Randy Moyer Dec 17, 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-18-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Bergman / Creasman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	Auriga Safe Work Permit
745	ED will use on s.t. Remark utilities for DMT locations.
830	ED off s.t. - AE. Prep to Grout MW-130
840	Pump Batch #1 Grout 3 94# Bags Portland + gel - MW-130
910	Pump Batch #2 Grout 3 94# Bags Portland + gel - MW-130
930	DECON
1030	Steam Cleaner hose failed. Driller off s.t. to purchase new hose
1130	Return to repair steam Cleaner
1200	Lunch & Buy Portland
1300	Drill MW-132 65.5 Cal PID 99.8 ppm
1605	Install MW-132 to 65.2 with 10' screen and 0.3 bottom Plug
1610	Install Sand to 52.4 ~7 Bags
1640	Install Bentonite to 49.6' ~ 1 Bag
1710	off s.t.
	Developed - MW-130 65 GAL
	- Call Cricket Grady to schedule Gravel
	- Randy will rent leaf blower to clean well area

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-18-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417.610 DATE: Dec 18, 2013 REPORT NUMBER: 1 of

PROJECT & LOCATION: Auriga Spartanburg

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: Well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0730		leave to go to Progress park to get grundfos pump repaired
0805		leave for Auriga Spartanburg
	0843	arrive on site - calibrate YSI 556
		DO% saturated air @ 19.93 8.83
		Conductivity 1.278 @ 20.03 1.278
		pH 7.00 @ 20.14 7.02
		pH 4.00 4.00
		pH 10.05 10.01
		ORP 237.5 237.5
		Turbidit meter accepts all standards 1000, 10.0, 0.02 NTU's
	0908	at MW-114 to notch out well cap
0918		on site at MW-130 well just completed need to wait for grout to dry.
1100		at MW-130 begin to bail to develop WL 53.42 not much water will use bailing method more than normal then
	1153	switch to grundfos
1200	1300	lunch
1310		back at MW-130 bailed 5 more gals for total of 20 gals
1337		begin to use grundfos to develop MW-130

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 18, 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-19-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services Morgan

SUBCONTRACTOR PERSONNEL ON SITE: Bergman, Creasman

BRIEF SUMMARY OF WORK PERFORMED: Install, Develop Monitoring wells

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On S.G.
740	Obtain Safe work Permit from Auriga
800	Clean Rig area Packing out 4 1/4L Blunier.
800	Grout MW-132 Batch #1 3 #94 Bags Portland + Gel
830	Batch #2 3 #94 Bag Portland + Gell
900	Batch #3 3 #94 Bag Portland + Gell
930	Cleanup - Steam Clean.
1030	Move Rig to. MW-134
1100	Saw Cut Asphalt at MW-134
1130	Level
1215	Move down - to staging area MW-128 (S), MW-130 (S) MW-132 (S)
1330	Drill MW-134 to 75.5
1600	Install MW-134 - to 75.4' 10' screen 0.3 Plug
1620	Sand well 7 Bags to 62.8
1630	Bentonite with 1 Bag to 60
1710	Grout Batch #1 3 #94 Bags Portland + Gell
1730	Grout Batch #2 3 94 Bg Portland # Gel.
	Develop MW 132 - 92.5 GAL
	- Drum Inventory in storage area - 35

FIELD REPRESENTATIVES SIGNATURE: Marc Hartford DATE: 12-19-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 19, 2013 REPORT NUMBER: 1 of 1

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development / clean parking lots of mud.

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave for Home Depot Spartanburg to pick up labels behind leaf blower to blow off parking lots and roadways
0715		at Home depot.
	0738	arrive on site - calibrate YSI 556 water quality meter
		DO% saturated air @ 20.45 8.79
		Conductivity 1.298 @ 19.38 1.298
		Ph 7.021 @ 19.40 7.02
		Ph 4.00 @ 19.71 4.00
		Ph 10.03 10.02
		ORP 237.5 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTUs
0745		Health + Safety briefing - while calibrating meter
0805		begin to clean up parking lot and roadway of mud
1100		at MW-132 begin developing w/ bailer
1130	1230	lunch
1255		back at mw-132 continue developing w/ groundfos pump
	1430	complete developing mw-132
1438		empty development water
	1455	off site to Home Depot to return leaf blower
	1600	back at AECOM office. End of day

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 19, 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 12-20-13 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Bergman, Creasman

BRIEF SUMMARY OF WORK PERFORMED: Grout + Well Pads

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
740	on site Auriga Safe work permit
800	Top off Grout MW-134, MW-132, MW-130, MW-128
930	- Collect Trash - From DMT & Bankhead
1020	Surface completion ~~MW-128~~ - Decon Augers
1100	Called Trey Jenkins w D&F re quick turn 3-4 day -
	Chloroform Samples collected Jan 8-10 and possibly -
	Jan 20-22 - He will deliver bottles to facility and
	get back to me on TAT -
1100	Surface completion MW-130
1140	Surface completion MW-134
1230	Surface Completion MW-132
1250	Surface Completion MW-128
1300	Move Drums to staging area - MW-134 (6) Total 41
	Empty decon water drums to WWTP - start empty decon
	water drums in staging area
-	Secure decon Pad/Pump water off - will leave for Rockwell
	Crew.
1430	Off Site
	Monday - Finish 5" Pads
	Develop - MW-134

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 12-20-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: Dec 23, 2013 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: Well development / install wells in all wells newly installed (inside vault)

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0700		leave for Auriga Spartanburg - ~~pick~~ pick up gas for van
0800		on site Calibrate YSI 556
		DO% saturated air @ 18.97 8.97
		Conductivity 1.278 @ 18.71 1.278
		Ph 7.02 @ 19.16 7.02
		Ph 4.00 4.00
		Ph 10.05 10.02
		ORP 237.5 232.5
		Turbidymeter accepts all standards 1000, 10.0, 0.02 NTUs
0823		called Shay about obtaing safe work permit, Shay
		said with what I and drillers were doing today we
		did not need one NO work permits issued
0830		R Morgan at MW-134 begin to develop w/ bailer
		Daniel Bergman w/ AE Drilling onsite to pour well pads at
		5 remaining wells outside fenced area, obtained
		well tags to place in wells when complete developing.
	1056	complete developing MW-134, decon pump
	1108	empty development water
1120	1200	put well tags in well inside fence and remove cones
1200	1300	lunch
1300		put well tags in wells at Bruckner Road site
	1338	back at Auriga site
1300		drillers back from lunch to continue well completion

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Dec 23, 13

AECOM

Aurga Spartanburg SC

DAILY REPORT

PROJECT NUMBER: 60280417.610 DATE: Dec 23, 2013 REPORT NUMBER: 2 of 2

well development / well completions Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		drillers (AE) Daniel Berman, Gary Winborn, Abel McGuire
		topping off grout in wells MW-126 + MW-138
		Well pads completed at MW-122, MW-124, MW-136
1400		called Shaq Moore about leaving decon pad/set up and
		drums in the same area, alerted him some equipment may
		arrive prior to Jan 6, 2014 to be staged in parking
		lot of Rec Bldg away from Bldg.
1445		top off grout at MW-138
1500		off site - drillers will not return to put pads on
		MW-126 + MW-138 until Jan 6, 2014
	1530	take paperwork + YSI to Mark for later use.
1605		return equipment
	1630	at AECOM office

Randy Monyo Dec 23 2013

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/8/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, John Gorma

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1600	H&S meeting
1620	Set up Rig on RLJ-127

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/9/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	ON S.G
800	H&S meeting, obtain safe work permit from Auriga
900 -	Prepare & drill RW-127
930	Water in truck Frozen
945	Obtain hose to run from Rec bldg spigot to mud tub.
1100	Mud tub Full.
1130	Pump Frozen
1140	Lunch
1430	TD At 60'
1500	Set 6" PVC casing - to 60' 70' casing to 45 grout shoe
	10.5 sticks = 59.95 ~ 60
	- 10 Drum Drilling mud - not complete -
1630	- Off S.G

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 1-9-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/10/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Suarez, John Garman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On S.G.
800	Obtain safe work permit form Auriga
830	Purchase 7 Bales straw from I+D Depot
900	Drill crew load portland Cement.
930	Prep to Grout RW-127
940	Grouted 6-in casing via tremie and grout shoe.
	~16 40 lb bags~
1000	Drill Rig is stuck trying to get out
1030	Wrecker on S.G. pulling out drill rig - Call T. Jamison re leaving the drum until it drys out. He said OK.
1100	Met with Tim Jamison re - RW5 - He said that he will send an e-mail to let facility personnel know that we will take care of it when it drys out
1130	Wrecker off site to get different equipment to get support truck out.
	Randy will Get ars from PAR grading to repair RW5.
	Total 12 Drum Drill Mud.
1330	Toll company back - pulls out support truck.
1400	Decon Drill Tools
1420	Clean up Mud
	Cover Drum
1500	Demob

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/20/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
830	On s.t. - Security check at Brucknew
930	AE called said they have rig problems -
	Work on a backup solution

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 1-21-14

PROJECT & LOCATION: Amigo

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE. Drilling.

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swaim, John Garmon

BRIEF SUMMARY OF WORK PERFORMED:

TIME	DESCRIPTION OF ACTIVTIES
915	On S.T- Tim Jamison asked that I send him an e-mail with schedule for the week.
	Called Tay Pierce w PAR spoke to schedule meet 864-680-8404
930	Safe Work Permit for Amigo.
945	Unload AIV, fill water truck.
1000	Set up location RW-125 w/ CME750 for Surface casing
	Bit circumference 3.38 ft = 2.2 diameter
1045	Drill mud / wash Rotary RW-125
1200	Lunch
1230	Drill RW-125 Surface casing
1340	Move Drill from RW-125 area to Low Bay in Rear parking Lot.
1400	RW-125 at 53'
	PO went to Para Grading for $500. $2,500 was added to the original quote to cover the new 3rd area near the Rear building that needs work
1600	Top of Rock at ~~53~~ 73 MW-125 is at 60'
1605	Circulation Mud Pump quit working - work on Pump and drain hose and pump. Haul Equip to Low Lot.
	- 7 Drums of mud to Fan.

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: 1-21-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/22/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnette, Carlos Swain, John Garman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On S.t. JSA Meet / Auriga Safe Work permit
830	Set up air compressor and Wilden air diaphragm pump
	Mayno Pump on rig Not working -
840	Move 2 drums from RW-125 area to IDW bay Trailer in Parking Lot.
900	Fill Mud drums from mud tub.
945	Resume drilling, Rock socket 73 - 76
1030	Pump off / Mud Tub
1040	Pull Rods
1110	Install 6" in SCH 40 PVC casing to 76' - RW-125
1230	Lunch
1320	Grout RW-125 Batch #1 9 Bags Total
1430	Batch #2 - 7 Bags + Cell - Total 150 Sch
1605	Off load Mud Drum in storage area
	RW-127 - 12 RW-125 - 20 Total 32 Drums -
	Plan to try to Complete Labs, pump Wash off and
	transfer to LWTP.
1630	Load Crane 750 -
1700	Off S.t.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 1/22/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/23/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Suarez, Josh Garman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation / Surface Casing.

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	Auriga Safe Work Permit.
830	Set up to install RW-123 surface casing - with Schramm Rig.
930	Work to thaw Pump.
945	Drill 9¾ roller Bit at RW-123 0-60' 0:58:5
1200	Lunch
1245	Drill Rock socket RW-123 60-62 58.5-60.5
1330	Pull Rods -
1400	Install 6 - 1/2 PVC surface casing - with grout shoe
1420	Pull Casing - Something stuck blocking hole -
1500	Flush hole to Open back up - Stabalize Level to both wells
1600	Re-Install Casing - Stuck again at ±56' will have to buy different Pump tomorrow and attempt to flush

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 1-23-13

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/29/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Sloan, John Garner

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	on site Review Safe work Permit
830	CME 45 with mud Pump on site -
	RW-123 surface casing stuck @ 56' - TD @ 60.5
1130	Finished flushing hole to get from surface casing to bottom
1130	Lunch
1230	Grout RW-123 surface casing 13 Bags + Gel
	= 100 GAL - Top off RW-123
1400	Move RW-123 Mud drum to drum storage area
1500	Clean up -
1530	off site

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/27/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
830	On site Safe Work Permit from Auriga
900	Move to decon area
930	Decon Rig Tools
1230	Set up at RW131
1030	- Pump water off drums in storage area and haul to WWTP
1300	Drill RW-131
1300	Continue to consolidate drums - Pumped 300 Gal water to WWTP from Mud drum by 1430
1630	Drilled RW131 @ 90' - MW on Rack -
	Lens 78781 - Generated 16 Drum Mud
1700	Total drums consolidated from storage area 18 -

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/28/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, John Garner

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
830	On Site Review Safe Work Permit.
900	Resume drilling RW-13I mud rotary to Surface Casing
	- Consolidate Drill mud drums -
	- Pump off decon pad water & haul to WWTP
1140	Lunch
1230	Pull Rods
1300	Install 6-in PVC Casing - RW-13I
	- Rec'd. Approval from Bryan Dahlgren to use the former GLI Eq. tank for thin Mud / Water drums temp storage - limited to mtl that can be pumped with a sump pump - ~~Mark~~ notified Chuck Amken - He will notify his supervisor and start drawing water in the tank tomorrow so we can start with an empty tank.
1400	Casing will not go to the bottom. - Stuck won't go lower down. - Work the Casing.
1530	Casing will not budge. 27 drums filled - circulation through bottom good but casing is stuck.
	Haul drums to storage area from RW-13I -
	24 drums to storage area - 4th WWTP to be pumped off
	& Removed with Site
1615	Off Site due to Snow, out of drums,
	will tremie circulate inside and outside casing tomorrow

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/29/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation NO work due to Icy Roads

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
	- Called JBR & AEO for cutoff prices
	JBR - 85 drop + Pickup + 15 day + 48 Liner
	AEO Per drop / pick + 12 day + 54 Liner
	- Spoke w Bill about problems we are having w/ casing install Ide suggested 8 1/4 ID HSA - and socket will min hammer, - this would prevent having to push casing through mud -
	Spoke w C. Amicken re - we will not post mud in EQ tank. We will argue a cutoff - need location to put it - when we can dump -

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/30/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Sloan

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
900	On S.G Safe Work Permit from Auriga
1000	Find RW-131 Casing Annulus - Casing is stuck - and not on Bottom
1100	Casing and Tremie Broke - will have to dig to sand
	Lock Tremie inside casing and Pull out and Have to Weld
	steel. of Lot can weld -
1200	Lunch
1300	Attempt to remove Stuck PVC Casing - By lowering air
	hammer inside
1330	Casing is loose. Remove PVC Casing.
	- Drilling rolloff on hold until we get permission to dispose of on site
1500	Tommy Burnette discuss with his office where to move over or
	clean this hole and install steel casing. Hold to stay on this hole would
	be best. + they only have 100' of long auger and so offset
	would have to be another mud rotary hole with some potential
1520	Called Tim Jamison to see if Rusty Philyaw can weld casing tomorrow
	He is not Booked. Tim thinks so but will confirm and call back
1700	Off site - Hole cleaned out to 106 ft.
	Tim Jamison said Rusty Philyaw will
	have to weld casing on location tomorrow
	at 10:00 - Rain on Wed

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 1/3/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Strain, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On site -
815	From Chuck Amerson - ok to get a rolloff, one will be allowed to empty somewhere on site.
930	Safe Work Permit
940	Ream/clean hole to TD.
1200	Lunch
1300	PCM Tools -
1330	Install 6-in steel surface casing
1430	Case at 116.5 ft.
1500	Grout casing via grout shoe & tremie pipe. Pumped 4 Batches from grout trailer. 10 @ 40 lb bags each Batch - total 40 Bags -
1630	off site -
	Recd. ok to dispose of rolloff soil on site if TCLP metals and specific COCs are ok.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/3/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swaim, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
830	On s.t. - Rain
930	Safe work Permit
915	Prep to trip off grout on RW-131
940	Grout RW-131 trip off 1 Batch 8 #40 Bags portland
1000	Clean drill s.t., prep to decon
1100	Setup Rig on RW-129
1230	AEG dropped off a rolloff - for soil - at RW-129
1300	Drill RW-129 with 8¼" ID HSA for Surface Casing
1500	At 70 ft in HSA
1430	AEG dropped off 2nd rolloff near RW-133 for drill mud.
1500	Load down from RW-131 and transport to rolloff
1715	Off s.t. - Rigged - & drove into rolloff

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/4/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, John Gaines

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On s.t. -
815	Auriga Safe work permit
830	Drill RW-129 to Auger Refusal at 77 ft
930	Switch to air hammer for rock socket
1000	Work on drill rig top head chain
1030	Switch over to air hammer for rock socket
1100	Pump 150 gal water from mud rollOff and transfer to WasteTank
1115	Drill socket 77-88 85-88 Hard RW-129
1200	Pull Drill tools -
1210	~~Install casing into Auger with guard shoe~~ Auger filled with mud to 50
1300	Drill Auger deeper in attempt to seal
1530	Connect drive to augers
1700	Clean out hole with air.
	Will have to flush with water tomorrow to clean mud out of hole - It is sticky to the side of auger and not enough water in hole to aid in Slurry.
	Cover RollOff's

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/5/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, Jake Garman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On S.t
815	Auriga Safe work permit -
	Spoke with Bryan Re - problems and try NEW Sp drum
	- He is ok with it. - ok to switch back to Steel Barrel
	on problem with Auger
930	Flush RW-129 inside Auger to clean out mud
1000	- Install Surface casing to 88.4 ft
1030	Pull Augers -
1130	Lunch
1215	Grout RW-129 6-in PVC Casing and via grout shoe
1430	Mix grout 35 #94 lb bags portland + gel
	Clean up Boring location / Pickup Trash
1500	Pump 150 Gal water from Mud mixer and
	transfer to Water
1630	Off S.t

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2/5/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/6/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	Auriga Safe work permits.
815	Docon
930	Set up on location. RW-133 Saw Cut Asphalt
1000	Mud Rotary drill RW-133 9¼" Roller Bit. Haul mud directly to mud rolloff in skid steer buckets
1100	~~Start~~ Pump 150 Gal clean water from mud rolloff and haul to WWTP
1130	Lunch
1230	Continue drilling RW-133 at 27'
1400	Pump 150 gal of clean water from top of existing mud drum and transfer to WWTP.
1500	Drill Rock socket RW-133.
1600	Drill Cross off S.G. Steel Casing will be here in the AM
1630	Pumped 150 gal clean water from top of existing mud drum and haul to WWTP
—	Total 450 gal today

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/7/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swaim, Dave, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
815	On S-t
830	Safe Work Permit
900	Drill Crew on s-t - Brought compressor to use air drilling next week with the cme 750
	Stag said Recycle fluid don't want us to use them dumpsters
930	Pump 150 gal water from mud roll-off and dispose at WWTP
	- Rec'd. AGO Rotor will work up on/Capel
	- Schedule PAR Crew for some time next week - Will Call
930	Clean out hole - thin mud
1000	Get load of water at WWTP
1100	Pull tools, prep to set casing
1125	Install 6-in ID welded Steel Casing in 21' sections
	x 4 + 6' final section = 90' stg grout shoe on Bottom
1305	Unload cement - take water truck Back to WWTP to fill.
1330	Lunch
1430	Grout RW-133 Casing via tremie & grout shoe - 25 #47 Bags
1530	Do CON
1630	Off S-t

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/10/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Suarez, Nate Hawthorne

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation, Packer Test

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
700	On site - Always Safe Work Permit
930	Pump 150 gal water from mud pit off Cary transfer to WWTP
1000	Safety orientation for Nate Hawthorne
1000	Setup by Rock Drill RW-129
1030	Trip Rock & Bent of Casg
1135	Lunch
1230	Back Rock RW-129
1330	Stop at 105' Pull Rods
1415	Transfer 150 Gal water from Packer drilling hopper to WWTP
1425	Pump 88.5-105 Zone Pump @ 103'
1505	Sample RW-129-105 (88.5-105)
1510	Trip Rods Back into hole
	Trans 150 Gal water from Packer drill/ Sample to WWTP
1600	At 120' Pull Rods
1620	Rods out
1645	Transfer 150 gal water from RW-129 Hopper to WWTP
	≈ 300 Gal contained to dispose of tomorrow.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2/10/14

2/12/14 - NO work due to snow
2/13/14 - NO work due to Snow.

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/11/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Sisaid, Nat Hawthorne

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation, GW Sample

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On s.t.
832	Begin Safe Work Plan
840	Install Packers to 105' Inflate to 200 PSI
900	Calibrate YSI
930	Purge 105-120 2GPM 40 GAL
1012	Sample RW-129-120 from 105-120 2GPM
1015	Pull Packers
1100	Off s.t. due to SNOW.
1430	Met Pace courier on I-85 and relinquished
	Samples - from 88.5-105 & 105-120
	intervals of Loc RW-129 - Temp Blk labeled MW-01
	-3 Day TAT Requested for Chloroform Analysis

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2-11-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/14/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Suarez, TJ Chesmon.

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
815	on S.t
820	Auriga Site Work Permit
	Prep to Rock drill RW129 120-135 intend to
	GW Sample - Calibrate YSI & PID.
900	Rae 3000 Cal 99% on 100 PPM Isobutylene
	YSI - DO. 10.06, PH 7.01, PH 4.00, SC 1.147 MS/cm, ORP - 237.5 MV.
915	Transfer stored IDW water in Hopper to Poly tote
930	Drill 120 - 135 / Transfer 600 gal to Mud rollsoff
1030	Pull Rods
1045	Install Packer to 120 Inflate to 200 PSI
1120	Purge 120-135 zone Dry did not recover
1200	Lunch
1300	Prep to Drill 135-150
1330	Drain 150 Gal water to mud rolloff
1345	Drill 135-150
1415	Pull Rods -
1445	Haul Rock chip slurry to mud rolloff in hopper
1495	Install Packer to (130-135) open 135-150
1512	Purge RLS-129-150 (135-150) zone
1732	Sample RW-129-150
1740	Clean up
1730	off Site

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2/14/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/17/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Strain, Nate Dawthorn, Dan Bergman, TJ Crumpler

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

Relinquished RW-129-150 samples to Pace Canisters

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On Site
830	Auriga Safe Work Permit
900	Transfer 350 gal water from RW-129 to mud roll-off
	Decon Rigs & Tools
	- Received from Chuck Amick to pump off calm water to WWTP
-	Chuck collected a sample from rolloff & checked PH & COD.
1000	Dan ordered skid steer & hopper - Set up CME 550 on location
	RW-137 - Set up Schramm on RW-129 135
1100	Transfer 150 gal water from RW-129 drums to WWTP
1200	Lunch
1300	Continue set up at RW-137
-	Contact AES re schedule - may need additional roll-off at Bruckner
	next week or end of this week - order Roll off for Bruckner Friday
1330	Start drill RW-135
1400	Call Sit water to have hydrant meter hooked up this week
1430	Call PAR Grady - Sheet for Wed / Thu this week
1600	Transfer 150 Gal water from RW-129 drums to WWTP
1640	Transfer 150 Gal water from RW-129 drum to WWTP
	RW-135 - Stop at 106 for the day - Not TD.
	RW-137 - Stop at 20' not TD
1705	Off Site.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2-17-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/18/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swaim, Nathan Hawthorne, Dan Bergmeyer, TJ Cashman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	on s.t.
	Auriga Safe work Permit 135
830	Schramm Continue on RW-135 106-121 -15
	CME 55 Continue on RW-137 121-123 -2
900	Transfer 150 gal from mud Roll-off to LWTP
-	RW-129-105 3.85 MSP RW-127-120 -3.29 MSP 137
1130	Steel Pipe & Portland delivery 20-87-67
1230	Lunch 87-89.5 -2.5
1330	Transfer 150 gal from mud Roll-off to LWTP
	RW-135 Completed Rock @ 121-123
1400	Install 6-in OD steel surface Casy RW-135 - 123
1600	Install Temporary inside casing
1630	Transfer 150 Gal water from mud roll-off to LWTP
1700	Transfer 150 Gal water from mud-roll-off to LWTP
	RW-135 to Grout tomorrow
	RW-137 to set clean hole & set casy + grout tomorrow -
	Transfer 600 Gal to LWTP
	Schramm + RW-129 ~~SPT~~ SPT water hooked up hydrant meter
	on stand other locks @ Brickyard
	AED to meet at
	CME to RW-139 Next - S.T. tomorrow AM -
	PAR - Who knows

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2-18-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/19/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Swain, Nick Hamilton, Dan Bergmen, TJ Cressman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
730	On site - Pump clean water from mud roll-off
800	Auriga Safe work permits
830	Transfer 150 gal water from mud - roll-off to WWTP
900	- RW-135 Prep to grout casing
900	RW-137 Prep to install Casing
930	Grout RW-135 4" ø 47 Bags grout
930	Install Casing RW-137 TD
1000	AEO Tech on site to place drum emptying and Roll-off delivery.
1030	PAR Grady to start gravel work at RW-139 & - Several Backhoe locations
1215	Transfer 150 gal water from mud roll-off to WWTP
1300	Ordered 9 sets chloroform aqueous & 4 sets soil/mud VOC, 1,4 D, RCRA metals
1300	Grout RW-137 - 160 gal 12 Bags + Cell
1300	PAR Grady work on RW-139 area - 3 loads stone
1300	Decon Schramm Set up on RW-129 to Rock drill to 165'
1430	Transfer 150 gal water from Mud roll-off to WWTP
1500	Drill RW-129 to 165 set Packer 149-150
1900	Decon Crew Set up on RW-139
1930	off site

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2-19-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/20/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett, Carlos Sirain, Dave Bergman TJ Chesnut

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	CME 550 Rig to Mud rotary & set Conc at RW-139
	Schramm Rig to Packer sample & RW-129
830	Review Safe work Permits
900	Transfer RW-129 drill cuttings set directly to west
905	Decon grundfos Pump. - Packer at 228 BGS
	set Grundfos Pump inside drop pipe for 150165 samples
	Due to very slow recovery after 2" rods were evacuated the interval
	were determined dry. Slow recovery could have been packer leakage
1050	Drill 165-180
1130	Pull Drill Rods
1145	Install Packer 162-165
1234	Pump dry after 1 Rod Vol 20 gal
1335	Only Recovered 11.5 ft. Cal Bryson D. Reid dry zone
1345	Pull Packer
1530	Decon
1630	Set up on RW-125
1730	RW-139 Continue Mud rotary drilling STB SL
	Packer 2 + 2
	Decon 1

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 2-20-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/21/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Tommy Burnett

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	ON Site - Rain - Drill crew not on site
900	Schramm crew empty Hopper at mud box
930	AEO Deliver Fork Lift. Prep to empty drums.
	- CME 550 Prep to set casg at RW-139
1020	AEO Deliver Rolloff - AE Drilling Hopper not Work - decide
	to use rolloff box at RW-125
-	AEO will bring another Box for Mud
1130	Lunch
1215	Drill Rock RW-125 Target 146'
1330	CME crew set casg at RW-139 to 84 ft.
	- Grout casg 3 Batches 7 Bg ea 21 BG. Tgell
1330	RW-125 at Target. No Frac. No water during drill. Sit 15
	Min pmp Hole 1/4 GPM Mud - PH 11.6. Talk with Bryan -
	Drill to 160 No change
1400	Pull Rods - Decon
1630	off Site - Schramm Crew.
1630	Transfer 150 Gal water from mud rolloff to WWTP.
	- This area is ready for Sample
	AEO. Filled Sump Pulled H with Sch Well Drum.
	- In process of fill mud box with mud drum
	- Existing mud box will be fill from monday
	- RW-125 Box will be moved for RW-137/RW-139 wells Mon
	- Will Need Mud box at Bucket on Wed

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

Plan to Sample 3 Boxes on Monday for QT. AEO out of Boxes

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/24/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services / AEC

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman TJ Cannon

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	Prep to sample Roll-off -
820	Sample mud Roll-off - 1 TCLP VOC, 1,4D, RCRA metal
830	AE Crew Prep & Rock drill RW-139
915	Sample Soil Roll-off-1 TCLP VOC, 1,4D, RCRA metals
930	Sample mud roll-off-2 TCLP VOC, 1,4D, RCRA metals *
930	Review Safe Work Permit
935	- AEC empty remaining mud drum out mud box-2
	* Sampled drums to be emptied -
910.	Spoke w Bryan re - RW-125 - May construct 2-in well - in Rock hole - Interval to be determined. - Let Mike know to stand on Bearing / well con logs.
945	Moved RW-125 Rolloff - to RW-137 / 139 area
1100	Drill crew ~~Travel~~ Continue setup to air drill at RW-139 move compressor / decon etc.
1050	Relinquished roll-off Samples to PACE / MVL
1230	Setup to Drill RW-139 - Drill to 97' - Good Pressure at 95'
1600	Move Compressor out / stuck. Attempt to Pull Up AGO Rod / Stuck - Spoke w Bryan - Re- RW-129 - Screen 135-150 Bentonite 137-151.
1700	Clean up
1730	Off Site

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/25/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	ON S.C. - H&S meeting
815	Set up CME 550 & Air Compressor on RW-137 -
	Target depth 107'
900	Calibrate MiniRae 99.7 ppm on 100 ppm isobutylene
900	Decon / Steel Waters -
1000	Transfer 150 gal water from RW-139 to IDW TP
1030	Drill RW-137 to 107 - Finish at 98.5'
1130	Lunch
1300	Blow air in RW-137 air lift develop - PH 8.8
1430	Flush hole clean PH 8.15 - Total = 500 gal
1500	Transfer 150 gal Water from RW-137 to IDW TP
	Drill crew prep to move to Buchanan & Install RW-137/139
	tomorrow 2-4" PVC w 10' screen
1700	Transfer 150 gal water from RW-137 to IDW TP.
	Plan to set
	RW-137 - screen 97-107 Finish 98.5
	RW-139 screen 87-97

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 2/26/14

PROJECT & LOCATION: Avaya Spartanburg

CLIENT: Colonial AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: A.E Drilling / AECOM ENV.

SUBCONTRACTOR PERSONNEL ON SITE: Don Bagwell, TJ Cranmer

BRIEF SUMMARY OF WORK PERFORMED:

TIME	DESCRIPTION OF ACTIVTIES
800	On S.C AE H&S Meet
810	Prep & install RW-137 - cut steel casing flush
930	Install RW-137 2-in PVC well w 10' Screen 0.3 ft bottom plug - TD 102.3 Sand + Bentonite to well
1130	Lunch
1230	Grout RW-137
1330	Install RW-139 2-in PVC well w 10 ft screen and 0.3 Bottom plug. TD ~~102.3~~ 92.8
-	Gave Mr Ivan Cox town of Arvaya and Bruckner - gave him phone #'s for Dahlgren, Drilling AECOM
1700	AE Begin to mob equipment to Bruckner Rd
1600	Off S.C

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: _____

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/27/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law ~~Mark Hartford~~

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, TJ Ceasman

BRIEF SUMMARY OF WORK PERFORMED: Monitoring Well Installation drilling surface casing RW-115

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0735	Onsite at RW-137/139 drilling location, waiting on drillers
0801	Called Dan; drillers running behind, on their way over.
0810	Called Josh w/ AEO to confirm Hopper replacement & rolloff moving schedule for RW-137/139 rolloff to Buckner; left message.
0830	Drillers onsite, H&S meeting; drillers to finish MOBing equipment over to Buckner side, then setup and drill RW-115 surface casing.
0932	Josh w/ AEO called and confirmed rolloff is scheduled to be move over to Buckner Rd mid-morning. Dan says that water truck is overheating and that they need to go off site to grab a part to fix it. (plug for a hose fitting).
1020	Josh w/ AEO onsite to drop off rolloff RW-137/139.
1034	Alarm system Tech "Tony" onsite to check out Alarm in Buckner Rd Building. Josh offsite
1058	Drillers back onsite, setup on RW-115 to drill surface casing.
1130	Tony says that either the dailer or modem is not working, replace would require an upgrade to the control panel. Alarm left off. Tony offsite.
1179	Break for lunch
1240	Back onsite, continue setup on RW-115
1350	Start mud rotary drilling on RW-115
1710	stop @ 45.5' BGS, drain pumps & winterize rig; will continue drilling tomorrow morning.
	Offsite, lockup gate; MOB back to office; End of Day

FIELD REPRESENTATIVES SIGNATURE: [signature] DATE: 2/27/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 2/28/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law ~~Mark Hartford~~

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, TJ Gaskeman

BRIEF SUMMARY OF WORK PERFORMED: ~~Monitoring Well Installation~~ Surface casing installation RW-115

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0800	Onsite with Drillers, warm up rig, prep to continue drilling out surface casing. From 45.5' Bgs.
1015	Stop @ 59.5' Bgs, 2.5' socket drilled. Flush out hole, pull rods & tooling in prep for steel surface casing installation.
1210	Finished Grouting in 6" surface casing; 6 x 94lbs Bags of portland into 80 Gals with 50lbs Bentonite Gel. Break for lunch.
1313	Back onsite, pump out mud tub into mudroff, prep to MOB back over to RW-139 to grout up borehole to finish off well installation.
1407	At RW-139 to grout up well installation. Josh w/ AEO called said they will have to postpone till Monday on emptying damaged Hopper.
1503	Finished grouting in RW-139 well installation; 2.5 Batches of Bentonite grout (3 x 94lbs of Portland cement into 40 Gals water with Bentonite quick gel.) from 82' Bgs to surface; cleanup site work area, lock gate
1530	Offsite, MOB back to office; End of Day

FIELD REPRESENTATIVES SIGNATURE: J. Mark Law DATE: 2/28/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/3/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law ~~Mark Hartford~~

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, TJ Ceasemen

BRIEF SUMMARY OF WORK PERFORMED: ~~Monitoring Well Installation~~ drill & Packer test RW-115

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0830	Onsite at Bruckner; waiting on drillers, moderate rain falling.
0840	Drillers called, they are running late after their safety meeting, on their way now. Calibrate YSI.
0928	Drillers onsite; H&S meeting, prep to drill out and conduct packer test at 15' intervals on RW-115.
1245	Drillers Finished switching tooling over to Air Hammer, start drilling from 59.5' Bgs to 74.5' Bgs.
1330	Stop @ 72' Bgs, water blowing out of MW-114; called Mark Hartford. He said to try continuing to 75' Bgs then packer test.
1422	@ 75' Bgs, water still spewing from MW-114, stop Roll tooling & Rods, drill thinks soft soils from 60'-72', then Rock to 75'.
1450	Lose 6' after pulling toolage, inside of casing is covered in cuttings from cyclone getting gummed up from all the mud. Drillers checking with shop to see if 5" casing is available to use. MOB over to RW-129 to seal bottom 25' with coated bentonite pellets.
1515	Onsite @ RW-129, called Tim Jameson for safe work permit approval, He said none needed.
1545	Added five buckets of coated pellets 1st Hydrate; tagged top of seal @ 164.4' Bgs. Will need to add more to get to 155' Bgs. Site clean up
1600	Offsite, MOB back to Office; End of Day.

FIELD REPRESENTATIVES SIGNATURE: J. Hartford DATE: 3/3/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3 / 4 /14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law ~~Mark Hartford~~

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, TJ Cessman

BRIEF SUMMARY OF WORK PERFORMED: ~~Monitoring Well Installation~~ Temporary casing install on RW-115. drill surface casing on RW-121

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0830	Onsite w/ drillers, warm up rig, H&S meeting, drillers to wash off RW Rods with pressure washer. Tagged RW-115 @ 60' BGS, 13' of cave-in. Pressure washer froze-up will have to wait till it thaws. Drillers switching back over to mud rotary tooling before moving rig over to RW-121 location.
1030	Driller setup on RW-121; need to clear overhead limbs; Drillers office to get priming pole to remove limbs; Mark Hartford onsite ~~to start well Development~~
1110	~~Mark H.~~ offsite, drillers back onsite, start trimming branches over RW-121 location.
1132	Break for lunch.
1237	Back onsite, continue setup on RW-121 for mud Rotary drilling.
1655	Stop @ 59.5' BGS, site clean up, will continue drilling tomorrow morning.
1740	Offsite, lock gate, ~~MOB~~ back to office; fill out Pay

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/4/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/5/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: ~~Mark Hartford~~ McLaw

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: ~~Tommy Burnett~~ Dan Bergman, TJ Conseman

BRIEF SUMMARY OF WORK PERFORMED: ~~Monitoring Well Installation~~ Drilling & installation of Surface casing @ RW-121

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0810	Onsite w/ drillers, HAS meeting, Drillers prep to continue drilling out surface casing from 59.5' BGS using Mud Rotary methods.
1137	Stop @ 69.5' BGS, 3.5' Rock Socket drilled, ~~Hole~~ Flushed hole; Break for Lunch
1228	Back onsite, prep to install 6" well steel surface casing; pull Rods & tooling
1311	Talked to Josh w/ AEO, will have tanker truck delivered later today.
1338	Clamp on welder broken, Drillers offsite to get replacement
1411	Drillers back onsite w/ replacement clamp, working to fit welder. continue casing installation.
1545	Tanker trailer onsite from AEO, drillers mixing up Bentonite/Portland grout.
1633	Finished grouting in surface casing, three batches of 50 Gals of grout. (3x 94 lbs bg) portland & Quick gel per batch.
1701	Site cleanup, Mark Hartford onsite to switch vehicles again; Drillers offsite
1737	lock gate to Brackmen, offsite, mob back to office; End of Day

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/5/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/6/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law ~~Hartford~~

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergman, TJ Casseman

BRIEF SUMMARY OF WORK PERFORMED: Drilling & installation of surface casing on RW-119

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0810	Onsite w/ Drillers, warm up rig, HSE meeting; prep to move rig
	over to RW-119 location to drill out surface casing.
0845	start pumping water portion of Mudaloff into tanker, using Sump Pump.
1010	Finished pumping off water off the top of rolloff; Drillers start drilling out surface
	casing hole on RW-119 using mud rotary methods.
1130	Stop @ 24.5' Bgs, break for lunch
1232	Back onsite, Continue drilling
1700	Stop @ 59.5' Bgs, light wintery mix falling, site cleanup
1715	Lock gate, offsite, MSE back to office; End of Day

FIELD REPRESENTATIVES SIGNATURE: [signature] DATE: 3/6/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/7/14

PROJECT & LOCATION: Aurigo Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergman, TJ Ceaseman

BRIEF SUMMARY OF WORK PERFORMED: drilling & installation of surface casing on RW-119

TIME	DESCRIPTION OF ACTIVTIES
0830	Onsite w/ drillers; Moderate rain falling, 1.5" has fallen since yesterday evening
	warm up rig, H&S meeting. Continue drilling from 59.5' Bgs on RW-119
	with mud rotary.
1120	Stop @ 64' Bgs, break for lunch
1221	Back onsite, prep to install 6" steel surface casing from 0 to 64' Bgs.
1238	Still raining; no welding when raining; move over to Aurigo side to add additional
	coated pellets to RW-129
1336	Added 2.5 5 Gal buckets of coated pellets to RW-129 being seal from 164.4'
	to 155.7' Bgs, let Hydrate.
1400	Drillers don't want to wait on the weather, will install & grout surface casing on
	monday morning, leaving Stuff downhole; site clean up
1430	Lock Gate & Bracknor, offsite MOB back to office, End of Day

FIELD REPRESENTATIVES SIGNATURE: J. Law DATE: 3/7/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60260417 DATE: 3/10/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergman, TJ Ceasewa

BRIEF SUMMARY OF WORK PERFORMED: Installation of surface casing at RW-119, drill & install of surface casing at RW-117

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1620		Start drilling on RW-117 using Mud Rotary methods
1715		Stop @ 28.0 Bgs, site cleanup
1730		Lock up gate, offsite, MOB back to office, End of Day

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/10/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/10/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Ray Bergman, TJ Creasman

BRIEF SUMMARY OF WORK PERFORMED: Installation of RW-119 surface casing, drilling & Installation of RW-117 surface casing

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0815		Onsite, waiting on drillers; start pump off water portion of Mud rolloff into Tanker at Bracknell
0842		Called Josh w/ AEO to setup meeting to dump three rolloffs At location provided by Wastewater personal at Auriga. Josh to be onsite at 10am.
0908		Over at Auriga, meet w/ WW personal to see where they wanted rolloffs dumped by fence behind former Maintence Building. Drillers still at Bracknell Rd installing surface casing at RW-119.
1005		AEO onsite to dump rolloffs at Auriga side.
1035		Dumped first Mud rolloff, mostly mud, Chuck @ Auriga said not very useful soil and not to dump the other rolloff of mud here other than the with soils is fine. AEO offsite to drop other empty rolloff will return to dump soil rolloff only, then reline rolloff and deliever to Bracknell.
1050		Chuck talked w/ Bill @ Auriga, decided to dump two remaining Roll Down by outfall #3 off assess road outside fence area.
1216		AEO Finish dumping the other two rolloffs; will come back with Small excavator to pick out liners after delivering rolloff to Bracknell
1320		AEO onsite to Bracknell to drop off second rolloff; Drillers grouting in surface casing @ RW-119, hole had to be flushed out since sitting over the weekend.
1508		AEO Finish pulling liners out of dumped materials from rolloffs, Drillers Moving over to RW-117 location to setup to drill surface casing.

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/10/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/11/14 REPORT NUMBER:

PROJECT & LOCATION: Avrija Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mr Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: (Drilling) Dan Bergman, JJ Ceasemon (Pads) John Goreman, Jeff Pennell

BRIEF SUMMARY OF WORK PERFORMED: Drilling and installing surface casing on RW-117;
Pad completions on RW-137, MW-138, & RW-139

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0750		Onsite, waiting on Drillers whom are running late.
0838		Drillers onsite, tbt's meeting, warm up rig, continue drilling out surface casing hole from 28' Bgs.
0918		Second crew onsite to do pad completions on wells installed East of Air liquid.
1131		Stop @ 33' Bgs, break for lunch
1227		Back onsite, continue drilling from 33' Bgs on RW-117
1412		Stop @ 34' Bgs, pull rods in prep to install 6" steel surface casing
1635		Pads crew offsite, completed pads on MW-126 & MW-138, and dug out forms on RW-127, RW-137, RW-139. to be poured tomm
1708		Finished grouting in surface casing on RW-117, three buckets of 3x 94 lbs bags of portland per 40 Gals water with bwtn-gel.
1728		Lock gate, offsite, mob back to office; End of Day

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/11/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/12/14 REPORT NUMBER:

PROJECT & LOCATION: Aurora Sonar Gauging

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: (Drill) Dan Bergman, TJ Ceasemen (Perf) John Gorman, Jeff Reed

BRIEF SUMMARY OF WORK PERFORMED: Install temp casing in RW-115, packer test. pad completions on RW-137 & 139

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0752		Onsite, waiting on drilling crews
0806		Second crew onsite, waiting on driller.
0830		Driller onsite, had tailgate treyr in his truck, HAS meeting,
		5" Air Hammer onsite so crews moving rig over to RW-115 hole
		to run 5" PW rods as temporary casing down to 75' Bgs, then
		start packer testing. Second crew over at RW-125 to abandon
		borehole which is 166' using grout machine, then move down to RW-139
		& RW-137 to complete pads.
1120		Drillers finish DEZONing PW rods & rig, rig setup back up on RW-115
		second crew working to grout up RW-125, break for Lunch.
1219		Back onsite, drillers prep to install temporary 5" PW rods to 75' Bgs
		borehole has caved in to 62.2' Bgs, Flush out hole install temp casing.
1350		Second crew finished pad completions on RW-137 & 139, and also pumped
		~300 Gals of portland/Grout into RW-125; 4 batches (5x94 lb Bags into 75 Gals)
		needs topping off; Crew offsite.
1421		Temp Casing @ 75' Bgs, switch tooling over to Air Rotary.
1503		Start hammering from 75' to 90' Bgs.
1510		Blew Air line, stop to repair line, hole flowing water thought to be
		Bypass from temp casing.
1530		Continue drilling, then stop at 78.8' Bgs, bypass in RW-114 again ~~drilling~~
		drilling
~~1552~~	1541	Continue drilling to see if bypass stops at depth.
1608		Stop @ 90' Bgs, Dry cutting, wait for recharge, then see if clears up.

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/12/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/12/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: M. Law

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1710		Went through five cycles of waiting for recharge then blowing out hole using compressed air, water will not clean up, fine sands & silts; stop working on hole site cleanup & pump out mud tub and Hoppers into second roll off.
1735		Lock gate, offsite w/ Drillers; End of Day.

FIELD REPRESENTATIVES SIGNATURE: DATE: 3/12/14

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3/14/14 REPORT NUMBER: _____

PROJECT & LOCATION: Amiga

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling.

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: Set Casing

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800		- H&S meeting - Discuss Activ.
900		- Rig Air hammer tools - RLW-115
930		Install 6-in Steel casing to 75' RLW-115
1200		Lunch
1230		Grout RLW-115 - Egg Batcher - 8 94# Portland
		Bell - Grout down ≈ 15' will finish with tremie once outside
1345		Clean up Prepare Move to RLW-129
1425		Prep to Install RLW-129
1430		Amiga Safe Work Permit
1500		Unload pipe for RLW-129 - Some pipe was missing o-rings
		and some had wrong threads - did not install.
-		Cleaning mud when roll off was dumped near maint Bldg
		Spread 7 Bales straw at RLW-117
		Pumped rolloff water into Tanker.
		- Notify WWTP about Leachate delivery on early April

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: _____

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-17-14

PROJECT & LOCATION: Aerojet - Brackner

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling

SUBCONTRACTOR PERSONNEL ON SITE: TJ Cresmer, John Gorman

BRIEF SUMMARY OF WORK PERFORMED: _____

TIME	DESCRIPTION OF ACTIVTIES
830	ON S.G - HAS Mtg - Prep to drill out RW-115 Casing
	Prep to drill out RW-115 to packer sample
	Cal. both YSI 556 - Conductivity out of range - cleaned
	Sensor - Cal ok
930	Air hammer kicky off and binding after exiting casing - RW-115
1030	Pull Air tools - Call Ross / Philips - for advice.
	AE sending a stabilizer steel to keep air hammer down
1140	Kicky off -
1300	Prep to Add stabilizer and trip tools back into RW-115
1325	Trip Back in RW-115 w/ 10" stabilizer & 5" hammer
1430	Stabalizer not working - Hammer is freely into pre-drilled hole on 1
	blade in casing - Drill called shop - Dan is coming with
	roller bit -
1530	Dan Boysmer on site - Tripping Roller Bit RW-115
	to clean out hole already drilled to 90'.
1630	Pull Roller Bit - switch Back to air hammer - Roller Bit model # 83
1700	Drill air hammer to 90
1800	off S.G

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: _____

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-18-14 REPORT NUMBER: _____

PROJECT & LOCATION: Amisub

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Hartford

SUBCONTRACTOR: AE Drilling

SUBCONTRACTOR PERSONNEL ON SITE: D. Bergman, TJ Cramer, J. Gorman

BRIEF SUMMARY OF WORK PERFORMED: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800		JHS Meet
815		CAP JSA Conducting out of range
830		Blow water out of RW-115 with air -
940		Install Pump -
1000		Pump Fault
1125		Resume with AECOM pump
1305		Collect RW-115-90 -
	1410	Drill 90-105
1415	1500	Pull Flex tech / Install Packer @ 90
1525		Purge Zone 90-105 Dry - slow recovery / Dry.
1600		Pull Packer -
1630		Drill 105-120
1720		Install Packer @ 105' Inflate @ 200 PSI
1735		Purge zone 105-120 Dry - slow recovery / Dry
1800		Pull Packer.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: _____

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-19-14 REPORT NUMBER: _____

PROJECT & LOCATION: Avnet Spartanburg

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: _____

SUBCONTRACTOR: AE Drilling

SUBCONTRACTOR PERSONNEL ON SITE: Dan Bergman, Crossman, Gormany

BRIEF SUMMARY OF WORK PERFORMED: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800		On S.G HES Meet
		Call to Request Roll-off / double lined delivers to
		Plant side by Friday
830		Decon / Clean tanks for RW-113 Casing
Jones		Set up Rig at RW-113
800	—	Pumps off Roll-off water to Tanker —
1030		Drill RW-113 & set surface casing
		-43.5 Hard -49 - Int / Soft Clay
120		49 Hard TOP Rx - TD 52 - 30 min/1in
		Well set casing in Ann. -
		Mike Wilcox and female Resident - Wilcox Residence - came to gate and Requested to know if the what we were doing - I provided them with the phone # & e-mail address to - Travis Jacobsen.
		Contacted T. Jamison - re - SG visit on April 8th - Training Room for videos & - 25 Hard Hats to Celanese

FIELD REPRESENTATIVES SIGNATURE: _____ DATE: _____

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3/20/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services

BRIEF SUMMARY OF WORK PERFORMED: Bergman, Crowson, Gorman, Winbourn, Manello.

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
820	on S.C. Pump roll-off water to tank-ur. 10 BBL mud
830	Install Surface Casing - RW-113 6-in steel
1000	2nd AE Crew. Gang Winbourn & Manello on site
1115	RW-113 Steel casing set to 88.55' Ray to grout
1106	RW-115 Tremie Bentonite Hole Plug 84-120
-	
	Install RW-115 2-in well. to 88.8 - Screen 78.5-88.5
1300 -	RW-113 Pull Casing, Grout shoe broken
1400 -	Ream Hole Reinstall Casing -
1600	Grout Casing - 3 Batches - 7 48# Bags / batch + Gell
	RW-113 Driller noted that while I was at RW-115
	Black Tahoe pulled in turned around & took ~~pict~~
	pictures of them at RW-113 before - speedy arr.
	Blond Female driver in 30's
1650	Final Grouting RW-113 - Clean up
	other crew dropped trailer at DMS

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE: 3/20/14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-21-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services - Dan Bergman TJ Cherry

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On Site
830	Pump off Roll-off
830	DCon
930	Move/Set up on RW-117
1100	Missing air hose Connections - Trip to meet AE Crews toward Greenville
1330	Air compressor would not - Call to troubleshoot - Unit requires tec from Columbia on monday
1400	Return to Greenville to pickup air compressor from another job site.
1530	Drill Rock RW-117 34-72.7 Dry
1800	Clean up move Grate Truck to Auriga Side for Cherry crew Tomorrow
	- AE to Deliver Roll-off to Main Bldg area.
	Met Tim Jamison and Taylor -
	Plan to meet Taylor Tomorrow for safe work permit.
	579-5230

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-22-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services Tommy Burnette, Marcello Gonzalez

BRIEF SUMMARY OF WORK PERFORMED: Drill Bedrock.

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
820	Move Equipment From Brunchen Site
900	Review Safe Work Permit
1000	Decon Rig.
1045	Set up on RW-131
1100	Trip Rods / Drill RW-131 Target depth 150'
1230	Drill to 141 - Small Water Zone at 137' - Signal 141
1300	Pull develop RW 12 - Drillers thinks it from ground inside Cyclone
1310	Pull Rods RW-131 at 129 at 14.03 124.8 at 1415
1330	Decon / Set up on RW-135
1430	Drill RW-135 to 162 - D/C 123-162 Target 144
1530	Trip Rods / Decon / set up at RW-133 - Target 148
1625	RW-131 WL as 16:25 - 93.3
1630	Set up on RW-133 - Drill -
1635	RW-135 TD 162 Lost 161.97
1645	Drill Rods RW-133 88-162 - Trace Water - ¼ GPM
	Foam at 102.5, 112, 128, 140. Lost at from 112 Foam.
1855	Pull Rods
1915	RW-135 DTW 161.2 RW-133
1920	RW-131 DTW 69.3 19.28 154.7
1940	Load Bobcat to return to Brunchen 1935 153.3
2030	Return to Pickup Steam cleaner.

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-24-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: Crew #1 Dan Bergman CJ Chesmon Johathon Arrington Brucknor
Crew #2 R. Phillips T — U R Morgan

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On S. G
730	H&S Meet.
900	Drill RW-117 72.7 -88 Dry Drilling —
	~est 30 Gal hel accumulated in hole at start from Friday and today
1030	Pull Rods
1100	Decon -
1130	Setup Rig on RW-121
1200	Lunch
1300	Setup and Wait on Replacement Compressor
1450	Replacement Compressor on Sight.
1500	Drill Rock 69.5 -83 - 76-77 Fracture.
1610	Air Develop -
1650	Pull Rods
1700	Decon
1730	Setup Rig - RW-119

RW-117 -
Time Int.
1030 87.9
1334 86.2

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-24-2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0700		leave AECOM to pick up equipment
	0800	arrive on site - Bruckner site to meet w/ Mark for instruction on days work
		Health and Safety Orientation
0918		at Auriga site to get water levels on newly drilled wells
0918		RW-129 39.98 TOC
0923		RW-131 52.24 TOC
0932		RW-133 45.25 TOC
0937		RW-135 14.33 TOC
1000		Tim Jamison arrives to sign safe work permit
		AE arrives on site
1020		at RW-133 to pump out water into rolloff
1100		decided to use poly tank instead of rolloff over to Bruckner site to get poly tank.
		Tagged RW-133 Total well Depth 162.2 TOC
1125		started out 120 gals pump quit working
1200	1230	lunch
1235		AE to Bruckner site to get hole plug
1300		at RW-133 begin pouring hole plug started to get dust out
	1520	in well
1520		hole plug up to 120' BGS 9 1/2 bags hole plug
		lowered pump back in well to remove water to be sure the
		well still produces

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: March 24, 2014

Auriga Site Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: March 24 2014 REPORT NUMBER: _____

Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		purged out another 120 gals
	1534	Water level RW-133 118.41 TOC
	1540	" " RW-133 117.12 TOC
	1541	pulled pump out
	1544	water level RW-133 109.90 TOC
	1554	empty water out of poly tank at WWTP
	1600	move to RW-131 to pump out this well and
		check ph while pumping out
	1607	RW 131 water level 52.18 TOC
		Total well depth 142.3 TOC or 141.2 BGS
	1615	set pump on bottom to pump out well and begin sampling
	1618	Initial Ph = 7.20
	1624	75 gals out Ph = 8.77
	1629	125 gals out Ph = 11.28
	1630	well gone dry 140 gals out
	1635	water level RW-131 139.43 TOC
	1640	water level RW-131 137.08 TOC
	1650	water level RW-131 133.80 TOC
	1700	to WWTP to empty poly tank
	1713	unload poly tank and sampler at staging area
	1730	off site to Buchanan Site to meet W/ Mauk
	1815	off site - secure gate return to Greenville
	1848	at AECOM end of day.

Randy Meyer 3-24-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-25-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services Dan Bergman, Crewman - Jonathan Arrington

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On Site
815	H&S meeting - Discuss grout tubes on Brushton Rig moving to Auriga
830	Drill RW-119 -86-113 ft.
1130	Lunch
1230	Check water - same as at 88 Drill to 118 - no additional water will backfill 95-118 and screen 80-90
1315	Pull Rods - Decon
1430	Setup on RW-117
1500	Drill RW-113 55-70
1630	Pull Rods
1700	Move to Decon — 2nd Crew — Approx
1715	Off Site — Install RW-131 — 131-141
	RW-129 — 135-150
	RW-133 — 107-117
	Randy Re-develop RW-~~EL~~ 114

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: March 25, 2014 REPORT NUMBER: 1 of

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well installation

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0715		Leave for Auriga Spartanburg
0800		arrived on site - called Tim Jamerson
0825		Sign safe work permit
		AE load materials to set well at RW-133
0832		Water level RW-133 43.90 BGS
		tagged bottom of well 119.7 BGS
		set the well at 117.0 BGS
0840		~~Setting~~ begin setting RW-133
0851	0917	begin filling in with sand up to 104.0 BGS 6 bags
0918		4-bag hole plug from 104.0 to 99.7 ft
	0930	Complete RW-133
0934		at RW-131 target water level 57.90 BGS
		AE crew moves to RW 131 to install well
1018		begin to set PVC casing in well set at 140.0' BGS
1028		begin to pour sand in from 141.7 to 127.2
1038		hole plug from 127.2 to 123.1
1110		at RW-129 water level 38.90 BGS TD 154.5 BGS
1114		begin setting RW-129 2" PVC to 150' BGS
1122		begin pour sand in from 154.5 to 132.5 BGS
1157		begin to pour hole plug from 132.5 to 127.5 BGS 1-Bag
1215	1255	lunch
1300		at Bruckner site RW-121 water level 22.70 BGS
1315		AE on site - they do not have 5' screen will return 3-26-14

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 3-25-14

Aurga Spartanburg

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: March 25, 2014 REPORT NUMBER: 2 of 2

Page #: _____

Well installation / well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1330		AE crew offsite until 3-26-14 w/ 5' screens
	~	Spoke with Mark and a tire on van need to be repaired
1345	1450	left site to get tire fixed
1500		set up on MW-114 to redevelop due to influence
		from RW-113 when installing
1525		begin developing MW-114
	1645	complete developing MW-114 - decon pump
1703		clean up and headover to Aurga to empty poly tank
	1730	off site to AECom Greenville
	1810	at AECom EOD.

Randy Mongo 3-25-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-26-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services

BRIEF SUMMARY OF WORK PERFORMED: Install & Grout wells

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS	
600	ON S.L	
830	HES Mtg	
900	Prepare to Grout Abandon RW-117 Grout	
	w Portland / Bentonite 3 Batches in drum 7 Bags	
	Portland each 1st 2 The 2 Bag 3rd Batch	
1000	Grout RW-~~117~~ 115 Bentonite Tag 73	
1200	Lunch	
1300	Grout RW-121 from 62.5	2 Drum Grout.
1400	Grout RW-129 from 74	2 Drum Grout
1530	Grout RW-113 from 53	1.5 Drum Grout
	Pump Rolloff Water to Tanker	
	Pump Decon Water to Tanker	
1600	Smooth Ruttted areas -	
1700	Move Rig to Plant	Randy Overlap
1730	Move Dropper to Plant	RW-139
1830	Move Skid steer to Plant	RW-137
		Install
		RW-113 -70
		RW-119 -90
		RW-121 -80

FIELD REPRESENTATIVES SIGNATURE: Mark Hartford DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-26-14 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: installation of monitoring wells / development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0715		leave for Anigda from Greenville
0750		arrive on site check WL + TD in RW-119
0755		WL 32.50 BGS TD 117.52 BGS
		checked WL + TD on RW-115 on 3-25-14
		WL 33.15 BGS TD 88.62 BGS
0810		AE crew on site
0817		check TD + WL at RW-121
		WL ____ TD 82.8' BGS
0820	0829	begin to set well - lower PVC to 80' BGS screen 75-80' BGS
0827		Sand from 82.8' to 73.0 Almost 3 Bags sand
0838		1-Bag hole plug ~~83~~ 73.0 to 67.7 BGS
0905		at RW-119 to hole plug from 117.5 to 95
	0955	hole plug up to 95' BGS
		move to RW-113 while hole plug sets up at RW-119
1003		at RW-113 to get ~~WL 18.28 BGS TD~~ RM
		WL 18.28 BGS TD 70.00 BGS
1013		begin setting RW-113 to 70.00 BGS screen 70-60' BGS
1020		begin to sand up to 70.00 to 57.6 BGS 3-Bags
1028		begin to hole plug from 57.6 to 52.6' 1-Bag
1043		back to RW-119 to install well - set well at 90' BGS
1055		screen 80-90' BGS
1105	1122	begin to sand from 95' to 77.7 BGS
1124	1127	hole plug from 77.7' to 72.1 BGS 1-Bag

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 3-26-14

Auraga Site Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-26-2014 REPORT NUMBER: 2 of 2

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Well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1200	1245	lench
1255		at RW-139 set up to develop w/ grundfos pump
1315		begin to develop RW-139
	1430	complete developing RW-139 decon pump
1439		empty poly tank of development water at WWTP
1500		back at RW-137 set up to develop
1510		begin developing RW-137
	1630	complete developing RW-137 decon pump
1643		empty poly tank of development water at WWTP
	1700	off site to AECOM Greenville
	1738	at AECOM EOD

Randy Mayo 3-26-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-27-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services D. Bergman, TJ Crew mem, J Gorman

BRIEF SUMMARY OF WORK PERFORMED: Grout Wells

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
8ew	Ops S.G - Bruchner / DMT 2 Crews.
9ew	Water is off at DMT area -
	Go to main Plant to get water and pressure for
	location -
10ew	2nd location
12ew	Lunch
~~1300~~ 1230	Grout RW-129 Bentonite @ 127.5
	Pumped 4 Barrels grout + Bag cal - did not come up -
	-will let setup and check. May be going in the gravel fracture @ 103
	at 103' 2 Bags 200 gal.
1435	Move to RW ~~130~~ 131 Grout Bentonite @ 123' 2½ Batches
1530	move to RW-133 Bentonite 99.7
1605	Secure crew Grout RW-133/Abandon — TD 162
1715	Finish RW-133
1800	Finish RW-135 Abandon.
	Rory M.
	Well Pads Develop -
	RW-113 RW-119 - Low yield
	115 RW-121 - Low yield
	119 RW-113 — Done
	121 RW-115

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-27-2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		Calibrate YSI 556 water quality meter before leaving
		DO% saturated air @ 19.60 8.95
		Conductivity 1.278 @ 18.00 1.278
		Ph 7.02 @ 17.55 7.02
		ph 4.00 @ 17.86 4.00
		Ph 10.05 10.05
		ORP 237.5 237.5
0715		purchase gas for generator
0745	0815	arrive on site - waiting to meet Mark at Auriga
0823		arrive on Brechner site setup to develop wells
0853		at RW-113 begin to develop
	0953	complete developing RW-113 decon pump
1015		off site to empty development water at WWTP
1103		back at Brechner Site continue developing at RW-115
1128		begin to develop RW-115 w/ grundfos pump
	1248	complete developing RW-115 decon pump
1308		at RW-119 due to expected low yield - will bail to
		see if it draw down
	1352	Dry at 13.0 gals very low recharge will return
		on 3-28-14 to bail down again - check recovery rate .33 every 5 minute
1409		off site to Auriga to empty development water at WWTP
1433		empty development water at WWTP
1450	1515	lunch

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 3-27-14

Auriga site Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-27-14 REPORT NUMBER: 2 of 2

well development Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1523		back at Bruckner site at RW-121
1548		at RW-121 begin to develop w/ groundhog
1553		dry at 7.5 gals allow to recover low yield well
	1705	well recovered to 47.25 pumped dry again
		will return on 3-28-14 to continue developing
XX		leave pump in well for tonight
1719		off site to Auriga to empty development water
		and meet w/ Mark.
1745		off site to Greenville AECOM
	1825	at AECOM EOD

Randy Mayo 3-27-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: ~~12/~~ 3/28/14. REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services

BRIEF SUMMARY OF WORK PERFORMED: Drill Rock RW-123

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	on S.G.
830	Safe Work Permit
845	Set up on RW-123 Casing @ 60'
—	Tag Grout RW-129 @ 96'
900	Drill RW-123 Casing @ 60 Target. 139 Drill max 160
	- Randy M. finished develop RW-119 & 121 low yield
	- AEO Spread straw @ Bucket —
	Randy Develop Plant side wells RW-131 & RW-133
1345	RW-123 Total Depth 137.5 Fracture @ 133 & 134
1420	Pull Rods
1530	Down
1630	Setting on RW-127
1700	Install 2-in well RW-123 to 137.3 W 10' screen
	and 0.3 Bottom Filling

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: March 28, 2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: Well development

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		Calibrate YSI 556 water quality meter before leaving
		DO% saturated air @ 19.11 9.00
		Conductivity 1.278 @ 19.43 1.278
		Ph 7.02 @ 19.44 7.02
		Ph 4.00 @ 19.62 4.00
		Ph 10.05 10.03
		ORP 237.5 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTUs
0730		on site at RW-119 to purge dry w/ 36" bailer
	0735	RW-119 dry at 6.0 gals will return later today
0810		back at RW-121 to purge dry
0818		begin to pump RW-121 dry at 8.5 gals allow to recover
0830		check total depths and water levels on newly installed
		wells
0848		at RW-112 after opening well found the pad has been
		run off over and pushed over the well and will need
		to be replaced the well is OK.
1035		back at RW-121 pump dry again at 9.0 gals
		pulled pump and decon /
		crew on site to spread straw in need areas - show
		where these area are
1130		off Buchner site to Auriga to pump off development water at Well
1148		back to Buchner site to lock gate

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: March 28, 2014

Aurora Spartanburg

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: March 28, 2014 REPORT NUMBER: 2 of 2

Well development Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1208		spoke with Pace labs about bottleware not received will need to send additional bottleware next week
1215		met Pace courier delivering bottleware at Hot Spot the courier will pick samples up daily if needed between 12-1:00 at the Hot Spot.
1238		at RW-133 to develop - set up
1318		begin to develop RW-133 - dry at 17.5 gpm allow to recover
1355		pumped RW-133 dry again 7.0 gpm will return later to continue / pulled pump - decon check recovery rate ~ .23 every 5 minutes
1458		spoke to Mark - drilling crew are preparing to set well then leave
1545		at RW-119 to purge dry - dry 3.0 gpm
	1600	off site to AECOM Greenville
	1640	at AECOM - end of day

Randy Moyer 3-28-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-31-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services R. Morgan - Development J. Butler - Sampling

SUBCONTRACTOR PERSONNEL ON SITE: D Bergman, TJ Grossman, J. Gorman, C Swain AE Drilling Services

BRIEF SUMMARY OF WORK PERFORMED: Drill RW-127

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
800	On Site
830	Finish Safety Meeting
900	Drill RW-127 - to 92.5
1145	Pull Rods -
1215	Lunch
1300	Install RW-127 ~~92.7~~ 92.7 10' Screen 0.3 plus Backstage
	Pump off Rolloff at Brunchner -
	AE 2nd Crew - Grout - 135, 123, 127 RW-125, 129
	Put Well Tag in MW-124
	Grout MW-124 Well Tag back in Box to correct
	Static Sample MW-136 138 RW-137. 139
	Ready - Develop - RW-131, 133 129.
	Development 129, 133 complete 131 Did not recover will check in the Morning -
	Ready Sample IDW Mud in 2 Roll-offs, Soil in one, and Soil in 15 drums

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280117 DATE: 3/31/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: AECOM FIELD REPRESENTATIVE: Justin Butler

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0700		Mob to site from office
0745		Arrive @ site, wait for access badge.
815		Leave welcome center with badge
0830		Meet with Mark Hartford to discuss Procedures
0900		Mob to meet with Randy Morgan to receive proper bottleware
0945		Arrive @ MW-138 & RW-139 Pair
1000		Begin calibration of YSI & turbidity meter
		Temp 19.98 Pressure 747.8 mmHg
		Do 11.72 9.76 corrected 9.76
		Spec Cond 0.703 1.147
		Ph7 7.14 7.04
		Ph4 4.21 9.00
		Ph10 9.96 10.07
		ORP 229.7 244.0 * Turbidity - yes
1145		Sample time MW-138
1230		Mob to pick up ice & lunch
1315		Arrive back @ RW-139
1405		Sample time RW-139
1445		Move to MW-136
1545		Sample time MW-136
1620		Move to RW-137
1710		~~Finish~~ - Sample time @ RW-137. Repack samples and make sample kits
1900		~~End~~ of day Trip Blank MW-301 @ 1800 3/31/14

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-31-14 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development / IDW sampling

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		left AECOM to go to Progress park to pick up certified unpreserved VOC vials for VOC sampling recieved from Pace labs was preserved.
0643		leave for Auriga Spartanburg
0718		arrive on site
		Calibrate YSI 556 water quality meter
		DO% saturated air @ 13.69 10.15
		Conductivity 1.298 @ 18.01 1.278
		ph 7.02 @ 17.56 7.02
		ph 4.00 @ 17.35 4.00
		ph 10.05 10.03
		ORP 237.5 237.5
0730		at RW-131 set up to begin developing
	0812	dry at 19.0 gals allow to recover
	0850	begin to develop 9 gals dry at 1.0 gal will allow to recover all day then return - decon pump
0915		at RW-133 set up to develop - started on 3-28-14
	1005	dry at 15.0 gals allow to recover to continue developing decon pump
1030		at RW-129 the well is not flush to the ground yet - will need to be cut down our equipment is only 150' long and does not reach bottom of the well right now - the crew will cut it down flush with ground

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 3-31-14

Aurora Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 3-31-14 REPORT NUMBER: 2 of 2

Well Development Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1053		at RW-129 set up to begin development
1105		begin developing RW-129
	1240	Complete developing RW-129 decon pump
1251	1303	empty poly tank of development water at WWTP
1310	1340	lunch
1345		at Hot Spot to meet Pace Courier to Pick up additional bottleware and frig blanks unpreserved.
1400		take bottleware to Justin - He is sampling wells while I am developing wells.
1408		leave to go to Bruckner Site to sample drums of soil IDW and 2 - roll off and pump out water into tanker.
1430		go inside Bruckner bldg to open 5 drums of soil IDW then sample and then close back up. Secure bldg
	1445	Sampled Bruckner Soil IDW
1451		~~secure bldg~~ & pump off roll offs
		at 2 - Roll Off 1 - will be 4 and the other 5 bottles will be labeled on roll offs
	1520	sampled roll off 5
	1535	sampled roll off 4
1543		leave Bruckner site to go to Aurora to sample roll off 6
		sampled roll off 6
1620		at RW-133 check water level 98.52 BGS not recovered enough to ~~start~~ continue developing
		will start back at RW-131 after AE crew tops off grout
	1704	at RW-131 check water level 135.30 not recovered enough to develop will return on 4-1-14 to re evaluate
1715		check w/ Justin, see if He needs anything
		take His purge water to WWTP to empty
1743		oversee drill crew clean up and put lock on RW-129
	1815	off site to Greenville AECOM
	1850	end of day

Randy Mango 3-31-14

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 4-1-14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site, Spartanburg, SC

CLIENT: Celanese AECOM FIELD REPRESENTATIVE: Mark Hartford

SUBCONTRACTOR: AE Drilling Services

SUBCONTRACTOR PERSONNEL ON SITE: AE Drilling Services Dan Bergman, JS Crossman

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	DESCRIPTION OF ACTIVTIES: REMARKS
8AM	On Site
830	Safe Work Permit.
	- Decon to grab sample from RW-131 Residual and
	then abandon hole
	To Do -
	Clean up
	Pads - RW-123, 127, 129, 133
	Replace Pad 112
	Grout / Abandon RW-131
	Inspect RW-127 area with Tim - Needs to be Raked & Straw'd
	Develop All Remaining
	Sample In Progress
	Abandon RW-131
	Pad All Remaining

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 9/1/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: AECOM FIELD REPRESENTATIVE: Justin Butler ~~Randy Morgan~~

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0700		Mob to site
0715		Arrive @ site. meet with R. Morgan to receive materials
0815		Arrive @ Bruckner wells
0825		Calibrate YSI + Turbidity meter
		Temp = 15.50°C Press 745.4 mm Hg
		Do 9.23 corrected 9.76
		Spec Cond 1.075 1.147
		Ph7 7.01 7.04
		Ph4 3.96 4.00
		Ph10 9.89 10.06
		ORP 242.3 249.0 Turbidity - yes
0830		Arrive @ RW-119. R Morgan helps with purge. purge dry/come back later
1005		Arrive @ MW-112
1055		Sample time for MW-112
1135		Arrive @ RW-113
1215		Sample time for RW-113
1300		Sample relinquish time to courier
1325		Sample time for MW-302, trip blank for VOC + 1,4 Dioxane
1345		Arrive @ RW-116
1455		Sample time for RW-116
1600		Arrive @ MW-118
1730		Sample time MW-118
1825		Sample time RW-119

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 4/1/14 REPORT NUMBER:

Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1900		Meet with R. Morgan for sample kit distribution.
1945		End of day

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: April 1, 2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: well development / groundwater sampling

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave AECOM for Auriga Spartanburg
0706		arrive on site - check water level in RW-131
	0710	water level is 133.90 sent information to Mark
		He sent it to Bryon Dahlgren in Atlanta
0718		calibrate YSI 556 S/N 05C1520 AM
		100% saturated air @ 14.11° 10.07
		Conductivity 1.278 @ 12.69 1.278
		Ph 7.02 @ 17.60 7.02
		Ph 4.00 4.00
		Ph 10.05 10.05
		ORP 237.5 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU's
0758		at RW-133 begin developing w/ grundfos pump
	0808	dry after 10 gals this is third and last time to pump
		at dry - pull pump and decon
0830		met w/ Mark Hartford - will need to go over and help Justin with
		RW-119 - bailed it dry then Justin will sample later today
0948		purchase ice for samples return to Justin to give him ice
	1020	at RW-131 now Residual Pump RW-131 well to pull &
		sample with a Teflon bailer (per) Everette Gloves / Bryon
		Dahlgren then the well will be abandon due to low yield
		when samp My noticed an odor - called Mark & Bryon to inform
		them of it - sulfur odor - will STILL proceed with abandonment

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: 4-1-2014

Aurga Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 4-1-14 REPORT NUMBER: 20f

groundwater sampling/well development Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		AE Drill Crew just finish well pads - will need to wait
		til they dry before continuing development.
1113		at MW-130 to sample - set up grundfos pump in
		screen zone to micro - low flow sample
1120		begin purging MW-130
	1150	complete purging MW-130 - collect Fe sample 0.04 mg/L
	1200	begin sampling MW-130 also collect MS/MSD all analysis
	1223	complete sampling - pull pump - decon
		Pace Courier will be on site ~ 1300 go to help Justin
		pack samples
	1317	relinquish samples to Pace courier
1325	1355	Lunch
1400		back on site - at RW-123 set up to start developing well
		high yield well - pumping rate 2.0 gpm
	1519	complete developing RW-123 150 gals out
		pull pump - decon - empty poly tank at WWTP
1600		at RW-127 to develop - set up and begin developing well
		high yield well 2.0 gpm
	1737	complete developing RW-127 - pull pump - decon - empty poly tank
		at WWTP
1803		go down to well MW-130 & RW-127 to see if
		debri left behind was cleaned up - yes it was gone
1621		over to Bruckner site to get bottleware from Justin for
		groundwater sampling on 4-2-14 also empty Justin purge
		water
	1915	off site to Greenville AECOM
	1952	at AECOM office. EOD

Randy Moya 4-1-2014

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: 4/2/14 REPORT NUMBER:

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: ~~A~~ AECOM FIELD REPRESENTATIVE: Justin Butler

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0645		Mob to site
0720		Stop to pick up ice
0730		Arrive @ Bruckner wells
0745		Calibrate YSI + turbidity
		Temp 12.68 Press 744.5
		DO 10.50 corrected 9.76
		SpecCond 1.142 1.147
		Ph7 7.01 7.04
		Ph4 3.87 4.00
		Ph10 10.00 10.08
		ORP 244.4 244.0 Turbidity - Yes
0845		Arrive @ MW-114
0925		Sample time for MW-114
0955		Sample time for MW-402, duplicate of MW-114
1020		Arrive @ MW-115
1200		Sample time for MW-115
1300		~~Mob to MW~~ Sample time MW-303 Trip blank VOC + 1,4 Dioxane
1400		Arrive @ MW-120
1500		Sample time MW-120 - MS/MSD
1615		Arrive @ MW-121
1710		Sample time MW-121
1800		Empty purge water
1845		End of day / Arrive @ office

FIELD REPRESENTATIVES SIGNATURE: DATE:

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: April 2, 2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: groundwater sampling

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave AECOM Greenville for Auriga Spartanburg SC
	0706	arrive at Ingles Spartanburg to purchase ice for samples
0711		arrive on site
		calibrate YSI 556 S/N 05C1520Ah
		DO% saturated air @ 15.74 9.71
		Conductivity 1.278 @ 17.83 1.278
		ph 7.02 @ 17.69 7.02
		ph 4.00 @ 17.55 4.00
		ph 10.05 10.02
		ORP 237.5 237.5
0735		at RW-133 set up to pump will dry due to low yield
0803		begin to purge RW-133
	0853	RW-133 dry allow to recover and sample w/ bailer
		pull pump - decon
0930		at MW-132 set up to begin purging w/ groundfos pump
	1015	sampled MW-132 also collected a duplicate and it will be a blind sample called MW-401 time 0830
		pull pump and decon
1050		at MW-134 set up and begin to purge w/ groundfos pump
	1140	sampled MW-134 - pull pump and decon,
	1200	go to Justin to get samples and pack coolers to meet Pace Courier
		at the Hot Spot gas station 1230 - 1245
	1245	relinquish samples to Pace courier

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: April 2, 2014

Auriga Site, Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: 60284017 DATE: April 2, 2014 REPORT NUMBER: 2 of 2

Page #:

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1300	1330	lunch
1343		at RW-129 set up to purge w/ grundfos pump
1420		begin to purge RW-129 - monitor draw down keeps dropping
		~ 3' every 5 minutes - turn pump up to draw down well
		continue monitoring water level
1505		turn pump down and well starts recovering
1510		begin 5 minute intervals - readings water level continues to rise
	1530	Sampled RW-129 - pull pump - decon
1543		Mark on site w/ AEO who will be spreading straw in
		areas around new wells - will need to assist on 4-3-14
1630		at MW-128 set up to purge w/ grundfos pump
	1723	sampled MW-128 - pull pump - decon
1758		empty purge water at WWTP
	1815	off site to greenville AECOM - samples kept on
		ice in secure location for courier pick up on 4-3-14
	1850	at AECOM Greenville EOD
1745		Sampled RW-133 w/ bailer

Randy Morgan April 2, 2014

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 4/3/14 REPORT NUMBER: _____

Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0845		Mob to site
0720		Arrive @ site, pick up pump & tubing from R. Morgan
0745		Calibrate YSI & turbidity
		Temp- 20.24 Press- 742.8
		Do 7.94 Corrected 8.84
		Spec Cond 1.127 1.278
		Ph7 7.38 7.02
		Ph4 3.88 4.00
		Ph10 9.83 10.01
		ORP 226.5 237.5 Turbidity - yes
0800		Arrive @ MW-126
0855		Sample time for MW-126
0920		Arrive @ RW-127
1015		Sample time for MW-127
1100		Meet with R Morgan to pack samples
1130		Head back to office to relinquish equipment and gather GPS unit
1330		Arrive back @ site, begin laying out injection points.
1830		Finish laying out injection points
1845		Leave site
1930		Arrive @ office, end of day

AECOM

DAILY REPORT

PROJECT NUMBER: 60280417 DATE: April 3, 2014 REPORT NUMBER: 1 of 2

PROJECT & LOCATION: Auriga Site Spartanburg SC

CLIENT: _____ AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR: _____

SUBCONTRACTOR PERSONNEL ON SITE: _____

BRIEF SUMMARY OF WORK PERFORMED: groundwater sampling low flow

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave AECOM Greenville SC for Auriga Spartanburg
0711		at Ingles Spartanburg to purchase ice for samples
0715		" " purchase gas for generator
0725		on site calibrate YSI 556 S/N 05C1520AA
		100% saturated air @ 19.1°C 9.03
		Conductivity 1.278 @ 18.96 1.278
		Ph 7.02 @ 18.75 7.02
		Ph 4.00 @ 18.26 4.00
		Ph 10.05 10.03
		ORP 237.5 237.5
0756		at RW-123 begin to low flow purging sampling w/ groundfos pump
	0843	sampled RW-123 also Blind duplicate RW-403 @ 0800
		pulled pump - decon
0910		at MW-122 set up to low flow purge/sample w/groundfos pump
	1007	sampled MW-122 - pulled pump - decon pump
1030		at MW-124 set up w/ groundfos pump to low flow purge/sample
1043		begin purging MW-124
	1125	sampled MW-124 - pulled pump - decon pump
1153		empty poly tank at WWTP
1210		off site to purchase stakes, paint, flagging to mark Injection
		points on the Auriga site & Brucker site
1330		begin marking locations at the Auriga site w/ Justin Brake
1435		at Hot Spot gas station to relinquish samples to Pace Courier

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: April 3 2014

Auriga Spartanburg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: April 3, 2014 REPORT NUMBER: 2 of 2

Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1450		back on site to continue marking injection locations
		on the Auriga site
1630		complete marking locations on Auriga site
1635		head over to the Bruckner site to start marking locations
		for injections
	1830	complete marking injection locations at Bruckner site
		leave to return equipment
	1930	back at AECOM office after returning equipment.

Randy Manga April 3, 2014

Well/Piezo ID:
RW-115-90

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: cloudy, 50°, [illegible] Collector(s) Mr Law M. Hartford

Date: 3/18/14
Time: Start 940 am/pm
Finish 1305 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Stick up 1.5 BTOC. Steel open borehole Well ☒ Piezometer ☐

a. Total Well Length 91.5
b. Water Table Depth 38
c. Casing Material PVC
d. Casing Diameter 6"
e. Length of Water Column 53.5 (a-b)
f. Calculated Well Volume (see back) 78

WELL PURGING DATA

a. Purge Method Ground for Pump

Blew out 1 vol with air rig prior to installing Pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ N/A well volumes)
- Maximum Allowable Turbidity NTUs
- Stabilization of parameters

c. Field Testing Equipment Used:

	Make	Model	Serial Number
	YSI	556	05P1437 AR
	HF Scientific	2000	20081222A

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (µmhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
945	5	13.55	9.05	0.155	500	7.77	99.5		40.6
1235	30	16.22	8.15	0.140	41	7.65	135.5		40.5
1245	50	16.49	8.15	0.146	39	7.97	95.7		42
1255	70	16.40	8.23	0.141	20.51	7.97	99.6		44.1
1304	90	16.41	8.16	0.142	10	7.81	98.2		44.3

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☐	☐	☒

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-115-90	glass	3	HCL	VOCs (8260) Chloroform	1305

Comments Initial Packer test interval (Packer not needed)

Signature _____ Date ___/___/___

Start back - 1225

Time - Gal WL
951 15 - Pump Fault Quit
1232 25 39
1238 40 42

Work on Pump

5 in Hole 90-105

Stickup 2' Top Packer 89 - Pump Intake 87.0 L
Bottom Packer 92

Well/Piezo ID: RW-115-105

Dry Zone

Packer 20V PST

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: C Windy Collector(s) Hartford

Date: 3/18/14
Time: Start 1525 am/pm
Finish _____ am/pm

Stickup 2'

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐ 89 - 35.6 0.163

a. Total Well Length 107 c. Casing Material 2-in Pipe e. Length of Water Column _____ (a-b) 8.7 L

Stickup 2' b. Water Table Depth 35.6 d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

5-in Hole 15' = 15.3 gal

WELL PURGING DATA

a. Purge Method Ground Water Pump 1 Vol - 24 Gal.

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ ~~NA~~ well volumes) _____
- Maximum Allowable Turbidity NA NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make YSI Model 556 Serial Number _____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (µmhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1530	5	14.65	6.92	0.128	30	7.34	99.4		68.9
1533	8	16.01	6.85	0.130	25	6.47	80.4		= Dry

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
NO Sample	glass	3		VOCs (8260) Chloroform	

Comments Dry

Signature _____ Date ___/___/___

Recovers 0.8 Ft / 5 min

5 / 0.8 = 43.9 274 min 1 Vol - Recovery - 85 gal

1654 9.1 Hrs

Sticky 3 Top Packer 105' BTOC
Bottom Packer 108 BTOC

Well/Piezo ID: RW-115-120

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy Collector(s) Hartford

Date: 3/18/14
Time: Start 1734 am/pm
Finish _____ am/pm

NO Sample

Sticky 3

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 123 c. Casing Material _____ e. Length of Water Column _____ (a-b)

b. Water Table Depth 46.9 d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

Vol 5" hole x 15' = 15.3 Gal
Vol 2" Pipe 105 - 46.9 - 58.1 x 0.163 = 9.4

WELL PURGING DATA

a. Purge Method _____

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (µmhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1737	5	14.27	7.16	0.128	2.43	7.61	40.4		88
1745	9	15.87	6.90	0.128	11.2	8.56	74.9		89

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260)	

Comments Dry After removing vol in 2 in Pipe =

Signature _____ Date ___/___/___

Recovery - Time DTW
1745 96.4
1750 96.32
1752 96.29 / Dry

3 mg/l

88.5-105 Interval

Well/Piezo ID: RW-129-105

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy / warm Collector(s) Hunt Ford

Date: 2/10/17
Time: Start 1425 am/pm
Finish 1505 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐ open hole

a. Total Well Length 105
b. Water Table Depth 40.5
c. Casing Material PVC.
d. Casing Diameter 6
e. Length of Water Column _____ (a-b)
f. Calculated Well Volume (see back) 94

WELL PURGING DATA

a. Purge Method Grundfos Pump - Minimal drawdown Open 88.5-105

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ NA well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond mS/cm	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1430	10	17.62	6.18	0.172	26.55	3.14	124.5		41
1440	30	18.56	6.56	0.166	10.6	2.44	139.1		41
1450	50	18.47	6.34	0.164	6.38	3.00	134.2		41
1500	70	18.48	6.31	0.164	6.19	2.99	142.1		41

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☐	☐	☑

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-129-105	glass	3	HCl	VOCs (8260) Chlorides	1505

Comments 1st Interval Below Surface Casing - NO packer.

Signature Mark Hunt Date 2/13/14

Interval base of casing 88.5 to 105

Pump set to fracture depth 103 - minimal drawdown to verify formation water

3 mg/D

105-120 Interval

Well/Piezo ID: RW-129-120

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy Collector(s) Hartford

Date: 2/11/14
Time: Start 9240 am/pm
Finish 1010 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐ Open hole

a. Total Well Length 120
b. Water Table Depth 44.45
c. Casing Material 2 in Pipe
d. Casing Diameter 6
e. Length of Water Column _____ (a-b)
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Ground for Pump top of Packer at 102-105 open 105-120 Stickup 3

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ N/A well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

Volume 15" open hole: 1.23 x 15 = 18.5 Gal
5 1/2" liner

c. Field Testing Equipment Used: Make YSI Model 556 Serial Number _____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # Below TOC

Packer 200 PSI

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond mS/cm (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
9240	Initial	15.77	6.48	0.229	6.55	3.20	98.5		45.1
940	10	17.85	6.54	0.223	1.75	3.21	102.6		45.2
950	20	18.14	6.53	0.219	3.42	2.98	100.1		45.2
1000	30	17.87	6.54	0.216	3.11	3.81	102.4		45.3
1010	40	17.52	6.49	0.214	3.09	2.74	101.6		45.3

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

Vol in Rods (105 - 44.45) · 0.163 = 9.8 Gal

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-129-120	glass	3	HCL	VOCs (8260) Chloroform	1017

Comments _____

Signature Marc Hartford Date 2/11/14

Packer at 105 Sample 105-120

Trip Blank Labeled MW-001 2-11-14 1300

D.y 120 -135 Entered

Well/Piezo ID: RW-129 -135

NO SAMPLE DRY

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear Collector(s) Hart Field

Date: 2/14/14
Time: Start 1120 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length _____ c. Casing Material 2-in Pipe e. Length of Water Column _____ (a-b)

b. Water Table Depth 42.5 d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Grundfos Pump on Top of 2" Packer at 117 - 120 - open 120-135

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ 1 well volumes) 15 · 1.23 gal/ft = 18.5 gal / vol
- Maximum Allowable Turbidity 100 NTUs
- Stabilization of parameters

5½" Diameter Hole

c. Field Testing Equipment Used: Make YSI Model 556 Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____ Below Target Capacity

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec Cond mS/cm (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1122	0.5	18.10	6.40	0.180	49.6	3.81	121.7		52.1
1135	5	19.00	5.97	0.191	54.9	2.61	105.0		104.0
1145	10	19.75	6.32	0.201	175	2.84	86.5		119

D.y 11:46

Dry after Vol in Rich.

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

Vol in Rich (120-42.5) · .1632 gal/ft = 12.5 gal

TVC (120-42.5)

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260) Chlorform	

Comments

Signature [signature] Date 2/14/14

NO Sample - water did not recover enough in 15 min -

1 mg/l

135-150 Intend

Well/Piezo ID: RW-129-150

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: clear Collector(s) Hartin

Date: 2/14/14
Time: Start 1512 am/pm
Finish 1637 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 150
b. Water Table Depth 39.45
c. Casing Material 2-in Pipe
d. Casing Diameter _____
e. Length of Water Column _____ (a-b)
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Grundfos Pump on Top of Packer at 132-135 BGS. Rock Interval

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ 3 well volumes) _____
- Maximum Allowable Turbidity 10 NTUs
- Stabilization of parameters _____

15" = 1.23 gal/ft
18.5 gal = 1 vol interval

c. Field Testing Equipment Used: Make YSI Model 556 Serial Number _____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____ Below TOC at Grnd

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond mS/cm (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1514		17.51	6.49	0.160	350	3.40	128.7		54.5
1520	5	18.17	5.53	0.161	94.4	3.36	140.0		70.9
1528	10	18.16	5.14	0.165	42.7	3.33	145.5		88.5
1538	15	18.77	5.19	0.163	61.4	4.17	151.2		97.3
1548	20	19.01	5.43	0.173	106.5	5.79	146.1		118.4
1558	25	19.32	5.74	0.179	180.2	6.05	141.7		128.5
1610									D ry

Packer 20 PSI

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

Vol Reqd (130 - 39.45) · 0.163 = 14.7 GAL

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-129-150	glass	3		VOCs (8260) Chlorofm	1637

Comments _____

Signature _____ Date 2/14/14

Recvd 1600 - 1610

1610 - ON at low Rate

Time	Vol	Temp	pH	Sp Cond	Turb.	DO	ORP	DTW
1622	30	19.79	6.38	0.165	135.1	4.33	135.5	114.9
1635	35	19.97	6.41	0.165	60.71	3.45	139.1	115.2

MW9 Interval ISD -165

Well/Piezo ID: RW-129-165 Dry Interval

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy Collector(s) Hartford

Date: 2/20/14
Time: Start 915 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 165 c. Casing Material _____ e. Length of Water Column _____ (a-b)

b. Water Table Depth 35.2 d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

165-

WELL PURGING DATA

a. Purge Method Groundfos Pump. Packer (147-150) BGS.

Pipe Vol (147-35.2) .163 = 18 Gal.

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

Interval Vol 15 · 1.23 Gal/ft = 18.5

c. Field Testing Equipment Used: Make YSI Model _____ Serial Number _____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond mS/cm (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
915	0	17.86	6.09	0.284	57	4.60	155.2		
928	10	18.95	6.61	0.246	81	3.19	151.4		100.5
940	15	18.61	6.77	0.244	82	3.14	144.4		122.5

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260)	

Comments 942 Stop Pump to check for recharge ~ 0.1 GPM. Recovery 1ft in 1.5 min ~

Signature Mark Hartford Date 2/20/14

Gal
5 - 920
10 - 928 - 100.5
15 - 940 - 122.5

Recovery 1.5 min/ft - / 0.163 gal/ft
= 0.1 GPM - Could be leakage around packer. Interval Determined to Be Dry

Dry

Interval 165-180

Well/Piezo ID: RW-129-180

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy Collector(s) Hartford

Date: 2/20/14
Time: Start 1210 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 180 c. Casing Material _____ e. Length of Water Column _____ (a-b)

b. Water Table Depth 40.5 d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

280 PSI

WELL PURGING DATA

a. Purge Method Grundfos Pump (Packer 162 165) Pipe Vol (162-40.5) 0.163 20 Gal

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

15" Rich Hole 18 gal. Total 38 Gal

c. Field Testing Equipment Used: Make YSI Model 556 Serial Number _____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond mS/cm	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1210	0	18.67	6.02	0.192	13	3.25	144.5		40.5
1218	10	19.11	5.65	0.176	47	3.03	144.7		105
1224	15	20.09	5.68	0.189	61		146.2		133.5

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260)	

Comments _____

Signature _____ Date ___/___/___

Recovery 1234 - WL 156 From Tubing Backflow
1335 - 144.2
11.8 ft in 1 Hr.

Need 110 ft of recovery to volume in Rock interval
8-10 Hrs.

Gal	Time	WL
5	1214	75
10	1218	105
15	1224	133.5
~ 20	1234	Dry

Called Bryon to discuss - Decide to call interval DRY

Well/Piezo ID: MW-112

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Partly Cloud/50's Collector(s) Josh Butler

Date: 4/1/14
Time: Start 1025 am/pm
Finish 1125 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well [X] Piezometer [ ]

a. Total Well Length 38.83
b. Water Table Depth 12.13
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column
f. Calculated Well Volume (see back)

WELL PURGING DATA

a. Purge Method Peristaltic/Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1020	Initial	14.36	5.61	0.128	0.68	6.50	131.4	NA	12.50
1025	1000	15.01	5.18	0.124	0.10	5.36	141.3	NA	12.52
1030	2000	15.73	5.12	0.119	0.07	5.26	146.3	NA	12.52
1035	3000	16.02	5.15	0.120	0.05	5.22	148.1	NA	12.53
1040	4000	15.90	5.16	0.122	0.09	5.52	148.8	NA	12.53
1045	5000	15.87	5.13	0.120	0.08	5.57	149.3	NA	12.53
1050	6000	15.74	5.12	0.118	0.17	5.50	152.9	NA	12.53

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	[ ]	[ ]	[ ]
Has required turbidity been reached	[ ]	[ ]	[ ]
Have parameters stabilized	[ ]	[ ]	[ ]

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-112	glass	3		VOCs (8260)	1055
	glass	3	Phosphoric Acid	TOC	1055
	plastic	1		Alkalinity	1055
	plastic	1		Chloride	1055
	plastic	1		Dissolved metals	1055
	glass	3	HCL	1,4 dioxane	1055
	glass	2		Dew therm	1055

Comments Ferrous Iron = 0.00

Signature Josh Butler Date 4/1/14

Well/Piezo ID: MW-113

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/60's Collector(s) Justin Butler

Date: 4/1/14
Time: Start 1135 am/pm
Finish 1305 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 18.95 c. Casing Material PVC e. Length of Water Column ____

b. Water Table Depth 18.66 d. Casing Diameter 2" f. Calculated Well Volume (see back) ____

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ ____ well volumes) ____
- Maximum Allowable Turbidity ____ NTUs
- Stabilization of parameters ____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # ____ Page # ____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1142	Initial	20.17	7.50	0.252	0.38	6.82	107.5	NA	19.02
1147	1000	20.10	7.63	0.251	0.01	2.26	112.8	NA	19.09
1152	2000	20.28	7.65	0.252	0.28	1.27	112.4	NA	19.13
1157	3000	20.38	7.66	0.252	0.24	0.94	113.8	NA	19.16
1202	4000	20.46	7.66	0.252	0.06	1.80	112.5	NA	19.16
1207	5000	20.55	7.67	0.253	0.01	1.76	110.7	NA	19.16
1212	6000	20.64	7.68	0.252	0.00	1.91	109.5	NA	19.17

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-113	glass	3		VOCs (8260)	1215
	glass	3	Phosphoric Acid	TOC	1215
	plastic	1		Alkalinity	1215
	plastic	1		Chloride	1215
	plastic	1		Dissolved Metals	1215
	glass	3	HCl	1,4 Dioxane	1215
	glass	2		Dow therm	1215

Comments Ferrous Iron = 0.05

Signature Justin Butler Date 4/1/14

Well/Piezo ID: MW-114

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / 50's Collector(s) Justin Butler

Date: 4/2/14
Time: Start 0845 am/pm
Finish 1010 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well [X] Piezometer [ ]

a. Total Well Length 36.15
b. Water Table Depth 30.50
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column _____
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Grundfos / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0856	Initial 2.0gal	14.86	5.08	~~1488~~ 0.133	90.58	6.27	145.6	NA	30.66
0901	9375	15.66	5.00	0.128	47.51	6.17	151.0	NA	30.66
0906	11250	16.22	4.96	0.126	31.56	6.07	153.8	NA	30.66
0911	13125	16.63	4.95	0.126	13.79	6.03	153.7	NA	30.66
0916	15000	16.84	4.94	0.123	10.92	6.14	153.2	NA	30.66
0921	16875	16.95	4.95	0.123	5.03	6.07	153.3	NA	30.66

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	[ ]	[ ]	[ ]
Has required turbidity been reached	[ ]	[ ]	[ ]
Have parameters stabilized	[ ]	[ ]	[ ]

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-114	glass	3		VOCs (8260)	0925
	glass	3	phosphoric Acid	TOC	0925
	plastic	1		Alkalinity	0925
	plastic	1		Chloride	0925
	plastic	1		Dissolved Metals	0925
	glass	3	HCL	1,4 Dioxane	0925
	glass	2		Dewterm	0925

Comments Ferrous Iron - 0.17
* Duplicate - MW-402 @ 0955

Signature Justin Butler Date 4/2/14

Well/Piezo ID: RW-115

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear 60's Collector(s) Justin Butler

Date: 4/2/14
Time: Start 1020 am/pm
Finish 1245 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 88.65 c. Casing Material PVC e. Length of Water Column _____

b. Water Table Depth 32.87 d. Casing Diameter 2" f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method GroundFos / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1038	Total 1gal	19.07	6.63	0.333	107.1	4.03	122.3	NA	33.34
1043	5625	19.52	6.79	0.308	154.9	4.85	121.5	NA	33.34
1048	7500	19.55	6.81	0.310	337.5	5.67	121.0	NA	33.34
1053	9375	19.86	7.10	0.333	520.1	5.47	120.8	NA	33.30
1058	11250	19.82	7.38	0.346	674.8	5.56	120.4	NA	33.28
1103	15000	20.11	7.91	0.353	744.0	3.51	120.3	NA	33.27
1108	16875	20.36	7.89	0.355	791.5	5.41	119.8	NA	33.27

Continued Next Page

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-115	glass	3		VOCs (8260)	1200
	glass	3	phosphoric acid	TOC	1200
	plastic	1		Alkalinity	1200
	plastic	1		chloride	1200
	plastic	1		Dissolved metals	1200
	glass	3	HCl	1,4 dioxane	1200
	glass	2		Dowtherm	1200

Comments Ferrous Iron - 0.69

Signature _____ Date 4/2/14

Well/Piezo ID: RW-115

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: _____ Collector(s) _____

Date: 4/21/14
Time: Start _____ am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length _____ c. Casing Material _____ e. Length of Water Column _____

b. Water Table Depth _____ d. Casing Diameter _____ f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method _____

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

_____

_____

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1113	18750	20.61	8.00	0.356	821.7	5.30	119.5	NA	33.26
1118	20625	20.36	8.10	0354	242.5	5.33	119.3	NA	33.26
1145	—	19.68	6.01	0.174	17.06	5.55	128.1	NA	34.06
1150	—	19.62	5.97	0.174	9.11	5.50	129.1	NA	34.05
1155	—	19.68	5.95	0.172	7.38	5.50	130.1	NA	34.04

3rd Flow rate ge to clear →

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

_____

_____

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260)	

Comments _____

_____

Signature _____ Date ___/ /

Well/Piezo ID: MW-116

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Partly Cloudy / 70's Collector(s) Justin Butler

Date: 4/1/14
Time: Start 1345 am/pm
Finish 1545 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 31.29
b. Water Table Depth 3.68
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column
f. Calculated Well Volume (see back)

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1422	Initial	25.01	6.30	0.155	1.61	7.25	98.2	NA	4.82
1427	1000	20.83	5.90	0.154	1.90	2.90	114.0	NA	4.84
1432	2000	19.74	5.52	0.136	1.71	3.26	123.5	NA	4.84
1437	3000	19.34	5.16	0.133	1.14	3.55	132.5	NA	4.84
1442	4000	18.70	4.81	0.132	1.87	3.52	138.4	NA	4.85
1447	5000	18.51	4.77	0.135	3.08	3.60	139.2	NA	4.85
1452	6000	18.66	4.74	0.134	1.68	3.60	139.8	NA	4.86

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-116	glass	3		VOCs (8260)	1455
	glass	3	Phosphoric Acid	TOC	1455
	Plastic	1		Alkalinity	1455
	Plastic	1		Chloride	1455
	Plastic	1		Dissolved metals	1455
	glass	3	HCL	1,4 Dioxane	1455
	glass	2		Dow Therm	1455

Comments: Ferrous Iron = 0.06

Signature Justin Butler Date 4/1/14

Well/Piezo ID: MW-118

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / 80's Collector(s) Justin Butler

Date: 4/1/14
Time: Start 1600 am/pm
Finish 1900 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 44.00 c. Casing Material PVC e. Length of Water Column ____

b. Water Table Depth 31.75 d. Casing Diameter 2" f. Calculated Well Volume (see back) ____

WELL PURGING DATA

a. Purge Method GrundFos Pump / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ ____ well volumes) ____
- Maximum Allowable Turbidity ____ NTUs
- Stabilization of parameters ____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # ____ Page #____

Purged 2 Gal

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1703	Tai Ha!	18.92	4.96	0.089	83.13	6.38	141.2	NA	33.30
1708	9375	19.11	4.69	0.099	43.51	6.48	145.7	NA	33.30
1713	11250	18.99	4.71	0.097	22.08	6.36	146.9	NA	33.30
1718	13125	19.12	4.74	0.096	6.35	6.44	148.2	NA	33.30
1723	15000	19.13	4.78	0.094	6.56	6.46	148.4	NA	33.30
1728	16875	19.11	4.81	0.094	3.57	6.41	149.3	NA	33.30

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-118	glass	3		VOCs (8260)	1730
	glass	3	Phosphoric Acid	TOC	1730
	Plastic	1		Alkalinity	1730
	Plastic	1		Chloride	1730
	Plastic	1		Dissolved Oxygen	1730
	glass	3	HCL	1,4 Dioxane	1730
	glass	2		Dow therm	

Comments Ferrous Iron = 0.11
Attempted sample with Peristaltic Pump

Signature Justin Butler Date 4/1/14

Well/Piezo ID: RW-119

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Partly Cloudy/40's Collector(s) Justin Butler

Date: 4/1/14
Time: Start 0850 am/pm
Finish 1900 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☒ Piezometer ☐

a. Total Well Length 90.10
b. Water Table Depth 31.33
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column _____
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Teflon Bailer/Purge Day

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0905	Initial	15.73	7.38	0.090	2.70	7.83	148.9	NA	—
0913	~3	16.03	6.90	0.266	3.55	4.62	136.2	NA	—
0920	~6	16.23	6.99	0.257	8.37	5.17	129.3	NA	—
0926	~9	13.86	7.02	0.249	53.11	5.84	128.3	NA	—
0930	Dry ~11	15.83	9.23	0.269	257.7	8.20	127.5	NA	—
1825					3.74				

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-119	glass	3		VOCs (8260)	1825
	glass	3	phosphoric acid	TOC	1825
	plastic	1		Alkalinity	1825
	plastic	1		Chloride	1825
	plastic	1		Dissolved metals	1825
	glass	3	HCL	1,4 Dioxane	1825
	glass	2		Dow-Therm	1825

Comments: Ferrous Iron = 0.12

Signature _____ Date 4/1/14

Well/Piezo ID: MW-120

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / 80's Collector(s) Justin Butler

Date: 4/2/14
Time: Start 1400 am/pm
Finish 1605 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 55.03 c. Casing Material PVC e. Length of Water Column ____

b. Water Table Depth 32.36 d. Casing Diameter 2" f. Calculated Well Volume (see back) ____

WELL PURGING DATA

a. Purge Method Grundfos / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ ____ well volumes) ____
- Maximum Allowable Turbidity ____ NTUs
- Stabilization of parameters ____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # ____ Page # ____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1430	Initial 1gal	20.22	4.95	0.073	75.47	4.96	144.3	NA	35.65
1435	5625	21.66	4.87	0.072	39.50	4.61	148.4	NA	35.72
1440	7500	21.71	4.86	0.073	9.67	4.66	149.5	NA	35.72
1445	9375	22.06	4.87	0.074	7.43	4.54	150.0	NA	35.74
1450	11250	21.64	4.86	0.073	5.29	4.56	150.2	NA	35.74
1455	13000	21.92	4.88	0.073	4.11	4.51	150.0	NA	35.25

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-120	glass	3		VOCs (8260)	1500
	glass	3	Phosphoric acid	TOC	1500
	Plastic	1		Alkalinity	1500
	plastic	1		chloride	1500
	plastic	1		Dissolved metals	1500
	glass	3	HCl	1,4 Dioxane	1500
	glass	2		DOC Therm	1500

Comments Ferrous Iron - 0.02
* MS/MSD

Signature [signature] Date 4/2/14

Well/Piezo ID: RW-121

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / 30's Collector(s) Justin Butler

Date: 4/2/14
Time: Start 1615 am/pm
Finish 1800 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☒ Piezometer ☐

a. Total Well Length 79.60
b. Water Table Depth 32.98
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column _____
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Grundfos / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1640	Initial 1gal	18.61	6.96	0.237	5.40	2.30	118.3	NA	37.39
1645		18.52	6.86	0.234	2.59	2.29	119.1	NA	39.77
1650		19.68	6.87	0.232	1.88	1.82	117.8	NA	40.40
1655		20.30	6.95	0.232	1.93	1.96	116.9	NA	40.48
1700		20.04	6.97	0.232	1.65	1.97	116.2	NA	40.49
1705		19.67	6.98	0.232	1.79	1.95	116.4	NA	40.50

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-121	glass	3		VOCs (8260)	1710
	glass	3	Phosphoric Acid	TOC	1710
	Plastic	1		Alkalinity	1710
	Plastic	1		Chloride	1710
	Plastic	1		Dissolved metals	1710
	glass / glass	3 / 2	HCL	1,4 Dioxane Dow Therm	1710

Comments Ferrous Iron 0.0

Signature _____ Date 4/2/14

Well/Piezo ID: MW-122

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy 60's Collector(s) Randy Morgan

Date 04/03/14
Time: Start 0925 am/pm
Finish 1010 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 57.39
b. Water Table Depth 18.53
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 38.86
f. Calculated Well Volume (see back) 6.33

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (gals)	TEMP C	pH S.U.	Spec. Cond (mScm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0930	.75	19.54	4.92	0.060	300.2	4.35	204.5	none	18.90
0935	1.25	19.44	4.94	0.055	130.7	4.44	214.8	none	18.90
0940	1.75	19.41	4.98	0.054	36.54	4.55	221.6	none	18.91
0945	2.25	20.22	4.94	0.055	26.58	4.59	228.6	none	18.92
0950	2.75	20.45	4.97	0.055	13.92	4.61	228.3	none	18.93
0955	3.25	20.48	4.99	0.054	10.09	4.60	227.6	none	18.93
1000	4.0	20.68	5.11	0.053	7.03	4.59	219.8	none	18.94

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-122	glass	3		VOCs (8260)	1007
MW-122	glass	3	phosphoric B-1	TOC	1007
MW-122	plastic	1	none	Cloride	1007
MW-122	plastic	1	none	Alkalinity	1007
MW-122	plastic	1	none	Dissolved Metals	1007

Comments Fe = 0.08 mg/l

Signature Randy Morgan Date 04/03/14

Well/Piezo ID: RW-123

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: overcast 60 Collector(s) Randy Morgan

Date: 04/03/14
Time: Start 0756 am/pm
Finish 0836 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 137.03
b. Water Table Depth 25.40
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 111.63
f. Calculated Well Volume (see back) 18.19

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (gal) (ml)	TEMP C	pH S.U.	Spec. Cond (mS/cm) (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0801	1.5	19.65	7.21	0.162	9.23	0.70	204.7	none	26.64
0806	1.0	19.84	7.31	0.164	8.38	0.46	133.3	none	27.18
0811	1.5	19.95	7.34	0.162	3.96	0.41	93.5	none	29.35
0816	2.0	20.02	7.42	0.163	2.61	0.38	54.7	none	27.50
0821	2.5	19.97	7.25	0.162	2.06	0.38	47.6	none	27.63
0826	3.0	20.12	7.41	0.161	1.69	0.40	36.8	none	27.71
0831	3.5	20.13	7.42	0.163	1.09	0.43	44.5	none	27.94
0836	4.0	20.25	7.41	0.161	0.76	0.47		none	27.89

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-123	glass	3	none	VOCs (8260)	0843
RW-123	glass	3	phosphoric B-1	TOC	0843
RW-123	plastic	1	none	Cloride	0843
RW-123	plastic	1	none	Alkalinity	0843
RW-123	plastic	1	none	Dissolved Metals	0843

Comments Fe = 0.0 mg/L

Signature Randy Morgan Date 04/03/2014

B/Dup Duplicate collected ID RW-403 @ 0800
All analysis

Well/Piezo ID: MW-124

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy 63 Collector(s) Randy Morgan

Date: 04/03/14
Time: Start 1038 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 59.50
b. Water Table Depth 22.12
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 37.38
f. Calculated Well Volume (see back) 6.09

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mS/cm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1043	.5	20.03	4.70	0.060	187.0	6.48	244.3	none	23.03
1048	1.0	20.66	4.85	0.063	166.0	6.48	240.5	none	23.02
1053	1.5	21.11	4.90	0.061	83.65	6.24	238.6	none	23.18
1058	2.0	21.17	4.91	0.062	48.01	6.14	240.6	none	23.12
1103	2.5	21.48	4.94	0.062	28.39	6.05	237.5	none	23.11
1108	3.0	21.46	4.86	0.063	21.14	6.02	240.8	none	23.15
1113	3.5	21.59	4.94	0.061	15.26	5.95	239.1	none	23.19
1118	4.0	21.80	4.98	0.062	9.33	5.83	238.4	none	23.20

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-124	glass	3	none	VOCs (8260)	1125
MW-124	glass	3	phosphoric B-1	TOC	1125
MW-124	plastic	1	none	Cloride	1125
MW-124	plastic	1	none	Alkalinity	1125
MW-124	plastic	1	none	Dissolved Metals	1125

Comments Fe = 0.06 mg/L

Signature Randy Morgan Date 04/03/2014

Well/Piezo ID: MW-12C

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy/60's Collector(s) Justin Butler

Date: 4/3/14
Time: Start 0805 am/pm
Finish 0920 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☒ Piezometer ☐

a. Total Well Length 99.15
b. Water Table Depth 24.25
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column _____
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Peristaltic/Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0821	Initial	17.83	4.83	0.202	1.63	8.96	162.2	NA	24.35
0826	1000	17.80	4.34	0.171	0.66	7.08	176.6	NA	24.36
0831	2000	17.79	4.23	0.171	0.30	6.37	182.6	NA	24.37
0836	3000	17.77	4.16	0.169	0.19	6.71	184.6	NA	24.37
0841	4000	17.91	4.13	0.170	0.12	6.58	185.8	NA	24.37
0846	5000	18.13	4.15	0.170	0.01	6.53	185.5	NA	24.37
0851	6000	18.20	4.15	0.168	0.01	6.52	185.8	NA	24.37

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-12C	glass	3		VOCs (8260)	0855
	glass	3	Phosphoric Acid	TOC	0855
	Plastic	1		Alkalinity	0855
	Plastic	1		Chloride	0855
	Plastic	1		Dissolved metals	0855

Comments Ferrous Iron - 0.09

Signature Justin Butler Date 4/3/14

Well/Piezo ID: RW-27

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Cloudy 60's Collector(s) Justin Butler

Date: 4/3/14
Time: Start 0930 am/pm
Finish 1100 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 92.42
b. Water Table Depth 26.53
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column
f. Calculated Well Volume (see back)

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0943	Initial	19.80	6.42	0.352	0.97	7.13	141.2	NA	26.62
0948	1000	19.63	6.67	0.362	0.99	1.86	140.5	NA	26.67
0953	2000	19.53	6.76	0.370	0.89	1.80	139.8	NA	26.70
0958	3000	19.53	6.81	0.370	0.72	1.48	138.9	NA	26.72
1003	4000	19.89	6.86	0.369	0.52	1.38	138.2	NA	26.73
1008	5000	19.72	6.88	0.369	0.49	1.20	137.6	NA	26.74
1013	6000	19.81	6.90	0.369		1.17	137.2	NA	

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-27	glass	3		VOCs (8260)	1015
	glass	3	Phosphoric Acid	TOC	1015
	Plastic	1		Alkalinity	1015
	Plastic	1		Chloride	1015
↓	Plastic	1		Dissolved Metals	1015
					1015

Comments Ferrous Iron 0.00

Signature Justin Butler Date 4/3/14

Well/Piezo ID: MW-128

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: _____ Collector(s) Randy Morgan

Date: 04/02/14
Time: Start 1642 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 59.90
b. Water Table Depth 33.93
c. Casing Material PVC
d. Casing Diameter Ø 2.0
e. Length of Water Column 25.97
f. Calculated Well Volume (see back) 4.23

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (~~ml~~ gal)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mScm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1647	.50	21.61	4.51	0.031	90.69	9.25	260.0	none	35.83
1652	1.0	22.44	4.50	0.031	76.94	9.34	262.9	none	36.00
1657	1.5	22.95	4.26	0.031	38.64	9.16	259.9	none	36.10
1702	2.0	22.86	4.18	0.031	21.62	9.25	278.8	none	36.09
1707	2.5	23.25	4.08	0.031	20.69	8.99	264.0	none	36.19
1712	3.0	23.37	4.12	0.031	8.79	9.10	275.6	none	36.07
1717	3.5	23.39	4.21	0.031	9.73	9.28	280.1	none	36.10

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

_____

_____

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-128	glass	3	none	VOCs (8260)	1723
MW-128	glass	3	phosphoric B-1	TOC	1723
MW-128	plastic	1	none	Cloride	1723
MW-128	plastic	1	none	Alkalinity	1723
MW-128	plastic	1	none	Dissolved Metals	1723

Comments Fe = 0.08

Signature Randy Morgan Date 04/02/14

Well/Piezo ID: RW-129

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/sunny Collector(s) Randy Moryo

Date: 04/02/14
Time: Start 1415 am/pm
Finish 1525 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 150.03
b. Water Table Depth 42.30
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 107.73
f. Calculated Well Volume (see back) 17.56

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gals)	TEMP C	pH S.U.	Spec. Cond (mS/cm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1425	.80	22.88	6.55	0.457	6.24	1.51	69.3	none	44.93
1440	5.0	20.90	6.33	0.439	7.20	0.47	53.6	none	64.73
1455	10.0	20.95	6.37	0.438	2.01	0.36	31.9	none	81.15
1510	13.0	21.86	6.61	0.433	0.32	0.38	12.8	none	81.08
1515	13.5	21.90	6.61	0.428	0.25	0.25	1.7	none	78.38
1520	14.0	21.69	6.53	0.431	0.01	0.23	2.2	none	76.57
1525	14.5	21.62	6.49	0.433	0.01	0.20	3.5	none	75.62

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-129	glass	3	none	VOCs (8260)	1530
RW-129	glass	3	phosphoric B-1	TOC	1530
RW-129	plastic	1	none	Cloride	1530
RW-129	plastic	1	none	Alkalinity	1530
RW-129	plastic	1	none	Dissolved Metals	1530

Comments Fe = 0.08

Signature Randy Moryo Date 04/02/14

1440 WL 48.25 turn pump up to pump well dry – Low yield
1500 WL 85.69 turn pump down to see if well has recovery, it is very fast
1505 WL 82.88 scale pump turn down
1535 WL 73.66

Well/Piezo ID: MW-130

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: cloudy 58 Collector(s) Randy Morgan

Date 04/01/2014
Time: Start 1114 (am)/pm
Finish 1150 (am)/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 60.34
b. Water Table Depth 51.90
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 8.44
f. Calculated Well Volume (see back) 1.37

WELL PURGING DATA

a. Purge Method Grundfos Pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (mS/cm) (~~umhos~~)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1120	.75	22.17	4.99	0.028	49.50	3.15	263.7	none	52.29
1125	1.50	23.41	5.10	0.028	52.63	3.43	268.7	none	52.30
1130	2.25	23.67	5.10	0.029	40.23	3.18	269.4	none	52.28
1135	3.0	23.88	5.20	0.028	41.79	3.08	263.3	none	52.28
1140	3.75	23.97	5.17	0.029	23.44	3.03	270.4	none	52.26
1145	4.50	24.10	4.99	0.029	16.47	3.03	281.1	none	52.28
1150	5.25	24.28	5.15	0.029	16.85	2.98	269.8	none	52.27

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-130	glass	3		VOCs (8260)	1200
MW-130	glass	3	phosphoric B-1	TOC	1200
MW-130	plastic	1	none	Cloride	1200
MW-130	plastic	1	none	Alkalinity	1200
MW-130	plastic	1	none	Dissolved Metals	1200

Comments Fe = 0.04 mg/L A/so collect MS/MSD for all analysis MW-130-MS / MW-130-MSD

Signature Randy Morgan Date 04/01/2014

Well/Piezo ID: Residual Pump RW-13

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/Sunny Collector(s) Randy Morgan
Date: 04/01/14
Time: Start 1020 am/pm
Finish 1023 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☑ Piezometer ☐

a. Total Well Length 139.80
b. Water Table Depth 134.09
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 5.71
f. Calculated Well Volume (see back) 0.93

WELL PURGING DATA

a. Purge Method teflon baller

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520AC

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # Daily dated Today 4-01-14 Page # _____

Time	Volume Removed (~~ml~~ gals)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mSem)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1023	1.25	18.40	7.09	0.535	11.19	5.72	145.2	Sulfur	134.09 (134.09)

e. Acceptance criteria pass/fail

	Yes RM	No	N/A
Has required volume been removed	☒	☐	☒
Has required turbidity been reached	☒	☐	☒
Have parameters stabilized	☒	☐	☒

If no or N/A - Explain below.
very slow recovery Evelette Glover said to grab a VOC sample only from water in well then abandon

SAMPLE COLLECTION: Method: ~~PUMP TUBING~~ teflon baller

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
Residual Pump RW13	glass	3		VOCs (8260)	1020

Comments Fe = 0.02 mg/L

Signature Randy Morgan Date 04/01/14

Well/Piezo ID: MW-132

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/Sunny Collector(s) R Morgan

Date: 04/02/14
Time: Start 0942 am/pm
Finish _____ am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 64.97
b. Water Table Depth 43.63
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column _____
f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (~~ml~~ gals)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mScm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0948	1.60	19.31	4.08	0.045	78.67	0.54	311.4	none	44.64
0953	1.20	20.72	4.51	0.046	35.40	0.37	289.1	none	44.63
0958	1.80	21.31	4.55	0.046	24.16	0.30	291.2	none	44.64
1008	2.40	21.86	4.61	0.045	7.46	0.27	298.4	none	44.63
1013	3.0	21.98	4.62	0.046	4.57	0.25	303.5	none	44.64

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-132	glass	3		VOCs (8260)	1015
MW-132	glass	3	phosphoric B-1	TOC	1015
MW-132	plastic	1	none	Cloride	1015
MW-132	plastic	1	none	Alkalinity	1015
MW-132	plastic	1	none	Dissolved Metals	1015

Comments Fe = 0.01

Signature Randy Morgan Date 04/02/14

Blind - Duplicate collected (All Analysis) MW-401 @ 0830

Well/Piezo ID: RW-133

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / Sunny Collector(s) Randy Morgan

Date: 04/02/14
Time: Start 0749 am/pm
Finish 0853 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 116.48
b. Water Table Depth 57.94
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 58.54
f. Calculated Well Volume (see back) 9.54

WELL PURGING DATA

a. Purge Method grundfos pump - low flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (~~ml~~ gals)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mScm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
0803	.65	17.30	5.54	0.217	51.30	4.62	143.3	none	61.90
0818	5.0	20.74	6.03	0.223	73.95	4.55	134.6	none	86.47
0837	10.0	22.50	6.33	0.235	149.88	4.54	131.1	none	107.08
0853	12.5	24.53	6.55	0.274	32.39	5.56	98.4	none	116.03
Sample 1740	12.75	18.83	5.92	0.211	23.26	2.58	158.9	none	85.38

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☐	☐	☒

If no or N/A - Explain below.
low yield well - pump dry - allow to recover to sample

SAMPLE COLLECTION: Method: ~~PUMP TUBING~~ teflon bailer

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-133	glass	3		VOCs (8260)	1745
RW-133	glass	3	phosphoric B-1	TOC	1745
RW-133	plastic	1	none	Cloride	1745
RW-133	plastic	1	none	Alkalinity	1745
RW-133	plastic	1	none	Dissolved Metals	1745

Comments Fe = 0.07

Signature Randy Morgan Date 04/02/14

0749 begin purging at .25 gpm water level drops to 59.39
0800 " " " " 61.90
0853 pumped dry
1740 water level 85.38

Well/Piezo ID: MW-134

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear Sunny 75 Collector(s) Randy Morgan

Date: 04/02/14
Time: Start 1100 am/pm
Finish 1135 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑ Piezometer ☐

a. Total Well Length 75.07
b. Water Table Depth 53.04
c. Casing Material PVC
d. Casing Diameter 2.0
e. Length of Water Column 22.03
f. Calculated Well Volume (see back) 3.59

WELL PURGING DATA

a. Purge Method grundfos pump

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used:

Make	Model	Serial Number
YSI	556	05C1520 AU

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (~~ml~~ gals)	TEMP C	pH S.U.	Spec. Cond (~~umhos~~ mScm)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1110	1.0	21.03	4.51	0.048	254.8	2.88	205.6	none	54.21
1115	1.5	22.29	4.90	0.048	66.08	2.53	234.2	none	54.40
1120	2.0	22.76	5.00	0.048	34.06	2.36	231.0	none	54.47
1125	2.5	22.84	4.91	0.048	18.55	2.20	235.5	none	55.04
1130	3.0	22.95	4.94	0.048	12.62	2.15	234.0	none	55.08
1135	3.5	23.13	4.85	0.047	12.78	2.08	238.1	none	55.06

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-134	glass	3		VOCs (8260)	1140
MW-134	glass	3	phosphoric B-1	TOC	1140
MW-134	plastic	1	none	Cloride	1140
MW-134	plastic	1	none	Alkalinity	1140
MW-134	plastic	1	none	Dissolved Metals	1140

Comments Fe = 0.02 mg/L

Signature Randy Morgan Date 04/02/14

Well/Piezo ID: MW-136

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/70's Collector(s) Justin Butler

Date: 3/31/14
Time: Start 1510 am/pm
Finish 1610 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 60.12 c. Casing Material PVC e. Length of Water Column ____

b. Water Table Depth 22.72 d. Casing Diameter 2" f. Calculated Well Volume (see back) ____

WELL PURGING DATA

a. Purge Method Peristaltic/Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ ____ well volumes) ____
- Maximum Allowable Turbidity ____ NTUs
- Stabilization of parameters ____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # ____ Page # ____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1513	Initial	19.33	5.28	0.123	0.45	6.64	136.3	N/A	23.11
1518	1000	19.02	5.12	0.122	0.66	6.20	143.3	N/A	23.32
1523	2000	18.98	5.02	0.117	1.21	5.91	147.3	N/A	23.40
1528	3000	18.74	4.96	0.117	1.13	5.92	149.7	N/A	23.40
1533	4000	18.85	4.92	0.118	1.31	5.86	151.0	N/A	23.40
1538	5000	18.93	4.90	0.116	1.75	5.85	152.0	N/A	23.40
1543	6000	18.87	4.89	0.117	1.33	5.85	152.5	N/A	23.40

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-136	glass	3		VOCs (8260)	1545
↓	glass	3	Phosphoric Acid	TOC	1545
	Plastic	1		Alkalinity	1545
	Plastic	1		chloride	1545
	Plastic	1		dissolved Metals	1545

Comments Ferrous Iron = 0.0

Signature ____ Date 3/31/14

Well/Piezo ID: BW-137

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear / 70's
Collector(s): Justin Butler
Date: 3/31/14
Time: Start 1630 am/pm
Finish 1735 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 107.21
b. Water Table Depth 22.30
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column
f. Calculated Well Volume (see back)

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1636	Initial	21.28	5.93	0.216	5.63	4.09	119.4	NA	22.72
1641		20.91	5.91	0.220	0.25	2.28	119.5	NA	22.74
1646		21.06	5.88	0.216	4.85	1.16	120.5	NA	22.74
1651		21.12	5.86	0.216	3.00	1.37	119.8	NA	22.74
1656		21.06	5.85	0.215	7.50	0.93	118.9	NA	22.74
1701		21.08	5.82	0.217	3.89	0.67	120.3	NA	22.74
1706		20.99	5.81	0.217	3.65	0.84	119.8	NA	22.74

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.
1

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	glass	3		VOCs (8260)	1710
	glass	3	phosphoric acid	TOC	1710
	plastic	1		Alkalinity	1710
	plastic	1		chloride	1710
	plastic	1		dissolved metals	1710

Comments: Ferrous Iron = 0.22

Signature: Justin Butler Date 3/31/14

Well/Piezo ID: MW-138

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/50's
Collector(s): Justin Butler
Date: 3/31/14
Time: Start 1105 am/pm
Finish 1200 am/pm

WATER LEVEL DATA: (measured from Top of Casing)

Well [X] Piezometer [ ]

a. Total Well Length 59.65
b. Water Table Depth 11.14
c. Casing Material PVC
d. Casing Diameter 2"
e. Length of Water Column
f. Calculated Well Volume (see back)

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1110	Initial	14.37	5.66	0.138	65.16	8.04	134.0	NA	11.35
1115	1000	14.73	5.10	0.109	8.51	6.56	143.6	NA	11.36
1120	2000	14.87	5.05	0.083	4.25	6.43	153.3	NA	11.37
1125	3000	15.13	4.95	0.071	1.69	6.32	159.5	NA	11.37
1130	4000	15.21	4.97	0.068	0.64	6.26	164.2	NA	11.37
1135	5000	15.26	4.96	0.070	0.71	6.18	167.3	NA	11.38
1140	6000	15.20	4.95	0.072	0.46	6.18	170.1	NA	11.38

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	[ ]	[ ]	[ ]
Has required turbidity been reached	[ ]	[ ]	[ ]
Have parameters stabilized	[ ]	[ ]	[ ]

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
MW-138	glass	3		VOCs (8260)	1145
	glass	3	Phosphoric Acid	TOC	1145
	Plastic	1		Alkalinity	1145
	Plastic	1		Chloride	1145
	Plastic	1		Dissolved Metals	1145

Comments: Ferrous Iron = 0.05 mg/L

Signature: Justin Butler
Date: 3/31/14

Well/Piezo ID: RW-139

Ground Water Sample Collection Record

Client: Celanese
Project No: 60280417
Site Location: Spartanburg, SC
Weather Conds: Clear/60s Collector(s) Justin Butler

Date: 3/31/14
Time: Start 1330 am/pm
Finish 1440 am/pm

WATER LEVEL DATA: (measured from Top of Casing) Well ☒ Piezometer ☐

a. Total Well Length 97.70 c. Casing Material PVC e. Length of Water Column _____

b. Water Table Depth 13.76 d. Casing Diameter 2" f. Calculated Well Volume (see back) _____

WELL PURGING DATA

a. Purge Method Peristaltic / Low Flow

b. Acceptance Criteria defined (from workplan)
- Minimum Required Purge Volume (@ _____ well volumes) _____
- Maximum Allowable Turbidity _____ NTUs
- Stabilization of parameters _____

c. Field Testing Equipment Used: Make Model Serial Number

d. Field Testing Equipment Calibration Documentation Found in Field Notebook # _____ Page #_____

Time	Volume Removed (ml)	TEMP C	pH S.U.	Spec. Cond (umhos)	TURBIDITY NTUs	D.O. mg/l	ORP MV	Odor	DTW
1332	Initial	17.50	5.93	0.194	2.04	8.76	121.8	NA	13.89
1337	1250	16.91	5.73	0.187	1.30	3.93	129.8	NA	13.90
1342	2500	16.91	5.61	0.189	0.74	2.84	131.1	NA	13.91
1347	3750	16.95	5.48	0.192	0.42	1.15	133.6	NA	13.91
1352	5000	16.97	5.44	0.194	0.45	0.66	134.1	NA	13.92
1357	6250	16.93	5.41	0.195	0.84	0.44	132.2	NA	13.92
1402	7500	16.94	5.39	0.195	0.64	0.46	131.6	NA	13.93

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: PUMP TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
RW-139	glass	3		VOCs (8260)	1405
↓	glass	3	Phosphoric Acid	TOC	1405
	Plastic	1		Alkalinity	1405
	Plastic	1		chloride	1405
↓	Plastic	1		Dissolved metals	1405

Comments Ferrous Iron = 0.12 mg/L

Signature Justin Butler Date 3/31/14

stick up 1.7'
BGS 4.6' grout

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 13/Dec/11 Date Completed (yr/mo/day) 13-Dec-11

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-112

____ Upgradient ____ Downgradient

Weather Conditions Clear / Sunny

Air Temperature 40's - 50's °F

Total Well Depth (TWD) = 38.78 ~~37.20~~ BGS 1/100 ft

Depth to Ground Water (DGW) = 12.75 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 24.45 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.98 gallons

5 Casing Volumes = 19.92 gallons

Method of Well Development bailed, grundfos pump

Total Volume of Water Removed 119.5 gallons

Date/Time 12-11-13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	
1500 ~~1300~~	bailed	9	—	—	—	—	Brown<1100	3.0% silt	bailed	—
1525 ~~1325~~	pumped 1.5	15	15.88	5.34	170.8	0.080	Brown<1100	3.0% silt	30.30	6.47
1540 ~~1340~~	1.5	37.5	15.82	5.37	175.3	0.076	Brown<1100	1.8% silt	32.18	7.61
1555 ~~1355~~	1.3	59.5	15.60	5.38	179.3	0.074	Brown 4100	1.8% silt	33.80	8.78
1610 ~~1410~~	1.0	~~74~~ 89.5	15.45	5.50	171.9	0.077	Brown 349.3	0%	28.65	8.49
1625 ~~1425~~	1.0	89.5	15.77	5.78	170.3	0.078	Slight 64.26	0%	29.68	5.70
1640 ~~1440~~	1.0	104.5	15.76	5.67	170.4	0.078	Clear 16.87	0%	29.80	5.32
1655 ~~1455~~	1.0	119.5	15.60	5.53	175.8	0.078	Clear 3.09	0%	29.82	5.53

surged
surged
surged
surged
TOP of Screen
"
"
"

COMMENTS/OBSERVATIONS: 1410 pulled pump to top of screen

AECOM

Monitoring Well Development Log

Page 1 of 1

Date Started (yr/mo/day) 2014-Mar-27 Date Completed (yr/mo/day) 2014-3-27

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-113

____ Upgradient ____ Downgradient

Weather Conditions Clear / Sunny

Air Temperature 34 °F

Total Well Depth (TWD) = 70.10 BGS 1/100 ft

Depth to Ground Water (DGW) = 18.40 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 51.70 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 8.42 gallons

5 Casing Volumes = 42.13 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 130.0 gallons

Date/Time 3-27-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	WL
0853	2.0	10.0	16.63	7.53	219.4	0.145	18.37 clear	0	Surged	36.5
0903	2.0	30.0	16.60	7.70	220.6	0.145	12.17 Clear	0	Surged	42.58
0913	2.0	50.0	16.52	7.67	186.3	0.145	7.33 clear	0	Surged	Pump Set
0923	2.0	70.0	16.45	7.72	145.1	0.144	6.45 Clear	0	Surged	44.88
0933	2.0	90.0	16.56	7.74	122.3	0.145	2.74 clear	0	—	Top of water column
0943	2.0	110.0	16.58	7.68	110.1	0.145	1.18 Clear	0	—	
0953	2.0	130.0	16.63	7.72	109.2	0.144	0.96 Clear	0	—	
									—	

COMMENTS/OBSERVATIONS: (well yield high) had bottom & surged stayed clear entire time (set pump in screen first 5 readings) then pull to top of water column

S/4 3.4"
BGS 9.0' grout

AECOM

Monitoring Well Development Log

60.30 TOC before being cut off

Date Started (yr/mo/day) 13/12/11 (Dec) Date Completed (yr/mo/day) 13/12/11 (Dec)

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-114

____ Upgradient ____ Downgradient

Weather Conditions Clear/sunny

Air Temperature 30's – 40's °F

Total Well Depth (TWD) = 56.47 ~~55.50~~ BGS 1/100 ft

Depth to Ground Water (DGW) = 31.55 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 23.95 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.90 gallons

5 Casing Volumes = 19.57 gallons

Method of Well Development bailed/grundfos pump

Total Volume of Water Removed 126.6 gallons

Date/Time 12-11-13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO @ ft w/ BGS mg/L	
0845	Bailed	3	—	—	—	—	Brown	silt 30%	Bailed	
0920	1.3	4	15.82	6.58	178.1	0.103	Brown	silt 10%	36.10	8.49 surged
0935	1.3	24	15.84	6.25	154.2	0.053	Brown	silt 5%	42.78	7.80 surged
0950	1.3	44	15.53	5.47	163.9	0.077	Brown <1100	0	~~46.59~~	8.60 surged
1005	1.5	66.5	16.54	5.45	166.8	0.066	Brown <1100	0	46.54	5.57 surged
1015	1.5	81.5	16.59	5.65	166.7	0.068	slight 60.55	0	49.74	6.69
1025	1.5	96.5	16.81	5.66	168.3	0.070	Brown 703.8	0	49.68	5.42
1035	1.5	111.5	16.78	5.60	169.8	0.066	slight 158.3	0	48.56	6.82
1045	1.5	126.6	16.50	5.56	172.0	0.065	slight 76.27	0	48.72	8.46

COMMENTS/OBSERVATIONS: pulled pump to top of screen at 1005

Re-development

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 14-March-25 Date Completed (yr/mo/day) 14 March 25

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-114

____ Upgradient ____ Downgradient

Weather Conditions mostly Sunny / windy

Air Temperature 48 °F

Total Well Depth (TWD) = 56.47 1/100 ft

Depth to Ground Water (DGW) = 30.43 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 26.04 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 4.24 gallons

5 Casing Volumes = 21.2 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 110 gallons

Date/Time 3-25-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1525	~~5.0~~	5.0	16.20	5.92	210.5	0.070	<1100 Brn		Surged
1535	~~5.0~~ 1.0	15.0	16.95	5.46	223.3	0.061	<1100 Brn		Surged
1545	1.0	25.0	16.87	5.41	232.5	0.059	586. Brn		Surged
1555	1.0	35.0	16.70	5.33	240.3	0.061	140.3 Slight		—
1605	1.5	50.0	16.76	5.52	228.7	0.061	66.08 Slight		—
1615	1.5	65.0	16.32	5.33	243.5	0.060	18.12 clear		—
1625	1.5	80.0	16.66	5.24	246.3	0.063	6.45 clear		—
1635	1.5	95.0	16.77	5.20	244.7	0.061	6.67 clear		—
1645	1.5	110.0	16.88	5.24	2	0.059	6.48 clear		—

COMMENTS/OBSERVATIONS:

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-March-~~27~~ 27 Date Completed (yr/mo/day) 2014-3-27

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-115

____ Upgradient ____ Downgradient

Weather Conditions mostly Sunny / ~~Cloudy~~

Air Temperature 48 °F

Total Well Depth (TWD) = 88.62 BGS 1/100 ft

Depth to Ground Water (DGW) = 33.15 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 55.47 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 9.04 gallons

5 Casing Volumes = 45.20 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 127.5 gallons

Date/Time 3-27-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO (in the screen)
1128	1.5	7.5	17.24	8.50	198.1	0.179	534.1 Grey		Surged
1138	1.5	22.5	17.56	7.04	216.7	0.109	101.8 Grey		Surged
1148	1.5	37.5	17.32	6.11	228.1	0.110	93.45 Grey		Surged
1158	1.5	52.5	17.49	6.02	208.5	0.110	88.46 Slight Grey		Surged
1208	1.5	67.5	17.77	6.03	212.1	0.110	25.68 clear		Top of water column
1218	1.5	82.5	17.60	6.18	214.6	0.108	9.27 clear		—
1228	1.5	97.5	17.41	6.28	198.2	0.108	7.84 clear		—
1238	1.5	112.5	17.89	6.35	201.3	0.107	4.95 clear		—
1248	1.5	127.5	18.15	6.27	206.9	0.107	5.85 clear		—

WL
40.58
41.90
42.11

COMMENTS/OBSERVATIONS:

Grout D
S/up 2.44

AECOM

Monitoring Well Development Log

Page 1 of 1

Date Started (yr/mo/day) 13/Dec/12 Date Completed (yr/mo/day) 13/Dec/12

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-116

____ Upgradient ____ Downgradient

Weather Conditions Clear/sunny 30's - 40's

Air Temperature 30's - 40's °F

Total Well Depth (TWD) = 31.45 ~~30.80~~ BGS 1/100 ft

Depth to Ground Water (DGW) = 5.02 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 25.78 1/100 ft

1 Casing Volume (OCV) = LWC x 1.63 = ____ gallons

5 Casing Volumes = ~~5~~ ____ gallons

Method of Well Development teflon bailer/grundfospump

Total Volume of Water Removed 65.5 gallons

Date/Time Dec 12,13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	WL	Remarks DO	
0815	bailed	10	—	—	—	—	Brown <1100	20% silt			bailed
0908	pumping	13	8.31	4.00	202.1	0.110	Brown <1100	1.0% silt	22.83	3.36	Surge
0923	.5	20.5	13.32	6.16	153.2	0.098	Brown <1100	1.0% silt	25.56	3.67	Surge
0938	.5	28.0	13.69	5.99	156.7	0.093	Brown <1100	1% silt	25.85	2.99	Surge
0953	.5	35.5	13.98	5.96	168.8	0.084	Brown <1100	1.0% silt	26.20	3.90	Surge
1008	.5	43.0	14.09	6.04	158.1	0.081	Brown 6689	0%	26.33	5.59	
1022	.5	50.5	14.40	6.03	154.5	0.079	Brown 5350	0%	28.38	3.86	
1039	.5	58.0	14.79	6.03	158.8	0.076	Clear 26.29	0%	29.53	4.88	
1052	.5	65.5	14.90	5.90	161.3	0.075	Clear 18.12	0%	29.81	4.86	

COMMENTS/OBSERVATIONS: ____

stick up 1.63
grouted up today

AECOM

Monitoring Well Development Log

Page 1 of 1

Date Started (yr/mo/day) 13-Dec-12 Date Completed (yr/mo/day) 13-Dec-13

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-118

____ Upgradient ____ Downgradient

Weather Conditions Clear/sunny

Air Temperature 30's 40's °F

Total Well Depth (TWD) = 44.05 ~~43.90~~ 1/100 ft

Depth to Ground Water (DGW) = 32.00 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 11.90 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = ____ gallons

5 Casing Volumes = ____ gallons

Method of Well Development ~~Teflon~~ bailed / groundfos pump

Total Volume of Water Removed 43 gallons

Date/Time Dec 12,13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	
1445	bailed	9	—	—	—	—	~~Brown~~ <1100	—	40.01	Almost Dry bailed
Dec 13,13	—	—	—	—	—	—	—	—	—	
1045	pumped .5	~~10~~ 10	14.27	7.31	162.7	0.145	Brown <1100	1.0% silt	40.56 6.48	surged
1055	pumped ~~1.0~~ .5	~~19~~ 15	15.65	7.11	173.3	0.136	Brown <1100	.5% silt	42.09 7.15	Dry
1105	pumped ~~1.0~~ .5	~~26~~ 19	15.87	7.25	164.8	0.132	Brown <1100	.5% silt	42.18 6.23	surged dry
1120	~~1.0~~ .5	23	15.80	6.82	171.3	0.114	Brown <1100	0% ~~silt~~	42.20 6.72	surged dry
1135	.5	27	16.05	6.55	176.4	0.103	Brown 350.2	0%	42.16 6.81	Dry
1200	.5	31	15.53	6.52	174.3	0.101	Brown 294.5	0%	42.01 7.47	Dry
1215	.5	35	16.21	6.46	169.6	0.093	Brown 130.6	0%	42.39 7.26	Dry
1230	.5	39	15.86	6.40	171.4	0.095	Slight 116.5	0%	42.25 6.74	Dry
1245	.5	43	16.30	6.21	178.6	0.092	Slight 79.09	0%	42.53 6.37	Dry

COMMENTS/OBSERVATIONS: pumped 1.0 gpm goes dry turn pump off allow recovery repeat this every 10 min. to 20 min

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-27 Date Completed (yr/mo/day) 2014-3-28

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-119

____ Upgradient ____ Downgradient

Weather Conditions clear/sunny

Air Temperature 58 °F

Total Well Depth (TWD) = 90.12 TOC 1/100 ft

Depth to Ground Water (DGW) = 25.02 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 65.10 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 10.61 gallons

5 Casing Volumes = 53.05 gallons

Method of Well Development 36" Teflon bailer

Total Volume of Water Removed 22 gallons

Date/Time 3-27-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	WL
1323	bailed	5	17.88	9.69	165.8	0.231	>1100 Brn		bailed	~~58~~80
1342	"	10	17.12	9.31	167.5	0.233	>1100 Brn		bailed	79.88
1352	"	13	16.13	8.74	189.9	0.237	>1100 Brn		bailed	85.5
3-28-14	—	—	—	—	—	—	—		—	
0737	"	13.25	16.67	7.10	352.1	0.150	583.1 Lt brn		bailed	63.80
0755	"	19.0	15.80	7.50	348.5	0.176	>1100 Brn		bailed Dry	
1552	"	22.0	16.12	8.02	86.7	0.177	>1100 Brn		bailed Dry	

COMMENTS/OBSERVATIONS: Slow Recovery rate

	Time	WL
3-27-14	1354	88.53
	1359	87.98
	1404	87.65
	1409	87.32
3-27-14	1638	84.80
3-28-14	0730	63.80
	1540	77.97

Stickup 1.73
topped off grout today

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13/Dec/12 Date Completed (yr/mo/day) 13/Dec/13

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-120

____ Upgradient ____ Downgradient

Weather Conditions Clear/Sunny 40's

Air Temperature 40's °F

Total Well Depth (TWD) = 54.96 ~~54.92~~ 1/100 ft

Depth to Ground Water (DGW) = 32.18 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 22.54 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.67 gallons

5 Casing Volumes = 18.35 gallons

Method of Well Development ~~Teflon~~ bailer / grundfos pump

Total Volume of Water Removed 40.75 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	WL Remarks DO	
Dec 12/13 1418	bailed	8	—	—	—	—	Brown <1100	20% Silt	49.95 Almost Dry	bailed
1530	pump .40	8.5	15.71	6.40	171.3	0.117	Brown <1100	10% silt	47.63 3.78	Surge
1545	.25	12.25	17.02	6.44	170.0	0.104	Brown <1100	.5% Silt	49.51 6.09	Surge
1600	.25	16.0	17.60	6.18	164.9	0.104	Brown <1100	0% ~~Silt~~	52.20 3.23	Dry
1645	.25	19.75	18.02	6.22	167.8	0.092	Slight 54.33	0%	46.27 6.59	
1700	.40	25.75	17.35	5.82	180.3	0.085	Slight 103.2	0%	52.10 6.30	Dry
12-13-13	—	—	~~—~~	—	—	—	~~Moderate 361.0~~	0%	—	
0745	1.0	30.75	15.53	6.18	177.9	0.084	Moderate 361.0	0%	53.04 7.32	Dry
0815	1.0	35.75	16.17	6.12	175.0	0.084	" 231.2	0%	53.81 6.87	Dry
0845	1.0	40.75	15.90	6.33	169.7	0.088	" ~~251~~ 9	0%	53.04 4.86	Dry

COMMENTS/OBSERVATIONS:

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-27 Date Completed (yr/mo/day) 2014-3-28

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-121

____ Upgradient ____ Downgradient

Weather Conditions clear/sunny

Air Temperature 46 - 58 °F

Total Well Depth (TWD) = 79.60 TOC 1/100 ft

Depth to Ground Water (DGW) = 33.01 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 46.59 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 7.59 gallons

5 Casing Volumes = 37.97 gallons

Method of Well Development ground Pos pump

Total Volume of Water Removed 30.0 gallons

Date/Time 3-27-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1548	1.5	7.5	20.05	9.68	138.1	0.129	456.4 Brn		surged on bottom
1705	.25-.50	12.5	19.16	8.03	127.5	0.132	>1100 Brn		Surged
3-28-14	—	—	—	—	—	—	—	—	— Drop in 64.01
0818	1.0	17.5	18.06	7.79	296.5	0.136	311.4 Brn		Surged
0825	1.0	21.0	19.04	7.85	284.2	0.133	230.6 Brn		Surged Dry
1035	.5	26.0	18.24	7.45	281.5	0.130	148.2 Lt Brn		surged
1048	.5	30.0	18.71	7.64	250.7	0.134	129.7 Lt Brn		surged Dry

COMMENTS/OBSERVATIONS: 1553 dry at 7.5 gals

3-27-14 1605 WL 62.78

1628 WL 56.30

1705 WL 47.25

	Time	WL
3-28-14	0809	32.96
	1023	40.46

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-13 Date Completed (yr/mo/day) 13-Dec-13

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-122

____ Upgradient ____ Downgradient

Weather Conditions Mostly Sunny 40's

Air Temperature 40's °F

Total Well Depth (TWD) = 57.42 ~~57.40~~ BGS 1/100 ft

Depth to Ground Water (DGW) = 20.48 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = gallons

5 Casing Volumes = gallons

Method of Well Development teflon bailer / grundfos pump

Total Volume of Water Removed 208 gallons

Date/Time 12-13-13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	
1430	Bailed	2	—	—	—	—		—		Bailed
1452	pumping 3.0	5	18.50	6.12	108.5	0.101	Brown 4/100	.5%/silt	32.12 3.51	Surged
1502	3.0	38	19.52	6.23	103.0	0.097	Brn 4/100	0%	41.55 3.54	Surged
1512	3.0	68	19.48	5.99	124.5	0.099	Brn 4/100	0%	47.12 4.01	Surged
1522	3.0	98	19.22	5.91	132.1	0.080	Brn 4/100	0%	56.01 3.99	Surged
1545	3.0	128	18.33	5.90	148.2	0.070	Brn 10/6	0%	31.42 4.11	Surged
1555	2.0	148	19.14	5.87	150.5	0.069	Clear 80.32	0%	31.98 3.99	
1605	2.0	168	18.93	5.74	155.2	0.068	Clear 33.49	0%	32.38 3.87	
1615	2.0	188	18.25	5.77	158.6	0.069	Clear 53.64	0%	33.30 3.79	
1625	2.0	208	18.41	5.77	159.4	0.068	Clear 28.71	0%	34.78 4.28	

COMMENTS/OBSERVATIONS: 1525 empty purge water

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 14-4-01 Date Completed (yr/mo/day) 14-04-01

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-123

____ Upgradient ____ Downgradient

Weather Conditions sunny

Air Temperature 81 °F

Total Well Depth (TWD) = 137.03 1/100 ft

Depth to Ground Water (DGW) = 25.39 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 111.64 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 18.19 gallons

5 Casing Volumes = 90.98 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 150 gallons

Date/Time 4-1-2014	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	WL
1409	2.0	10	20.89	6.92	140.3	0.157	33.42 clear		Surged	63.10
1419	2.0	30	19.95	7.51	103.3	0.154	8.77 clear		Surged	70.41
1429	2.0	50	19.43	7.47	108.5	0.155	191.9 slight		Surged	74.50
1439	2.0	70	20.46	7.79	84.6	0.158	110.7 Slight		Surged	72.35
1449	2.0	90	19.11	7.70	100.5	0.158	144.0 Slight		Surged	
1459	2.0	110	19.14	7.76	102.4	0.160	8.96 clear		Surged	
1509	2.0	130	19.23	7.84	99.1	0.160	2.76 clear		—	
1519	2.0	150	1951	7.90	86.9	0.162	3.07 Clear		—	29.52

COMMENTS/OBSERVATIONS:

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13 Dec 16 Date Completed (yr/mo/day) 13-Dec-16

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-124

____ Upgradient ____ Downgradient

Weather Conditions clear/sunny 30's 50's

Air Temperature 30's - 50's °F

Total Well Depth (TWD) = 59.53 ~~59.20~~ BGS 1/100 ft

Depth to Ground Water (DGW) = 25.03 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 33.17 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 5.40 gallons

5 Casing Volumes = 27.03 gallons

Method of Well Development Teflon bailer/grundfos pump

Total Volume of Water Removed 97 gallons

Date/Time Dec 16,13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO WL	
0753	bailed	2	+							bailed
0805	pumped 2.0	7	17.79	6.49	169.1	0.131	Brn <1100	1.0% Silt	51.08 1.96	Surged
0815	pumped 1.0	17	18.45	6.31	182.2	0.107	Brn <1100	.5% Silt	48.65 3.70	Surged
0825	1.0	27	18.63	6.06	185.6	0.093	Brn <1100	0% ~~Silt~~	48.01 3.73	Surged
0835	1.0	37	18.88	5.99	188.9	0.089	Brn 681.8	0% ~~Silt~~	48.53 3.97	Surged
0845	1.0	47	18.91	5.91	191.1	0.086	Brn <1100	0% ~~Silt~~	48.96 4.33	Surged
0855	1.0	57	19.58	5.92	190.0	0.081	Brn 311.5	0%	49.55 4.11	
0905	1.0	67	19.28	5.80	194.1	0.077	clear 222.6	0%	49.91 5.17	
0915	1.0	77	19.39	5.69	195.7	0.073	slight 47.51	0%	50.62 5.22	
0925	1.0	87	19.47	5.63	196.7	0.073	clear 6.53	0%	49.83 5.13	
0935	1.0	97	19.56	5.62	198.4	0.071	clear 5.38	0%	49.25 4.87	

COMMENTS/OBSERVATIONS: started out 2.0 GPM WL dropped turned down to 1.0 GPM

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-16 Date Completed (yr/mo/day) 13-Dec-16

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-126

____ Upgradient ____ Downgradient

Weather Conditions Clear/Sunny

Air Temperature 40's - 50's °F

Total Well Depth (TWD) = 49.38 BGS 1/100 ft

Depth to Ground Water (DGW) = 21.40 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = ____ 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = ____ gallons

5 Casing Volumes = ____ gallons

Method of Well Development Teflon bailer/grundfos pump

Total Volume of Water Removed 175.5 gallons

Date/Time Dec 16, 2013	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO WL	
1245	bailed	2	—	—	—	—	Brown <1100	1% silt		5.82 bailed
1320	pumped 1.5	9	17.53	7.25	136.8	0.170	Brn <1100	1% silt	33.61	4.95 surged
1340	1.50	39	18.23	6.15	159.7	0.123	Brn <1100	0%	44.83	5.44 surged
1400	1.50	69	19.48	5.44	166.7	0.127	Brn <1100	0%	46.10	5.48 surged
1425	1.50	91.5	18.16	5.47	169.8	0.102	Brn 6984	0%	41.34	5.53 surged
1435	1.40	105.5	18.27	5.29	176.3	0.102	Slight 5966	0%	41.43	5.21
1445	1.40	119.5	18.29	5.42	173.8	0.105	Brn 123.2	0%	41.23	5.23
1455	1.40	133.5	18.33	5.38	174.6	0.105	Slight 5183	0%	41.18	5.12
1505	1.40	147.5	18.39	5.41	173.5	0.106	Slight 84.50	0%	41.25	5.00
1515	1.40	161.5	18.08	5.35	183.7	0.095	Clear 12.72	0%	41.41	4.70
1525	1.40	175.5	18.15		187.3	0.094	Clear 9.98	0%	41.29	4.85

COMMENTS/OBSERVATIONS: 1405 empty development water

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-4-01 Date Completed (yr/mo/day) ____

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-127

____ Upgradient ____ Downgradient

Weather Conditions clear / sunny

Air Temperature 82 °F

Total Well Depth (TWD) = 92.43 1/100 ft

Depth to Ground Water (DGW) = 27.69 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 64.74 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 10.55 gallons

5 Casing Volumes = 52.76 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 170 gallons

Date/Time 4-1-2014	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1617	2.0	10	19.55	8.12	197.6	0.183	930.1 Brn		Surged in screen
1627	2.0	30	19.31	7.67	126.3	0.183	505.3 Brn		Surged
1637	2.0	50	18.90	7.60	85.4	0.181	62.32 Slight		Surged 43.5
1647	2.0	70	18.81	7.33	46.2	0.179	17.79 Clear		Surged
1657	2.0	90	19.46	7.41	39.7	0.181	88.78 Slight		Surged
1707	2.0	110	19.04	7.47	34.6	0.179	3.94 Clear		"
1717	2.0	130	18.66	7.17	20.7	0.178	7.00 Clear		" 54.38
1727	2.0	150	18.60	7.10	11.8	0.179	3.26 Clear		"
1737	2.0	170	18.63	7.25	6.8	0.179	3.00 Clear		"

WL

COMMENTS/OBSERVATIONS: ____

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-17 Date Completed (yr/mo/day) 15-Dec-17

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-128

___ Upgradient ___ Downgradient

Weather Conditions Clear/Sunny

Air Temperature 50s F

Total Well Depth (TWD) = 60.20 ~~60.15~~ 1/100 ft

Depth to Ground Water (DGW) = 35.95 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 24.20 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.94 gallons

5 Casing Volumes = 19.73 gallons

Method of Well Development Teflon bailer / grundfos pump

Total Volume of Water Removed 69 gallons

Date/Time Dec 19, 2013	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO WL	
1337	Bailed	3					Brown <1100	2% silt		bailed
1358	pump .60	5	19.42	6.67	174.7	0,131	Brown <1100	1.0% silt	46.26 6.74	surged
1425	.60	11	19.50	6.24	185.6	0.091	Brn <1100	1.0% silt	51.23 6.71	surged
1505	.60	23	20.04	4.77	230.4	0.048	Brn <1100	1% silt	52.88 6.81	Surged
1530	.60	30	19.36	4.74	234.2	0.045	Brn 830.6	0%	51.55 7.25	
1545	.60	39	19,38	4.89	210.6	0.040	Slight 1075	0%	52.91 5.72	
1600	.60	49	18.34	4.83	223.6	0.040	Slight 1077	0%	52.80 5.70	
1615	.60	59	18.67	4.94	208.2	0.038	clear 17.68	0%	53.48 7.12	
1630	.60	69	19.51	5.01	214.7	0.037	clear 12.64	0%	53.81 8.04	

COMMENTS/OBSERVATIONS: 1410 turn off pump to allow well to recharge
1445 turn on pump " " "

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-31 Date Completed (yr/mo/day) 2014-3-31

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-RW-129

____ Upgradient ____ Downgradient

Weather Conditions Clear / Sunny

Air Temperature 61 °F

Total Well Depth (TWD) = 150.03 1/100 ft

Depth to Ground Water (DGW) = 40.90 1/100 ft

Length of Water Column (LWC) = TWD - DGW = ____ 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = ____ gallons

5 Casing Volumes = ____ gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 75 gallons

Date/Time 3-31-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	WL
1110	1.5-.75	7.5	19.57	6.65	105.2	0.391	>1100 Grey		Surged	92.53
1120	.75	15.0	19.95	6.38	82.0	0.385	>1100 Grey		Surged	113.33
1130	.75	22.5	20.44	6.50	58.9	0.426	640.4 Grey		surged	131.24
1140	.75	30.0	20.20	6.58	48.8	0.457	557.1 Grey		Surged	139.80
1150	.75	37.5	20.44	6.51	44.4	0.472	288.5 Grey		Surged	
1200	.75	45.0	20.94	6.60	31.7	0.476	138.5 Grey		Surged	
1210	.75	52.5	21.23	6.75	23.9	0.487	109.3 Grey		Surged	145.5
1220	.75	60.0	21.68	6.90	18.0	0.482	3.41 Clear		—	
1230	.75	67.5	21.50	6.81	21.0	0.478	2.60 clear		—	
1240	.75	75.0	21.55	6.84	17.3	0.470	3.50 clear		—	

COMMENTS/OBSERVATIONS: ____

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-18 Date Completed (yr/mo/day) 13-Dec-18

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-130

___ Upgradient ___ Downgradient

Weather Conditions Clear/Sunny

Air Temperature 40's - 50's °F

Total Well Depth (TWD) = 60.33 TOC 1/100 ft

Depth to Ground Water (DGW) = 53.42 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = ___ 1/100 ft

1 Casing Volume (OCV) = LWC x .163 ___ gallons

5 Casing Volumes = ___ gallons

Method of Well Development Teflon bailer/grundfos pump

Total Volume of Water Removed 6.5 gallons

Date/Time Dec 18, 2013	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	
1100-1115	bailed	5	—	—	—	—	Brn <1100	20%	54.68 —	bailed
1135	bailed	10	18.33	6.00	202.1	0.107	Brn <1100	1.0%	54.68 4.74	bailed
1153	bailed	15	18.58	5.75	204.4	0.089	Brn <1100	1%	54.68 5.67	bailed
1310	bailed	20	17.54	5.71	202.8	0.083	Brn <1100	0%	54.50 5.72	bailed
1337	pump .5	30	19.94	4.97	219.6	0.060	Brn 957.9	0%	57.20 3.88	surged
1400	pump .5	40	20.74	5.53	205.1	0.060	Brn 743.8	0%	57.03 5.40	surged
1415	.5	45	20.27	5.37	207.8	0.052	Brn 232.9	0%	57.05 4.08	
1425	.5	50	20.58	5.10	213.8	0.049	LtBrn 156.9	0%	57.08 3.99	
1435	.5	55	20.17	5.20	208.7	0.051	Clear 23.02	0%	57.64 3.64	
1445	.5	60	20.15	5.26	208.4	0.050	Clear 20.09	0%	57.93 4.01	
1455	.5	65	20.35	5.16	211.3	0.049	clear 10.71	0%	58.01 4.40	

COMMENTS/OBSERVATIONS: when pumping would surge well pump 10 gals out turn off pump allow recovery then repeat

AECOM

grab VOC sample
Residual Pump RW-131

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-31 Date Completed (yr/mo/day) 2014-3-31

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-131

____ Upgradient ____ Downgradient

Weather Conditions Clear/sunny

Air Temperature ____ °F

Total Well Depth (TWD) = 139.80 BGS 1/100 ft

Depth to Ground Water (DGW) = 49.55 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 90.25 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 14.71 gallons

5 Casing Volumes = 73.55 gallons

Method of Well Development groundfos pump

Total Volume of Water Removed ____ gallons

Date/Time 3-31-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
0742	1.0	5.0	17.94	6.46	-66.9	0.690	458.1 Brn		Surged
0752	.25	12.5	18.83	6.78	-92.7	0.686	140.3 Slight		Surged
0802	.50	15.0	20.50	6.81	-86.2	0.664	155.6 Slight		Surged
0812	.75	19.0	21.07	6.81	-82.3	0.687	49.66 Slight		Surged Dry
0850	.75	1.0	18.03	6.50	-41.9	0.654	195.8 Sm		Surged Dry

WL
82.63
104.96
132.50
140.31

COMMENTS/OBSERVATIONS: 0815 turn pump off

3-31-14 WL
1704 135.30

4-1-14 WL
0710 133.90

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-19 Date Completed (yr/mo/day) 13-Dec-19

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-132

____ Upgradient ____ Downgradient

Weather Conditions Clear/Sunny

Air Temperature 40-50's °F

Total Well Depth (TWD) = 65.23 ~~65.20~~ 1/100 ft

Depth to Ground Water (DGW) = 44.30 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 20.90 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.40 gallons

5 Casing Volumes = 17.03 gallons

Method of Well Development Tetherless/grundfos pump

Total Volume of Water Removed 92.5 gallons

Date/Time Dec 19, 2013	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO WL	
1130	bailed	5	—	—	—	—	Brn <1100	2%		bailed
1255	pumping	7.5	19.10	5.55	201.7	0.084	Brn <1100	1.0%	49.58 3.39	surged
1315	1.0	~~27.5~~ 17.5	19.01	5.43	202.6	0.077	Brn <1100	1.0%	57.90 4.06	surged
1345	1.0	47.5	18.92	5.25	199.5	0.071	Brn <1100	1.0%	57.58 3.65	surged
1400	1.0	62.5	19.09	5.24	199.6	0.067	Brn 68.6	0%	57.95 2.95	
1410	1.0	72.5	18.80	5.03	205.4	0.063	Slight 64.30	0%	57.17 3.07	
1420	1.0	82.5	18.87	5.19	200.2	0.065	Clear 6.96	0%	56.98 3.74	
1430	1.0	92.5	19.10	5.21	199.9	0.064	Clear 4.75	0%	57.17 3.18	
~~1440~~										

COMMENTS/OBSERVATIONS: 1325-1335 stopped to allow recharge

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-28 Date Completed (yr/mo/day) 2014-4-1

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-133

____ Upgradient ____ Downgradient

Weather Conditions overcast

Air Temperature 58 °F

Total Well Depth (TWD) = 116.60 BGS 1/100 ft

Depth to Ground Water (DGW) = 39.10 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 77.50 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 12.63 gallons

5 Casing Volumes = 63.16 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 46.5 gallons

Date/Time 3-28-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1318	1.5	7.5	21.37	6.34	0.7	0.246	8361 Brn		Surged
1328	1.0	17.5	22.81	6.32	-12.6	0.245	171.2 Brn		—
1355	.5	21.5	20.10	5.99	48.3	0.220	331.8 Brn		Dry
3-31-14	—	—	—	—	—	—	—		—
0955	1.0	26.5	17.78	6.37	133.3	0.208	332.7 Brn		Surged
1005	1.0	36.5	14.79	6.47	123.0	0.226	427.5 Brn		Surged Dry
4-1-14	—		—	—	—	—	—		—
0758	.5	41.5	16.83	6.59	190.4	0.231	170.7 Brn		Surged
0808	.5	46.5	18.26	6.68	165.2	0.234	212.2 Brn		surged DRY

WL 110.21

COMMENTS/OBSERVATIONS: 1330 turn Pump of to Allow recharge
1355 turn pump of to allow recharge

Recovery
Time WL
1435 115.79
1440 115.56
1445 115.47

rate

3-31-14
0935 WL 40.38
1620 98.52

4-1-14 WL
0714 60.98

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec-23 Date Completed (yr/mo/day) 13-Dec-23

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-134

____ Upgradient ____ Downgradient

Weather Conditions rain

Air Temperature 50's °F

Total Well Depth (TWD) = ~~75.07~~ ~~74.63~~ TOC 1/100 ft

Depth to Ground Water (DGW) = 53.87 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 20.76 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 3.38 gallons

5 Casing Volumes = 16.91 gallons

Method of Well Development

Total Volume of Water Removed 65 gallons

Date/Time Dec	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	WL Remarks DO	
0830	bailed	2					Brown <1100	2%		bailed
0850	pump 1.0	7	19.07	6.63	183.1	0.188	Brown <1100	2%	65.63 3.59	surged
0915	pump 1.0	12	19.53	5.90	192.8	0.102	Brown <1100	1%	72.13 3.40	surged
0930	pump 1.0	19	19.47	5.77	195.4	0.101	Brown <1100	0%	73.30 5.60	surged
0950	pump 1.0	30	19.59	5.51	198.1	0.100	Brown 1054	0%	65.13 4.05	surged
1000	1.0	37	19.85	5.56	197.2	0.071	Brn 423.9	0%	67.18 4.28	
1005	1.0	42	20.16	5.66	194.3	0.073	Slight 37.32	0%	68.47 3.57	
1020	1.0	50	19.78	5.52	197.8	0.066	Slight 96.52	0%	69.85 3.70	
1030	.50	55	19.84	5.31	202.1	0.068	Clear 15.38	0%	67.98 3.78	
1040	.50	60	20.01	5.36	201.4	0.063	Clear 9.35	0%	67.32 3.62	
1050	.50	65	20.00	5.40	199.8	0.061	Clear 6.27	0%	67.20 2.89	

COMMENTS/OBSERVATIONS: 0900 well goes dry turn off allow to recover

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 13-Dec 16 Date Completed (yr/mo/day) 13-Dec-17

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW- 136

____ Upgradient ____ Downgradient

Weather Conditions Clear / Sunny

Air Temperature 12-16-13 50's 12-17-13 30-40's °F

Total Well Depth (TWD) = 60.18 ~~54.33~~ 1/100 ft

Depth to Ground Water (DGW) = 25.73 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 33.60 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 5.47 gallons

5 Casing Volumes = 27.38 gallons

Method of Well Development Teflon bailer / grundfos pump

Total Volume of Water Removed 745 gallons

Date/Time Dec 16-13	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1553	bailed	4.0	—	—	—	—	Brn	1.0%	bailed
1610	pump 1.5	5.5	16.43	5.52	174.0	0.089	Brn <1100	1.0%	40.71 3.53 Surge
1620	.60	11.5	17.57	5.91	164.5	0.106	Brn <1100	1.0%	51.31 3.95 Surge
1630	.60	17.5	17.56	5.47	180.9	0.083	Brn <1100	0 %	53.84 4.70 Surge
1640	.60	23.5	17.79	5.47	179.9	0.078	Brn 449.0	0 %	53.61 5.01 Surge
1700	.60	35.5	17.50	5.34	185.6	0.075	Brn 394.5	0 %	51.95 5.11
12-17-13 0740	.60	38.5	17.57	5.75	194.3	0.089	Brn 410.9	0%	50.20 4.70 Surge
0820	.60	~~50~~ 45	16.14	5.47	197.0	0.075	Clear 11.81	0%	51.86 5.50
0840	.60	~~RAD 56~~ 62.5	17.07	5.58	193.1	0.073	Clear 5.37	0%	51.80 5.49
0900	.60	~~RAD 67~~ 74.5	17.12	5.60	192.3	0.075	Clear 4.24	0%	51.13 5.62

COMMENTS/OBSERVATIONS: 1700 Stopped developing today will continue 12-17-13
0745 Stopped for safety meeting
0800 Restarted

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-26 Date Completed (yr/mo/day) 2014-3-26

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW~~ RW-137

____ Upgradient ____ Downgradient

Weather Conditions clear/sunny

Air Temperature 48 °F

Total Well Depth (TWD) = 107.24 1/100 ft

Depth to Ground Water (DGW) = 22.34 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 84.90 1/100 ft

1 Casing Volume (OCV) = LWC x 1/6.3 = 13.83 gallons

5 Casing Volumes = 69.19 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 127.5 gallons

Date/Time 3-26-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO	WL
1510	1.5	7.5	16.17	5.65	88.4	0.140	363.8 Brn		Surged in screen	
1520	1.5	22.5	17.24	6.05	104.8	0.131	236.3 Brn		surged in screen	
1530	1.5	37.5	17.31	6.04	125.3	0.125	13.81 clear		—	85.6
1540	1.5	52.5	17.51	5.94	135.1	0.134	60.55 slight		surged in screen	
1550	1.5	67.5	17.49	5.90	126.3	0.138	37.52 slight		—	83.4
1600	1.5	82.5	17.82	5.88	143.3	0.134	27.10 slight		—	
1610	1.5	97.5	17.55	5.96	141.7	0.134	14.59 clear		—	
1620	1.5	112.5	17.40	5.93	155.3	0.134	11.93 clear		—	
1630	1.5	127.5	17.68	5.92	164.8	0.134	9.74 clear		—	

COMMENTS/OBSERVATIONS: low yield pumping w/ grundfos at 1.5 gpm

AECOM

Monitoring Well Development Log

Page 1 of ___

Date Started (yr/mo/day) 13-Dec-17 Date Completed (yr/mo/day) 13-Dec-17

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # MW-138

___ Upgradient ___ Downgradient

Weather Conditions Clear/Sunny

Air Temperature 30-50's °F

Total Well Depth (TWD) = 59.47 ~~59.28~~ 1/100 ft

Depth to Ground Water (DGW) = 13.01 1/100 ft

Length of Water Column (LWC) = TWD - DGW = ___ 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = ___ gallons

5 Casing Volumes = ___ gallons

Method of Well Development teflon bailer/grundfos pump

Total Volume of Water Removed 206 gallons

Date/Time Dec 17, 2013	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO WL	
0915	bailed	2					Brown <1100	20%		bailed
0935	purged 2.0	10	15.38	6.20	184.5	0.101	Brn <1100	1.0%	20.31 5.62	Surged
1000	2.0 ~~2.5~~	60 ~~60.0~~	16.25	5.79	191.3	0.068	Brn <1100	1.0%	35.01 5.53	Surged
1020	2.0	100	16.31	5.49	201.6	0.056	Slight 3440	0%	37.23 6.04	
1045	2.0	116	16.68	5.82	192.9	0.062	Brn 828.5	0%	24.53 7.91	Surged
1100	2.0	146	16.96	5.50	200.4	0.059	Clear 2474	0%	28.13 5.37	
1115	2.0	176	16.88	5.58	196.9	0.057	Clear 960	0%	30.21 5.65	
1130	2.0	206	17.12	5.42	202.7	0.055	Clear 939	0%	32.18 5.47	

COMMENTS/OBSERVATIONS: 1020 stop to empty development water
1038 restart pumping

AECOM

Monitoring Well Development Log

Page ____ of ____

Date Started (yr/mo/day) 2014-3-26 Date Completed (yr/mo/day) 2014-3-26

Field Personnel Randy Morgan

Site Name Auriga Site Spartanburg SC

Job # 60280417

Well ID # ~~MW-~~ RW-~~13~~ 139

____ Upgradient ____ Downgradient

Weather Conditions Clear / Sunny

Air Temperature 47 °F

Total Well Depth (TWD) = 97.75 1/100 ft

Depth to Ground Water (DGW) = 13.68 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 84.07 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 13.70 gallons

5 Casing Volumes = 68.51 gallons

Method of Well Development grundfos pump

Total Volume of Water Removed 113 gallons

Date/Time 3-26-14	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	ORP	Specific Conductivity (mS/cm)	Turbidity/Color	Sand Content (%)	Remarks DO
1320	1.5	7.5	16.85	5.79	164.3	0.117	<1100 Brn		Surged In screen
1330	1.5	23.0	16.43	5.66	153.7	0.112	634.8 Brn		Surged
1340	1.5	38.0	16.20	5.53	139.2	0.113	5833 slight		Surged
1350	1.5	53.0	15.91	5.64	159.0	0.112	6.50 clear		
1400	1.5	68.0	16.63	5.61	175.8	0.111	108.7 slight		(Surged - Top of Screen)
1410	1.5	83.0	16.56	5.62	172.0	0.110	3.54 clear		—
1420	1.5	98.0	16.51	5.60	175.2	0.110	1.44 clear		—
1430	1.5	113.0	16.65	5.70	181.6	0.111	2.27 clear		—

WL 21:33

COMMENTS/OBSERVATIONS: (High yield)

AECOM

Test Boring Report

BORING NO. MW-112
PAGE 1 OF 2

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-4-13
DATE FINISH: 12-5-13
DRILLER: Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4 1/4	1 1/2	
					HAMMER WT		140	
					HAMMER FALL		30	

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, red, mostly silt, some fine sand
5.0		2 2 2		5 – 6.5	SANDY SILT (ML) Soft, moist, reddish yellow, mostly silt, some fine sand
10.0		3 2 1		10 – 11.5	SANDY SILT (ML) Soft, moist, yellowish red, mostly silt, some fine sand.
15.0		1 1 2		15 – 16.5	SANDY SILT (ML) Soft, moist, olive brown, mostly silt, some fine sand
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-112

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		0 1 2		20 21.5	SANDY SILT (ML) Soft, wet, grayish brown, mostly silt, some fine sand - Saprolite
25.0		2 4 6		25 26.5	Same as above except stiff
30.0		2 3 7		30 31.5	SANDY SILT (ML) Stiff, wet, gray, mostly silt, some fine sand - Saprolite
35.0		3 4 5		35 36.5	Same as above with occasional more coarse sand
40.0				40 41.5	Same as above
45.0					TD at 41.5 Sample 40.5 Auger Refusal Not

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-113
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 3/19/14
DATE FINISH: 3/25/14
DRILLER: Dan Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
3-25	11:06	28.3			SIZE ID			
3-25	17.10	26.8			HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					10-in mud rotary drilling to set 6-in Steel Surface casing (0-55)
					See log for MW-112 for soil descriptions
					0-40 ft - Not Refusal
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-113

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
25.0					See log for MW-112 for soil descriptions 0-40
30.0					
35.0					
40.0					43.5 Partially weathered Rock
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-113

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					Partially weathered Rock
					49
					Competent Rock Socket
50.0					53-55 Harder.
55.0					Gray Biotite Feldspar Gneiss Dry
					-58
					White Gray Feldspar, Quartz, muscovite, Gneiss Dry -
60.0					61
					Water Gray Black Biotite Garnet Schist
					Water
65.0					68
					Wh. & Feldspar Quartz Gneiss
					Total Depth 70'
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

Plan 75'

AECOM

Test Boring Report

BORING NO. MW-114
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-3-13
DATE FINISH: 12-3-13
DRILLER: Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE: HSA	SS	
					SIZE ID: 4 1/4	1 1/2	
					HAMMER WT: 140		
					HAMMER FALL: 30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SILTY CLAY (CL-ML) moist, dark red, mostly silt & clay, trace mica, trace fine sand
5.0		4 5 7		5 – 6.5	SILTY with Sand (ML) stiff moist, yellowish red, mostly silt, little fine sand trace mica
10.0		5 7 10		10 – 11.5	SILTY SAND (SM) m. dense, moist, olive brown, mostly fine sand, little silt Black possible MNO staining
15.0		9 11 13		15 – 16.5	Same as above
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. MW-114

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		22 38 36		20 – 21.5	Same as above
25.0		9 10 11		25 – 26.5	SANDY SILT (ML) V. Stiff, moist, grayish brown, mostly silt, some fine sand
30.0		5 6 10		30 – 31.5	SANDY SILT (ML) V. Stiff, grayish brown moist-wet, mostly silt some fine sand
35.0		4 4 11		35 – 36.5	SILTY SAND (SM) M. Dense, wet, white, mostly sand, little silt trace gravel size fragments
40.0		4 6 9		40 – 41.5	SANDY SILT (ML) Stiff, wet, olive brown, mostly silt, some fine sand
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-114

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		5 12 22		45 - 46.5	Same as above with rock fragments
50.0		4 6 12		50 - 51.5	SILT with sand (ML) V. stiff, wet, mostly silt, little fine sand Somewhat harder drilling based on Auger chatter. - Probable weathered rock lens.
55.0		4 13 50/4.5		55 - 56.5	SILTY SAND (SM) V. Dense wet, mostly fine sand some silt Auger Refusal at 57'
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-115
PAGE 1 OF 5

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION: Brachtyer Rd
ELEVATION: 3/14/14 casing #2
DATE START: 2/27/14 (casing) #1
DATE FINISH: 3/18/14
DRILLER: Dan Peggman
PREPARED BY: Hartford / M. Law

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	~~steel~~	steel	
					SIZE ID	6"		
					HAMMER WT	–		
					HAMMER FALL	–		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					- Surface casing (6") drilled with Mud Rotary using 9 5/8" roller bit.
					- Casing set from 0' – 59.5' bgs
					- See MW-114 log for lithology
5.0					3-13-14 – Removed 6-in Casing installed on 2/27/14 to 59.5' Ream hole to 75 ft
					3-14-14 - Install 6-in steel surface Casing to 75 ft
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-11S

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					- See MW-114 for lith -
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-115

PAGE 3 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
					- Harder drilling 49.5' to 51.5' bgs - (PWR lense ?)
50.0					- Softens ups @ 52' Bgs -
					- Harder drilling @ 55.5' Bgs -
55.0					
					- Top of Rock called @ 57' Bgs - Cuttings are fresh to slightly weathered fragments of Muscovite Mica, white Feldspars, quartz, with few biotite Mica. GNEISS
60.0					- Rock socket drilled to 59.5' Bgs - (Surface casing from 0 - 57.5' Bgs) - continue with Air Hammer -
					- Soft drilling (Saprolite zone ?)
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-11S

PAGE 4 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					- Softer drilling - Saprolite (AS ABOVE)
					- Harder drilling @ 73' Bgs, Driller called top of Rock.
75.0					- Installed (6") Temporary casing from 0' to 75' Bgs - (PW Rods)
					- Fracture @ 78.8' Bgs (Bypass in MW-11A) -
80.0					Dry, Fresh cuttings, Feldspar, Quartz, Biotite mica Gniess
			RW-11S-10		- Fracture @ 84.5' Bgs -
85.0					- Fracture @ 85.5' Bgs -
					- Fracture @ 88' Bgs -
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RL-115

PAGE 5 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0			Attempt RL-115-100.5	Dry No sample	96 Fracture 96-96.5 Fracture 97.5 Fracture 98.8 Fracture 99.3 Biot. & Garnet Schist/Gneiss NO Noticable increase IN water from these fractures
100.0					Dry Fracture Packer at 90 - Pumped Dry - Recovery 0.8 ft/5 min - Called Dry Zone
105.0			Attempt RL-115-120	Dry No sample	Packer at 105 Pumped Dry - Recovery 0.08 ft/5 min - Called Dry Zone Biot. & Garnet Gneiss
110.0					
115.0					115.2 Small Fracture
120.0					Total Depth Drilled 120 ft

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

Target 40'

AECOM

Test Boring Report

BORING NO. MW-116
PAGE 1 OF 2

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 55U

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-6-13
DATE FINISH: 12-6-13
DRILLER: Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼	1.5 IN	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, brown, mostly silt, some fine sand
5.0		2		5	SILTY CLAY (CL-ML)
		1		6.5	very soft, wet, mostly silt and clay, trace fine
		1			sand
10.0		1		10	SILTY SAND (SM)
		1		11.5	very loose, wet, mostly fine sand, some silt
		1			with seam of coarse quartz sand
15.0		2		15	SANDY SILT (ML)
		2		16.5	medium stiff, wet, mostly silt, some fine
		3			sand, with 1/4 in seam of coarse sand.
20.0					-Saprolite

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-116

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		2 2 3		20 – 21.5	Same as above Silt with sand seam
25.0		2 2 3		25 – 26.5	Sandy SILT (ML) medium stiff, wet, olive brown, mostly silt, some fine sand.
30.0		11 11 50/3"		30 – 31.5	Same as above Garnet Gneiss fragment Auger Refusal at 31.5'
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-117
PAGE 1 OF 4

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION: Bruckner Rd
ELEVATION:
DATE START: 3/10/14 (Surface casing)
DATE FINISH: 3/24/14
DRILLER: Dan Bergman
PREPARED BY: Hartford / M. Law

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
3-24	10:30	87.9			TYPE: steel		
3-24	1330	86.2			SIZE ID: 6"		
					HAMMER WT: —		
					HAMMER FALL: —		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					- 6" steel surface casing drilled with mud Rotary methods w/ 9 5/8" roller bit
					- Casing set from 0'-34' BGS
5.0					- See MW-116 log for lithology (0-31.5 ft)
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-117

PAGE 2 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					– See MW-116 for lithology to 31.5' Bgs
25.0					
30.0					– Harder drilling @ 29.0 Bgs – (Miller calls Competent Rock)
					– Softens up @ 32.5' Bgs – (0.5' weathered zone) – Back to harder drilling @ 33' Bgs –
35.0					Gray Black Biotite Gneiss 35-36' White Feldspar Garnet Gneiss Black Biotite Gneiss
					38' Wht Feldspar Gneiss
40.0					Dry
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-117

PAGE 3 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
50.0					50' Black Biotite Garnet Gneiss - Dry
55.0					
60.0					
65.0					Dry
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-117

PAGE 4 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					3/21/14 Stop @ 72.7 Dry -
75.0					75 Wh. to Feldspar Gneiss Dry.
80.0					81- Black Biotite Gneiss Dry
85.0					
90.0					Total Depth 88 Ft 3/24/14
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

Planned 55

AECOM Test Boring Report

BORING NO. MW-118
PAGE 1 OF 2

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 55 ATV

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-9-13
DATE FINISH: 12-9-13
DRILLER: Bergmann
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼	1.5	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, reddish brown, mostly silt
5.0		3 3 5		5 6.5	SILTY SAND (SM) LOOSE, moist, yellowish brown, mostly fine sand, some silt.
10.0		3 3 4		10 11.5	SANDY SILT (ML) medium stiff, moist, light olive brown, mostly silt, some fine sand
15.0		2 3 4		15 16.5	Same as above
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-118

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		15 27 30		20 – 21.5	SANDY SILT (ML) Hard, moist, brownish gray, mostly silt, some fine sand, weathered garnet, saprolite
25.0		4 4 6		25 – 26.5	SANDY SILT (ML) Stiff, moist, light yellowish brown, mostly silt, some fine sand
30.0		2 5 7		30 – 31.5	SANDY SILT (ML) Stiff, wet, olive brown, mostly silt, some fine sand 31 - 31.2 – mostly sand
35.0		13 27 33		35 – 36.5	SANDY SILT (ML) Hard, wet, olive brown, mostly silt, some fine sand, with weathered garnet schist/gneiss fragments 36 - 36.5
40.0		13 12 18		40 – 41.5	same as above with quartz fragment and garnet gneiss fragment
45.0					Refusal at 44.3

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-119
PAGE 1 OF 5

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION: Brockenen Rd
ELEVATION:
DATE START: 3/6/14 (surface casing)
DATE FINISH: 3/25/14
DRILLER: Dan Bergman
PREPARED BY: Hartford / Milan

GROUND WATER		DEPTH TO:			-	CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	steel		
2-25	14:40	101.2			SIZE ID	6"		
2-25	16:50	70.6			HAMMER WT	-		
2-26	7:55	32.5			HAMMER FALL	-		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					- 6" surface casing drilled with mud Rotary 9 5/8 roller bit
					- Casing set from 0' - 64' Bgs
					- See MW-118 log for lithology
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-119

PAGE 2 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					- see MW-118 log for lith -
25.0					
30.0					
35.0					
40.0					- Harder drilling @ 39' BGS - (PWR lense?) - Soft @ 40' BGS - - Hard again @ 41' BGS - - Soft @ 44' BGS -
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-119

PAGE 3 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
					– Harder again @ 47' Bgs –
					– Softens up @ 48' Bgs –
50.0					– Harder drilling @ 50.7' Bgs –
					– Softens up again @ 52' Bgs –
55.0					
					– Harder drilling @ 58' Bgs – (Seems more competent slower penetration)
60.0					
					Gray Biotite schist
					6x5 – Surface casing 0' – 64' Bgs
65.0					Brown partially weathered Biotite schist
					66.
					Gray Biotite schist
					68
					Gray Brown partially weathered Biotite schist
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-119

PAGE 4 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					72
					Grey Biotite Garnet Schist
75.0					77
					White Feldspar Quartz Gneiss
80.0					83
85.0					~ Possible small fractures or soft zones ~
					Grey Biotite Garnet Schist
					8" water 10 min bore hole - trickle of water
90.0					92
					White Feldspar Biotite Quartz Gneiss
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-119

PAGE 5 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					to Grey White Feldspar Biotite Quartz Gneiss
100.0					
105.0					
110.0					110 small fractures or soft zones Grey Biotite Garnet schist stop at 113 for lunch check No increase in water over blowing at 88'
115.0					
120.0					Total Depth 118

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-120
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-5-13
DATE FINISH: 12-5-13
DRILLER: Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼	1.5	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, yellowish red, mostly silt, some fine sand -Fill-
5.0		2 2 2		5 6.5	Same as above - soft
10.0		4 6 8		10 11.5	Same as above -Fill stiff
15.0		2 3 5		15 16.5	SANDY SILT (ML) moist, medium stiff, olive yellow, mostly silt, some fine sand
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-120

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		3 5 5		20 21.5	Same as above
25.0		4 4 5		25 26.5	SILTY SAND (SM) Loose, moist, white & olive brown, mostly fine to coarse sand, some silt
30.0		3 3 5		30 31.5	Same as above
35.0		3 2 5		35 36.5	SILTY SAND (SM) Loose, moist, olive yellow) mostly fine sand, some silt
40.0		4 4 4		46 41.5	SILTY SAND (SM) Loose, wet, dark grayish brown) mostly fine sand, some silt
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-120

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		10 16 29		45 46.5	Well Graded Sand WITH SILT (SW-SM) Dense, wet, pale yellow, mostly fine to Coarse sand, few silt, trace gravel size qtz & Feldspar
50.0		4 7 13		50 51.5	SILTY SAND (SM) medium dense, wet, grayish brown, mostly fine sand, some silt
55.0		12 22 27		55 56.5	Same as above - Saprolite 2 IN ZONE of Sand
					Total Depth 56.5 ft Not Refusal
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-121
PAGE 1 OF 4

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION: Bracknen Rd
ELEVATION:
DATE START: 3/4/14 (Surface casing)
DATE FINISH: 3/24/14
DRILLER: Dan Bergman
PREPARED BY: ~~Hartford~~ M. Law / Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	Steel		
					SIZE ID	6"		
					HAMMER WT	-		
					HAMMER FALL	-		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					- 6"- Surface casing drilled w/ Mud Rotary using 9 5/8" roller bit - Casing set from 0'-69.5 Bgs - see MW-120 log for lithology -
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-121

PAGE 2 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					— See MW-120 log for 0 - 456 [redacted] with
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-121

PAGE 3 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					- See MW-120 log for lithology from 0 - 56' BGS
50.0					- Harder drilling @ 54' BGS - (PWR lense?)
55.0					- Softens up @ 55.5' BGS -
60.0					- Harder again @ ~ 63' BGS - (Another lense?)
65.0					- Soft @ 65' BGS -
70.0					- Harder @ 66' BGS - (Rock called by driller)
					- Surface casing 0 - 69.5' BGS with 3.5' socket -

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-121

PAGE 4 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					Brown and Black weathered Biotite Gneiss - moist
75.0					Gray Black Biotite Gneiss -
					Water Fracture -
					Gray Black Biotite Gneiss
80.0					
					Total Depth 83 ft.
85.0					
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-122
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-11-13
DATE FINISH: 12-11-13
DRILLER: Bergner
PREPARED BY: Hartford

Plan 60'

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼	1.5	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, reddish brown, mostly silt some fine sand
5.0		3 3 5		5 - 6.5	Sandy silt (ml) yellowish brown medium stiff, moist, mostly silt, some fine sand
10.0		3 5 7		10 - 11.5	same as above with ¼ in coarse sand zone - Saprolite
15.0		3 5 7		15 - 16.5	Same as above
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-122

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		3 4 6		20 21.5	SANDY SILT (ML) Stiff, moist, mostly silt, some fine sand yellowish brown
25.0		3 4 6		25 26.5	SANDY SILT (ML) Lt olive brn. Stiff, wet, mostly silt, some fine sand coarse sand 26-26.1
30.0		3 3 9		30 31.5	SANDY SILT (ML) Lt olive BRN Stiff, wet, mostly silt, some fine sand, trace medium sand
35.0		16 16 9		35 36.5	SILTY SAND (SM) Medium dense, wet, grayish brown, mostly fine to coarse sand, little silt
40.0		4 5 4		40 41.5	SANDY SILT (ML) Stiff, wet, light olive brown, mostly silt, some fine sand, 1/4 in coarse sand at 41
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-122
PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		43 50/3.5"		45 - 46.5	WELL GRADED SAND WITH SILT (SW-SM) Very dense, wet, White, mostly fine to coarse sand, few silt, trace fine gravel, almost all weathered feldspar and quartz
50.0	13.2	23 38 50/4"		50 - 51.5	Well Graded Sand with Gravel (SW- very dense, wet, White to light gray, mostly fine to coarse sand, little gravel
55.0	0	15 50/5"		55 - 56	SILTY SAND (SM) very dense, wet, dark olive brown, mostly fine sand, some silt
60.0					Auger Refusal at 58 ft.
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123
PAGE 1 OF 6

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 1-23-14
DATE FINISH: 3-28-14
DRILLER: T. Burnett
PREPARED BY: Hartford

1-24-14 Start for ca. Coring.

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	PVC		
					SIZE ID	6 IN		
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 ¼-in Mud Rotary Drilling to set 6-in PVC Surface Casing (0 - 60')
					See Log for MW-122 for (0-58)
5.0					MW-122 Auger Refusal at 58 ft
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123

PAGE 2 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See Log for MW-122 for (0-58)
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123

PAGE 3 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					See Log for MW-122 for (0-58) Auger Refusal at 58 ft
50.0					
55.0					
					58
					Competent Rock Socket 58-60
60.0					Black Biotite Schist - Dry
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					Black Biotite Schist Dry.
75.0					
80.0					
85.0					Black Biotite Schist - Dry
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123

PAGE 5 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					Black Biotite Schist Drg
100.0					
105.0					
110.0					Black Biotite Schist Drg
115.0					
120.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-123
PAGE 6 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0					
					Black Biotite Schist
125.0					
130.0					
					133
					Water 2 GPM
					134
135.0					Black Biotite Schist
					Total Depth 137.5 ft.
140.0					
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

Plan 60

AECOM Test Boring Report

BORING NO. MW-124
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-11-13
DATE FINISH: 12-11-13
DRILLER: D Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4 1/4	1.5 in	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) Moist, yellowish brown, mostly silt, some fine sand
5.0		4 5 7		5 6.5	SANDY SILT (ML) Stiff, moist, yellowish red & gray, mostly silt some fine sand, Wet in sand at 6'
10.0		4 5 8		10 11.5	SILTY SAND (SM) medium dense, moist, brown, mostly fine sand, some silt
15.0		4 5 7		15 16.5	Same as above except light yellowish brown.
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-124

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4 4 7		20 21.5	SANDY SILT (ML) Stiff, moist, mostly silt, some fine sand ^Lt olive brown
25.0		3 3 8		25 26.5	SANDY SILT (ML) Stiff, moist, light olive brown, mostly silt, some fine sand
30.0		3 5 8		30 31.5	Same as above wet
35.0		13 5 8		35 36.5	Sandy SILT (ML) 35-35.5 - olive brown Well Graded Sand (SW) 35.5-36 - wh. to Sandy SILT (ML) 36-36.5 - olive brown
40.0		13 14 41		40 41.5	WELL GRADED SAND (SW) Very dense, wet, mostly fine to coarse sand, trace silt, trace gravel
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-24

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		8 11 17		45 46.5	SILTY SAND (SM) Medium dense, wet, olive brown, mostly fine sand, some silt.
50.0		8 13 20		50 51.5	Same as above Den=20
55.0		5 10 11		55 56.5	SILTY SAND (SM) medium dense, Wet, grayish brown, mostly fine sand, some silt
60.0		5 12 11		60 61.5	Same as above. with Well Graded Sand seams
65.0					Drilled 60.5 - Not Auger Refusal Sampled to 61.5
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-125
PAGE 1 OF 7

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 750

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 1/22/14 Surface Casing
DATE FINISH: 2/21/14
DRILLER: T. Burnett
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	PVC		
					SIZE ID	6-in		
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 1/4 in mud rotary Drilling to set 6-in PVC surface casing (0 - 76)
					See Log for MW-124 for (0-60) soil descriptions.
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-125

PAGE 2 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See MW-124 Log for (0-60)
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-125

PAGE 3 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
50.0					See MW-124 Log Pg (0-60)
55.0					
60.0					
65.0					68 Partially Weathered Rock
70.0					Sapprock Gr.

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-125

PAGE 4 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					Weathered Rock
					73
					Competent Rock Socket 73-76
					Biotite Schist
75.0					76
					2-21-14
					Brown Partially Weathered Rock
					Below Casing - moist
80.0					
85.0					
					87
					Black Gray Biotite Schist.
					- No water produced during drilling
					- Cuttings dry to moist.
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-125

PAGE 5 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					Black/Gray Biotite Schist no water produced during drilling Cuttings dry to moist
100.0					
105.0					
110.0					
115.0					Gray Biotite Schist no water produced during drilling
120.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-125
PAGE 6 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0					Gray Biot schist No water produced during drilling or during time required to add drill rods
125.0					
130.0					
135.0					
140.0					
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-125

PAGE 7 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
~~75.0~~	145				Stop at 146' target depth and turn off air for 30 min to check for recharge - After 30 min hole produces 4 to 6 gpm mud/water of PH 11.5 . Some may be just below casing - at 76
150 ~~75.0~~					
155 ~~80.0~~					Biotite schist No water produced during drilling
160 ~~85.0~~					
165 ~~90.0~~					Total Depth 166 ft No Fractures encountered 76-165 PWR 76-87 - soft . May be some at 146m
170 ~~95.0~~					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-126
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-12-13
DATE FINISH: 12-12-13
DRILLER: D. Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE: HSA	SS	
					SIZE ID: 4 1/4	1.5" ID	
					HAMMER WT: 140		
					HAMMER FALL: 30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		1 2 4		5' - 6.5'	SANDY SILT (ML) Stiff, moist, reddish brown, mostly silt, some fine to coarse sand, trace gravel - Possible Fill
10.0		5 5 6		10' - 11.5'	WELL GRADED SAND (SW) moist, Lt Grey, mostly f-c sand SILTY SAND (SM) medium dense, moist, mostly fine sand, some silt
15.0		7 13 9		15' - 16.5'	SILTY SAND (SM) 1/2 in gravel seam as 16'
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-126

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		6 7 13		20 - 21.5	Poorly GRADED SAND WITH Silt (SP-SM) Medium dense, moist, mostly fine to medium Sand, little Silt - Saprolite
25.0		4 6 9		25 - 26.5	SANDY SILT (ML) Stiff, moist, mostly silt, some fine sand
30.0		4 6 12		30 - 31.5	Same as above.
35.0		4 6 5		35 - 36.5	SANDY SILT (ML) WET 2-IN Otta Sand/gravel at 36.2
40.0		42 50		40 - 41.5	WELL GRADED SAND (SW) very dense, wet, gray, mostly fine to coarse Sand, trace gravel, trace Silt
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-126
PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		50/5"		45 to 46.5	POORLY GRADED SAND WITH SILT (SP-SM) Very dense, wet, grayish brown, mostly fine to medium sand, few silt
50.0		50/3		48.5	Same as above
					Auger Refusal 50
55.0					
60.0					
65.0					
70.0					

PLAN 50'

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-127
PAGE 1 OF 4

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm / CME 55U

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 1-9-14 Surface Casing -
DATE FINISH: 3-31-14
DRILLER: T. Burnett
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	PVC		
					SIZE ID	6-in.		
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					10-in mud Rotary Drilling to set 6-in PVC Surface casing. (0 - 60)
					See log for MW-126 for soil descriptions. - MW-126 Auger Refusal at 50 ft. 12-12-13
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-127

PAGE 2 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See MW-126 log for 0-50
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-127

PAGE 3 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
50.0					Weathered Rock Schist/Gneiss
55.0					Soft zone - Sapprolite Weathered Rock 58 Competent Rock - Socket 58-60'
60.0					Black Butte schist
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-127

PAGE 4 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					Black Biotite Schist
75.0					
80.0					
85.0					
90.0					89.5 Fracture - water
95.0					Total Depth 92.7 ft.

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-128
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-16-13
DATE FINISH: 12-16-13
DRILLER: D. Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA		
					SIZE ID	4¼		
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		2 3 4		5 6.5	SANDY SILT (ML) medium stiff, moist, mostly silt, some fine sand (Red)
10.0		4 4 5		10 11.5	SILTY SAND (ML) Loose, moist, reddish brown, mostly fine Sand, some silt - saprolite
15.0		5 7 11		15 16.5	Same as above
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-128

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4 5 8		20 21.5	SILTY SAND (SM) Medium dense, moist, grayish brown, mostly fine sand, some silt
25.0		5 6 8		25 26.5	Same - brownish yellow
30.0		4 8 12		30 31.5	Same grayish brown
35.0		9 25 37		35 36.5	SILTY SAND (SM) Very Dense, moist, grayish brown, mostly fine sand, little silt
40.0		6 6 10		40 41.5	SILTY SAND (SM) medium dense, wet, grayish brown, mostly fine sand, little silt
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-128
PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		5 7 9		45 46.5	SILTY SAND (SM) Medium dense, wet, yellowish brown, mostly fine sand, little silt.
50.0		5 8 10		50 51.5	SILTY SAND (SM) medium dense, wet, yellowish brown, mostly fine to medium sand, little silt
55.0		6 9 11		55 56.5	Same as above
60.0		5 7 9		60 61.5	same as above
					Total Depth Augered 60.5 Not Refusal
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129
PAGE 1 OF 8

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 2-2-14
DATE FINISH: 2-26-14
DRILLER: T Burnette
PREPARED BY: Hartford

Surface Casing 2-5-14

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA		
					SIZE ID	8¼		
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					12-IN OD HSA Drilling to set 6 in PVC surface casing (88.4)
					See log for MW-128 for (0-60)
5.0					See nearby Extraction well Log for EW-37 for (60-88)
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

PAGE 2 OF 8

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
25.0					
30.0					See Log for MW-128 for 0-60
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					see log for MW-128 for 0-60
50.0					
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

PAGE 4 OF 8

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					
75.0					77 Auger Refusal 8 3/4 ID HSA 78 Drilled Auger to 78 After drilling rock pilot hole to ~88.4 Drilled with air hammer inside auger for rock socket (78 - 88.4) Partially Weathered Rock 95
80.0					
85.0					Competent Rock Socket 85-88.4
90.0					Gneiss - Gray to White, Biotite Gneiss
95.0					- water zone - ON Rod change over nine during drilling

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

PAGE 5 OF 8

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0				88.4	Grey Gneiss
			RW-129-105 4/11/14	105	103' wm to = 10 GPM
100.0					
105.0				105	White Feldspar Gneiss
110.0					
			RW-129-120 4/11/14		Grey Biotite Gneiss
115.0					
120.0				120	Fractures were not detected during drilling 105'-120'- Likely Reduced work Groundwater inflow associated with the 103' fracture

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0			120 - 135 12in Zone	120	Black Biotite Garnet Schist
125.0				125	Dry - Fracture - Breathing zone 0 ppm during drilling
					Net Dry Fracture at 122 ft in nearby EW-37
					Biotite Garnet Schist Black
130.0					
				135	
135.0					
				135	Black/Grey Biotite Garnet Schist
140.0			135 - 150		
				150	
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129
PAGE 7 OF 8

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
~~120.0~~ 145					Black/Grey Biotite Garnet Schist
				150	
150 ~~125.0~~					No Fractures noted during drilling 135-150 Zone produced water for packer sampling
				150	
			RW-129 (150-165) Dry		
155 ~~130.0~~					Black Grey Biotite Garnet Schist
160 ~~135.0~~					
				165	no fractures noted during drilling 150-165
165 ~~140.0~~				165	
					White/Grey Feldspar Garnet Gneiss
170 ~~145.0~~					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-129

PAGE 8 OF 8

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
~~120.0~~ 120			RW-129 (165-180) Drg-	165	
125 ~~125.0~~				-	White, Grey Feldspar Garnet Gneiss -
180 ~~130.0~~				180	No fractures noted during drilling 165-180 ft.
					Total depth 180 ft
185 ~~135.0~~					
190 ~~140.0~~					
195 ~~145.0~~					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-130
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-17-13
DATE FINISH: 12-17-13
DRILLER: D. Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4 1/4 in	1.5	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					4 in Asphalt
					SANDY SILT (ML) moist, reddish brown, mostly silt, some fine sand
5.0		2 3 3		5 6.5	CLAYEY SAND (SC) Loose, wet, reddish brown, mostly fine sand 1.Hlx clay
					-Fill-
10.0		3 3 3		10 11.5	Same as above wet with Gravel Reddish brown to grey. Fill
15.0		3 5 6		15 16.5	SANDY SILT (ML) medium dense, moist, reddish brown, Mostly silt, some fine sand
					Geotextile Fabric in cuttings
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-130

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		5 8 11		20 21.5	CLAYEY SAND (SC) Red medium dense, moist, mostly fine to coarse sand little clay - Fill
25.0		5 6 8		25 26.5	Same as above Fill
30.0		4 4 6		30 31.5	Same as above
35.0		8 10 11		35 36.5	SILTY SAND (SM) medium dense, moist, reddish brown, mostly fine sand, some silt - Saprolite
40.0		5 7 10		40 41.5	SILTY SAND medium dense, moist, olive yellow, mostly fine sand, little silt.
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-130
PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		7 8 11		45 46.5	Silty Sand (SM) medium dense, moist, yellowish brown, mostly fine sand, little silt
50.0		4 5 7		50 51.5	SILTY SAND (SM) medium dense, wet, yellowish brown, mostly fine sand, little silt.
55.0		4 7 9		55 56.5	SILTY sand (SM) medium dense, wet, olive brown, mostly fine to medium sand, little silt
60.0		4 4 6		60 61.5	WELL GRADED SAND (SW) Loose, wet, pale brown to light gray, mostly fine to coarse sand, trace gravel, trace silt.
65.0					61.5 TD Not Refusal
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131
PAGE 1 OF 6

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 1-27-14
DATE FINISH: 3-22-14
DRILLER: T. Burnette
PREPARED BY: Hartford

1-31-14 Surface casing

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	Carbon Steel		
3-22	14:03	129	116.5		SIZE ID	6" ID		
3-22	19:20	69.3			HAMMER WT			
3-24	9:30	52.24			HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 1/4-in Mud rotary drilling to set 6-in steel surface casing (0-116.5)
					See log for MW-130 for (0-60)
					see log for EW-53 for (60-110)
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131

PAGE 2 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
25.0					
30.0					Sample 6
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131

PAGE 3 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					
50.0					
55.0					Saprolite
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131

PAGE 4 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					
75.0					
80.0					Saprolite
85.0					
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131

PAGE 5 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					
100.0					
105.0					
110.0					110 Partially Weathered Rock 114
115.0					Competent Rock Socket 114-116.5 Black Biotite Garnet Schist Dry
120.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-131

PAGE 6 OF 6

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0					Black Biotite Garnet Schist - Dry
125.0					
130.0					White - Feldspar - Dry
135.0					~137' Dust Reduced During drilling Black Biotite Garnet schist
140.0					Total Depth 141 Open interval 116.5 - 141 Producing ½ GPM - Well assumed to be Open 137 based on reduced dust during drilling and EW-5B "Possible Fracture at 135')
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-132
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME-550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-18-13
DATE FINISH: 12-18-13
DRILLER: D. Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼		
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					0-2 Asphalt
					2-3.5' in and out of gravel
5.0		2 4 4		5 – 6.5	SILTY SAND (SM) Loose, moist, yellowish brown, mostly fine to medium sand, some silt.
10.0		2 3 4		10 – 11.5	Same as above
15.0		5 4 5		15 – 16.5	SILTY SAND (SM) Loose, moist, reddish brown, mostly fine & medium sand, some silt
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-132
PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4 5 6		20 ~21.5	Same as above
25.0		4 6 7		25 ~26.5	SILTY SAND (SM) Medium dense, moist, yellowish brown mostly fine to medium sand, some silt
30.0		4 5 5		30 ~31.5	SILTY SAND (SM) Loose, moist, brown, mostly fine sand, some silt
35.0		3 4 4		35 ~36.5	Same as above - grayish brown - Trace gravel in ½" zone
40.0		3 4 6		40 ~41.5	SILTY SAND (SM) Loose, wet, gray, mostly fine sand, some silt
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-132

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		5 5 7		45 46	SILTY SAND (SM) Medium dense, wet, olive gray, mostly fine sand, little silt.
50.0		9 12 11		50 51.5	Same as above
55.0		3 4 7		55 56.5	SILTY SAND (SM) Medium dense, wet, olive brown, mostly fine sand, some silt
60.0				60 61.5	Same as above
65.0		24 22 50/3.5		65 66.5	Same as above with weathered Biotite schist fragments Total Depth Drilled 65.5
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133
PAGE 1 OF 7

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm

PROJECT NO: 60280417
LOCATION: maintenance Bldg
ELEVATION:
DATE START: 2-6-14 (surface casing 2-7-14)
DATE FINISH: 3-22-14
DRILLER: T. Burnette
PREPARED BY: Hartford

GROUND WATER		DEPTH TO: -			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		
3/22	19:28	154.7	98		SIZE ID	6-IN	
3/22	19.35	153.3			HAMMER WT		
3/24	9:30	45.25			HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 1/4-in mud rotary drilling to set 6-in steel surface casing (0-98 ft)
					See log for MW-132 for (0-65 ft)
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133

PAGE 2 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See log for MW-132 for (0-65 ft)
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133

PAGE 3 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					See log for MW-132 for 0-65 ft
50.0					
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133

PAGE 4 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					
75.0					Saprolite
80.0					S2
					Partially weathered Rock
85.0					S6
					Competent Rock Socket 86-88
90.0					Black Biotite Schist - dry -
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133

PAGE 5 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					Black Butte schist Dry.
100.0					102.5 Possible small fracture - Dry during drilling
105.0					White Feldspar, quants, muscovite Zone
110.0					110.
					112 Fracture.
					114 Black Butte schist Dry
115.0					White Feldspar, quartz, muscovite zone Dry.
120.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133
PAGE 6 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0					White Feldspar, quartz zone
125.0					~ Possible small fracture or transition Black Biotite Schist Dry.
130.0					
135.0					
140.0					- Small fracture. Dry. Black Biotite Garnet Schist Dry
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-133

PAGE 1 OF 1

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120 145					
150					
					Block Biotite Garnet Schist
155					
160					
					162
					Total Depth 162
					Let sit 20 min - Blew hole - produced 4 GPM probably from 112' - stopped producing after 2-min
					DTW - 45.25 3-24-14
165					
170					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-134
PAGE 1 OF 4

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT:

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-19-13
DATE FINISH: 12-19-13
DRILLER: D Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA		
					SIZE ID	4 1/4		
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					0-0.2 Asphalt 0.2-0.6' Gravel
5.0		5 6 5		5 6.5	SANDY SILT (ML) Stiff, moist, mostly silt, some fine sand, yellowish brown -Fill
10.0		4 4 4		10 11.5	SILTY SAND (SM) Loose, moist, reddish brown, mostly fine sand, some silt. -Fill-
15.0		4 5 6		15 16.5	CLAYEY SAND (SC) Stiff, moist, red, mostly fine to medium sand, little clay
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-134

PAGE 2 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4 4 7		20 - 21.5	CLAYEY SAND (SC) Stiff, moist, mostly, fine to medium Sand little clay. red
25.0		2 3 4		25 - 26.5	CLAYEY SAND (SC) Medium stiff, moist, red, mostly fine to medium sand, little clay, trace gravel
30.0		5 10 17		30 - 31.5	CLAYEY SAND (SC) V. stiff, moist, red, mostly fine to coarse sand, little clay, trace gravel FILL?
35.0		7 10 11		35 - 36.5	WELL GRADED SAND (SW) Medium dense, moist white, mostly fine to coarse sand, trace silt.
40.0		8 9 12		40 - 41.5	Same as above - moist white - (SW) with trace gravel - mostly feldspar
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-134
PAGE 3 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		5 7 9		45 46.5	SILTY SAND (SM) Medium dense, moist, olive yellow, mostly fine sand, some silt
50.0		5 6 8		50 51.5	Same as above
55.0		5 6 8		55 56.5	Same as above - wet
60.0		8 12 42		60 61.5	SILTY SAND (SM) Very dense, wet, olive brown, mostly fine to coarse sand, some silt, trace weathered rock fragments
65.0		4 6 8		65 66.5	Same as above
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-134

PAGE 4 OF 4

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0		5 3 8		70 71.5	SILTY SAND (SM) Loose, wet, olive brown, mostly fine to coarse Sand, some silt. 70.5-70.7 well Graded Sand (SW)
75.0				75 76.5	Same as above
					Auger to 75.5
80.0					
85.0					
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135
PAGE 1 OF 7

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: Schramm

PROJECT NO: 60280417
LOCATION: Maintenance Bldg.
ELEVATION:
DATE START: 2-17-14
DATE FINISH: 3-22-14
DRILLER: T Blanchette
PREPARED BY: Hartford

Surface casing 2-18-14

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	Carbon Steel		
3-22	1635	161.7	123		SIZE ID	6-in		
3-22	1915	161.2			HAMMER WT			
3-24	930	149.3			HAMMER FALL			

-27
2.00
123'

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 7/8-in mud rotary drilling to set 6-in steel surface casing (0-123)
					See Log for MW-134 for (0-75 ft)
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 2 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See Log for MW-134 for (0-75 ft)
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 3 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					See log for MW-134 for 0-75 ft
50.0					
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 4 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					
75.0					
80.0					Saprolite
85.0					
90.0					
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 5 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					
					98
					99 Partially Weathered Rock
100.0					
					Saprock to
105.0					105
					Soft Partially Weathered Rock
110.0					
					115
115.0					
					Harder Partially Weathered Rock
120.0					120

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 6 OF 7

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
120.0					Competent Rock Socket
					123
125.0					Black Biotite Schist – DRY
130.0					
135.0					
140.0					Black Biotite Schist – DRY –
145.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-135

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
145					Black Biotite Schist
150					Dry -
155					
160					Total Depth 162 -
165					Dry Hole
170					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-136
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 55

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-13-13
DATE FINISH: 12-13-13
DRILLER: Bergmeier
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	SS	
					SIZE ID	4¼	1.5" ID	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					SANDY SILT (ML) moist, reddish brown, mostly silt, some fine sand
5.0		4/5/6		5 - 6.5	SILTY SAND (SM) Medium dense, moist, yellowish brown, mostly fine to medium sand, little silt
10.0		5/9/13		10 - 11.5	WELL GRADED SAND (SW) medium dense, moist, white/gray, mostly fine to coarse sand, trace silt
15.0		4/3/5		15 - 16.5	SANDY SILT (ML) medium stiff, moist, olive brown, mostly silt, some fine sand
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

3 4L

AECOM

Test Boring Report

BORING NO. MW-136

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		3 4 6		20 21.5	SANDY SILT (ML) As above
25.0		3 5 7		25 26.5	SANDY SILT
30.0		3 5 6		30 31.5	SANDY SILT (ML) yellowish brown
35.0		3 5 6		35 36.5	SANDY SILT (ML) Stiff, wet, mostly silt, some fine sand 36' - 4 IN Well Graded SAND Zone
40.0		6 9 9		40 41.5	SILTY SAND (SM) medium dense, wet, gray to olive brown) mostly fine to medium Sand, Some Silt. 41' - 6 IN Well Graded SAND with gravel Zone (SW)
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-136

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		3 5 9		45 46.5	SILTY SAND (SM) and well Graded Sand with Gravel (SW) wet, gray to olive brown
50.0		5 7 8		50 51.5	WELL GRADED SAND (SW) medium dense, wet, white, mostly fine to coarse sand, trace silt, trace gravel
55.0		8 9 7		55 56.5	WELL GRADED GRAVEL with Sand (GW) medium dense, wet, white to olive brown, mostly fine to medium gravel (@12) with fine to medium sand, trace silt
60.0		5 7 7		60 61.5	Same as above
					Total Depth 61.5 Nit Refusal
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

Target 107

AECOM Test Boring Report

BORING NO. RW-137
PAGE 1 OF 5

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 2-16-14
DATE FINISH: 2-25-14
DRILLER: D. Bergman
PREPARED BY: Hartford

Surface casing 2-18-14

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
			89.5		TYPE	Carbon Steel	
					SIZE ID	6-in	
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9½-in mud rotary drilling to set 6-in steel surface casing (0-89.5')
					See log for MW-136 for (0-60 ft)
					See log for EW-44
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-137

PAGE 2 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See log for MW-136 for (0-60 ft)
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-137

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					See log for MW-136 for 0-60 ft
50.0					
55.0					
60.0					
65.0					Partially Weathered Rock
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-137

PAGE 4 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					Saprol. to
75.0					75
80.0					Partially Weathered Rock
85.0					87
					Competent Rock Socket 87-89.5
					89.5
90.0					BROWN Weathered Schist
					wet
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-137

PAGE 5 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					96 Gray Biotite Schist -98.5 Fracture - 100.0 103 White/Grey Feldspar Gneiss 105.0 107 Biotite Garnet schist. Black TD 107.8 ft 110.0 115.0 120.0

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-138
PAGE 1 OF 3

PROJECT: Auriga Spartanburg, SC
CLIENT: Celanese North America
CONTRACTOR: AE Drilling Services
EQUIPMENT: CME 550

PROJECT NO: 60280417
LOCATION:
ELEVATION:
DATE START: 12-13-13
DATE FINISH: 12-13-13
DRILLER: D. Bergman
PREPARED BY: Hartford

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	H SA	SS	
					SIZE ID	4 1/4	1.5	
					HAMMER WT	140		
					HAMMER FALL	30		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		3 4 6		5 6.5	Clayey SAND (SC) Moist, stiff, reddish yellow, mostly fine to medium sand, little clay.
10.0		3 3 5		10 11.5	Same as above except yellow
15.0		2 2 4		15 16.5	SANDY SILT (ML) Soft, moist, olive yellow, mostly silt, some fine sand, well Graded Sand (SW) with 16.3-16.5 -SAPROLITE
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-138

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4 3 6		20 – 21.5	Well Graded Sand (SW) 20-20.2 SANDY SILT (ML) Stiff, wet, mostly silt, some fine sand
25.0		6 6 9		25 – 26.5	SILTY SAND (SM) medium dense, wet, mostly fine sand, some silt, yellowish brown
30.0		3 5 6		30 – 31.5	SILTY SAND (SM) medium dense, wet, yellowish browns, mostly fine sand, some silt.
35.0		3 13 30		35 – 36.5	WELL GRADED SAND with Gravel (SW) Very Dense, wet, white, mostly fine to coarse sand, little gravel
40.0		7 8 7		40 – 41.5	Same as above
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-138

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		4 6 11		45 46.5	SILTY SAND (SM) Medium dense, wet, brownish yellow, mostly fine Sand, some silt
50.0		6 4 7		50 51.5	SANDY SILT (ML) Stiff, wet, mostly silt, some fine sand (olive brown)
55.0		3 5 19		55 56.5	Same as above - very stiff
60.0		8 8 9		60 61.5	SILTY SAND (SM) Medium dense, wet, mostly fine sand, some silt, thin well Graded sand
65.0					Not Refusal
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-139

PAGE 1 OF 5

PROJECT: Auriga Spartanburg, SC

CLIENT: Celanese North America

CONTRACTOR: AE Drilling Services

EQUIPMENT: CME 550

PROJECT NO: 60280417

LOCATION:

ELEVATION:

DATE START: 2-20-14

DATE FINISH: 2-24-14

DRILLER: D. Bergman

PREPARED BY: Hartford

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
			84	97.5	TYPE: carbon steel		
					SIZE ID: 6-in		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					9 1/2 in Mud Rotary Drilling to set 6-in Steel Surface casing (0-84)
					See Log for MW-138 for (0-60) Soil descriptions
5.0					
10.0					
15.0					
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-139

PAGE 2 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					See log for MW-138 for 0-60 soil descriptions
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-139

PAGE 3 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0					See log for MW-138 for 0-60 soil descriptions
50.0					
55.0					
60.0					
65.0					Rock LENS Partially Weathered Rock
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-139

PAGE 4 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					
					Partially Weathered Rock
75.0					
80.0					Competent Rock Socket 81.5-84
85.0					Alternating Competent Schist to Partially weathered Pegmatite. White, Grey, Brown Quartz, Feldspar, muscovite
90.0					Biotite Schist Brown to Black
					— Fracture
95.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. RW-139

PAGE 5 OF 5

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
95.0					Fracture 95-97
					Biot. & Schist.
					Total Depth 97.8
100.0					
105.0					
110.0					
115.0					
120.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY