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Ms. Addie Walker  
South Carolina Department of Health and Environmental Control  
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September 04, 2014

Dear Ms. Walker,

**Subject: VCC Progress Report #4  
Auriga, Spartanburg Facility  
BoW Site ID# 00225, VCC 13-5841-RP  
AECOM Project No. 60280417**

**RECEIVED**

SEP 05 2014

**SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION**

Please find enclosed the above referenced report. As indicated in the Voluntary Cleanup Contract and your request, two hard copies and one electronic copy on CD are included.

If you have questions, please contact me at 404.965.9657.

Sincerely,

Bryon Dahlgren, PE  
Project Manager

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Environment

Prepared for:  
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September 2014

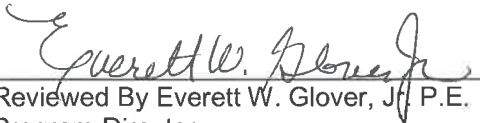
# Auriga Spartanburg Voluntary Cleanup Contract 13-5841-RP Progress Report #4 September 2014



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## 1.0 Introduction

The purpose of this document is to provide to the South Carolina Department of Health and Environmental Control (SCDHEC) an update of activities at the Auriga facility in Spartanburg, South Carolina (SC) (site) under Voluntary Cleanup Contract 13-5841-RP (VCC) signed March 12, 2013. Activity to be completed at the site was defined in the VCC work plan submitted April 26, 2013, and approved January 21, 2014. This progress report covers the period of March 1, 2014 through August 31, 2014.

A schedule of activities was presented in the VCC work plan. An updated version of the schedule is presented as Figure 1.

Two annual monitoring events are defined in the VCC work plan. The site-wide event is scheduled for completion in June of each year. The scope of the June event is presented in Table 1. Table 1 of this report has been expanded from the VCC annual monitoring plan to include the additional performance monitoring wells. A smaller event focused on the chloroform plume area, scheduled for completion in December of each year, is presented in Table 2. Table 2 also includes the performance monitoring well added subsequent to the VCC work plan.

The annual groundwater monitoring event was completed in June. Samples were collected between June 9 and June 18, 2014. Surface water locations were also sampled along Cherokee Creek, the Pacolet River, and Bruckner Creek. The monitoring locations are presented on Figure 2. The complete laboratory analytical results are provided as Appendix A. A summary of groundwater results is presented in Table 3. A summary of surface water results is presented in Table 4. Potentiometric maps based on the groundwater elevations measured during the June sampling event are presented on Figures 3 and 4. These summary tables and figures are referenced in the following discussions of operable units (OU) as defined in the VCC work plan.

## 2.0 Chloroform in Groundwater

Chloroform at the site is identified as an aqueous plume extending south-southeast from the DMT area. No remaining or ongoing source was identified. Continued delineation and remediation activities were established in the VCC work plan and separate documents.

### 2.1 Actions Completed during Reporting Period

Installation of performance monitoring wells was completed on March 31, 2014. Baseline samples were collected from the new performance monitoring wells between March 31 and April 3, 2014. The results of the baseline sampling were submitted to SCDHEC on May 15, 2014. The baseline data was consistent with the previously established chloroform concentrations identified in recent direct push technology (DPT) sampling events. The data summary table presented in the May 15 report is reprinted as Table 5 of this progress report.

Injection activities were completed between April 21 and May 30, 2014. The injection completion report was submitted to SCDHEC on June 26, 2014.

The June monitoring event was completed shortly after injection activities were finished. Chloroform results were consistent with recent historic data. The chloroform data are included in summary Tables 3 and 4. The chloroform results are presented on Figures 5 and 6 for saprolite and bedrock, respectively.

No significant changes were noted in the chloroform results for wells or areas. The injection activities are expected to result in declines, but the samples were collected just after the completion of injection. Based on historic remediation in nearby areas, the results of the recent injection are not expected to be observed yet and several quarters may be required before significant changes are noted.

The results of dissolved oxygen and ORP analyses are presented in Table 3 and on Figures 7 through 10. The lactate injection activities are expected to demonstrate changes to these parameters over the next several quarters, creating conditions that will facilitate *in situ* destruction of chloroform.

### 2.2 Actions Scheduled for Next Reporting Period

Performance monitoring is scheduled to continue in the next quarter. The first quarterly event will be completed during the month of September. All performance monitoring wells will be sampled for volatile organics (VOCs), included chloroform, as well as other indicator parameters.

Activity is also anticipated west of Bruckner Road. The schedule of activities in this area is dependent on final approval from SCDHEC.

The semiannual chloroform groundwater monitoring event will be completed in December 2014. This event will include monitoring of the wells in the December sampling plan, as well as the performance monitoring wells. The complete chloroform monitoring plan is presented in Table 2, which has been revised from the VCC annual monitoring plan to include the performance monitoring wells.

## 3.0 1,4-Dioxane in Groundwater

1,4-Dioxane has been identified in site groundwater. Several known sources of 1,4-dioxane impact to groundwater were removed in the mid to late 1990's, including the in-ground basins associated with the wastewater treatment system and the sludge holding and sludge drying lagoons. Continued monitoring and evaluation was established as the course of action in the VCC work plan.

### 3.1 Actions Completed during Reporting Period

Analysis for 1,4-dioxane was included in the June annual sampling event, as indicated in Table 1. The 1,4-dioxane groundwater results are presented in Table 3. In addition, the 1,4-dioxane results for the saprolite and bedrock wells are presented on Figures 11 and 12, respectively.

Minor changes in concentration were noted for several wells in the area between Outfall 001 and Cherokee Creek. Historically, the highest concentration in the area has been in samples collected from well EW-14. The samples from this well have consistently reported concentrations at approximately 0.160 milligrams per liter (mg/L). In the June 2014 sample, this result was 0.0357 mg/L. Another decrease in 1,4-dioxane concentrations was reported in the sample from well EW-28 located near Cherokee Creek. The June 2014 result at EW-28 was 0.0858 mg/L, compared to historic results at approximately 0.15 mg/L.

The largest increase in the Outfall 001 and Cherokee Creek area was at well EW-02. The June 2014 sample result for EW-02 was 0.190 mg/L, compared to historic concentrations of approximately 0.1 mg/L. Samples from a few other wells in this area also showed slight increases in concentration compared to historic results. These wells include MW-97, EW-17, and EW-27. The concentration at each of these locations is below 0.050 mg/L and within historic values for the area. The overall extent and magnitude of concentrations within the area remains unchanged, though some fluctuation has been observed in this event.

Increased concentrations of 1,4-dioxane were noted at a few wells in the central plant vicinity. Concentrations of 1,4-dioxane were first noted in this area centered around well MW-53. The concentrations at well MW-53 remain below the high of 9.54 mg/L noted in 2011, but this well remains the center of the plume. Increases were noted at nearby wells RW-80, RW-86, and RW-91 (6.76, 7.28, and 3.23 mg/L, respectively). A smaller increase was also noted at downgradient well MW-05, which reported a result of 1.35 mg/L. These results suggest that the plume has moved slightly in the past 4 years, but the plume remains closest to MW-53.

Decreasing concentrations were noted at three wells on the west side of the former DMT area. The 1,4-dioxane concentration reported for samples from wells MW-99 and EW-52 declined to 0.0022 mg/L. The result for nearby well MW-98 also declined slightly to 0.0423 mg/L. The results over several years suggest that the plume may be declining in this small area.

South of Bruckner Creek, there was a detection of 1,4-dioxane in the sample from well RW-110. The result of 0.0049 mg/L is similar to the prior reported detection of 0.0036 mg/L in early 2013. Three other samples collected in 2013 and 2014 were non-detected (<0.002 mg/L). Well RW-110 is located directly adjacent to Bruckner Creek. Samples collected from nearby downgradient well RW-111 have consistently remained below the Method 8260 SIM reporting limit of 0.002 mg/L. The sample collected in June was again non-detect (<0.002 mg/L). A second sample was collected from RW-111



on July 11, 2014, tested by Method M522, and reported a result of 0.0000998 mg/L. This result is similar to the M522 result measured from this well in December 2013 of 0.000123 mg/L. These results demonstrate that the groundwater directly adjacent to the creek may report measurable quantities; however, the flow of water from the south into the creek limits the migration of compounds, and the concentrations and range are limited beyond the creek.

In addition to the routine annual sampling (Table 1), one sample was collected from well MW-95 located across the Pacolet River and north of I-85. This sample was analyzed for 1,4-dioxane by Method M522 and reported a detection of 0.0000404 mg/L (40.4 parts per trillion). The reporting limit for this method is 40 parts per trillion. The result is more than an order of magnitude below the groundwater quality standard.

Detections of 1,4-dioxane were reported in a few surface water samples, as presented on Table 4. A detection of 0.0119 mg/L was reported at location SW-05, located near the conflux of Cherokee Creek and the Pacolet River. Lower concentrations were reported at nearby locations SW-04 and SW-06 (0.0021 and 0.0022 mg/L, respectively). This is the first reported detection of 1,4-dioxane at location SW-05. 1,4-Dioxane was also detected in the sample from location SW-10 at a concentration of 0.017 mg/L and at nearby location SW-09 at 0.0024 mg/L. The detection at SW-10 is consistent with periodic fluctuations seen at this location.

1,4-Dioxane was not detected (<0.002 mg/L) at all surface water locations south of I-85.

### **3.2 Actions Scheduled for Next Reporting Period**

Well MW-95 will be resampled for additional analysis by Method M522. In addition, wells located south of I-85 will be analyzed for 1,4-dioxane as part of the December monitoring event.

## 4.0 DOWTHERM™ A in Groundwater

DOWTHERM™ A (DOWTHERM) is comprised of approximately 27% 1,1-biphenyl and 73% diphenyl ether. The presence of DOWTHERM™ A in groundwater is interpreted to be residual impact from events prior to enhancements in plant operations and housekeeping. Continued monitoring and evaluation was established as the course of action in the VCC work plan.

### 4.1 Actions Completed during Reporting Period

Monitoring of DOWTHERM™ A, as described in the VCC work plan, is included in the June annual sampling event. The results for 1,1-biphenyl and diphenyl ether are included in Table 3. Diphenyl ether is the primary component of DOWTHERM™ A. In addition, 1,1-biphenyl is more readily degraded than diphenyl ether. Therefore, diphenyl ether is more frequently detected as presented on Figures 13 and 14, which show the extent of DOWTHERM™ A for the saprolite and bedrock wells, respectively.

In general, the concentrations of diphenyl ether are stable with declines noted at a few locations. Three wells along Cherokee Creek reported declining concentrations, including EW-14, EW-16, and EW-28. A declining concentration was also noted at well MW-07. Well MW-07 is in the area of extraction discussed in the following section.

No increasing concentration trends were noted.

As noted in Table 3, the diphenyl ether results for a few wells were rejected during the validation process. The diphenyl ether result for one surface water sample was also rejected. The locations with rejected results are EW-22, EW-27, EW-43, EW-52, MW-97, and SW-04. The validation was the result of poor laboratory control sample recovery. Only results that reported non-detect (<0.010 mg/L) on the preliminary data were rejected by this validation. For the listed locations, except for well EW-22, a result of non-detect (<0.010 mg/L) would be consistent with recent data. At EW-22, the diphenyl ether results for the past three years have ranged from 0.0119 to 0.0163 mg/L. Slightly higher results have been noted in older samples from EW-22. The rejected data are considered to provide no information for the 2014 assessment, but these data gaps do not impact the assessment for this compound.

### 4.2 Actions Scheduled for Next Reporting Period

No monitoring actions are scheduled for DOWTHERM™ A in groundwater for the next reporting period. The phase DOWTHERM™ investigation is described in the next section.

## **5.0 DOWTHERM™ A Phase Material**

Separate phase DOWTHERM™ A has been removed in the area of wells MW-07 and MW-39 downgradient of the former Fiber 1 EQ basin since startup of an extraction and decanting system in August 2001.

### **5.1 Actions Completed during Reporting Period**

Extraction activities continued during the reporting period. The system was decanted on May 23, 2014. Approximately 1 gallon of phase DOWTHERM™ material was removed from the system, in addition to approximately 1,000 gallons of water. The total volume of product extracted since the system was started is estimated to be 86 gallons.

The investigation of phase DOWTHERM™ A in the vicinity of well MW-7 started in August 2014. AECOM began installation of the temporary wells during the week of August 25, 2014. All wells will be completed early in the next reporting period. The study will be completed over a period of two months once the wells are complete. The temporary wells will be abandoned in accordance with SCDHEC guidance once the study is complete.

### **5.2 Actions Scheduled For Next Reporting Period**

The phase DOWTHERM™ investigation will continue into the next reporting period.

## 6.0 Other Chlorinated Solvents in Groundwater

Detection of other chlorinated compounds in groundwater have been identified in isolated areas. Detections consist primarily of tetrachloroethene (PCE) and trichloroethene (TCE), and their degradation product cis-1,2-dichloroethene (cDCE). These compounds are primarily noted near well MW-99 west of the DMT area and north of the plant between well MW-40 and Lake Patrick. 1,1-Dichloroethene (1,1-DCE) has also been noted at isolated locations. Continued monitoring and evaluation was established as the course of action in the VCC work plan.

### 6.1 Actions Completed during Reporting Period

Monitoring of VOCs, as described in the VCC work plan, is included in the June annual sampling event. The results for detected VOCs are included in Table 3. Detections of VOCs other than chloroform and 1,4-dioxane are presented on Figures 15 and 16.

No significant changes were noted for any other VOCs. All detections are consistent with historic values for the locations. A few new detections are noted in new performance monitoring wells, but these results are consistent with the known results for other wells in the area. The concentrations of VOCs at well MW-99 were all lower than recent results. This is consistent with the decline observed in 1,4-dioxane concentrations in the same area. Further data will be needed to determine if this is a trend or a fluctuation.

### 6.2 Actions Scheduled for Next Reporting Period

The September performance monitoring and December semiannual monitoring will include VOCs analysis for all wells in the sampling plans.

## **7.0 Cherokee Creek and Sediments and Ecological Habitat**

In 2011, SCDHEC completed a macroinvertebrate study of the Pacolet River, including work along Cherokee Creek near the site. In response to the findings of that study, SCDHEC requested additional actions, including an ecological assessment and potential source evaluation. These activities were previously completed and the results submitted to and accepted by SCDHEC. Continued surface water monitoring and evaluation was established as the course of action in the VCC work plan.

### **7.1 Actions Completed during Reporting Period**

The annual monitoring program as approved in the VCC work plan was completed in June. The results for site parameters are summarized in the previous sections of this progress report.

### **7.2 Actions Scheduled for Next Reporting Period**

The next annual sampling event will not occur until after the next reporting period.

## **8.0 Other Site-Wide Activities**

Because the June and December monitoring events encompass multiple operable units, they were defined in the VCC work plan as distinct operable units. Details of these events, specific to each operable unit, are provided in the previous sections.

### **8.1 Actions Completed during Reporting Period**

The VCC work plan includes the June and December monitoring events as shown in Tables 1 and 2. The June 2014 results are summarized in Tables 3 and 4. Complete laboratory results are provided as Appendix A. The results are discussed further in previous sections of this report.

### **8.2 Actions Scheduled for Next Reporting Period**

The December 2014 sampling event will be completed during the next reporting period.

## **9.0 Problems Encountered and Responses**

No problems were encountered.

## Tables



**Table 1  
Annual Monitoring Plan**

<b>Sample Location</b>	<b>VOCs (8260)</b>	<b>1,4-Dioxane</b>	<b>DowTherm A <sup>TM</sup> (1)</b>	<b>Natural Attenuation Parameters</b>
<b>Groundwater</b>				
EW-01		X	X	
EW-02		X	X	
EW-07		X		
EW-14	X	X	X	
EW-15		X		
EW-16		X	X	
EW-17		X	X	
EW-20	X	X		
EW-22		X	X	
EW-26		X	X	
EW-27		X	X	
EW-28		X	X	
EW-30	X			X
EW-31		X		X
EW-32		X	X	
EW-36	X			X
EW-37	X	X		X
EW-38	X	X		
EW-39	X			X
EW-40	X			X
EW-41	X	X		X
EW-43		X	X	
EW-47	X	X		
EW-49	X	X	X	X
EW-50	X			X
EW-52	X	X	X	X
EW-53	X	X	X	X
MW-03	X	X		
MW-05		X	X	
MW-07		X	X	
MW-09A		X		
MW-26		X		
MW-39		X	X	
MW-40R		X	X	
MW-41		X		
MW-42		X	X	
MW-45	X			X
MW-46	X			X
MW-53		X	X	
MW-57		X		
MW-81		X	X	
MW-96		X	X	
MW-97		X	X	

**Table 1  
Annual Monitoring Plan**

<b>Sample Location</b>	<b>VOCs (8260)</b>	<b>1,4-Dioxane</b>	<b>DowTherm A <sup>TM</sup> (1)</b>	<b>Natural Attenuation Parameters</b>
MW-98	X	X		
MW-99	X	X	X	X
MW-102		X	X	
MW-103	X	X	X	X
MW-105	X	X	X	X
MW-106	X	X	X	X
MW-107	X	X	X	X
MW-109	X	X	X	X
RW-08		X	X	
RW-24		X	X	
RW-29	X	X	X	X
RW-43		X	X	
RW-47	X			X
RW-48	X	X	X	X
RW-56		X		
RW-65	X	X	X	X
RW-79		X	X	
RW-80		X	X	
RW-82		X	X	
RW-83A		X	X	
RW-84		X	X	
RW-85		X	X	
RW-86		X	X	
RW-87		X	X	
RW-91		X	X	
RW-92		X	X	
RW-108	X	X	X	X
RW-110	X	X		X
RW-111	X	X		X
MW-112	X	X		X
RW-113	X	X		X
MW-114	X	X		X
RW-115	X	X		X
MW-116	X	X		X
MW-118	X	X		X
RW-119	X	X		X
MW-120	X	X		X
RW-121	X	X		X
MW-122	X			X
RW-123	X			X
MW-124	X			X
MW-126	X			X
RW-127	X			X
MW-128	X			X
RW-129	X			X
MW-130	X			X
MW-132	X			X
RW-133	X			X
MW-134	X			X

**Table 1  
Annual Monitoring Plan**

<b>Sample Location</b>	<b>VOCs (8260)</b>	<b>1,4-Dioxane</b>	<b>DowTherm A™ (1)</b>	<b>Natural Attenuation Parameters</b>
MW-136	X			X
RW-137	X			X
MW-138	X			X
RW-139	X			X
<b>Surface Water</b>				
SW-01	X	X	X	
SW-02	X	X	X	
SW-03	X	X	X	
SW-04	X	X	X	
SW-05	X	X	X	
SW-06	X	X	X	
SW-07	X	X	X	
SW-08	X	X	X	
SW-09	X	X	X	
SW-10	X	X	X	
SW-11	X	X	X	
SW-12	X	X	X	
SW-13	X	X		
SW-14	X	X		

NA Parameters - Temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), ortho phosphate, sulfate, sulfide, alkalinity, chloride, nitrate, nitrite, dissolved ferrous iron, dissolved manganese, and total organic carbon (TOC).

(1) - DowTherm A™ components are 1,1-biphenyl and Diphenyl Ether

**Table 2**  
**December Chloroform Monitoring Plan**

<b>Sample Location</b>	<b>VOCs</b>	<b>NA Params</b>
<b>Groundwater</b>		
EW-31	X	X
EW-37	X	X
EW-41	X	X
EW-49	X	X
EW-52	X	X
EW-53	X	X
MW-99	X	X
MW-103	X	X
MW-105	X	X
MW-106	X	X
MW-107	X	X
MW-109	X	X
RW-29	X	X
RW-48	X	X
RW-65	X	X
RW-108	X	X
RW-110	X	X
RW-111	X	X
MW-112	X	X
RW-113	X	X
MW-114	X	X
RW-115	X	X
MW-116	X	X
MW-118	X	X
RW-119	X	X
MW-120	X	X
RW-121	X	X
MW-122	X	X
RW-123	X	X
MW-124	X	X
MW-126	X	X
RW-127	X	X
MW-128	X	X
RW-129	X	X
MW-130	X	X
MW-132	X	X
RW-133	X	X
MW-134	X	X
MW-136	X	X
RW-137	X	X
MW-138	X	X
RW-139	X	X
<b>Surface Water</b>		
SW-12	X	
SW-13	X	
SW-14	X	

NA Params - Natural Attenuation Parameters:

Temperature, pH, dissolved oxygen (DO), ORP, alkalinity, chloride, dissolved ferrous iron, manganese, and total organic carbon (TOC)

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	EW-01 6/17/2014	EW-02 6/12/2014	EW-07 6/13/2014	EW-14 6/17/2014	EW-15 6/17/2014	EW-16 6/17/2014	EW-17 6/13/2014	EW-20 6/17/2014	EW-22 6/17/2014	EW-26 6/18/2014	EW-27 6/17/2014	EW-28 6/12/2014	EW-30 6/12/2014
<b>Volatile Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	NA	NA	NA	0.0254	NA	NA	NA	<0.025	NA	NA	NA	NA	<0.025
2-butanone	mg/L	NA	NA	NA	<0.01	NA	NA	NA	<0.01	NA	NA	NA	NA	<0.01
chloroform	mg/L	NA	NA	NA	0.0076	NA	NA	NA	<0.005	NA	NA	NA	NA	0.0925
1,1-dichloroethane	mg/L	NA	NA	NA	0.0714	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
1,1-dichloroethene	mg/L	NA	NA	NA	0.0135	NA	NA	NA	0.0162	NA	NA	NA	NA	<0.005
cis-1,2-dichloroethene	mg/L	NA	NA	NA	0.143	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
trans-1,2-dichloroethene	mg/L	NA	NA	NA	0.022	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
1,4-dioxane	mg/L	0.0324	0.19	0.114	0.0357	0.0365	1.63	0.031	0.016	0.604	0.0398	0.0466	0.0858	NA
methylene chloride	mg/L	NA	NA	NA	<0.005	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
1,1,2,2-tetrachloroethane	mg/L	NA	NA	NA	0.334	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
tetrachloroethene	mg/L	NA	NA	NA	0.0054	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
trichloroethene	mg/L	NA	NA	NA	0.235	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
vinyl chloride	mg/L	NA	NA	NA	0.0211	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	<0.01	0.141	NA	0.0491	NA	<0.01	<0.01	NA	<0.01	<0.01	<0.01	0.0264	NA
diphenyl ether	mg/L	0.0131	0.91	NA	0.653	NA	0.0446	<0.01	NA	R**	<0.01	R**	0.167	NA
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56.2
chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.6
dissolved oxygen	mg/L	0.73	0.76	0.51	1.2	0.58	0.39	0.34	0.45	0.44	0.44	2.82	0.54	0.43
ferrous Fe	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4
groundwater elevation	feet MSL	676	666.52	641.29	680.55	652.62	646.55	679.51	685.25	648.73	644.97	665.07	666.43	678.18
manganese (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.74
nitrate nitrogen	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
ORP	mV	55	-13	-60.7	74.2	-80	-41.9	-129.7	16.8	-45.5	-79.6	79.4	-31.5	-49.2
orthophosphate phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.05
pH	su	5.71	6.14	7.2	4.81	6.65	6.07	7.45	5.73	6.09	6.28	5.35	6.57	6.44
specific conductance	umhos/cm	176	0.132	0.12	161	244	811.9	143	156	781.7	274	0.083	162	0.18
sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
temperature	degrees C	17.42	18.82	16.47	19.15	16.5	18.04	21.4	17.31	17.82	16.96	19.47	20.42	21.57
total organic carbon	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1
turbidity	NTU	21.8	3.08	8.39	5.24	121.8	35.4	8.6	35.8	40	5.08	60	9.98	8.31

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	EW-31 6/12/2014	EW-32 6/18/2014	EW-36 6/12/2014	EW-37 6/12/2014	EW-38 6/13/2014	EW-39 6/12/2014	EW-40 6/17/2014	EW-41 6/12/2014	EW-43 6/12/2014	EW-47 6/13/2014	EW-49 6/11/2014	EW-50 6/11/2014	EW-52 6/12/2014
<b>Volatiles Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	NA	NA	<0.025	<0.025	<0.025	<0.025	5.6	<0.025	NA	<0.025	<0.025	<0.025	<0.025
2-butanone	mg/L	NA	NA	<0.01	<0.01	<0.01	<0.01	1.84	<0.01	NA	<0.01	<0.01	<0.01	<0.01
chloroform	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	0.0185	0.021	NA	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethane	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethene	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	NA	NA	0.0183	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	0.0096	<0.005	0.0569
trans-1,2-dichloroethene	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	0.0125	1.06	NA	<0.002	0.0397	NA	NA	<0.002	0.067	0.0242	0.0042	NA	0.0022
methylene chloride	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
vinyl chloride	mg/L	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	NA	<0.01	NA	NA	NA	NA	NA	NA	<0.01	NA	<0.01	NA	R**
diphenyl ether	mg/L	NA	0.0504	NA	NA	NA	NA	NA	NA	R**	NA	<0.01	NA	R**
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	114	NA	36.7	89.9	NA	705	11400	22.6	NA	NA	103	588	44.1
chloride	mg/L	7.7	NA	2.8	10.5	NA	12.9	8.6	2.9	NA	NA	1.8	3.1	2.9
dissolved oxygen	mg/L	0.24	0.7	0.34	0.53	0.44	0.68	0.67	0.34	0.65	5.78	0.43	0.44	0.39
ferrous Fe	mg/L	0.8	NA	4.4	1.2	NA	1	7	4.2	NA	NA	0.2	1	3.6
groundwater elevation	feet MSL	672.5	651.25	726.69	723.61	670.73	710.99	672.15	672.43	673.37	671.1	729	727.32	724.19
manganese (dissolved)	mg/L	1.54	NA	0.147	6.43	NA	1.25	0.28	0.445	NA	NA	0.0512	0.0098	0.21
nitrate nitrogen	mg/L	<0.1	NA	0.1	<0.1	NA	<0.1	3.2	0.14	NA	NA	<0.1	<0.1	<0.1
ORP	mV	-104	93.7	-41.8	136.4	-46	-58.8	-98.2	102.5	-94.1	193.1	-79.6	22.3	-62.9
orthophosphate phosphorus	mg/L	0.073	NA	0.05	NA	NA	0.2	0.17	0.054	NA	NA	<0.1	0.91	<0.1
pH	su	7.09	5.26	6.4	5.53	7.1	6.31	7.3	5.64	6.83	5.24	7.78	8.05	6.33
specific conductance	umhos/cm	0.254	239	0.129	0.123	0.125	1307	22611	0.072	0.22	0.065	0.23	1.082	0.176
sulfate	mg/L	<1	NA	<1	<1	NA	<1	5.3	<1	NA	NA	8.9	3.6	<1
temperature	degrees C	19.92	19.79	19.9	21.1	16.72	21.39	19.11	20.02	19.2	16.5	20.76	22.64	19.3
total organic carbon	mg/L	<1	NA	<1	43.3	NA	5.8	8570	<1	NA	NA	1.2	6.2	<1
turbidity	NTU	9.42	6.41	129	41.4	17.2	17.1	11.1	80.2	8.06	22.3	1.31	21	94.1

**Notes:**

- NA – Not Analyzed
- degrees C – degrees 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
- \* – 6/10/14 result for 1,4-dioxane = <0.002; resample on 7/11/14 tested by Method 522
- R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	EW-53 6/12/2014	EW-53 Dup 6/12/2014	MW-03 6/13/2014	MW-05 6/11/2014	MW-07 6/11/2014	MW-09A 6/10/2014	MW-26 6/13/2014	MW-39 6/10/2014	MW-40R 6/13/2014	MW-41 6/10/2014	MW-42 6/10/2014	MW-45 6/12/2014	MW-46 6/12/2014
<b>Volatile Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	<0.025	<0.025	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	<0.025	<0.025
2-butanone	mg/L	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	<0.01	<0.01
chloroform	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1-dichloroethane	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1-dichloroethene	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	0.0137
cis-1,2-dichloroethene	mg/L	0.0057	0.0059	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
trans-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,4-dioxane	mg/L	<0.002	0.0027	0.0046	1.35	0.0813	0.0515	0.102	0.554	1.32	0.0124	0.0163	NA	NA
methylene chloride	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1,1,2-tetrachloroethane	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.005	0.009	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
trichloroethene	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
vinyl chloride	mg/L	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	<0.01	<0.01	NA	0.0239	1.07	NA	NA	1.14	0.553	NA	<0.01	NA	NA
diphenyl ether	mg/L	<0.01	<0.01	NA	0.142	4.16	NA	NA	3.71	1.71	NA	0.0249	NA	NA
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	66.3	64.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.2	6.9
chloride	mg/L	9.5	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3	14.3
dissolved oxygen	mg/L	0.65	NA	0.65	0.75	0.84	3.92	2.15	0.4	1.19	1.29	3.43	6.38	5.69
ferrous Fe	mg/L	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0
groundwater elevation	feet MSL	699.44	NA	752.08	750.07	745.46	752.49	680.94	741.75	726.7	750.22	741.13	711.29	695.1
manganese (dissolved)	mg/L	1.36	1.35	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0115	0.0561
nitrate nitrogen	mg/L	<0.1	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	1.8
ORP	mV	58.1	NA	175.4	204.7	-23.8	193.2	237.8	-78.9	104.9	-61.4	44.8	154.4	264.8
orthophosphate phosphorus	mg/L	0.053	0.091	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.068	0.081
pH	su	5.05	NA	3.73	4.93	6.34	4.54	5.31	6.46	4.66	6.67	6.63	5.06	5.15
specific conductance	umhos/cm	245	NA	43	0.08	0.217	56	60	0.156	128	0.158	0.079	48	163
sulfate	mg/L	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	27.4
temperature	degrees C	19.75	NA	21.04	22.8	22.61	24	21.3	24.86	19.62	23.69	22.19	25.53	19.51
total organic carbon	mg/L	14.7	15.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7	<1
turbidity	NTU	48.3	NA	15.4	2.08	1.59	3.98	3.34	5.56	9.17	15.6	115	9.64	2.13

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	MW-53 6/11/2014	MW-57 6/13/2014	MW-81 6/10/2014	MW-95 6/17/2014	MW-96 6/17/2014	MW-97 6/17/2014	MW-98 6/12/2014	MW-99 6/12/2014	MW-102 6/10/2014	MW-103 6/12/2014	MW-105 6/11/2014	MW-106 6/11/2014	MW-107 6/17/2014
<b>Volatile Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	NA	NA	NA	NA	NA	NA	<0.025	<0.025	NA	<0.025	<0.025	<0.025	<0.025
2-butanone	mg/L	NA	NA	NA	NA	NA	NA	<0.01	<0.01	NA	<0.01	<0.01	<0.01	<0.01
chloroform	mg/L	NA	NA	NA	NA	NA	NA	<0.005	0.0066	NA	<0.005	0.129	0.0215	0.186
1,1-dichloroethane	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	0.162	0.108	NA	<0.005	0.0105	<0.005	<0.005
trans-1,2-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	8.94	0.0128	0.0834	0.0000404	0.0253	0.0261	0.0423	0.0022	0.113	<0.002	0.0071	<0.002	<0.002
methylene chloride	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	NA	NA	NA	NA	NA	NA	0.0296	0.127	NA	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	NA	NA	NA	NA	NA	NA	0.0149	0.0262	NA	<0.005	<0.005	<0.005	<0.005
vinyl chloride	mg/L	NA	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	0.144	NA	1.07	NA	<0.01	<0.01	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
diphenyl ether	mg/L	0.543	NA	4.11	NA	0.0327	R**	NA	<0.01	0.0216	<0.01	<0.01	<0.01	R**
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	<5	NA	<5	9.9	<5	25.8
chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	1.4	NA	2.2	6.9	4.1	1.9
dissolved oxygen	mg/L	1.08	5.99	0.64	NA	5.27	9.42	2.49	2.37	0.7	6.61	8.58	7.96	6.44
ferrous Fe	mg/L	NA	NA	NA	NA	NA	NA	NA	0	NA	0	0	0	0
groundwater elevation	feet MSL	761.18	733.41	762.08	NA	688.68	689.34	734.29	732.93	746.4	693.15	718.38	719.19	689.71
manganese (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.0372	NA	0.0413	<0.005	0.011	0.0087
nitrate nitrogen	mg/L	NA	NA	NA	NA	NA	NA	NA	0.92	NA	2.4	1.7	0.83	1.2
ORP	mV	127.5	283.2	-23.1	NA	262.3	317	172.2	231.3	210.8	312.5	185.3	202.7	197.5
orthophosphate phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	<0.1	<0.1	<0.1
pH	su	4.88	4.97	6.21	NA	3.91	2.77	5.71	5.14	4.87	4.86	5.48	4.92	5.48
specific conductance	umhos/cm	2440	28	0.124	NA	0.042	0.034	56	31	0.164	49	10	0.032	76
sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA	<1	<1	<1	<1
temperature	degrees C	23.8	17.82	25.88	NA	16.93	17.93	19.74	21.12	25.19	18.23	21.21	22.4	18.69
total organic carbon	mg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA	<1	<1	<1	<1
turbidity	NTU	8.41	9.78	8.72	NA	3.56	1.68	7.2	6.9	5.41	8.9	5.45	2.3	9.67

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.



**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	MW-109 6/11/2014	MW-112 6/10/2014	MW-114 6/10/2014	MW-114 Dup 6/10/2014	MW-116 6/10/2014	MW-118 6/11/2014	MW-120 6/11/2014	MW-122 6/9/2014	MW-124 6/9/2014	MW-126 6/9/2014	MW-128 6/9/2014	MW-130 6/12/2014	MW-132 6/11/2014
<b>Volatile Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	<0.025	<0.25	<0.25	<0.025	<0.025	<0.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-butanone	mg/L	<0.01	<0.1	<0.1	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
chloroform	mg/L	0.722	1.47	1.28	1.22	0.919	0.507	0.193	0.0236	0.55	1.7	0.0052	0.0424	<0.005
1,1-dichloroethane	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethene	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	0.0157	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-dichloroethene	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	0.0046	NA	NA	NA	NA	NA	NA
methylene chloride	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
vinyl chloride	mg/L	<0.005	<0.05	<0.05	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
diphenyl ether	mg/L	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	20.4	20.3	11.8	12.1	23.2	10.5	11	21.6	<5	5.6	<5	9.2	11.3
chloride	mg/L	2.8	2.2	6.8	6.8	4.2	2.6	2.5	3.4	7.1	12.8	<1	<1	4.6
dissolved oxygen	mg/L	5.36	4.8	6.69	NA	2.97	6.33	4.02	3.69	5.59	5.98	9.97	3.93	0.58
ferrous Fe	mg/L	0	0	0	NA	0	0	0	NA	0.6	0	0	0	0
groundwater elevation	feet MSL	677.43	686.79	683.08	NA	678.94	674.36	664.82	726.663	725.55	717.95	717.86	699.15	697.93
manganese (dissolved)	mg/L	<0.005	<0.005	0.0072	0.0073	0.124	0.0271	0.0372	0.569	0.0231	0.124	0.0167	0.0516	0.11
nitrate nitrogen	mg/L	1.2	1.8	1.4	1.4	0.75	0.8	0.46	1.3	3.2	2.8	2	0.19	<0.1
ORP	mV	194.5	158.1	188.1	NA	117.2	195	182.6	75	201.2	215.4	293.1	217.4	295.3
orthophosphate phosphorus	mg/L	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1
pH	su	4.05	5.85	5.74	NA	4.85	4.1	3.76	5.88	5.02	5.19	3.07	4.37	5.16
specific conductance	umhos/cm	64	76	72	NA	79	53	40	0.085	0.069	0.088	36	30	45
sulfate	mg/L	<1	<1	<1	<1	1.8	<1	<1	<1	<1	<1	<1	<1	<1
temperature	degrees C	19.41	18.09	17.63	NA	17.8	17.82	19.24	24.53	24.2	19.83	21.46	20.69	21.11
total organic carbon	mg/L	<1	<1	<1	<1	<1	<1	2.1	<1	<1	<1	<1	<1	<1
turbidity	NTU	146.2	1.9	6.9	NA	2.81	164.5	107.6	1.24	5.96	1.79	6.62	66.9	8.2

**Notes:**

NA – Not Analyzed

degrees C – degrees 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

\* – 6/10/14 result for 1,4-dioxane = <0.002;

resample on 7/11/14 tested by Method 522

R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	MW-134 6/11/2014	MW-136 6/9/2014	MW-136 Dup 6/9/2014	MW-138 6/9/2014	RW-08 6/10/2014	RW-24 6/18/2014	RW-29 6/12/2014	RW-29 Dup 6/12/2014	RW-43 6/13/2014	RW-47 6/12/2014	RW-48 6/12/2014	RW-56 6/13/2014	RW-65 6/12/2014
<b>Volatiles Organics &amp; 1,4-Dioxane</b>														
acetone	mg/L	<1	<0.025	<0.025	<0.025	NA	NA	<0.025	<0.025	NA	<0.025	<0.025	NA	<0.025
2-butanone	mg/L	<0.4	<0.01	<0.01	<0.01	NA	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	<0.01
chloroform	mg/L	6.31	<0.005	<0.005	0.169	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
1,1-dichloroethane	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
1,1-dichloroethene	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
cis-1,2-dichloroethene	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
trans-1,2-dichloroethene	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
1,4-dioxane	mg/L	NA	NA	NA	NA	0.105	0.343	<0.002	<0.002	1.26	NA	<0.002	0.0818	<0.002
methylene chloride	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
1,1,2,2-tetrachloroethane	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
tetrachloroethene	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
trichloroethene	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
vinyl chloride	mg/L	<0.2	<0.005	<0.005	<0.005	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005
<b>DOWTHERM™ A</b>														
1,1-biphenyl	mg/L	NA	NA	NA	NA	0.321	<0.01	<0.01	<0.01	<0.01	NA	<0.01	NA	<0.01
diphenyl ether	mg/L	NA	NA	NA	NA	1.53	0.0351	<0.01	<0.01	<0.01	NA	<0.01	NA	<0.01
<b>Field &amp; Natural Attenuation Parameters</b>														
alkalinity	mg/L	7.4	11.4	11.6	8.2	NA	NA	63.1	63.4	NA	510	105	NA	98.8
chloride	mg/L	1.9	11.7	11.7	2.3	NA	NA	1.2	1.2	NA	2.6	1.8	NA	12
dissolved oxygen	mg/L	1.87	5.07	NA	6.77	0.77	0.68	0.7	NA	0.27	0.49	0.44	2.89	0.55
ferrous Fe	mg/L	0	0	NA	0	NA	NA	0	NA	NA	0.9	1.6	NA	0.2
groundwater elevation	feet MSL	689.33	688.39	NA	676	747.28	663.08	775.1	NA	642.82	691.57	710.86	733.09	687.45
manganese (dissolved)	mg/L	0.0402	0.0738	0.0703	<0.005	NA	NA	0.0112	0.0107	NA	0.145	0.836	NA	1.43
nitrate nitrogen	mg/L	2.7	0.37	0.37	0.82	NA	NA	<0.1	<0.1	NA	<0.1	<0.1	NA	<0.1
ORP	mV	201.6	150	NA	224.1	-82.1	-24.7	40.9	NA	-57.1	-176.4	-44.7	117.4	-97.8
orthophosphate phosphorus	mg/L	<0.1	<0.1	<0.1	<0.1	NA	NA	0.15	0.16	NA	0.15	NA	NA	0.14
pH	su	5.4	5.59	NA	4.17	7.76	5.6	6.51	NA	9.22	8.16	5.88	6.38	7.56
specific conductance	umhos/cm	52	86	NA	40	0.265	599	153	NA	261	919	240	89	252
sulfate	mg/L	<1	<1	<1	<1	NA	NA	10.3	10.3	NA	<1	<1	NA	8.3
temperature	degrees C	20.19	23.48	NA	18.44	24.51	17.7	17.81	NA	15.69	17.52	19.97	20.7	17.4
total organic carbon	mg/L	<1	<1	<1	<1	NA	NA	<1	<1	NA	1.3	<1	NA	<1
turbidity	NTU	6.2	0.8	NA	5.86	3.18	6.94	2.86	NA	8.2	7.1	275.4	5.86	1.8

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	RW-79 6/10/2014	RW-80 6/11/2014	RW-82 6/11/2014	RW-82 Dup 6/11/2014	RW-83A 6/10/2014	RW-84 6/10/2014	RW-85 6/10/2014	RW-85 Dup 6/10/2014	RW-86 6/11/2014	RW-87 6/10/2014	RW-91 6/11/2014	RW-92 6/11/2014	RW-108 6/11/2014	RW-110 6/10/2014
<b>Volatiles Organics &amp; 1,4-Dioxane</b>															
acetone	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.025	<0.025
2-butanone	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.01	<0.01
chloroform	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1-dichloroethane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
trans-1,2-dichloroethene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,4-dioxane	mg/L	0.0055	6.76	0.589	0.496	0.0044	0.0203	0.0215	0.0223	7.28	0.0035	3.23	3.46	<0.002	0.0049
methylene chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
tetrachloroethene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
trichloroethene	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
vinyl chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005
<b>DOWTHERM™ A</b>															
1,1-biphenyl	mg/L	<0.01	0.042	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.353	<0.01	0.0891	0.0211	<0.01	NA
diphenyl ether	mg/L	<0.01	0.312	0.439	0.257	<0.01	<0.01	<0.01	<0.01	1.4	<0.01	0.288	1.76	<0.01	NA
<b>Field &amp; Natural Attenuation Parameters</b>															
alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	170	73.7
chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	2.7
dissolved oxygen	mg/L	5.14	0.45	0.39	NA	0.73	1.07	0.77	NA	0.24	1.21	0.49	0.54	0.58	1.25
ferrous Fe	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0
groundwater elevation	feet MSL	758.32	764.52	757.21	NA	764.23	761.55	759.03	NA	758.46	764.27	756.87	758.33	676.34	683.91
manganese (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.167	0.0061
nitrate nitrogen	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	1.3
ORP	mV	141.9	82.1	-6.1	NA	178.4	5	102	NA	-115.3	57.5	-35.7	-58	-43.8	31.9
orthophosphate phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11	<0.1
pH	su	4.66	4.33	5.92	NA	5.56	5.69	4.62	NA	6.73	5.81	5.97	6.28	6.77	7.29
specific conductance	umhos/cm	85	0.769	0.366	NA	0.131	0.126	205	NA	1251	266	271	0.962	321	208
sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	9.7
temperature	degrees C	24.94	35.87	25.52	NA	29.03	28.73	24.21	NA	32.49	27.85	22.79	23.98	18.12	18.74
total organic carbon	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	<1
turbidity	NTU	8.4	3.42	2.18	NA	1.68	1.2	53.9	NA	7.57	4.67	2.4	3.66	16.4	17.2

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.

**Table 3**  
**Summary of Groundwater Analytical Results**  
**June 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	RW-111 6/10/2014	RW-113 6/10/2014	RW-115 6/10/2014	RW-119 6/12/2014	RW-121 6/11/2014	RW-123 6/9/2014	RW-127 6/9/2014	RW-129 6/11/2014	RW-133 6/10/2014	RW-137 6/9/2014	RW-139 6/9/2014
<b>Volatile Organics &amp; 1,4-Dioxane</b>												
acetone	mg/L	<0.025	<0.025	<0.25	0.24	<0.025	0.0259	<0.025	<0.025	<0.025	<0.025	<0.025
2-butanone	mg/L	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
chloroform	mg/L	<0.005	<0.005	2.5	0.17	0.114	0.0101	1.09	0.0078	0.0645	0.248	0.899
1,1-dichloroethane	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethene	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	0.0000998*	<0.002	<0.002	0.0339	0.0033	NA	NA	NA	NA	NA	NA
methylene chloride	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	0.0159	<0.005	<0.005	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
vinyl chloride	mg/L	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<b>DOWTHERM™ A</b>												
1,1-biphenyl	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
diphenyl ether	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field &amp; Natural Attenuation Parameters</b>												
alkalinity	mg/L	65.4	68.3	47.2	68.5	67.9	87	78.8	223	103	57.1	52.3
chloride	mg/L	1.3	1.6	5.8	2.4	2.2	2.3	10.6	12.9	4.1	5.5	3.5
dissolved oxygen	mg/L	0.72	0.54	3.9	4.49	0.95	1.5	0.89	0.45	0.87	1.43	0.94
ferrous Fe	mg/L	0	0	0	0	0	0.2	0	0	0	0.2	0
groundwater elevation	feet MSL	701.14	683.6	681.46	672.44	664.45	719.73	715.69	709.56	684.77	687.55	672.62
manganese (dissolved)	mg/L	0.0341	0.0401	0.0174	<0.005	0.007	0.0757	0.111	0.189	0.183	0.0221	0.0301
nitrate nitrogen	mg/L	<0.1	<0.1	1.8	0.45	0.17	<0.1	<0.1	<0.1	0.76	0.26	0.66
ORP	mV	-2.9	-97.4	55.9	119.4	117.9	-114.7	11.4	-34.1	91.3	64.8	207.7
orthophosphate phosphorus	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH	su	5.87	7.89	6.87	5.77	4.97	7.25	7.02	6.29	6.65	6.2	3.77
specific conductance	umhos/cm	162	162	149	176	146	0.193	0.217	472	225	141	129
sulfate	mg/L	10.5	8.5	2.8	7.2	3.6	4	9.6	6.3	1.8	<1	<1
temperature	degrees C	17.83	18.73	17.46	19.08	18.82	29.16	20.66	21.44	19.43	19.44	17.71
total organic carbon	mg/L	<1	<1	<1	1.3	1.3	4.8	1.2	4.9	<1	<1	<1
turbidity	NTU	3.11	1.03	4.8	308.9	8.67	4.61	2.16	33.9	15.6	1.2	23.1

**Notes:**

NA – Not Analyzed  
degrees C – degrees 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  
\* – 6/10/14 result for 1,4-dioxane = <0.002;  
resample on 7/11/14 tested by Method 522  
R\*\* – Results not reportable.

**Table 4**  
**Summary of Surface Water Analytical Results**  
**June 2013**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	SW-01 6/11/2014	SW-02 6/11/2014	SW-03 6/11/2014	SW-04 6/11/2014	SW-05 6/11/2014	SW-06 6/11/2014	SW-07 6/11/2014	SW-08 6/11/2014	SW-09 6/11/2014	SW-10 6/11/2014	SW-11 6/11/2014	SW-12 6/10/2014	SW-13 6/11/2014	SW-14 6/11/2014
chloroform	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0127	0.0125	0.0064
1,4-dioxane	mg/L	<0.002	<0.002	<0.002	0.0021	0.0119	0.0022	<0.002	<0.002	0.0024	0.017	<0.002	<0.002	<0.002	<0.002
dissolved oxygen	mg/L	6.98	6.98	7.11	7.69	6.21	6.99	7.69	6.41	6.71	6.69	7.11	8	8.14	8.77
ORP	mV	-58.3	-50.8	-48.2	-32.6	-43.1	-49.3	-49.6	-55.8	-69.8	-37.6	-69.2	94.7	90.7	93.9
pH	su	7.14	7.12	6.98	7.31	7.11	6.91	7.09	7.71	7.86	8.19	6.78	7.02	5.95	5.81
specific conductance	umhos/cm	74	69	69	86	69	58	63	53	52	533	108	159	96	95
turbidity	NTU	12.1	9.2	8.3	6.4	17.4	12.2	12.1	8.4	10.1	9.4	12.6	4.2	5.52	2.97
temperature	degrees C	21.4	21.8	21.1	21	21.7	22.1	22.2	23.2	21.6	29.3	21.1	22.1	22	22.1

NA - Not Analyzed  
degrees C - degrees Celsius  
mg/L - milligrams per liter  
mV - millivolts  
NTU = nephelometric turbidity units  
su - standard units  
umhos/cm - micromhos/cm

**Table 5**  
**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
<b>Volatile Organics and 1,4-Dioxane</b>										
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
<b>Semivolatile Organics</b>										
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
<b>Field and Natural Attenuation Parameters</b>										
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 - degrees 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 5**  
**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
<b>Volatile Organics and 1,4-Dioxane</b>										
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
<b>Semivolatile Organics</b>										
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
<b>Field and Natural Attenuation Parameters</b>										
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 - degrees Celsius  
feet MSL - feet above mean sea level  
mg/L - milligrams per liter  
mV - millivolts  
NTU = nephelometric turbidity units  
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umhos/cm - micromhos/cm

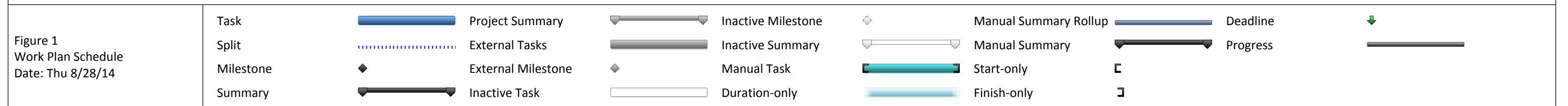
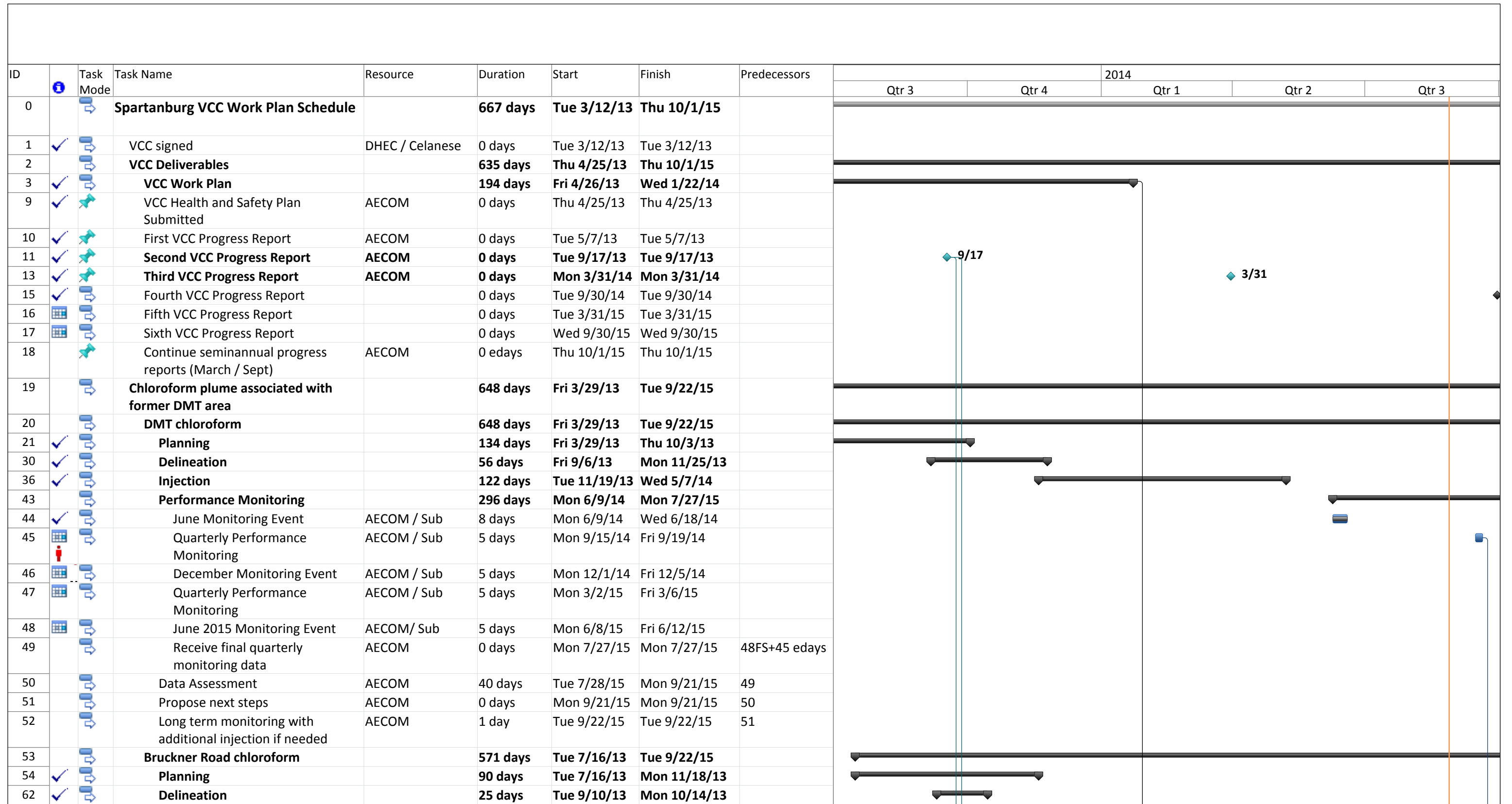
**Table 5**  
**Summary of Baseline Performance Monitoring Results**  
**April 2014**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

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
<b>Volatile Organics and 1,4-Dioxane</b>										
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
<b>Semivolatile Organics</b>										
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
<b>Field and Natural Attenuation Parameters</b>										
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 - degrees Celsius  
feet MSL - feet above mean sea level  
mg/L - milligrams per liter  
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NTU = nephelometric turbidity units  
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## Figures



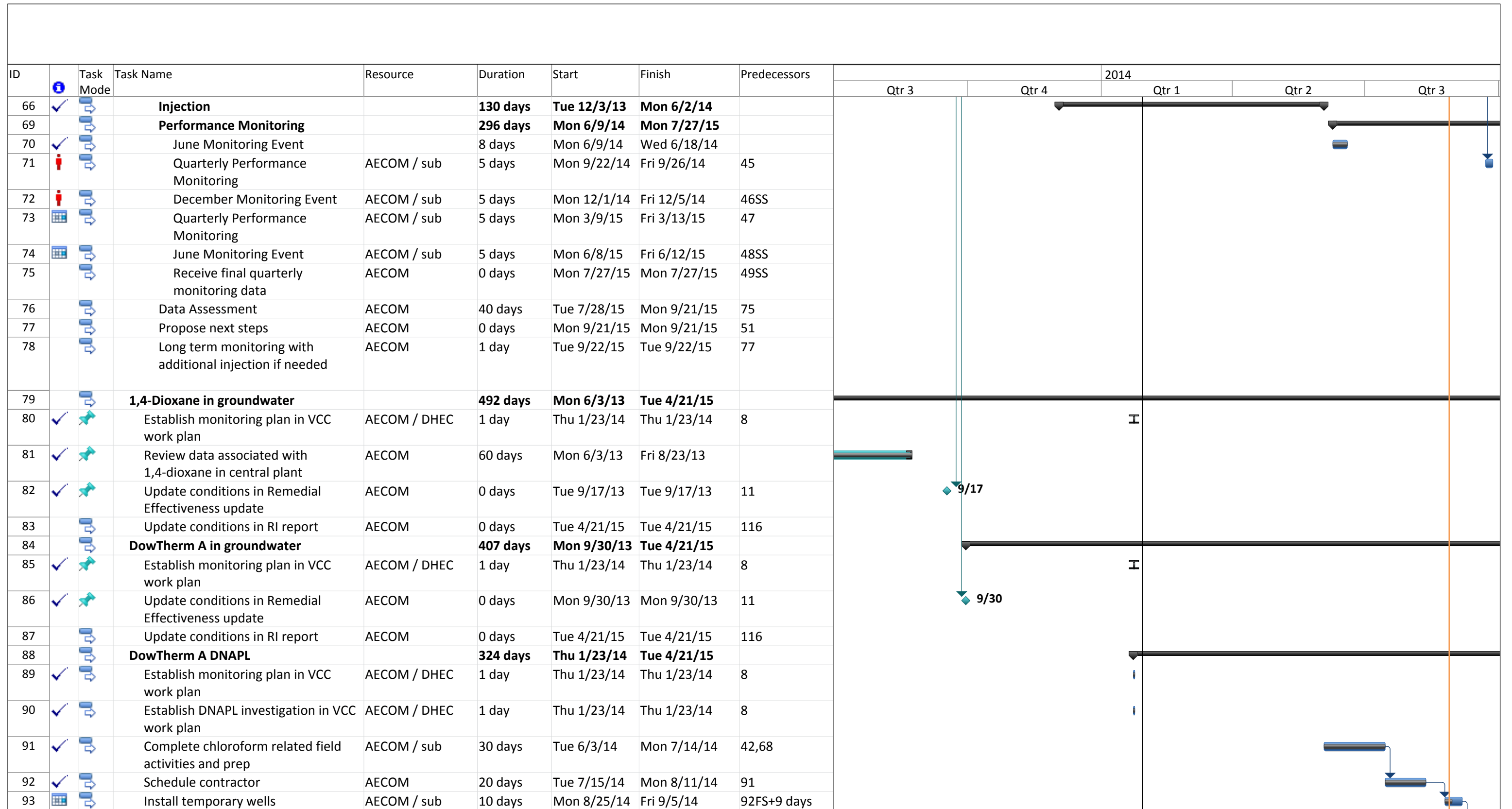
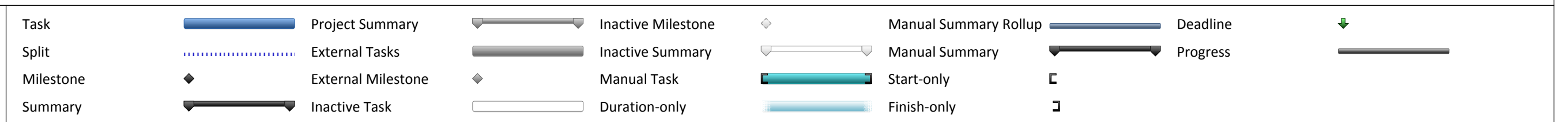


Figure 1  
Work Plan Schedule  
Date: Thu 8/28/14



ID	Task Mode	Task Name	Resource	Duration	Start	Finish	Predecessors	2014				
								Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
94		Complete DowTherm A field investigation	AECOM / sub	45 days	Mon 9/8/14	Fri 11/7/14	93					
95		Review results	AECOM	30 days	Mon 11/10/14	Fri 12/19/14	94					
96		Submit recommendations to DHEC in RI Report	AECOM	1 day	Tue 4/21/15	Tue 4/21/15	120,95					
97	✓	<b>Other chlorinated solvents in groundwater</b>		<b>1 day</b>	<b>Thu 1/23/14</b>	<b>Thu 1/23/14</b>						
100		<b>Cherokee Creek sediments and ecological habitat</b>		<b>324 days</b>	<b>Thu 1/23/14</b>	<b>Tue 4/21/15</b>						
101	✓	submit plan forward in VCC work plan	AECOM	1 day	Thu 1/23/14	Thu 1/23/14	3					
102		review recommendations and update in RI	AECOM	1 day	Tue 4/21/15	Tue 4/21/15	120					
103		<b>Site wide activities</b>		<b>482 days</b>	<b>Mon 6/17/13</b>	<b>Tue 4/21/15</b>						
104	✓	<b>June 2013 Annual Sampling</b>		<b>28 days</b>	<b>Mon 6/17/13</b>	<b>Wed 7/24/13</b>						
108	✓	<b>December 2013 Monitoring</b>		<b>28 days</b>	<b>Mon 12/2/13</b>	<b>Wed 1/8/14</b>						
112	✓	<b>June 2014 Annual Sampling</b>		<b>30 days</b>	<b>Mon 6/9/14</b>	<b>Fri 7/18/14</b>						
116		<b>Remedial Investigation Report</b>		<b>87 days</b>	<b>Mon 12/22/14</b>	<b>Tue 4/21/15</b>						
117		Complete work plan investigations	AECOM / DHEC / subs	1 day	Mon 12/22/14	Mon 12/22/14	115,95					
118		draft RI	AECOM	50 days	Tue 12/23/14	Mon 3/2/15	117					
119		review RI	Celanese	25 days	Tue 3/3/15	Mon 4/6/15	118					
120		complete RI	AECOM	10 days	Tue 4/7/15	Mon 4/20/15	119					
121		Submit RI	AECOM	1 day	Tue 4/21/15	Tue 4/21/15	120					
122		Continue Monitoring as established in Work Plan	AECOM / EFM	1 eday	Fri 7/18/14	Sat 7/19/14	112					

Figure 1  
Work Plan Schedule  
Date: Thu 8/28/14

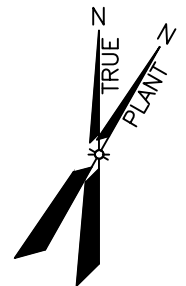
Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			



**LEGEND**

- MONITORING WELL LOCATION
- ☒ SURFACE WATER SAMPLE LOCATION

NOTE: LOCATION OF MW-40R IS APPROXIMATE - SURVEY PENDING.



**FIGURE 2**  
SAMPLE LOCATION MAP  
JUNE 2014

AURIGA SPARTANBURG FACILITY  
SPARTANBURG, SOUTH CAROLINA

