

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

March 6, 2014

Dear Ms. Walker,

**Subject: VCC Progress Report #3  
Auriga, Spartanburg Facility  
BoW Site ID# 00225, VCC 13-5841-RP  
AECOM Project No. 60280417**

Please find enclosed the above referenced report. As requested by you, 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

**RECEIVED**

MAR 07 2014

SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION



Environment

Prepared for:  
CNA Holdings LLC  
Dallas, TX

Prepared by:  
AECOM  
Atlanta, GA  
60280417  
March 2014

# Auriga Spartanburg Voluntary Cleanup Contract 13-5841-RP Progress Report #3

March 2014





Environment

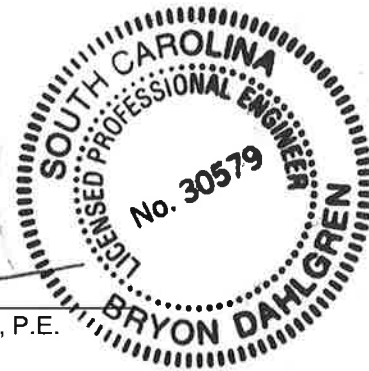
Prepared for:  
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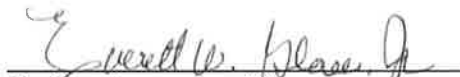
Prepared by:  
AECOM  
Atlanta, GA  
60280417  
March 2014

# Auriga Spartanburg Voluntary Cleanup Contract 13-5841-RP Progress Report #3

March 2014

  
Prepared By Bryon Dahlgren, P.E.  
Project Manager



  
Reviewed By Everett W. Glover, Jr. P.E.  
Program Director

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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 (DHEC) 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 September 1, 2013 through February 28, 2014.

As requested during a conversation with Addie Walker on January 21, 2014, the organization of this progress report has been modified to present sections grouped by operable unit. The chloroform plume in both the former DMT area and the Bruckner Road area are presented as a single operable unit.

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 June event is presented in Table 1. Table 1 of this report has been expanded from the VCC monitoring plan to include the additional performance monitoring wells. Installation of these wells is expected to be complete prior to the June 2014 event. A smaller event focused on the chloroform plume area is scheduled for completion in December of each year and presented in Table 2.

## 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 on-going 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

The semiannual groundwater monitoring event associated with the chloroform plume was completed in early December. Samples were collected between December 2 and December 4. Three surface water locations were also sampled along Bruckner Creek. The monitoring locations are presented on Figure 2. The complete laboratory analytical results are attached to this progress report. A summary of groundwater results is presented on Table 3. A summary of surface water results is presented on Table 4.

Chloroform results were consistent with recent historic data. The results are presented on Figure 2. Chloroform remediation has been shown to be effective in areas of prior treatment. Additional areas for further remediation have been identified in recent studies. The December 2013 results are consistent with these established conclusions.

Direct Push Technology (DPT) investigations to complete delineation were approved by DHEC in September 2013. The temporary monitoring wells were installed and sampled in October 2013. The results were submitted to DHEC on November 22, 2013. Based on the results of the DPT work the chloroform delineation was determined to be complete.

Installation of performance monitoring wells began in December. Nine saprolite wells were installed in the former DMT vicinity. Five saprolite wells were installed on the 600 Bruckner Road property. Bedrock wells are also being installed paired with each of the saprolite wells. Installation of bedrock wells includes two packer test locations for vertical delineation of chloroform. The bedrock well installation activities began in early January and are expected to be completed in early March, during the next reporting period.

A lactate injection permit application was submitted to DHEC Underground Injection Control (UIC) on February 21, 2014.

### 2.2 Actions Scheduled For Next Reporting Period

Installation of bedrock performance monitoring wells will continue into the next reporting period. Once the well installations are complete a baseline sampling event of the 28 performance monitoring wells will be completed. This sampling event is expected to occur in late March or early April 2014.

A separate report will be prepared and submitted to DHEC after the baseline sampling data are received. This report will include the results of the baseline event, as well as final surveying and construction details for the wells.

After completion of the baseline sampling event and receipt of the UIC permit, sodium lactate injection activities will be initiated in both the former DMT vicinity and also the 600 Bruckner Road property. Injection is targeted to begin in April and is estimated to require two months to complete.

Activity is also anticipated west of Bruckner Road. The schedule of activities in this area is dependent on an access agreement.

The annual groundwater monitoring event will be completed in June 2014. This event will include monitoring of the wells in the December sampling plan, as well as the new performance monitoring wells. The complete monitoring plan is presented on Table 1. Table 1 is revised from the VCC annual monitoring plan to include the new performance monitoring wells.

Because injection is expected to be completed just before this event, the June 2014 results will not be considered to be the first quarterly performance monitoring. The performance monitoring wells will be sampled in September 2014 as the first post-injection performance monitoring event.



### 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

The VCC workplan was approved, including annual sampling of 1,4-dioxane as part of the site-wide groundwater and surface water monitoring program.

Analysis for 1,4-dioxane was included in the December sampling for locations south of I-85 (Table 3). There were no detections of 1,4-dioxane in groundwater samples with the exception of well RW-111. As a one-time enhancement to the sampling plan presented in the VCC work plan the sample from well RW-111 was analyzed for 1,4-dioxane using method M522. The result of this analysis was 0.000123 milligrams per liter (mg/L), below the DHEC action level of 0.00067 mg/L.

Detections in surface water ranged from 0.00237 mg/L to 0.00308 mg/L (Table 4). These results are consistent with prior historic data. The results are also consistent with the chloroform data in that concentrations decline with distance downstream as the creek approaches the Pacolet River. This observation supports the conclusion that the creek is a gaining stream and 1,4-dioxane entering the creek upstream is attenuated by groundwater discharge to the creek.

#### 3.2 Actions Scheduled For Next Reporting Period

The baseline sampling of new performance monitoring wells will include analysis of 1,4-dioxane for the samples collected south of I-85.

The annual site-wide monitoring will be completed in June 2014. As shown on Table 1, 73 groundwater samples and 14 surface water samples are scheduled for 1,4-dioxane analysis. The 73 wells include MW-112 through RW-121, which are performance monitoring wells for the chloroform remediation.

## **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 soil and 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**

The VCC workplan was approved, including annual sampling of DowTherm A™ as part of the site-wide groundwater and surface water monitoring program.

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

The baseline sampling of new performance monitoring wells will include analysis of DowTherm A™ for the samples collected south of I-85.

The annual site-wide monitoring will be completed in June 2014. As shown on Table 1, 46 groundwater samples and 12 surface water samples are scheduled for 1,1-biphenyl, and diphenyl ether analysis.

## 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

The VCC workplan was approved, including annual sampling of DowTherm A™ as part of the site-wide groundwater and surface water monitoring program.

The investigation of phase DowTherm A™ in the vicinity of MW-7 was also approved as part of the VCC work plan.

### 5.2 Actions Scheduled For Next Reporting Period

The annual site-wide monitoring will be completed in June 2014. As shown on Table 1, 46 groundwater samples and 12 surface water samples are scheduled for 1,1-biphenyl and diphenyl ether analysis. Portions of this monitoring event will apply directly to the phase material investigation.

The current schedule project is presented on Figure 1. Planning of the field investigation is targeted for the next reporting period with field activities to occur later in 2014.

## 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), 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

The VCC workplan was approved, including annual sampling of Volatile Organic Compounds (VOCs) as part of the site-wide groundwater and surface water monitoring program.

### 6.2 Actions Scheduled For Next Reporting Period

The annual site-wide monitoring will be completed in June 2014. As shown on Table 1, 31 groundwater samples and 12 surface water samples are scheduled for VOC analysis.

Baseline monitoring of the chloroform performance monitoring wells will also include full VOC analysis by Method 8260. The results produced from the performance monitoring events will contribute to the assessment of other chlorinated solvents in groundwater.

## **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. Most of the response required for this OU has been completed and is described in documents listed in Appendix B of the VCC and in Section 1 of the VCC Work Plan. 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 VCC workplan was approved, including annual sampling of Volatile Organic Compounds (VOCs) as part of the site-wide groundwater and surface water monitoring program.

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

Surface water monitoring will be included in the June 2014 annual sampling event.

## **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 unit. Details of these events specific to each operable unit are provided in the sections above.

### **8.1 Actions Completed During Reporting Period**

The VCC work plan was approved, including the June and December monitoring events as shown on Tables 1 and 2. The December monitoring event was completed between December 2 and December 4, 2013. The results are summarized in Tables 3 and 4. Complete laboratory results are attached to this report. The results are discussed further in prior sections of this report.

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

The June sampling event will be completed during the next reporting period. As shown on Table 1, the June event will include the sampling plan approved in the VCC work plan modified to include the new performance monitoring wells.

## 9.0 Problems Encountered and Responses

Several periods of severe winter weather were encountered during the performance monitoring well installation activities which resulted as a delay in progress. The schedule presented on Figure 1 includes the current estimated schedule, including consideration of these delays.

No other problems were encountered.

## Tables



**Table 1**  
**Annual Monitoring Plan**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Sample Location	VOCs (8260)	1,4-Dioxane	DowTherm A™ (1)	Natural Attenuation Parameters
<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**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

<b>Sample Location</b>	<b>VOCs (8260)</b>	<b>1,4-Dioxane</b>	<b>DowTherm A™ (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
RW-117	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
RW-125	X			X
MW-126	X			X
RW-127	X			X
MW-128	X			X

**Table 1**  
**Annual Monitoring Plan**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

<b>Sample Location</b>	<b>VOCs (8260)</b>	<b>1,4-Dioxane</b>	<b>DowTherm A™ (1)</b>	<b>Natural Attenuation Parameters</b>
RW-129	X			X
RW-130	X			X
MW-131	X			X
RW-132	X			X
MW-133	X			X
RW-134	X			X
RW-135	X			X
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		

**Notes**

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**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

<b>Sample Location</b>	<b>VOCs</b>	<b>NA Params</b>
<b><i>Groundwater</i></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
<b><i>Surface Water</i></b>		
SW-12	X	
SW-13	X	
SW-14	X	

**Notes:**

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**  
**December 2013**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	EW-31 12/3/2013	EW-37 12/4/2013	EW-41 12/3/2013	EW-41 Dup 12/3/2013	EW-49 12/3/2013	EW-52 12/3/2013	EW-53 12/4/2013	MW-99 12/3/2013	MW-103 12/4/2013	MW-105 12/3/2013
<b>Volatile Organics and 1,4-Dioxane</b>											
chloroform	mg/L	<0.005	0.0836	0.0453	0.0437	<0.005	<0.005	0.0172	0.00887	<0.005	0.197
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	0.00871	0.0643	<0.005	0.136	<0.005	0.0158
1,4-dioxane	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tetrachloroethene	mg/L	<0.005	0.00565	<0.005	<0.005	<0.005	<0.005	<0.005	0.187	<0.005	<0.005
trichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.03	<0.005	<0.005
<b>Field and Natural Attenuation Parameters</b>											
alkalinity	mg/L	119	23.4	28.9	28.3	100	58.9	71.4	3.27	<1	9.27
chloride	mg/L	8.12	10.8	3.57	3.56	2.22	3.14	10.5	1.84	2.94	7.05
dissolved oxygen	mg/L	0.65	0.38	0.54	0.54	0.02	0.12	0.61	1.95	5.26	4.58
ferrous Fe	mg/L	1	4	2	2	0	3.5	4.2	0	0	0
groundwater elevation	feet MSL	671.52	722.05	671.34	671.34	727.84	723.88	698.54	732.24	692.62	718.18
manganese (dissolved)	mg/L	1.66	0.574	0.554	0.523	0.057	0.209	1.67	0.033	0.045	<0.01
ORP	mV	-65.7	40.2	10	10	-85.2	-49.2	-21.3	131	179.8	65.5
pH	su	6.92	5.54	5.78	5.78	8.34	6.98	6.34	5.12	4.55	5.4
specific conductance	umhos/cm	235	109	101	101	224	153	181	43	62	71
temperature	degrees C	14.59	17.89	15.34	15.34	16.48	16.64	18.08	19.13	15.93	18.29
total organic carbon	mg/L	<1	<1	<1	<1	1.05	<1	<1	<1	<1	<1
turbidity	NTU	9.37	160	38.5	38.5	1.4	43.9	20.1	0.41	6.05	3.7

**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

**Table 3**  
**Summary of Groundwater Analytical Results**  
**December 2013**  
**Auriga Spartanburg Facility**  
**AECOM Project No. 60280417**

Parameter	Unit	MW-105 Dup 12/3/2013	MW-106 12/3/2013	MW-107 12/4/2013	MW-109 12/3/2013	RW-29 12/3/2013	RW-48 12/3/2013	RW-65 12/3/2013	RW-108 12/3/2013	RW-110 12/2/2013	RW-111 12/2/2013
<b>Volatile Organics and 1,4-Dioxane</b>											
chloroform	mg/L	0.193	0.0061	0.0873	0.813	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	0.0159	<0.005	<0.005	<0.025	<0.005	<0.005	0.00533	<0.005	<0.005	<0.005
1,4-dioxane	mg/L	NA	NA	NA	<0.002	NA	NA	NA	<0.002	<0.002	0.000123
tetrachloroethene	mg/L	<0.005	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	<0.005	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<b>Field and Natural Attenuation Parameters</b>											
alkalinity	mg/L	9.81	<1	20.7	20.2	64.3	106	102	194	76.3	65.4
chloride	mg/L	7.14	4.09	2.03	3.52	1.53	2.53	12.5	5.21	3.44	1.53
dissolved oxygen	mg/L	4.58	6.94	4.54	6.41	0.07	0.09	0.35	1.63	1.04	2.74
ferrous Fe	mg/L	0	0	0	0.02	0	1.2	0.3	0.05	0.41	0.02
groundwater elevation	feet MSL	718.18	718.78	688.56	675.9	774.12	709.41	686.25	675.37	683.74	700
manganese (dissolved)	mg/L	<0.01	0.015	<0.01	<0.01	0.01	1.29	1.57	0.155	0.019	0.045
ORP	mV	65.5	89.6	115.2	177.3	-134	-150.2	-43.5	78.6	186.5	71.4
pH	su	5.4	4.7	5.33	5.57	7.41	6.83	7.2	7.82	5.82	7.22
specific conductance	umhos/cm	71	49	71	0.049	175	269	283	0.27	176	163
temperature	degrees C	18.29	17.24	15.59	19.09	17.04	17.08	16.04	17.4	17.57	16.26
total organic carbon	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
turbidity	NTU	3.7	2.47	2.2	5.75	3.31	214.7	1.53	6.58	99.6	1.14

**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

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

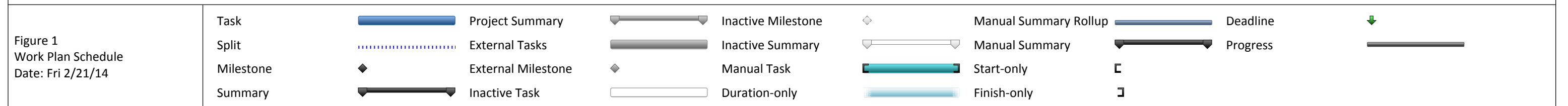
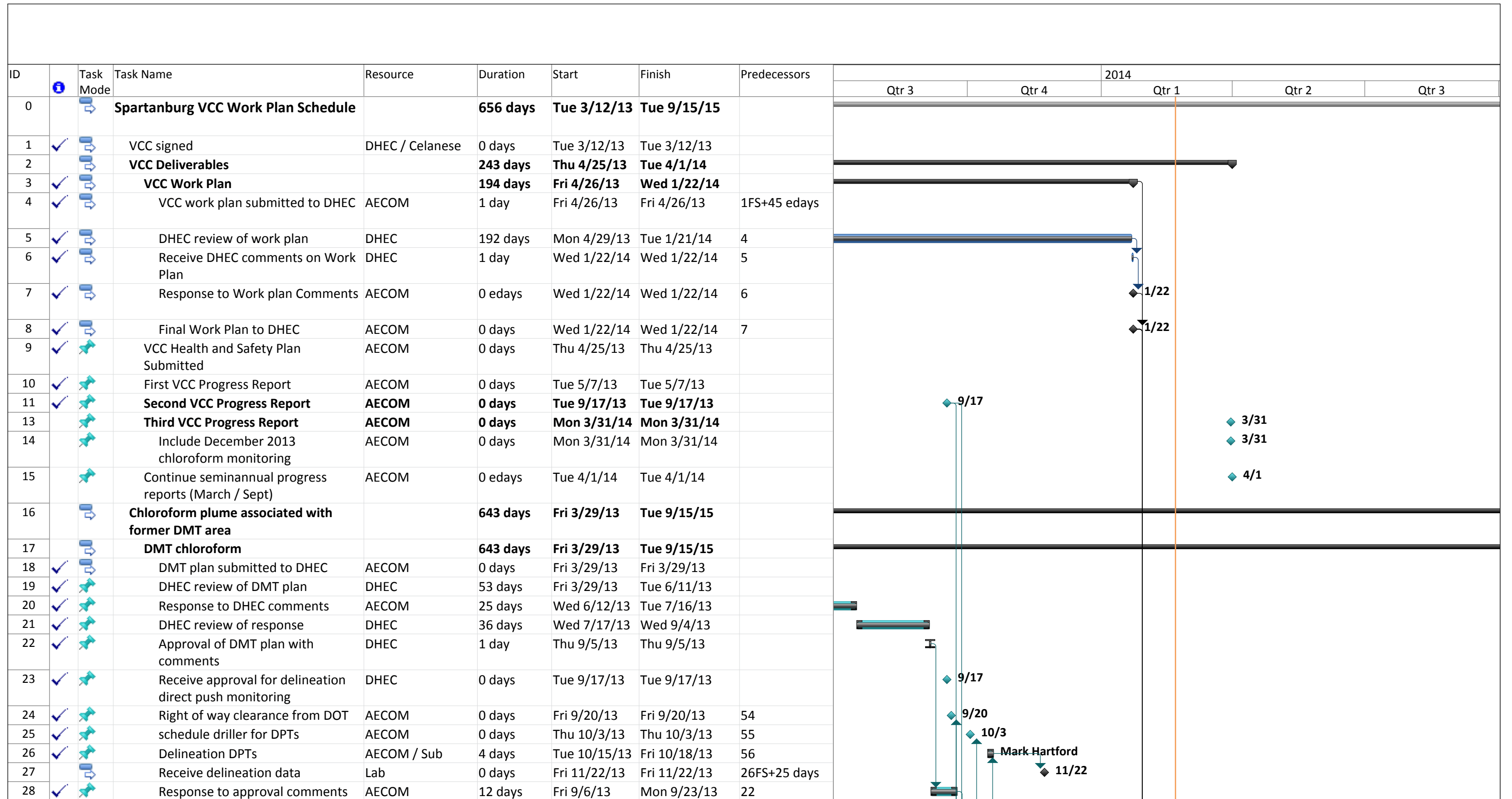
<b>Parameter</b>	<b>Unit</b>	<b>SW-12 12/3/2013</b>	<b>SW-13 12/3/2013</b>	<b>SW-14 12/3/2013</b>
1,4-dioxane	mg/L	0.00308	0.00253	0.00237
chloroform	mg/L	0.0203	0.0131	0.0086
dissolved oxygen	mg/L	10	9.24	10.2
ORP	mV	181.9	197	179
pH	su	5.66	5.54	7.3
specific conductance	umhos/cm	0.86	0.84	0.084
temperature	degrees C	12.83	12.43	11.98
turbidity	NTU	2.05	1.82	1.88

**Notes**

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

## Figures





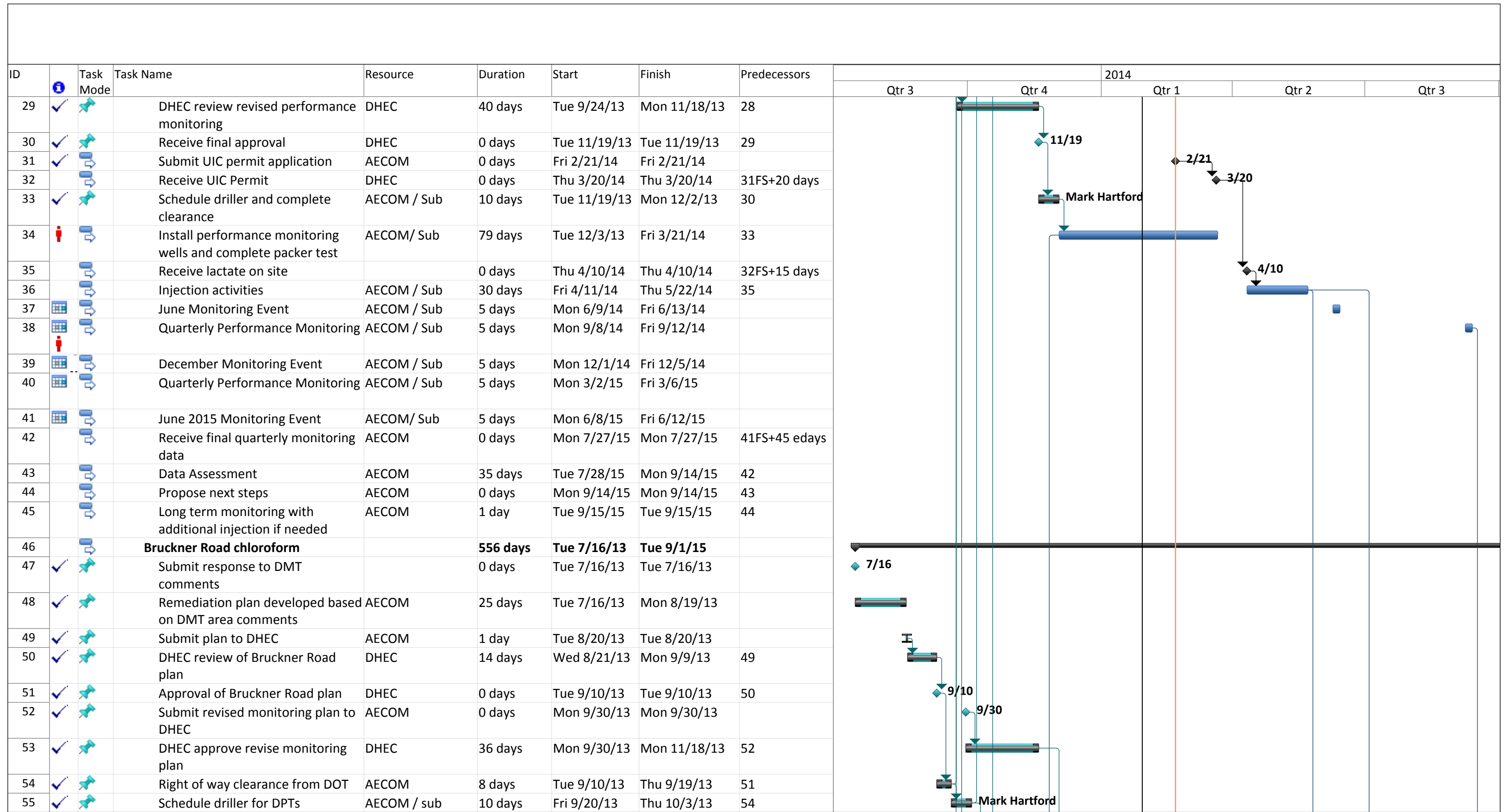
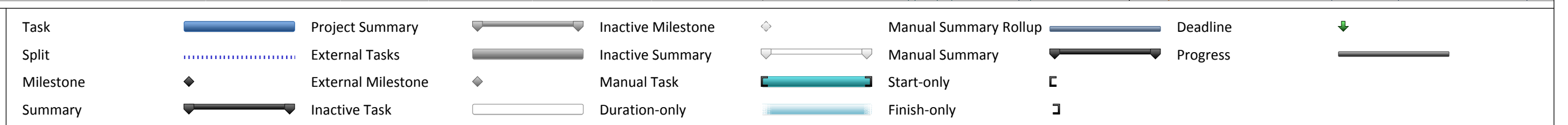


Figure 1  
Work Plan Schedule  
Date: Fri 2/21/14



ID	Task Mode	TaskName	Resource	Duration	Start	Finish	Predecessors	2014					
								Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	
56		DelineationDPTs	AECOM sub	3 days	Thu10/10/13	Mon 10/14/13	55FS+4days		Mark Hartford				
57		Installperformance monitoring wells and complete packer test	AECOM sub	79 days	Tue12/3/13	Fri3/21/14	34SS,53						
58		InjectionActivities	AECOM sub	30 days	Fri5/23/14	Thu7/3/14	36						
59		QuarterlyPerformanceMonitoring	AECOM sub	5 days	Mon 9/15/14	Fri9/19/14	38						
60		DecemberMonitoring Event	AECOM sub	5 days	Mon 12/1/14	Fri12/5/14	39SS						
61		QuarterlyPerformanceMonitoring	AECOM sub	5 days	Mon 3/9/15	Fri3/13/15	40						
62		JuneMonitoring Event	AECOM sub	5 days	Mon 6/8/15	Fri6/12/15	41SS						
63		Receive final quarterly monitoring data	AECOM	0 days	Mon 7/27/15	Mon 7/27/15	42SS						
64		DataAssessment	AECOM	25 days	Tue7/28/15	Mon 8/31/15	63						
65		Propose next steps	AECOM	0 days	Mon 8/31/15	Mon 8/31/15	64						
66		Long term monitoring with additional injection if needed	AECOM	1 day	Tue9/1/15	Tue9/1/15	65						
67		1,4 Dioxane in groundwater		462 days	Mon 6/3/13	Tue3/10/15							
68		Establish monitoring plan in VCC work plan	AECOM DHEC	1 day	Thu1/23/14	Thu1/23/14	8						
69		Review data associated with 1,4 dioxane in central plant	AECOM	60 days	Mon 6/3/13	Fri8/23/13							
70		Update conditions in Remedial Effectiveness update	AECOM	0 days	Tue9/17/13	Tue9/17/13	11						
71		Update conditions in RI report	AECOM	0 days	Tue3/10/15	Tue3/10/15	104						
72		DowTherMA in groundwater		377 days	Mon 9/30/13	Tue3/10/15							
73		Establish monitoring plan in VCC work plan	AECOM DHEC	1 day	Thu1/23/14	Thu1/23/14	8						
74		Update conditions in Remedial Effectiveness update	AECOM	0 days	Mon 9/30/13	Mon 9/30/13	11						
75		Update conditions in RI report	AECOM	0 days	Tue3/10/15	Tue3/10/15	104						
76		DowTherMA DNAPL		233 days	Thu1/23/14	Mon 12/15/14							
77		Establish monitoring plan in VCC work plan	AECOM DHEC	1 day	Thu1/23/14	Thu1/23/14	8						
78		Establish DNAPL investigation in VCC work plan	AECOM DHEC	1 day	Thu1/23/14	Thu1/23/14	8						
79		Complete chloroform related field activities and prep	AECOM sub	20 days	Fri7/4/14	Thu7/31/14	36,58						
80		Schedule contractor	AECOM	20 days	Fri8/1/14	Thu8/28/14	79						

Figure 1 Work Plan Schedule Date: Fri 2/21/14

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			