

**VOLUNTARY REMEDIATION PLAN  
SEMI-ANNUAL PROGRESS REPORT #7**

**SOUTHERN STATES, LLC  
30 GEORGIA AVENUE  
HAMPTON, GEORGIA**

**HSI No. 10141**

**OCTOBER 15, 2018**

**Prepared for**

**SOUTHERN STATES, LLC  
30 Georgia Avenue  
Hampton, Georgia**

# **VOLUNTARY REMEDIATION PLAN SEMI-ANNUAL PROGRESS REPORT #7**

**SOUTHERN STATES, LLC  
30 GEORGIA AVENUE  
HAMPTON, GEORGIA**

**HSI No. 10141**

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John O Schwaller, PG  
(GA. Registration No. 1617)  
**Project Manager**



**EMA**

*Environmental Management Associates, LLC*  
5262 Belle Wood Court, Suite A  
Buford, Georgia 30518

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## **CERTIFICATION OF GROUNDWATER REPORT**

*I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in ground-water hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding ground-water monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direction.*

\_\_\_\_\_  
John O. Schwaller  
Printed Name (GA Professional Geologist 1617)

Signature (Professional Geologist)

## 1.0 PROJECT SUMMARY

On behalf of Southern States, LLC (SSL), Environmental Management Associates, LLC (EMA) is submitting this Voluntary Remediation Plan - Semi-Annual Progress Report #7 (Progress Report) to the Georgia Environmental Protection Division for SSI's manufacturing facility located at 30 Georgia Avenue, Hampton, Georgia. This Progress Report has been prepared to meet the requirements contained in the Georgia Voluntary Remediation Program Act and covers the activities conducted since the submittal of Progress Report #6 dated April 15, 2018.

The SSL site (Site) is located at 30 Georgia Avenue, Hampton, Henry County, Georgia. The surrounding properties are predominantly residential. A topographic map (Property Location Map) of the surrounding area is included as Figure 1. A Site Plan is presented as Figure 2.

SSL began manufacturing operations at the Hampton, GA location in 1940. SSL manufactures high-voltage electrical switches and fuses at its 30-acre manufacturing facility located in Hampton, Georgia. In 1986, SSL conducted a focused groundwater investigation to determine the impact from an existing wastewater sludge impoundment. The results of this and subsequent investigations identified a release of select VOCs had occurred at the Property. In December 1989, SSL and the Georgia Environmental Protection Division (EPD) entered into a Consent Order (Order), No. EPD-HW-529. The Property was listed on the Hazardous Site Inventory on June 30, 1997 as Site No. 10141.

Since 1986, the Property has been the subject of a number of investigations which identified the presence of volatile organic compounds in the soil and groundwater.

EMA prepared the VRPAP and submitted to EPD on October 30, 2014. EPD approved the VRPAP with conditions and comments in two letters dated April 10, 2015.

EMA conducted two formal injections (June 2015 and January 2016 as proposed) of an in-situ chemical oxidation (ISCO) reagent (PeroxyChem's (formerly FMC Corporation) Klozur® sodium persulfate mixed with an alkaline activator (sodium hydroxide) to form sulfate and hydroxyl radicals) to reduce the existing groundwater contamination to levels at or below the Type 4 RRS proposed in the VRP. ISCO application was performed at three specific areas identified on Figure 3 with the following rationale:

<u>Treatment Area</u>	<u>Rationale</u>
Zone A - MW-39	suspected source zone (~ 200,000 µg/L TCE);
Zone B - TP-1 / TP-2	lateral impact area (~ 2,000 µg/L TCE); and

Zone C - MW-18                      pilot study to determine saprolite/shallow bedrock treatment effectiveness on MW-32.

In June 2015, EMA's subcontractors, REM-CON, LLC and Geo Lab Probing Services, installed temporary injection points at each of the three treatment zones. The injection points include open screened areas targeting the contaminant zones from 12 feet (ft) below ground surface (bgs) to 35 ft bgs. The sodium persulfate reagent was injected throughout the overburden aquifer. ISCO injections occurred in June 2015 and January 2016.

This Semi-Annual VRP Progress Report No. 7 was prepared in accordance with the VRP and covers the semi-annual groundwater monitoring event activity conducted since the Semi-Annual Progress Report No. 6 submittal and covers the period April 16, 2017 through October 15, 2018.



## 2.0 ACTIONS TAKEN SINCE LAST SUBMITTAL

### 2.1 GROUNDWATER PERFORMANCE MONITORING

Groundwater performance monitoring was performed in July 2018. The following select monitoring wells were utilized for the long term monitored natural attenuation (MNA) groundwater monitoring to determine the effectiveness of the groundwater remediation and confirm fate and transport model:

#### Monitoring Wells

##### Overburden

- MW-9;
- MW-13;
- MW-17;
- MW-18;
- MW-19;
- MW-21;
- MW-35;
- MW-39;
- MW-40;
- MW-41;
- TP-1; and
- TP-2.

##### Bedrock Wells

- MW-20;
- MW-28;
- MW-31;
- MW-32;
- MW-36;

Groundwater samples were collected on July 6, 2018 using the low-flow purging and sampling technique referenced in USEPA Region IV's SESD Operating Procedures - Groundwater Sampling SESDPROC-301-R4, April 2017. Peristaltic pumps using disposable Teflon tubing was used for the purging and sampling. Static groundwater level measurements were recorded at each monitoring well on January 10, 2018. The measurements were made with a pre-cleaned "Slope" electronic water level detector and were reported to the nearest 0.01-foot based on a fixed point on the top of the well casing. A potentiometric contour map for the shallow water table was prepared based on the groundwater elevations presented in Table 1 and is provided as Figure 3. For the bedrock monitoring

wells, a potentiometric contour map is presented as Figure 4. The groundwater flow directions in both the shallow water table and the bedrock are consistent with historic monitoring events.

During the low-flow purging procedure, field measurements of reduction oxidation potential (redox), dissolved oxygen (D.O.), turbidity, pH, conductivity, and temperature were recorded. Once the field measurements stabilized for three consecutive readings, samples were collected directly into the pre-preserved laboratory supplied containers. Monitoring well purge records are presented in Appendix A.

The groundwater samples were delivered under standard chain-of-custody (COC) protocols to Analytical Environmental Services, Inc. (AES) located in Atlanta, Georgia. AES is an accredited laboratory under the National Environmental Laboratory Accreditation Program (NELAC) (Accreditation ID: E87582). The groundwater samples were submitted for select target compound list (TCL) volatile organic compounds (VOCs) including 1,4-dioxane by SW-846 Method 8260B and select MNA parameters.

The detected compounds observed during the monitoring events since the baseline event of June 2015 through the July 2018 monitoring event are summarized in Table 2. Figures 5 and 6 present the most recent overburden total VOC and TCE iso-concentration contours, respectively. Figures 7 and 8 present the most recent bedrock total VOC and TCE iso-concentration contours. The analytical reports are included in Appendix A.

## 2.2 DISCUSSION AND CONCLUSIONS

Review of the groundwater data presented in Table 2 indicates favorable results following the groundwater remediation activities with minimal to no rebound. Of significant note are the following reductions from the June 2015 total chlorinated VOC baseline concentrations:

### Overburden Wells:

MW-13: 143 µg/L to 25 µg/L (approximately 83% reduction);  
MW-21: 228 µg/L to 159 (approximately 30% reduction);  
MW-39: 214,900 µg/L to 4,226 µg/L (approximately 98% reduction);  
MW-40: 5,438 µg/L to 827 µg/L (approximately 85% reduction);  
MW-41: 4,170 µg/L to 660 µg/L (approximately 84% reduction);  
TP-1: 2300 µg/L to 1,480 µg/L (approximately 36% reduction);and  
TP-2: 856 µg/L to 591 µg/L (approximately 31% reduction).

Bedrock Wells:

MW-31: 15 µg/L to ND (approximately 100% reduction);

MW-32: 118 µg/L to 47 µg/L ( approximately 60% reduction)

In general, the groundwater concentrations at all monitoring wells has been reduced and the contaminant plume has stabilized. It is important to note that the data indicating decreasing concentrations has been collected quarterly or semi-annually over a period of four years or more, while data indicating a stable contaminant plume has been collected for over 10 years. In addition, where rebound has been observed after remediation, the concentrations observed have not exceeded historic or baseline concentrations.

Table 2 presents the summary of analytical data collected since the baseline monitoring event of June 2015. Appendix B presents total VOC and select chlorinated contaminant trend graphs for select performance monitoring wells.

### 3.0 SCHEDULE AND FUTURE SUBMITTALS

A semi-annual groundwater sampling event including additional monitoring wells and monitored natural attenuation parameters is scheduled for December 2018.

A landfill cap has been selected and will be designed to prevent further surface water infiltration and potential movement of any subsurface contaminants. The landfill cap design will be submitted for EPD review. Construction is proposed for Spring 2020.

A Projected Milestone Schedule, showing timelines for the above items, is included in Appendix C.

Semiannual progress reports will continue to be submitted updating the progress and implementation of the VRPAP throughout the program. Additionally the Projected Milestone Schedule will be updated to show progress on the VRP objectives. The VRP Progress Report #8 will be submitted by April 15, 2019.

#### 4.0 PROFESSIONAL GEOLOGIST CERTIFICATION STATEMENT

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

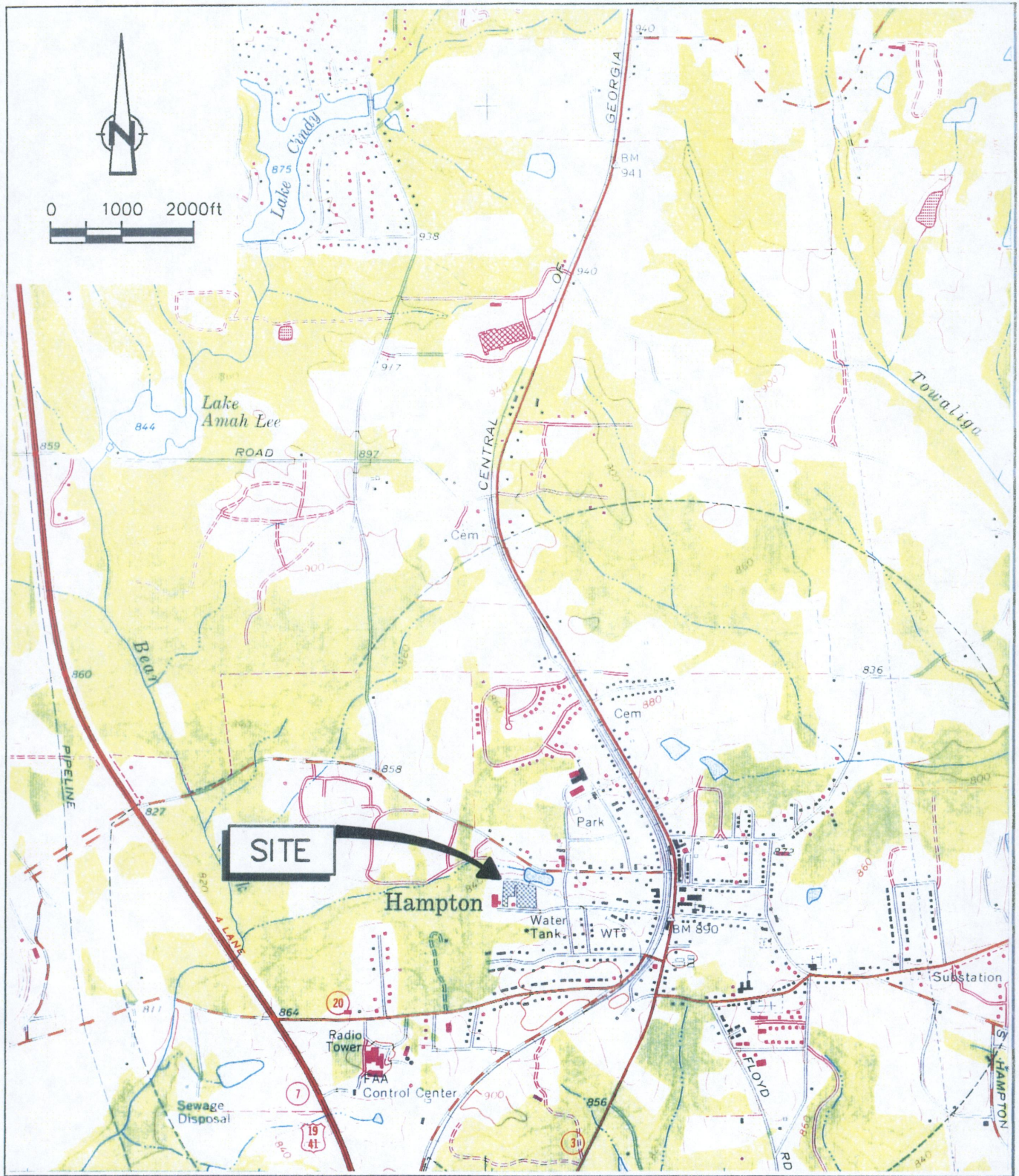
Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and log term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. "

Mr. John O. Schwaller, P.G.  
Georgia Registration No. 1617

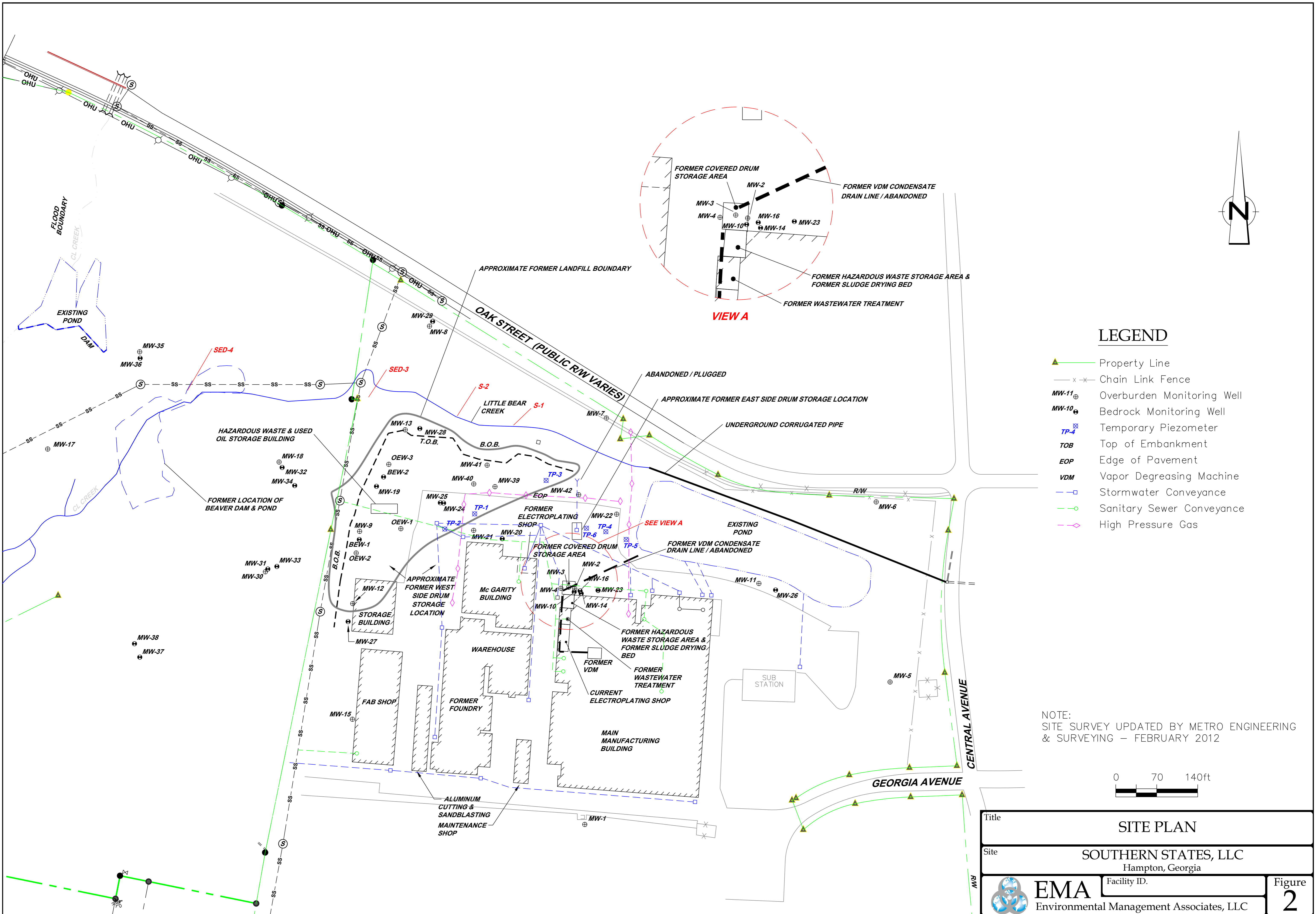
\_\_\_\_\_  
Signature/Stamp

## FIGURES

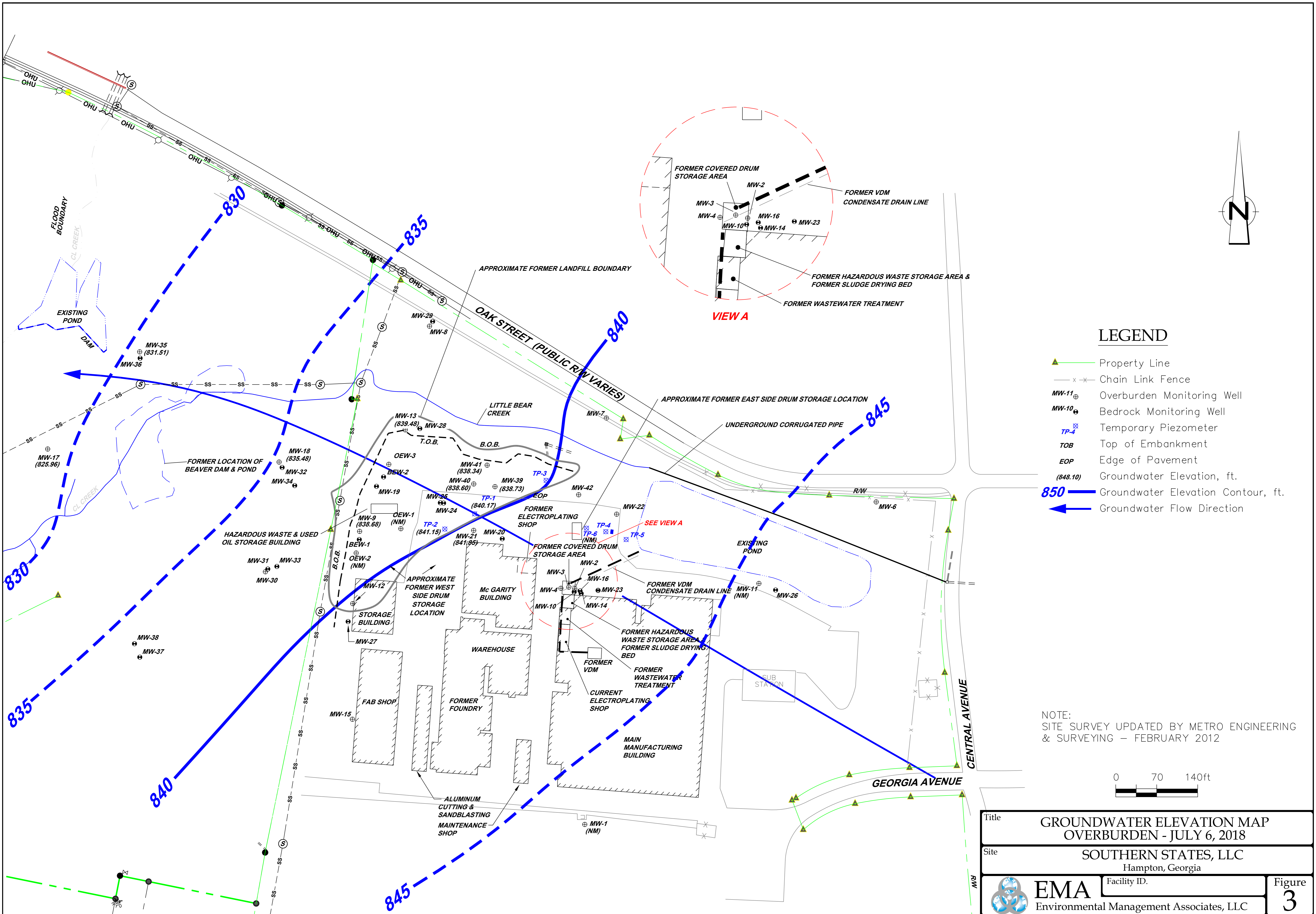


SOURCE: USGS QUADRANGLE;  
HAMPTON, GEORGIA

figure 1  
LOCATION MAP  
SOUTHERN STATES SITE  
*Hampton, Georgia*



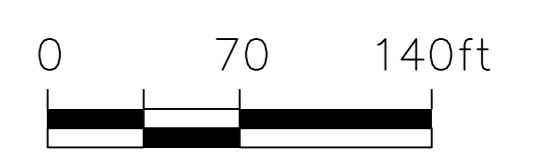




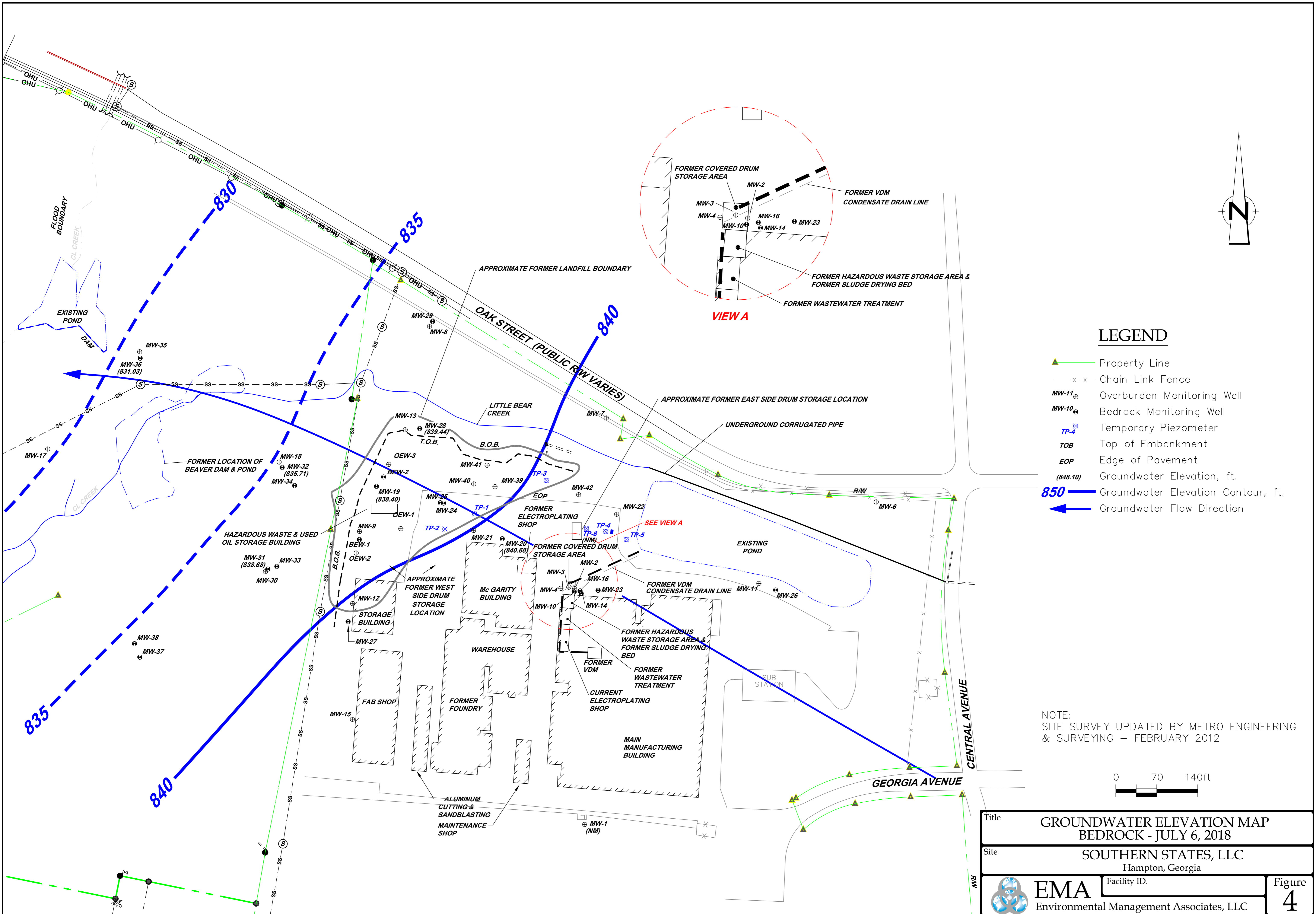
**LEGEND**

- Property Line
- Chain Link Fence
- MW-11 Overburden Monitoring Well
- MW-10 Bedrock Monitoring Well
- TP-4 Temporary Piezometer
- TOB Top of Embankment
- EOP Edge of Pavement
- (848.10) Groundwater Elevation, ft.
- 850 Groundwater Elevation Contour, ft.
- Groundwater Flow Direction

NOTE:  
SITE SURVEY UPDATED BY METRO ENGINEERING  
& SURVEYING - FEBRUARY 2012



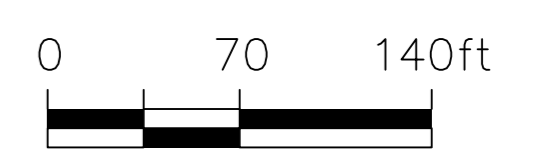
Title	GROUNDWATER ELEVATION MAP OVERBURDEN - JULY 6, 2018		
Site	SOUTHERN STATES, LLC Hampton, Georgia		
	EMA	Facility ID.	Figure
Environmental Management Associates, LLC			3



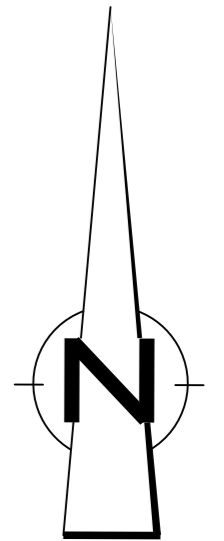
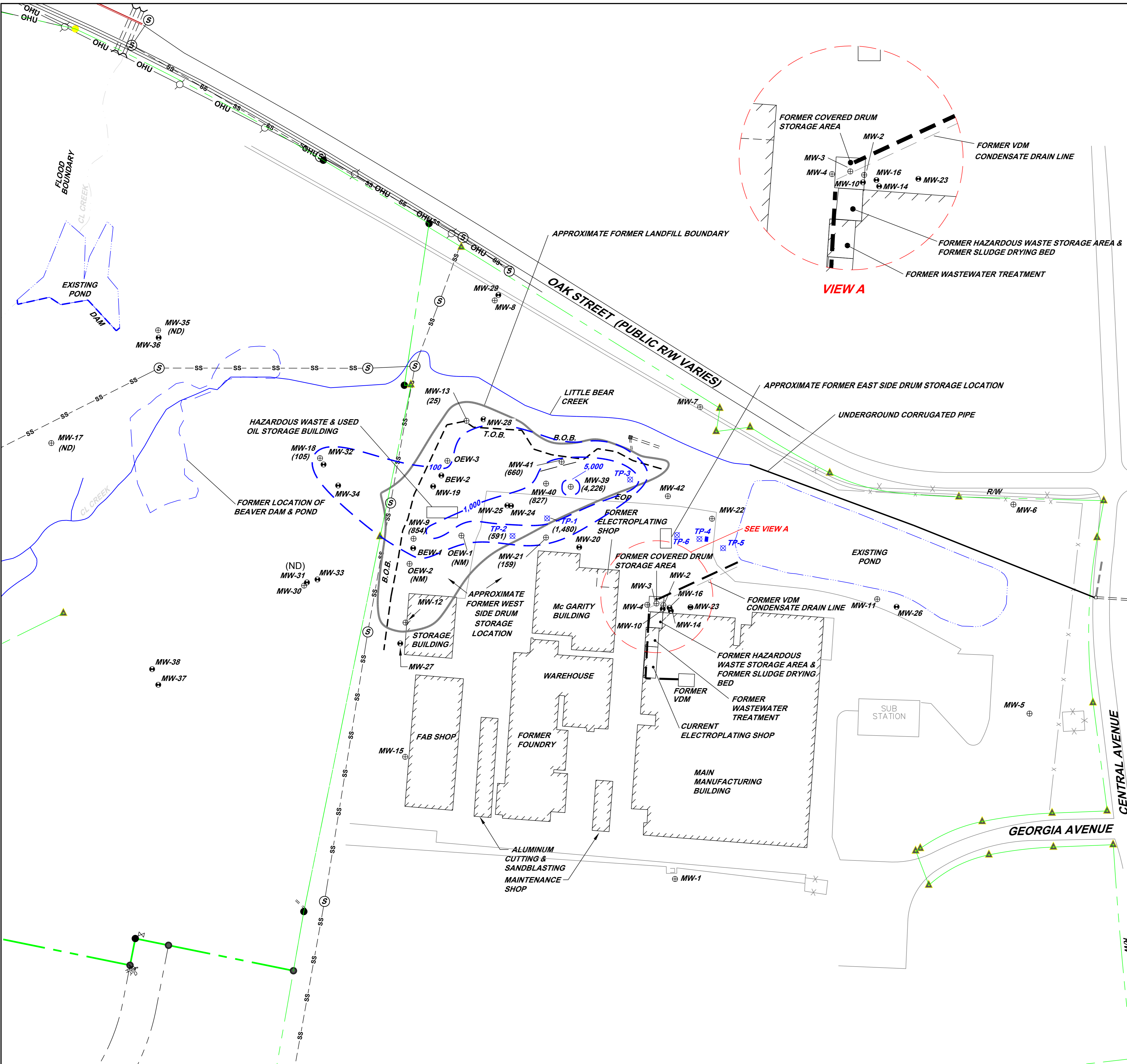
**LEGEND**

- Property Line
- Chain Link Fence
- MW-11 Overburden Monitoring Well
- MW-10 Bedrock Monitoring Well
- TP-4 Temporary Piezometer
- TOB Top of Embankment
- EOP Edge of Pavement
- (848.10) Groundwater Elevation, ft.
- 850 Groundwater Elevation Contour, ft.
- Groundwater Flow Direction

NOTE:  
SITE SURVEY UPDATED BY METRO ENGINEERING  
& SURVEYING - FEBRUARY 2012



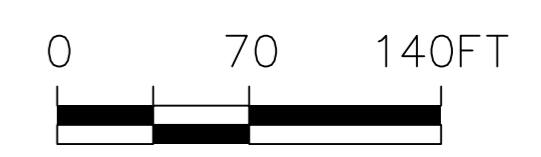
Title	GROUNDWATER ELEVATION MAP BEDROCK - JULY 6, 2018		
Site	SOUTHERN STATES, LLC Hampton, Georgia		
		Facility ID.	Figure <b>4</b>
Environmental Management Associates, LLC			



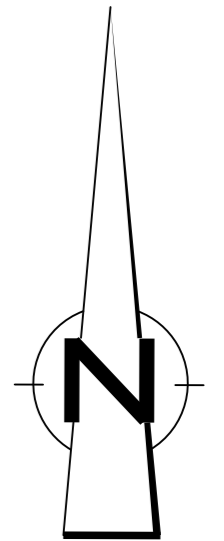
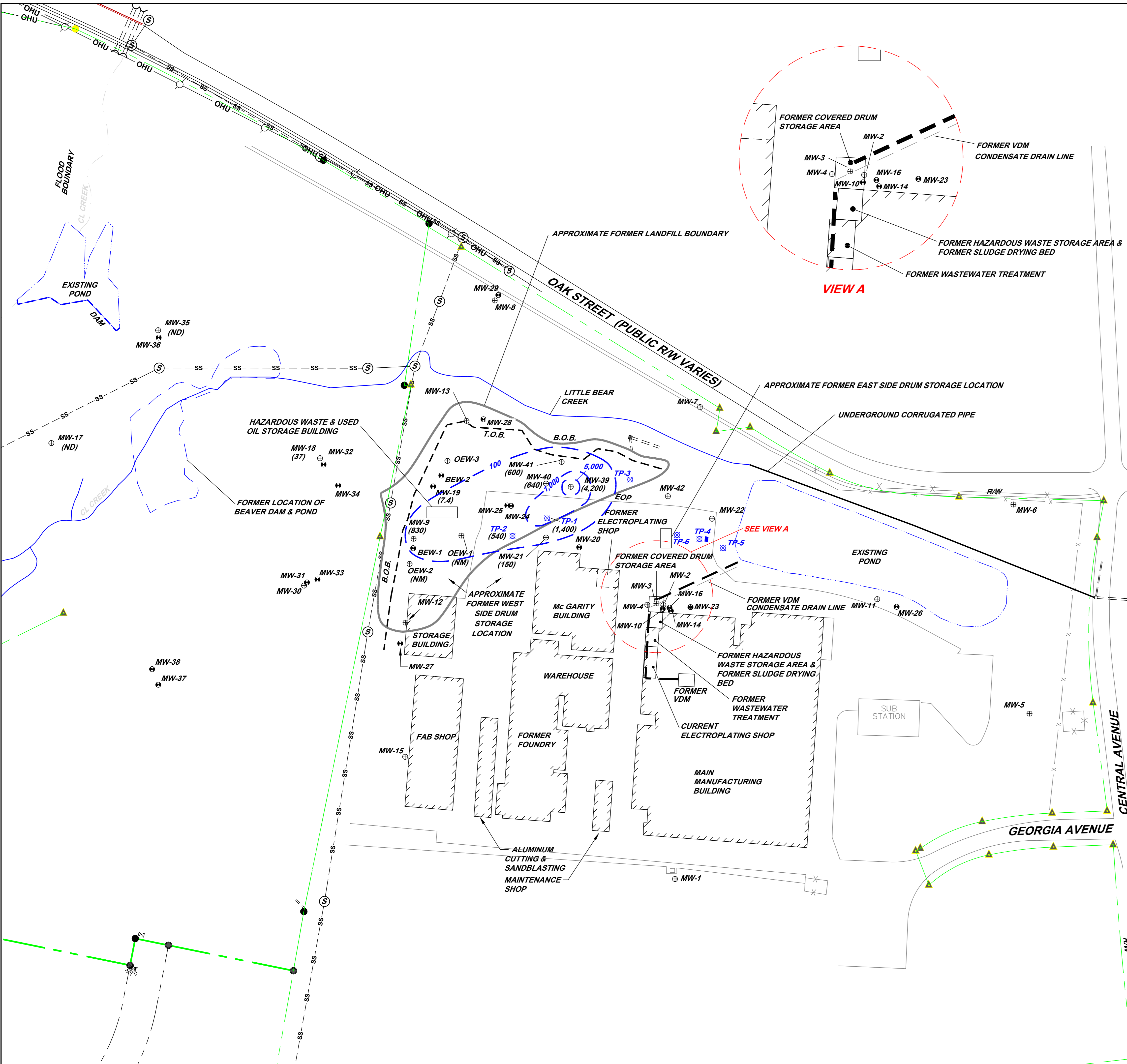
**LEGEND**

- Property Line
- Chain Link Fence
- MW-11 Overburden Monitoring Well
- MW-10 Bedrock Monitoring Well
- TP-1 Temporary Piezometer
- TOB Top of Embankment
- EOP Edge of Pavement
- (91) TOTAL VOC CONCENTRATION
- 100 TOTAL VOC CONCENTRATION CONTOUR

NOTE:  
 1.) SITE SURVEY UPDATED BY METRO ENGINEERING & SURVEYING – FEBRUARY 2012  
 2.) MW-32 IS BEDROCK WELL.



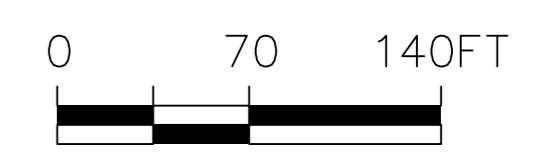
Title	OVERBURDEN TOTAL VOC ISO-CONCENTRATION CONTOURS - JULY 2018
Site	SOUTHERN STATES, LLC Hampton, Georgia
<b>EMA</b> Environmental Management Associates, LLC	Facility ID. <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>
Figure	<b>5</b>



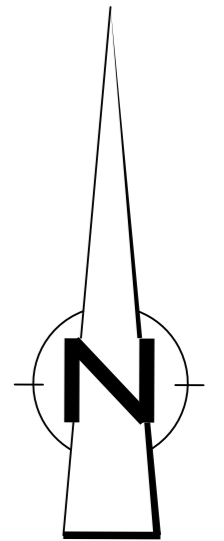
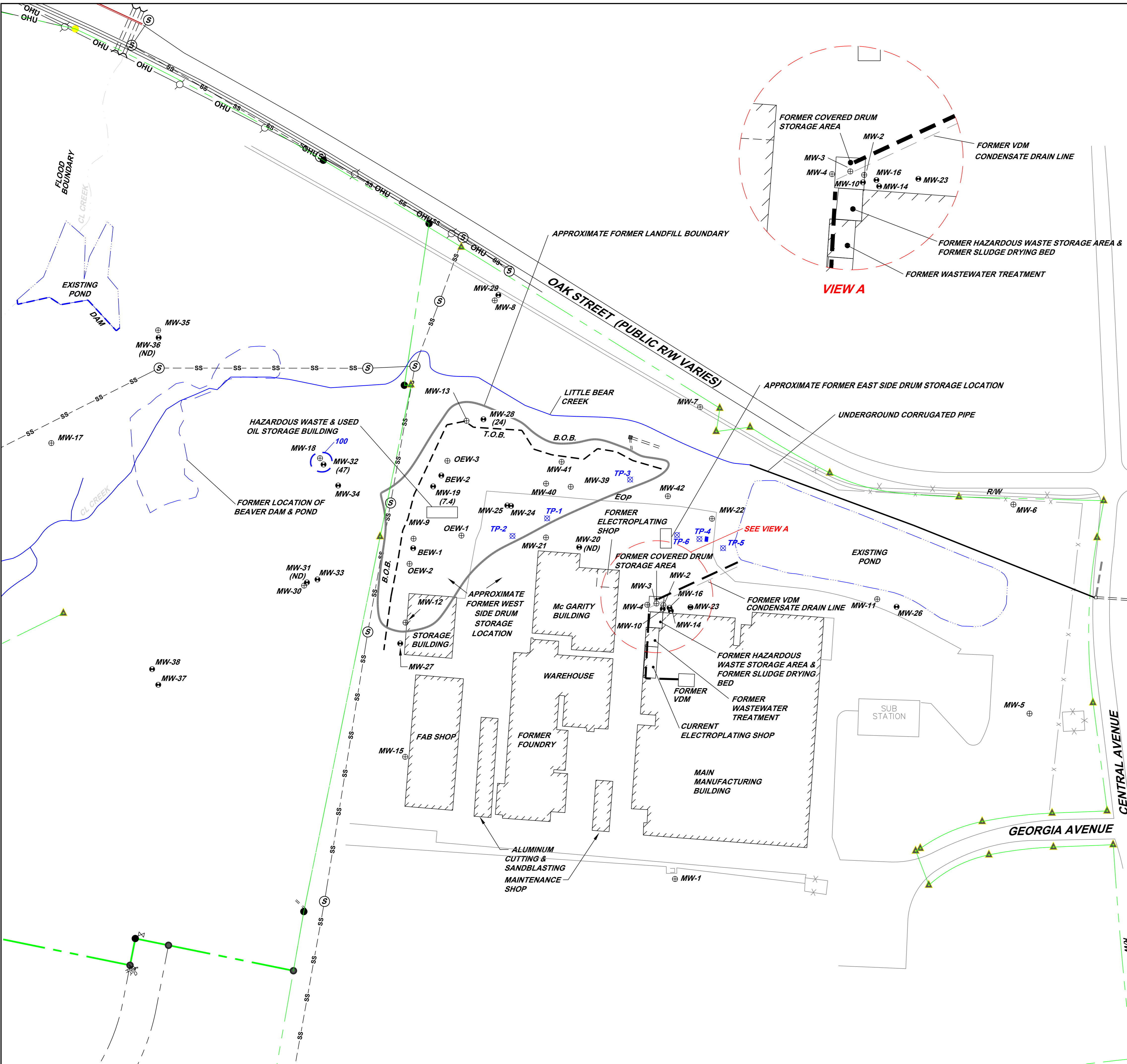
**LEGEND**

- Property Line
- Chain Link Fence
- MW-11 Overburden Monitoring Well
- MW-10 Bedrock Monitoring Well
- TP-4 Temporary Piezometer
- TOB Top of Embankment
- EOP Edge of Pavement
- (91) TCE CONCENTRATION
- 100 TCE CONCENTRATION CONTOUR

NOTE:  
 1.) SITE SURVEY UPDATED BY METRO ENGINEERING & SURVEYING – FEBRUARY 2012  
 2.) MW-32 IS BEDROCK WELL.



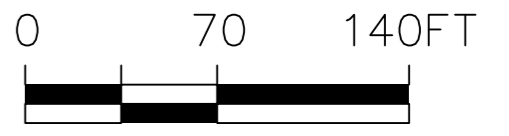
Title	<b>OVERBURDEN TCE ISO-CONCENTRATION CONTOURS - JULY 2018</b>
Site	SOUTHERN STATES, LLC Hampton, Georgia
<b>EMA</b> Environmental Management Associates, LLC	Facility ID. <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>
Figure	<b>6</b>



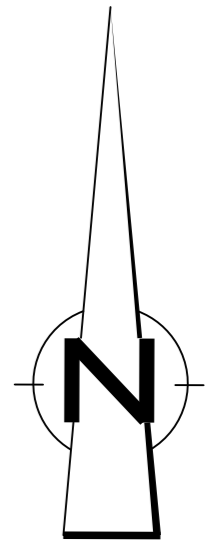
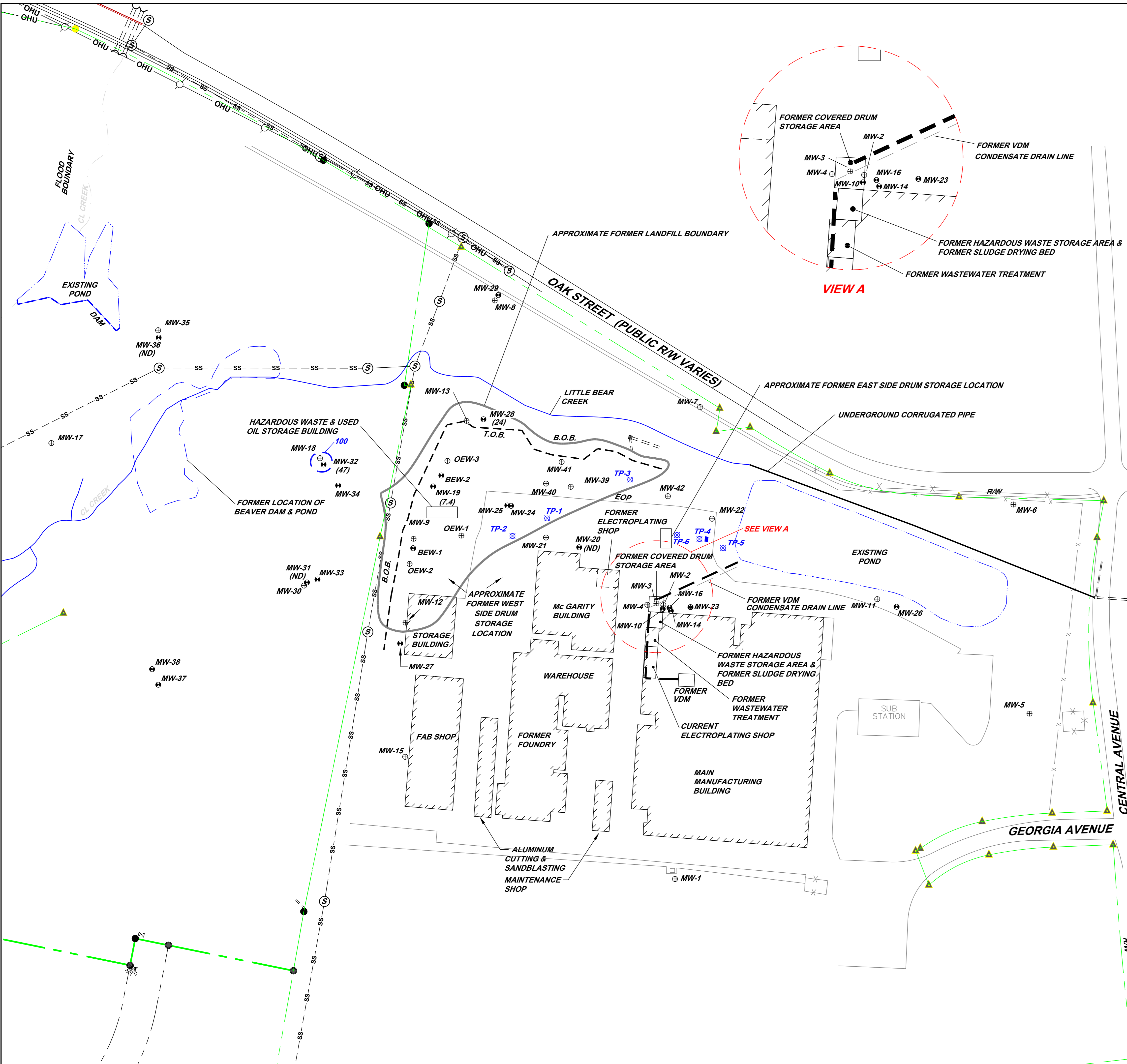
**LEGEND**

- Property Line
- Chain Link Fence
- Overburden Monitoring Well
- Bedrock Monitoring Well
- Temporary Piezometer
- Top of Embankment
- Edge of Pavement
- TOTAL VOC CONCENTRATION
- TOTAL VOC CONCENTRATION CONTOUR

NOTE:  
 1.) SITE SURVEY UPDATED BY METRO ENGINEERING & SURVEYING – FEBRUARY 2012  
 2.) MW-32 IS BEDROCK WELL.



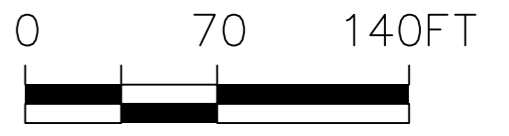
Title	<b>BEDROCK TOTAL VOC ISO-CONCENTRATION CONTOURS - JULY 2018</b>
Site	SOUTHERN STATES, LLC Hampton, Georgia
<b>EMA</b> Environmental Management Associates, LLC	Facility ID. _____ <div style="text-align: right; font-size: 24pt; font-weight: bold;">Figure 7</div>



**LEGEND**

- Property Line
- Chain Link Fence
- MW-11 Overburden Monitoring Well
- MW-10 Bedrock Monitoring Well
- TP-1 Temporary Piezometer
- TOB Top of Embankment
- EOP Edge of Pavement
- (91) TCE CONCENTRATION
- 100 TCE CONCENTRATION CONTOUR

NOTE:  
 1.) SITE SURVEY UPDATED BY METRO ENGINEERING & SURVEYING – FEBRUARY 2012  
 2.) MW-32 IS BEDROCK WELL.



Title	<b>BEDROCK TCE ISO-CONCENTRATION CONTOURS - JULY 2018</b>
Site	SOUTHERN STATES, LLC Hampton, Georgia
	Facility ID.
Environmental Management Associates, LLC	Figure <b>8</b>

## TABLES

**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATIONS**  
**PERFORMANCE EVALUATION MONITORING WELLS**  
**PERFORMANCE MONITORING**  
**SOUTHERN STATES, LLC.**  
**JULY 6, 2018**

<i>Monitoring Well</i>	<i>Reference Elevation (ft.)</i> <sup>(1)</sup>	<i>Depth to Groundwater (ft.)</i> <sup>(2)</sup>	<i>Groundwater Elevation (ft.)</i>
MW-9	856.50	15.91	840.59
MW-13	850.30	10.82	839.48
MW-17	833.71	7.75	825.96
MW-18	838.03	2.55	835.48
MW-19 <sup>(3)</sup>	850.81	12.41	838.40
MW-20 <sup>(3)</sup>	851.88	11.2	840.68
MW-21	851.32	9.47	841.85
MW-28 <sup>(3)</sup>	847.20	7.76	839.44
MW-31 <sup>(3)</sup>	843.92	5.24	838.68
MW-32 <sup>(3)</sup>	838.86	3.15	835.71
MW-35	839.95	8.44	831.51
MW-36 <sup>(3)</sup>	838.97	7.94	831.03
MW-39	848.47	9.74	838.73
MW-40	851.86	12.96	838.90
MW-41	851.38	13.04	838.34
TP-1	850.44	11.81	838.63
TP-2	851.36	10.21	841.15

Notes:

<sup>(1)</sup> North Atlantic Vertical Datum in feet

<sup>(2)</sup> Feet below top of casing

<sup>(3)</sup> Bedrock Well

NM - Monitoring wells were not evaluated during this sample round

MW-11 - 845.25 FT. AMSL



TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
Sample Name:		MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
Sample Date:		7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	06/08/2017	1/10/2018	7/6/2018
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection
	Type 4 RRS										
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	8.5	7.2	NS	6.4	5.5	5.6	7.4	5.0 U	6.9
1,1-Dichloroethene	ug/L	524	6.3	7.2	NS	6.4	5.7	5.0 U	7.1	5.0 U	7.5
1,4-Dioxane	ug/L	-	-	150 U	NS	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	NS	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	38	35	NS	29	24	30	37	24	35
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	690	740	NS	810	720	810	840	530	820
Vinyl chloride	ug/L	3.27	2.0 U	2.0 U	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.8
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	743	789	NS	852	755	846	892	554	872
<b>MNA's</b>											
Sulfide	mg/L									BDL (2)	BDL (2)
Chloride	mg/L									20	21
Nitrate	mg/L									1.3	1.2
Sulfate	mg/L									4.5	4.8
Ethane	ug/L									BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)
Methane	ug/L									BDL(4)	18
Iron, Ferrous	mg/L									BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L									75.3	75.2
Alkalinity	mg/L									41	39

Notes:  
 ug/L - micrograms per liter  
 mg/L - milligrams per liter  
 NC - No established criteria (remediation goal)  
 5.0 U - not detected at associated method reporting limit  
 100 UJ - estimated result reported below associated reporting limit  
 "-" Not analyzed  
 ND - not detected  
 230 - Above the Type 4 RRS  
 NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
Sample Name:		MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
Sample Date:		7/2/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection
	Type 4 RRS										
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	11	8.1	NS	NS	7.6	5.6	5.0 U	5.1	6.7
1,1-Dichloroethene	ug/L	524	36	24	NS	NS	21	13	7.5	11	10
1,4-Dioxane	ug/L	-		150 U	NS	NS	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	NS	NS	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	170	84	NS	NS	62	66	46	61	72
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	40	23	NS	NS	61	24	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	3.27	2.0 U	4	NS	NS	4	3.7	5.5	5.1	5.4
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	262	143	NS	NS	156	112	59	82	94
<b>MNA's</b>											
Sulfide	mg/L								BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L								17	25	37
Nitrate	mg/L								BDL(0.25)	BDL(0.25)	BDL(0.25)
Sulfate	mg/L								28	65	47
Ethane	ug/L								15	10	28
Ethene	ug/L								BDL(7)	BDL(7)	BDL(7)
Methane	ug/L								640	510	2400
Iron, Ferrous	mg/L								BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L								249	260	394
Alkalinity	mg/L								185	275	380

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-" Not analyzed  
ND - not detected  
**230 - Above the Type 4 RRS**  
NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		MW-17	MW-17	MW-17	MW-17	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	
Sample Name:		MW-17	MW-17	MW-17	MW-17	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	
Sample Date:		7/3/2014	6/8/2017	1/10/2018	7/6/18	7/2/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	
Parameters	Units	Historic	Post-injection	Post-injection	Post-injection	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	
	Type 4 RRS												
<b>Volatile Organic Compounds</b>													
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
1,1-Dichloroethane	ug/L	4000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
1,1-Dichloroethene	ug/L	524	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
1,4-Dioxane	ug/L	-	-	150 U	150 U	150 U	150 U	150 U	NS	150 U	150 U	150 U	
Acetone	ug/L	45620	50 U	50 U	50 U	50 U	50 U	50 U	NS	50 U	50 U	50 U	
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
Chloroethane	ug/L	29200	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	10 U	
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	
cis-1,2-Dichloroethene	ug/L	204	5.0 U	5.0 U	5.0 U	5.0 U	120	72	77	NS	5.7	54	130
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	5.0 U	5.0 U	5.0 U	5.0 U	26	22	14	NS	5.0 U	21	28
Vinyl chloride	ug/L	3.27	5.0 U	5.0 U	5.0 U	5.0 U	20	12	14	NS	5.0 U	7	5.3
Tetrachloroethane	ug/L	98	5.0U	5.0U	5.0U	5.0U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	ND	ND	ND	ND	166	106	105	NS	5.7	82	163
<b>MNA's</b>													
Sulfide	mg/L		NS	BDL(2)	BDL(2)	BDL(2)							
Chloride	mg/L		NS	3.2	2.6	3.7							
Nitrate	mg/L		NS	BDL(0.25)	BDL(0.25)	BDL(0.25)							
Sulfate	mg/L		NS	7.1	29	10							
Ethane	ug/L		NS	BDL(9)	BDL(9)	BDL(9)							
Ethene	ug/L		NS	BDL(7)	BDL(7)	BDL(7)							
Methane	ug/L		NS	330	38	28							
Iron, Ferrrous	mg/L		NS	BDL(0.1)	BDL(0.1)	0.119							
Carbon dioxide	mg/L		NS	112	126	112							
Alkalinity	mg/L		NS	40	37	33							

Notes:

- ug/L - micrograms per liter
- mg/L - milligrams per liter
- NC - No established criteria (remediation goal)
- 5.0 U - not detected at associated method reporting limit
- 100 UJ - estimated result reported below associated reporting limit
- "--" Not analyzed
- ND - not detected

230 - Above the Type 4 RRS

NS - Not sampled

**TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA**

Location ID:			MW-18	MW-18	MW-18	MW-19	MW-19	MW-19	MW-19	MW-19	MW-20	MW-20	MW-20	MW-20
Sample Name:			MW-18	MW-18	MW-18	MW-19	MW-19	MW-19	MW-19	MW-19	MW-20	MW-20	MW-20	MW-20
Sample Date:			6/8/2017	1/10/2018	7/6/18	7/2/14	6/18/15	6/8/2017	1/10/2018	7/6/18	7/1/2014	6/8/2017	1/10/2018	7/6/18
Parameters	Units	Type 4 RRS	Post-injection	Post-injection	Post-injection	Historic	Baseline	Post-Injection	Post-Injection	Post-Injection	Historic	Post-injection	Post-injection	Post-injection
<b>Volatile Organic Compounds</b>														
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	8.8	5.0 U	5.9	5.0 U
1,1-Dichloroethene	ug/L	524	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	ug/L	-	150 U	150 U	150 U		150 U	NS	150 U	150 U	-	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	50 U	50 U	50 U	NS	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	120	76	64	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	13	24	37	14	14	NS	14	7.4	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	3.27	8.8	4.2	3.5	2.0 U	2.0 U	NS	2.0 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	142	104	105	14	14		14	7	8.8	ND	5.9	ND
<b>MNA's</b>														
Sulfide	mg/L		BDL(2)	BDL(2)	BDL(2)			NS	BDL(2)	BDL(2)	NS	BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L		15	14	14				14	1.3	NS	13	14	14
Nitrate	mg/L		BDL(0.25)	BDL(0.25)	BDL(0.25)				0.54	0.38	NS	BDL(0.25)	BDL(0.25)	BDL(0.25)
Sulfate	mg/L		18	17	17				13	4	NS	4.2	3.4	4.1
Ethane	ug/L		BDL(9)	BDL(9)	BDL(9)				BDL(9)	BDL(9)	NS	BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L		BDL(7)	BDL(7)	BDL(7)				BDL(7)	BDL(7)	NS	BDL(7)	BDL(7)	BDL(7)
Methane	ug/L		190	BDL(4)	BDL(4)				BDL(4)	BDL(4)	NS	56	910	1600
Iron, Ferrous	mg/L		BDL(0.1)	BDL(0.5)	BDL(0.5)				BDL(0.1)	BDL(0.1)	NS	BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L		163	130	130				83.5	49.9	NS	166	171	163
Alkalinity	mg/L		129	107	107				84	23	NS	167	167	162

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"--" Not analyzed  
ND - not detected  
**230 - Above the Type 4 RRS**  
NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
Sample Name:		MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
Sample Date:		7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection
	Type 4 RRS										
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	524	5.0 U	9.2	NS	6.8	12	5.4	22	13	5.0 U
1,4-Dioxane	ug/L	-		150 U	NS	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.4	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	16	8.9	NS	6.7	5.0 U	5.0 U	7.2	7.2	12
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	340	210	NS	160	210	100	250	220	120
Vinyl chloride	ug/L	3.27	2.0 U	2.0 U	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	379	228	NS	174	232	105	279	240	132
<b>MNA's</b>											
Sulfide	mg/L								BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L								22	16	16
Nitrate	mg/L								4.2	1.7	3.2
Sulfate	mg/L								21	16	41
Ethane	ug/L								BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L								BDL(7)	BDL(7)	BDL(7)
Methane	ug/L								8.5	8.5	10
Iron, Ferrous	mg/L								BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L								65.6	48	128
Alkalinity	mg/L								34	28	64

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-." Not analyzed  
ND - not detected  
230 - Above the Type 4 RRS  
NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID: Sample Name: Sample Date:			MW-28	MW-28	MW-28	MW-28	MW-28	MW-31	MW-31	MW-31	MW-31
			MW-28 7/1/14 Historic	MW-28 6/18/15 Baseline	MW-28 6/8/2017 Post-injection	MW-28 1/10/2018 Post-injection	MW-28 7/6/18 Post-injection	MW-31 6/18/15 Baseline	MW-31 6/8/2017 Post-injection	MW-31 1/10/2018 Post-injection	MW-31 7/6/18 Post-injection
Parameters	Units	Type 4 RRS									
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	524	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	ug/L	-		150 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	16	15	7.4	27	24	15	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	3.27	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	16	15	7	27	24	15	ND	ND	ND
<b>MNA's</b>											
Sulfide	mg/L				BDL(2)	BDL(2)	BDL(2)		BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L				11	12	11		16	16	15
Nitrate	mg/L				1.1	1.2	1.2		BDL(0.25)	BDL(0.25)	BDL(0.25)
Sulfate	mg/L				7.8	8.7	8.4		1.3	2.3	2.3
Ethane	ug/L				BDL(9)	BDL(9)	BDL(9)		BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L				BDL(7)	BDL(7)	BDL(7)		BDL(7)	BDL(7)	BDL(7)
Methane	ug/L				BDL(4)	BDL(4)	BDL(4)		65	8.7	42
Iron, Ferrous	mg/L				BDL(0.1)	BDL(0.1)	BDL(0.1)		BDL(0.1)	BDL(0.1)	0.277
Carbon dioxide	mg/L				54.1	101	72		113	87.8	73.2
Alkalinity	mg/L				33	39	35		90	84	65

Notes:

ug/L - micrograms per liter

mg/L - milligrams per liter

NC - No established criteria (remediation goal)

5.0 U - not detected at associated method reporting limit

100 UJ - estimated result reported below associated reporting limit

"-" Not analyzed

ND - not detected

230 - Above the Type 4 RRS

NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID: Sample Name: Sample Date:			MW-32 7/2/14 Historic	MW-32 6/18/15 Baseline	MW-32 9/3/15 Post-Injection #1	MW-32 7/7/16 Post-Injection	MW-32 11/2/16 Post-Injection	MW-32 6/8/2017 Post-Injection	MW-32 1/10/2018 Post-Injection	MW-32 7/6/18 Post-Injection
Parameters	Units	Type 4 RRS								
<b>Volatile Organic Compounds</b>										
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	524	5.8	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	ug/L	-		150 U	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	10	7.4	7.9	6.4	7.1	5.2	5.8	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	110	110	120	85	110	83	99	47
Vinyl chloride	ug/L	3.27	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	126	118	128	91	117	88	105	47
<b>MNA's</b>										
Sulfide	mg/L							BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L							13	14	14
Nitrate	mg/L							1.1	1.4	1.4
Sulfate	mg/L							7.6	7.7	7.2
Ethane	ug/L							BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L							BDL(7)	BDL(7)	BDL(7)
Methane	ug/L							BDL(4)	BDL(4)	BDL(4)
Iron, Ferrous	mg/L							BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L							110	82.8	75.8
Alkalinity	mg/L							53	51	58

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"--" Not analyzed  
ND - not detected

230 - Above the Type 4 RRS

NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID: Sample Name: Sample Date:			MW-35	MW-35	MW-35	MW-35	MW-36	MW-36	MW-36	MW-36
			MW-35	MW-35	MW-35	MW-35	MW-36	MW-13	MW-13	MW-13
			7/3/14	6/8/2017	1/10/2018	7/6/18	7/3/14	6/8/2017	1/10/2018	7/6/18
Parameters	Units	Type 4 RRS	Historic	Post-injection	Post-injection	Post-injection	Historic	Post-injection	Post-injection	Post-injection
<b>Volatile Organic Compounds</b>										
1,1,1-Trichloroethane	ug/L	13600	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	524	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	ug/L	-	150 U	NS	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	NS	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	3.27	5.0 U	NS	2.0 U	2.0 U	5.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethane	ug/L	98	5.0U	NS	5.0U	5.0U	5.0U	5.0U	5.0U	5.0U
Total chlorinated VOCs	ug/L	NC	ND		ND	ND	ND	ND	ND	ND
<b>MNA's</b>										
Sulfide	mg/L				BDL(2)	BDL(2)		BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L				9.4	16		3.6	2.6	2.8
Nitrate	mg/L				BDL(0.25)	BDL(0.25)		0.36	0.41	0.36
Sulfate	mg/L				61	53		6.2	7.3	6.9
Ethane	ug/L				BDL(9)	BDL(9)		BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L				BDL(97)	BDL(7)		BDL(7)	BDL(7)	BDL(7)
Methane	ug/L				54	11		BDL(4)	11	BDL(4)
Iron, Ferrous	mg/L				BDL(0.1)	BDL(0.1)		BDL(0.1)	BDL(0.1)	BDL(0.2)
Carbon dioxide	mg/L				216	273		106	52.1	65.8
Alkalinity	mg/L				26	23		53	52	54

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-." Not analyzed  
ND - not detected  
230 - Above the Type 4 RRS  
NS - Not sampled



**TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA**

Location ID:	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	
Sample Name:	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	MW-39	
Sample Date:	7/2/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18		
Parameters	Units	Type 4 RRS	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	
<b>Volatile Organic Compounds</b>												
1,1,1-Trichloroethane	ug/L	13600	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	13	12	5.0 U
1,1-Dichloroethene	ug/L	524	25000 U	4900	25000 U	5000 U	500 U	500 U	500 U	53	28	11
1,4-Dioxane	ug/L	-	-	75000 U	750000 U	150000 U	15000 U	15000 U	15000 U	150 U	150 U	150 U
Acetone	ug/L	45620	50000 U	25000 U	50000 U	50000 U	5000 U	5000 U	5000 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	25000 U	2500 U	25000 U	10000 U	1000 U	1000 U	1000 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	29	39	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	263	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	200,000	210,000	100,000	110,000	19,000	8,600	9,800	6,300	5,800	4,200
Vinyl chloride	ug/L	3.27	10000 U	1000 U	10000 U	5000 U	500 U	500 U	500 U	2.0 U	2.0 U	2.0 U
Tetrachloroethane	ug/L	98	25000 U	2500 U	25000 U	5000 U	500 U	500 U	500 U	19	18	15
Total chlorinated VOCs	ug/L	NC	200,000	214,900	100,000	110,000	19,000	8,600	9,800	6,414	5,897	4,226
<b>MNA's</b>												
Sulfide	mg/L									BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L									14	15	13
Nitrate	mg/L									0.3	0.36	BDL(0.25)
Sulfate	mg/L									110	47	33
Ethane	ug/L									BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)	BDL(7)
Methane	ug/L									21	17	32
Iron, Ferrous	mg/L									BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L									112	106	110
Alkalinity	mg/L									42	18	21

Notes:  
 ug/L - micrograms per liter  
 mg/L - milligrams per liter  
 NC - No established criteria (remediation goal)  
 5.0 U - not detected at associated method reporting limit  
 100 UJ - estimated result reported below associated reporting limit  
 "-" Not analyzed  
 ND - not detected

**230 - Above the Type 4 RRS**

NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	
Sample Name:	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	MW-40	
Sample Date:	7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18	
Parameters	Units	Type 4 RRS	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	16	23	250 U	6.1	14	7.1	8.4	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	36	44	250 U	28	14	12	15	12	15
1,1-Dichloroethene	ug/L	524	42	61	250 U	38	61	5.0 U	5.1	5.0 U	5.0 U
1,4-Dioxane	ug/L	-		150 U	7500 U	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	2500 U	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	250 U	5.0 U	5.3	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	1500	1700	1600	720	250	230	330	210	390
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	250 U	6.9	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	2100	3500	3200	5200	1500	950	900	1000	1500
Vinyl chloride	ug/L	3.27	100	110	140	8.8	120	66	110	80	150
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	250 U	14	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	3794	5438	4940	6001	1964	1265	1369	1302	2055
<b>MNA's</b>											
Sulfide	mg/L									BDL(2)	BDL(2)
Chloride	mg/L									38	42
Nitrate	mg/L									BDL(0.25)	BDL(0.25)
Sulfate	mg/L									53	59
Ethane	ug/L									BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)
Methane	ug/L									98	130
Iron, Ferrous	mg/L									0.814	2.81
Carbon dioxide	mg/L									106	70.1
Alkalinity	mg/L									16	40

Notes:  
 ug/L - micrograms per liter  
 mg/L - milligrams per liter  
 NC - No established criteria (remediation goal)  
 5.0 U - not detected at associated method reporting limit  
 100 UJ - estimated result reported below associated reporting limit  
 "-" Not analyzed  
 ND - not detected

230 - Above the Type 4 RRS

NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	
Sample Name:		MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	MW-41	
Sample Date:		7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18	
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection	
	Type 4 RRS											
<b>Volatile Organic Compounds</b>												
1,1,1-Trichloroethane	ug/L	13600	5.0 U	250 U	250 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	250 U	250 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	23	250 U	250 U	NS	16	9.7	13	6.1	7.7	5.0 U
1,1-Dichloroethene	ug/L	524	24	250 U	250 U	NS	24	10	17	5.0 U	6.8	5.0 U
1,4-Dioxane	ug/L	-		7500 U	7500 U	NS	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	250 U	2500 U	NS	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	250 U	250 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	250 U	500 U	NS	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	250 U	250 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	880	670	690	NS	200	170	180	85	110	58
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	250 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	250 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	250 U	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	2800	3500	4400	NS	2800	1900	1900	570	760	600
Vinyl chloride	ug/L	3.27	6.8	100 U	100 U	NS	4.2	3.8	4.4	3.1	4.6	2.1
Tetrachloroethane	ug/L	98	7.3	250 U	250 U	NS	6.3	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	3741	4170	5090	NS	3051	1994	2114	664	889	660
<b>MNA's</b>												
Sulfide	mg/L									BDL(2)	BDL(2)	BDL(2)
Chloride	mg/L									28	28	28
Nitrate	mg/L									0.93	0.87	1.1
Sulfate	mg/L									280	180	91
Ethane	ug/L									BDL(9)	BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)	BDL(7)
Methane	ug/L									35	20	7.8
Iron, Ferrous	mg/L									BDL(0.1)	BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L									53.7	63.4	108
Alkalinity	mg/L									42	47	43

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-" Not analyzed  
ND - not detected  
230 - Above the Type 4 RRS  
NS - Not sampled

TABLE 2  
SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS  
SOUTHERN STATES, LLC.  
HAMPTON, GEORGIA

Location ID:		TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1
Sample Name:		TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1	TP-1
Sample Date:		7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/2018	7/6/18
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection
	Type 4 RRS										
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	19	250 U	18	12	5.5	5.2	5.6	11	15
1,1-Dichloroethane	ug/L	4000	7.5	250 U	7.8	6	5.3	5.0 U	5.0 U	5.5	8.1
1,1-Dichloroethene	ug/L	524	5.0 U	250 U	6.1	6.1	5.0 U	5.0 U	5.0 U	5.0 U	7.3
1,4-Dioxane	ug/L	-		7500 U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	10.2	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	250 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	26	250 U	24	17	15	9.2	6	15	23
cis-1,2-Dichloroethene	ug/L	204	110	250 U	110	87	69	55	140	110	120
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	2400	2300	2300	1800	1000	1100	870	1800	1900
Vinyl chloride	ug/L	3.27	3.8	250 U	3.3	2.0 U	2.0 U	2.0 U	8.8	4.2	3.6
Tetrachloroethane	ug/L	98	5.0 U	250 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	2566	2300	2469	1928	1095	1169	1030	1946	2077
<b>MNA's</b>											
Sulfide	mg/L									BDL(2)	BDL(2)
Chloride	mg/L									43	43
Nitrate	mg/L									9.9	9.9
Sulfate	mg/L									43	43
Ethane	ug/L									BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)
Methane	ug/L									27	37
Iron, Ferrous	mg/L									BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L									22.8	205
Alkalinity	mg/L									BDL(3)	BDL(3)

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-." Not analyzed  
ND - not detected  
230 - Above the Type 4 RRS  
NS - Not sampled

**TABLE 2**  
**SUMMARY OF DETECTED COMPOUNDS - PERFORMANCE MONITORING WELLS**  
**SOUTHERN STATES, LLC.**  
**HAMPTON, GEORGIA**

Location ID:		TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2
Sample Name:		TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2	TP-2
Sample Date:		7/1/14	6/18/15	9/3/15	12/16/15	3/31/16	7/7/16	11/2/16	6/8/2017	1/10/18	7/6/18
Parameters	Units	Historic	Baseline	Post-Injection #1	Pre-injection #2	Post-injection #2	Post-injection	Post-injection	Post-injection	Post-injection	Post-injection
	Type 4 RRS										
<b>Volatile Organic Compounds</b>											
1,1,1-Trichloroethane	ug/L	13600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	4000	16	16	13	12	11	10	14	9.8	12
1,1-Dichloroethene	ug/L	524	79	68	47	40	32	32	66	34	27
1,4-Dioxane	ug/L	-		150U	150 U	150 U	150 U	150 U	150 U	150 U	150 U
Acetone	ug/L	45620	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride	ug/L	10.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	29200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	ug/L	80	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	204	43	46	48	41	37	39	36	31	42
Methyl tert butyl ether (MTBE)	ug/L	263	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5241	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	2044	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	5.24	900	720	500	500	530	590	660	470	510
Vinyl chloride	ug/L	3.27	6.3	5.7	9.8	4.8	5.0	3.2	5.0	4.7	5.7
Tetrachloroethane	ug/L	98	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Total chlorinated VOCs	ug/L	NC	1044	856	618	598	615	674	781	550	597
<b>MNA's</b>											
Sulfide	mg/L									BDL(2)	BDL(2)
Chloride	mg/L									14	14
Nitrate	mg/L									0.99	1.1
Sulfate	mg/L									24	25
Ethane	ug/L									BDL(9)	BDL(9)
Ethene	ug/L									BDL(7)	BDL(7)
Methane	ug/L									16	38
Iron, Ferrous	mg/L									BDL(0.1)	BDL(0.1)
Carbon dioxide	mg/L									115	107
Alkalinity	mg/L									16	28

Notes:  
ug/L - micrograms per liter  
mg/L - milligrams per liter  
NC - No established criteria (remediation goal)  
5.0 U - not detected at associated method reporting limit  
100 UJ - estimated result reported below associated reporting limit  
"-" Not analyzed  
ND - not detected

**230 - Above the Type 4 RRS**

NS - Not sampled

**APPENDIX A**  
**GROUNDWATER PURGE FORMS**  
**&**  
**ANALYTICAL LABORATORY REPORTS**







**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/4/18  
 Personnel: JJS

**Monitoring Well Data:**

Well No.: MW-17  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 16.80  
 Measured Well Depth (ft): 16.80  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 15  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 7.75

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	Precision Required: ±0.1 Yr <sup>(3)</sup>	pH	Temperature °C ±3%	Conductivity <sup>(3)</sup> (mS/cm) ±0.005 or 0.01	ORP (mV) ±10 mV	DO (mg/L) ±10%	Turbidity (NTU) ±10%

1103	50	7.75			6.55	24.12	0.240	-16	2.10	10.4
1105		7.87			6.48	23.56	0.241	-51	1.50	16.1
1109		7.55			6.46	27.88	0.209	-60	1.71	11.2
1116		7.96			6.41	27.15	0.20210	-74	1.58	6.3
1120		7.50			6.46	24.02	0.204	-70	1.66	6.1
1125		7.54			6.42	23.42	0.204	-73	1.61	6.6
Sample ID:	MW-17	<del>DU</del> 510								
	VOCs									

- Notes:
- (1) The pump intake was placed at the well mid-screen or 2 ft above any sediment accumulated at the well bottom.
  - (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
  - (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/6/16  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-18  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 15.00  
 Measured Well Depth (ft): 15.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft) <sup>(1)</sup>: 10  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 2.55

**Dratoduron**

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Precision Required: (ft)	pH	Temperature °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
0835	50	2.55		6.90	22.04	0.158	124	0.51	10.9
0838		2.68		6.98	22.78	0.148	120	0.38	11.2
0841		2.68		6.93	22.86	0.136	116	0.49	8.6
0845		2.73		6.93	22.69	0.132	102	0.43	8.6
0851		2.75		6.93	23.01	0.130	100	0.46	8.4
0855		2.75		6.93	22.61	0.134	103	0.44	8.8
Sample ID: MW-18									
VOCs									

Notes:  
 (1) The pump intake was placed at the well screen mid-point or 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 ml./min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/1/18  
 Personnel: [Signature]

**Monitoring Well Data:**

Well No.: MW-19  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 118.00  
 Measured Well Depth (ft): 118.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft) <sup>(1)</sup>: 114.5  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 12.41

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	pH	Temperature <sup>(3)</sup> °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
<del>1020</del>	88	12.41		6.84	25.02	0.208	250	150	14.1
1028		12.48		6.80	24.84	0.216	251	1.81	8.2
1032		12.55		6.81	25.08	0.194	278	1.60	5.1
1040		12.56		6.70	24.94	0.190	274	1.54	8.4
1043		12.48		6.75	25.30	0.151	278	1.50	4.8
1047		12.66		6.75	25.67	0.151	276	1.56	7.5
Sample ID: MW-19									
VOCs									

Notes:  
 (1) The pump intake was placed at the well mid-screen or approx. 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.:

Date: 7/1/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**

Well No.: MW-20 Screen Length (ft): \_\_\_\_\_  
 Measurement Point: TOC Depth to Pump Intake (ft)<sup>(1)</sup>: 78  
 Constructed Well Depth (ft): 81.00 Well Diameter, D (in): 2  
 Measured Well Depth (ft): 81.00 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Depth of Sediment (ft): N/A Initial Depth to Water (ft): 11.20

**Drawdown**

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Precision Required: (ft)	pH	Temperature (°C)	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
0806	58	11.26		6.57	22.88	0.216	-54	1.10	12.2
0810		11.31		6.66	22.74	0.241	-108	1.04	9.5
0818		11.45		6.67	22.61	0.211	-118	0.98	8.1
0824		11.46		6.54	22.08	0.218	-126	0.93	5.4
0830		11.46		6.63	22.41	0.210	-121	0.97	4.6
Sample ID: <u>MW-20</u>									
VOCs									

**Notes:**

- (1) The pump intake was placed at the well mid-screen or 2 ft above any sediment accumulated at the well bottom.
  - (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
  - (3) For conductivity, the average value of three readings < 1 mS/cm ±0.005 mS/cm or where conductivity > 1 mS/cm ±0.01 mS/cm.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**  
 Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_  
 Date: 7/2/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**  
 Well No.: MW-21  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 23.80  
 Measured Well Depth (ft): 23.80  
 Depth of Sediment (ft): N/A  
 Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 21  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 5.97

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	Precision Required:	pH	Temperature °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	
											±0.1 Yvr
0836	55	9.47			6.76	22.55	0.228	-23	2.25	5.6	
0840		9.86			6.02	23.16	0.210	121	0.90	5.6	
0844		9.54			5.51	23.40	0.158	154	0.68	5.4	
0859		9.44			5.80	23.66	0.150	164	0.07	6.2	
0502		9.60			5.86	27.50	0.152	165	2.08	5.1	
0905		9.18			5.82	27.54	0.152	169	2.01	4.9	
Sample ID: MW-21											
	VOCs										

Notes:  
 (1) The pump intake was placed at the well mid-screen or approx. 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 ml/min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.  
 Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/6/14  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-28  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 78.00  
 Measured Well Depth (ft): 78.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 75  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 7.96

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	pH	Temperature °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
1000	50	7.96		6.84	23.41	0.116	141	1.02	2.20
1006		7.84		6.66	23.20	0.101	138	0.81	2.10
1014		7.90		6.51	23.21	0.105	124	0.76	1.90
1022		7.84		6.40	22.58	0.104	120	0.74	1.60
1026		7.50		6.46	23.10	0.102	126	0.70	1.48
1030		7.58		6.46	22.54	0.102	128	0.74	1.47
Sample ID	MW-28								
	VOCs								

Notes:  
 (1) The pump intake was placed at the well mid-screen or 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 ml./min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/5/18  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-31  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 57.42  
 Measured Well Depth (ft): 57.42  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 53  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (ml): \_\_\_\_\_  
 Initial Depth to Water (ft): 5.24

Time	Pumping Rate (ml/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	pH	Temperature °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	
										Precision Required: ±0.1 Yr <sup>1</sup>
0800	50	5.24		8.14	27.02	0.180	-101	5.11	8.1	
0808		5.76		8.09	22.84	0.172	-116	5.10	7.4	
0818		5.41		8.16	22.66	0.176	-130	4.16	6.2	
0814		5.48		8.04	22.88	0.165	-144	4.06	4.8	
0820		5.49		8.10	27.10	0.165	-146	4.08	5.10	
0824		5.50		8.06	22.86	0.166	-146	4.10	5.15	
0828		5.50		8.06	22.90	0.169	-147	4.11	4.6	
Sample ID: MW-31	VOCs									

Notes:  
 (1) The pump intake was placed at the well mid-screen or approx. 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 ml/min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/1/11  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-32  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 57.00  
 Measured Well Depth (ft): 57.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 52  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 3.15

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	pH	Temperature °C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
0840	58	3.15		7.42	24.10	0.119	128	3.71	11.6
0846		3.18		7.41	24.06	0.116	121	3.46	10.2
0850		3.36		7.36	23.98	0.118	136	3.45	9.1
0856		3.40		7.40	23.88	0.111	148	3.46	8.4
0900		3.78		7.45	24.02	0.111	140	3.30	6.8
0906	8	3.40		7.45	23.87	0.111	145	3.40	6.1
Sample ID: MW-32	VOCs								

**Notes:**

- (1) The pump intake was placed at the well mid-screen or 2 ft above any sediment accumulated at the well bottom.
- (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
- (3) For conductivity, the average value of three readings < 1 mS/cm ±0.005 mS/cm or where conductivity > 1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)



**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/6/18  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-35  
 Measurement Point: TOC  
 Constructed Well Depth (ft): \_\_\_\_\_  
 Measured Well Depth (ft): \_\_\_\_\_  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft) <sup>(1)</sup>: \_\_\_\_\_  
 Well Diameter, D (in): \_\_\_\_\_  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 6.44

**Drawdown**

Time	Pumping Rate (mL/min)	Depth to Water (ft)	from Initial Water Level <sup>(2)</sup> (ft)	pH	Temperature ° C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
1140	50	6.44		5.54	24.02	0.255	111	1.45	18.4
1153	50	6.52		5.85	23.81	0.254	74	1.40	18.1
1156	50	6.51		6.10	23.18	0.252	68	1.29	12.2
1202	50	6.44		6.04	23.49	0.248	60	1.28	9.4
1204	50	6.60		6.02	23.66	0.248	64	1.30	8.8
1208	50	6.68		6.02	23.41	0.248	64	1.25	8.2
Sample ID: MW-35									
	VOCs								

**Notes:**

- (1) The pump intake was placed at the well mid-screen or approx. 2 ft above any sediment accumulated at the well bottom.
- (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
- (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/1/18  
 Personnel: J. Schwaller

**Monitoring Well Data:**

Well No.: MW-36  
 Measurement Point: TOC  
 Constructed Well Depth (ft): \_\_\_\_\_  
 Measured Well Depth (ft): 35.34  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft) (1): 33  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 7.94

**Diatom**

Time	Pumping Rate (mL/min)	Depth to Water (ft)	from Initial Water Level (2) (ft)	pH	Temperature (3) °C	Conductivity (3) (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
1/4/4	50	7.94		6.95	22.74	0.124	22	1.66	6.4
1/50		8.06		6.94	22.60	0.120	14	1.48	6.6
1/58		8.10		6.97	22.54	0.120	16	1.78	7.2
1/206		8.20		6.98	22.78	0.118	18	1.40	5.4
1/212		8.18		6.98	22.80	0.118	16	1.40	6.1
Sample ID: MW-36									
	VOCs								

**Notes:**

- (1) The pump intake was placed at the well mid-screen or approx. 2 ft above any sediment accumulated at the well bottom.
- (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
- (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**  
 Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/11/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**  
 Well No.: MW-39  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 32.00  
 Measured Well Depth (ft): 32.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 22  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 9.74

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	Precision Required: ±0.1 V <sub>100</sub>	pH	Temperature °C ±.3%	Conductivity <sup>(3)</sup> (mS/cm) ±0.005 or 0.01	ORP (mV) ±10 mV	DO (mg/L) ±10%	Turbidity (NTU) ±10%
1205	55	9.74			5.48	24.10	0.144	184	2.51	5.4
1210		8.83			5.48	23.83	0.143	211	2.41	5.9
1218		8.54			5.51	23.28	0.140	261	2.14	6.2
1224		8.10			5.42	23.46	0.151	248	2.02	4.9
1238		5.58			5.46	23.20	0.150	250	2.08	5.1
1245		10.00			5.44	23.16	0.150	255	2.10	4.8
Sample ID: MW-39										
VOCs										

Notes:  
 (1) The pump intake was placed at the well screen mid-point or at approx. 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purgings will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing).

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/6/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**

Well No.: MW-40  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 32.00  
 Measured Well Depth (ft): 32.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 22  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 12.56

**Drawdown**

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level <sup>(2)</sup> (ft)	Precision Required: ±0.1 Vials	pH	Temperature ° C	Conductivity <sup>(3)</sup> (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
1023	55	12.56			5.48	24.16	0.184	135	1.53	8.6
1026		13.04			5.44	24.62	0.176	136	1.40	8.1
1034		13.10			5.36	23.80	0.175	134	1.45	8.2
1042		13.14			5.38	24.14	0.176	186	1.38	7.4
1045		13.18			5.40	24.40	0.180	186	1.40	6.8
1047		13.15			5.40	24.78	0.180	185	1.43	6.1
Sample ID: <u>MW-40</u>										
VOCs										

**Notes:**

- (1) The pump intake was placed at the well screen mid-point or at approx. 2 ft above any sediment accumulated at the well bottom.
- (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
- (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/1/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**

Well No.: MW-41  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 32.00  
 Measured Well Depth (ft): 32.00  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft)<sup>(1)</sup>: 22  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 13.09

**Dracothion**

Time	Pumping Rate	Depth to Water	from Initial Water Level <sup>(3)</sup>	Precision Required:	pH	Temperature ° C	Conductivity <sup>(3)</sup>	ORP	DO	Turbidity
1/20	6.0	17.09			6.16	25.14	2.386	136	1.24	8.4
1/28		18.10			6.16	21.40	2.328	171	1.08	6.6
1/12		17.14			6.04	23.71	2.210	170	1.18	5.2
1/22		17.18			6.08	28.14	2.325	123	1.26	6.1
1/21		17.16			6.16	25.10	2.306	120	1.28	5.5
1/45		17.20			6.05	25.36	2.325	125	1.27	5.0
Sample ID:	MW-41									
	VOCs									

Notes:  
 (1) The pump intake was placed at the well screen mid-point or at approx. 2 ft above any sediment accumulated at the well bottom.  
 (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.  
 (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.  
 Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.: \_\_\_\_\_

Date: 7/1/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**

Well No.: TP-1  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 22.40  
 Measured Well Depth (ft): \_\_\_\_\_  
 Depth of Sediment (ft): N/A

Screen Length (ft): \_\_\_\_\_  
 Depth to Pump Intake (ft) (1): 20  
 Well Diameter, D (in): 1  
 Well Screen Volume, V<sub>s</sub> (mL): \_\_\_\_\_  
 Initial Depth to Water (ft): 11.81

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level (2) (ft)	Precision Required:		pH	Temperature °C ±3%	Conductivity (3) (mS/cm) ±0.005 or 0.01	ORP (mV) ±10 mV	DO (mg/L) ±10%	Turbidity (NTU) ±10%
				±0.1	Yr/Yr						
0945	55	11.81		5.22	±0.1	25.14	0.183	218	1.18	4.1	
0952		11.58		4.97	±0.1	25.10	0.185	230	1.28	5.1	
0959		12.02		4.60	±0.1	25.02	0.186	236	1.21	6.1	
1006		11.50		4.63	±0.1	24.90	0.155	248	1.11	5.2	
1010		12.00		4.60	±0.1	25.60	0.188	250	1.10	5.1	
1015		12.08		4.12	±0.1	25.15	0.189	252	1.12	4.7	
Sample ID:	TP-1										
	VOCs										

**Notes:**

- (1) The pump intake was placed at the well mid-screen at approx 2 ft above any sediment accumulated at the well bottom.
  - (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
  - (3) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)

**MONITORING WELL RECORD FOR LOW-FLOW PURGING**

**Project Data:**

Project Name: Southern States LLC  
 Ref. No.:

Date: 7/1/18  
 Personnel: B. Cortelloni

**Monitoring Well Data:**

Well No.: TP-2  
 Measurement Point: TOC  
 Constructed Well Depth (ft): 30.00  
 Measured Well Depth (ft): 30.00  
 Depth of Sediment (ft): N/A

Screen Length (ft):  
 Depth to Pump Intake (ft) (1): 25  
 Well Diameter, D (in): 2  
 Well Screen Volume, V<sub>s</sub> (mL):  
 Initial Depth to Water (ft): 10.21

**Drawdown**

Pumping Rate	Depth to Water	Drawdown from Initial Water Level (2)	pH	Temperature °C	Conductivity (3) (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
			±0.1 V/vio	±3%	±0.005 or 0.01	±10 mV	±10%	±10%
			Precision Required:					

0511	10.21		5.26	27.90	0.127	193	6.40	7.4
0518	12.70		4.58	27.74	0.101	198	6.50	7.0
0522	12.48		4.51	27.80	0.093	208	9.2	6.8
0528	12.48		4.50	27.84	0.088	206	7.84	5.3
0535	12.48		4.53	27.40	0.085	202	8.4	5.5
0840	10.48		4.52	27.66	0.080	203	NK?	5.1
Sample ID: TP-2								
VOCs								

**Notes:**

- (1) The pump intake was placed at the well mid-screen or 2 ft above any sediment accumulated at the well bottom.
- (2) The drawdown from the initial water level should not exceed 0.33 ft. The pumping rate should not exceed 600 mL/min.
- (3) For conductivity, the average value of three readings < 1 mS/cm ±0.005 mS/cm or where conductivity > 1 mS/cm ±0.01 mS/cm. Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing)



**ANALYTICAL ENVIRONMENTAL SERVICES, INC.**

July 17, 2018

John Schwaller  
Environmental Management Associates, LLC  
5262 Belle Wood Ct.  
Buford GA 30518

RE: Southern States GW

Dear John Schwaller:

Order No: 1807523

Analytical Environmental Services, Inc. received 20 samples on 7/6/2018 2:00:00 PM  
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated  
Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the  
analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES's accreditations are as follows:

-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical  
Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective  
07/01/18-06/30/19.

State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective  
07/01/18-06/30/19 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.

-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos,  
Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal)  
Direct Examination, effective until 11/01/19.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Mirzeta Kararic  
Project Manager





COMPANY: <b>EMA / JS</b>		ADDRESS:		ANALYSIS REQUESTED				Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> for downloadable COCs and to log in to your AESAccess account.														
PHONE:		EMAIL:		<table border="1" style="width:100%; height: 100px;"> <tr><td>TCL</td><td>VOC</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MMA</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>					TCL	VOC						MMA						
TCL	VOC																					
MMA																						
SAMPLED BY: <b>J. SCHWANK / J. CANTRELL-OB</b>		SIGNATURE:																				
#	SAMPLE ID	DATE	TIME	GRAB	COMPOSITE	MATRIX (see codes)	PRESERVATION (see codes)	REMARKS														
1	MW-9	7/1	0843	X		GW	10															
2	MW-13 * 2		1045					INCLUDE														
3	MW-17 * 2		1125					1-4 DIOXANE														
4	MW-18		0855																			
5	MW-19 * 2		1047					MMA														
6	MW-20 * 2		0830					DISS. FERROUS IRON														
7	MW-21 * 2		0905					SULFIDE CO2														
8	MW-28		1030					SULFATE														
9	MW-31		0828					NITRATE														
10	MW-32		0906					ALKALINITY														
11	MW-35		1208					CHLORIDE														
12	MW-36		1212					ETHANE / ETHENE														
13	MW-39		1245					METHANE														
14	MW-40		1047																			
RELINQUISHED BY:		DATE/TIME:	RECEIVED BY:		DATE/TIME:	PROJECT INFORMATION		RECEIPT														
1. [Signature]		7/1/18 1400	1. MONIQUE ALDRIDGE		7/6/2018 2:00pm	PROJECT NAME: SOUTHWEST STATES GW		Total # of Containers														
2.			2.			PROJECT #: SITE ADDRESS:		Turnaround Time (TAT) Request														
3.			3.			SEND REPORT TO: <b>SCHWANK</b>		<input checked="" type="checkbox"/> Standard 5 Business Days														
SPECIAL INSTRUCTIONS/COMMENTS:		SHIPMENT METHOD						<input type="checkbox"/> 2 Business Day Rush														
		OUT: 1		VIA:		INVOICE TO:		<input type="checkbox"/> Next Business Day Rush														
		IN: 5		VIA:		(IF DIFFERENT FROM ABOVE)		<input type="checkbox"/> Same-Day Rush (auth req.)														
		client FedEx		UPS US mail courier Greyhound		QUOTE #:		<input type="checkbox"/> Other														
		other:				PO#:		STATE PROGRAM (if any):														
								E-mail? <input type="checkbox"/> Fax? <input type="checkbox"/>														
								DATA PACKAGE: <input type="checkbox"/> I <input type="checkbox"/> II <input checked="" type="checkbox"/> III <input type="checkbox"/> IV														

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.



### CHAIN OF CUSTODY

COMPANY: <u>EMA/TS</u>		ADDRESS:		ANALYSIS REQUESTED					Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> for downloadable COCs and to log in to your AESAccess account.	Number of Containers			
PHONE:		EMAIL:		TEL VOL MNA'S									
SAMPLED BY: <u>J. SCHEWALA/BZ COLLECTIONS</u>		SIGNATURE:											
#	SAMPLE ID	SAMPLED:		GRAB	COMPOSITE	MATRIX (see codes)	PRESERVATION (see codes)					REMARKS	
		DATE	TIME										
1	MW-41	7/6	1145	X		GW	✓	✓					
2	TP-1		1015			↓	↓	✓					
3	TP-2		0940			↓	↓	✓					
4	DUP		1245			↓	↓						
5	TRIP BLANK		-				↓						
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:	DATE/TIME: <u>7/6/18 1400</u>	RECEIVED BY: <u>MONIQUE ABRUCO</u>	DATE/TIME: <u>7/6/2018 2:00pm</u>	PROJECT INFORMATION		RECEIPT	
1.		2.		PROJECT NAME: <u>Southern STATES GW</u>		Total # of Containers	
3.		3.		PROJECT #: _____		Turnaround Time (TAT) Request	
SPECIAL INSTRUCTIONS/COMMENTS:				SHIPMENT METHOD		<input checked="" type="checkbox"/> Standard 5 Business Days <input type="checkbox"/> 2 Business Day Rush <input type="checkbox"/> Next Business Day Rush <input type="checkbox"/> Same-Day Rush (auth req.) <input type="checkbox"/> Other _____	
				OUT: / / VIA: IN: / / VIA: client <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> US mail <input type="checkbox"/> courier <input type="checkbox"/> Greyhound other: _____		SEND REPORT TO: <u>SCHEWALA</u> INVOICE TO: _____ (IF DIFFERENT FROM ABOVE)	
QUOTE #: _____				PO#: _____			

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

**Client:** Environmental Management Associates, LLC  
**Project:** Southern States GW  
**Lab ID:** 1807523

**Case Narrative**

Ferrous Iron Analysis by Method SM3500-Fe-D:

Method 3500Fe-B as listed in Standard Methods for the Examination of Water and Wastewater 22nd Edition is applicable for analyzing Ferrous Iron in the field. All samples were analyzed in the laboratory which is a deviation from the method.

Due to sample matrix, sample 1807523-011D required dilution during preparation and/or analysis resulting in an elevated reporting limit.

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-9
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 5:43:00 AM
<b>Lab ID:</b> 1807523-001	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 19:15	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 19:15	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 19:15	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
cis-1,2-Dichloroethene	24	5.0		ug/L	263963	1	07/13/2018 19:15	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 19:15	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-9
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 5:43:00 AM
<b>Lab ID:</b> 1807523-001	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Trichloroethene	830	50		ug/L	263963	10	07/13/2018 19:41	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 19:15	NP
1,2-Dichloroethene, Total	24	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 19:15	NP
Surr: 4-Bromofluorobenzene	83.5	68-127		%REC	263963	1	07/13/2018 19:15	NP
Surr: 4-Bromofluorobenzene	84.8	68-127		%REC	263963	10	07/13/2018 19:41	NP
Surr: Dibromofluoromethane	95.3	84.4-122		%REC	263963	10	07/13/2018 19:41	NP
Surr: Dibromofluoromethane	96.2	84.4-122		%REC	263963	1	07/13/2018 19:15	NP
Surr: Toluene-d8	92.5	80.1-116		%REC	263963	1	07/13/2018 19:15	NP
Surr: Toluene-d8	91	80.1-116		%REC	263963	10	07/13/2018 19:41	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	28	1.0		mg/L	R374748	1	07/06/2018 18:48	MP
Nitrate	1.1	0.25		mg/L	R374748	1	07/06/2018 18:48	MP
Sulfate	4.6	1.0		mg/L	R374748	1	07/06/2018 18:48	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:12	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:12	ZH
Methane	46	4.0		ug/L	263638	1	07/09/2018 15:12	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	129	10.0		mg/L	R375293	1	07/13/2018 12:40	AT
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	38.0	3.00		mg/L	R375293	1	07/13/2018 12:40	AT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-13
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:45:00 AM
<b>Lab ID:</b> 1807523-002	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 13:11	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 13:11	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 13:11	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
cis-1,2-Dichloroethene	21	5.0		ug/L	263963	1	07/13/2018 13:11	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 13:11	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-13
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:45:00 AM
<b>Lab ID:</b> 1807523-002	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Vinyl chloride	4.0	2.0		ug/L	263963	1	07/13/2018 13:11	NP
1,2-Dichloroethene, Total	21	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 13:11	NP
Surr: 4-Bromofluorobenzene	81.9	68-127		%REC	263963	1	07/13/2018 13:11	NP
Surr: Dibromofluoromethane	97.2	84.4-122		%REC	263963	1	07/13/2018 13:11	NP
Surr: Toluene-d8	90.4	80.1-116		%REC	263963	1	07/13/2018 13:11	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	37	1.0		mg/L	R374748	1	07/06/2018 19:03	MP
Nitrate	BRL	0.25		mg/L	R374748	1	07/06/2018 19:03	MP
Sulfate	47	1.0		mg/L	R374748	1	07/06/2018 19:03	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	28	9.0		ug/L	263638	1	07/09/2018 15:17	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:17	ZH
Methane	2400	80		ug/L	263638	20	07/09/2018 15:47	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	394	10.0		mg/L	R375293	1	07/13/2018 12:40	AT
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	380	15.0		mg/L	R375293	5	07/13/2018 12:40	AT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-17
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 11:25:00 AM
<b>Lab ID:</b> 1807523-003	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 13:37	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 13:37	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 13:37	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 13:37	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-17
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 11:25:00 AM
<b>Lab ID:</b> 1807523-003	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 13:37	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 13:37	NP
Surr: 4-Bromofluorobenzene	84.7	68-127		%REC	263963	1	07/13/2018 13:37	NP
Surr: Dibromofluoromethane	92.6	84.4-122		%REC	263963	1	07/13/2018 13:37	NP
Surr: Toluene-d8	91.2	80.1-116		%REC	263963	1	07/13/2018 13:37	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	3.7	1.0		mg/L	R374748	1	07/06/2018 19:18	MP
Nitrate	BRL	0.25		mg/L	R374748	1	07/06/2018 19:18	MP
Sulfate	10	1.0		mg/L	R374748	1	07/06/2018 19:18	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:22	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:22	ZH
Methane	28	4.0		ug/L	263638	1	07/09/2018 15:22	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	0.119	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	112	10.0		mg/L	R375293	1	07/13/2018 12:40	AT
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	33.0	3.00		mg/L	R375293	1	07/13/2018 12:40	AT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-18
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:55:00 AM
<b>Lab ID:</b> 1807523-004	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 14:03	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 14:03	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 14:03	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
cis-1,2-Dichloroethene	64	5.0		ug/L	263963	1	07/13/2018 14:03	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 14:03	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-18
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:55:00 AM
<b>Lab ID:</b> 1807523-004	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Trichloroethene	37	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Vinyl chloride	3.5	2.0		ug/L	263963	1	07/13/2018 14:03	NP
1,2-Dichloroethene, Total	64	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 14:03	NP
Surr: 4-Bromofluorobenzene	84.1	68-127		%REC	263963	1	07/13/2018 14:03	NP
Surr: Dibromofluoromethane	97.6	84.4-122		%REC	263963	1	07/13/2018 14:03	NP
Surr: Toluene-d8	90.2	80.1-116		%REC	263963	1	07/13/2018 14:03	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	14	1.0		mg/L	R374748	1	07/06/2018 19:33	MP
Nitrate	BRL	0.25		mg/L	R374748	1	07/06/2018 19:33	MP
Sulfate	11	1.0		mg/L	R374748	1	07/06/2018 19:33	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:27	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:27	ZH
Methane	14	4.0		ug/L	263638	1	07/09/2018 15:27	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	157	10.0		mg/L	R375293	1	07/13/2018 12:40	AT
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	99.0	3.00		mg/L	R375293	1	07/13/2018 12:40	AT

**Qualifiers:**

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- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-19
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:47:00 AM
<b>Lab ID:</b> 1807523-005	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 14:29	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 14:29	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 14:29	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 14:29	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-19
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:47:00 AM
<b>Lab ID:</b> 1807523-005	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Trichloroethene	7.4	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 14:29	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 14:29	NP
Surr: 4-Bromofluorobenzene	84	68-127		%REC	263963	1	07/13/2018 14:29	NP
Surr: Dibromofluoromethane	94.1	84.4-122		%REC	263963	1	07/13/2018 14:29	NP
Surr: Toluene-d8	90.8	80.1-116		%REC	263963	1	07/13/2018 14:29	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	1.3	1.0		mg/L	R374748	1	07/06/2018 19:48	MP
Nitrate	0.38	0.25		mg/L	R374748	1	07/06/2018 19:48	MP
Sulfate	4.0	1.0		mg/L	R374748	1	07/06/2018 19:48	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:32	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:32	ZH
Methane	BRL	4.0		ug/L	263638	1	07/09/2018 15:32	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	49.9	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	23.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-20
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:30:00 AM
<b>Lab ID:</b> 1807523-006	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 15:46	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 15:46	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 15:46	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 15:46	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-20
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:30:00 AM
<b>Lab ID:</b> 1807523-006	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 15:46	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 15:46	NP
Surr: 4-Bromofluorobenzene	84.2	68-127		%REC	263963	1	07/13/2018 15:46	NP
Surr: Dibromofluoromethane	95.1	84.4-122		%REC	263963	1	07/13/2018 15:46	NP
Surr: Toluene-d8	92.9	80.1-116		%REC	263963	1	07/13/2018 15:46	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	14	1.0		mg/L	R374748	1	07/06/2018 20:02	MP
Nitrate	BRL	0.25		mg/L	R374748	1	07/06/2018 20:02	MP
Sulfate	4.1	1.0		mg/L	R374748	1	07/06/2018 20:02	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:37	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:37	ZH
Methane	1600	40		ug/L	263638	10	07/09/2018 15:52	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	163	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	162	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-21
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:05:00 AM
<b>Lab ID:</b> 1807523-007	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 16:38	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 16:38	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 16:38	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
cis-1,2-Dichloroethene	9.3	5.0		ug/L	263963	1	07/13/2018 16:38	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 16:38	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-21
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:05:00 AM
<b>Lab ID:</b> 1807523-007	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Trichloroethene	150	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 16:38	NP
1,2-Dichloroethene, Total	9.3	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 16:38	NP
Surr: 4-Bromofluorobenzene	82.8	68-127		%REC	263963	1	07/13/2018 16:38	NP
Surr: Dibromofluoromethane	95.8	84.4-122		%REC	263963	1	07/13/2018 16:38	NP
Surr: Toluene-d8	91.5	80.1-116		%REC	263963	1	07/13/2018 16:38	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	16	1.0		mg/L	R374748	1	07/06/2018 20:17	MP
Nitrate	3.2	0.25		mg/L	R374748	1	07/06/2018 20:17	MP
Sulfate	41	1.0		mg/L	R374748	1	07/06/2018 20:17	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 15:57	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 15:57	ZH
Methane	10	4.0		ug/L	263638	1	07/09/2018 15:57	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	128	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	64.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-28
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:30:00 AM
<b>Lab ID:</b> 1807523-008	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 17:04	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 17:04	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 17:04	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 17:04	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-28
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:30:00 AM
<b>Lab ID:</b> 1807523-008	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Trichloroethene	24	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 17:04	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:04	NP
Surr: 4-Bromofluorobenzene	85.4	68-127		%REC	263963	1	07/13/2018 17:04	NP
Surr: Dibromofluoromethane	97.8	84.4-122		%REC	263963	1	07/13/2018 17:04	NP
Surr: Toluene-d8	90.9	80.1-116		%REC	263963	1	07/13/2018 17:04	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	11	1.0		mg/L	R374748	1	07/06/2018 20:32	MP
Nitrate	1.2	0.25		mg/L	R374748	1	07/06/2018 20:32	MP
Sulfate	8.4	1.0		mg/L	R374748	1	07/06/2018 20:32	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:01	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:01	ZH
Methane	BRL	4.0		ug/L	263638	1	07/09/2018 16:01	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	72.0	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	35.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-31
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:28:00 AM
<b>Lab ID:</b> 1807523-009	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 17:30	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 17:30	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 17:30	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 17:30	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-31
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 8:28:00 AM
<b>Lab ID:</b> 1807523-009	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 17:30	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:30	NP
Surr: 4-Bromofluorobenzene	84.5	68-127		%REC	263963	1	07/13/2018 17:30	NP
Surr: Dibromofluoromethane	98.7	84.4-122		%REC	263963	1	07/13/2018 17:30	NP
Surr: Toluene-d8	92.4	80.1-116		%REC	263963	1	07/13/2018 17:30	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	15	1.0		mg/L	R374748	1	07/06/2018 20:47	MP
Nitrate	BRL	0.25		mg/L	R374748	1	07/06/2018 20:47	MP
Sulfate	BRL	1.0		mg/L	R374748	1	07/06/2018 20:47	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:06	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:06	ZH
Methane	42	4.0		ug/L	263638	1	07/09/2018 16:06	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	0.277	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	73.2	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	65.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-32
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:06:00 AM
<b>Lab ID:</b> 1807523-010	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 17:57	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 17:57	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 17:57	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 17:57	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-32
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:06:00 AM
<b>Lab ID:</b> 1807523-010	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Trichloroethene	47	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 17:57	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 17:57	NP
Surr: 4-Bromofluorobenzene	84.8	68-127		%REC	263963	1	07/13/2018 17:57	NP
Surr: Dibromofluoromethane	95.3	84.4-122		%REC	263963	1	07/13/2018 17:57	NP
Surr: Toluene-d8	92	80.1-116		%REC	263963	1	07/13/2018 17:57	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	14	1.0		mg/L	R374747	1	07/06/2018 19:38	MP
Nitrate	1.4	0.25		mg/L	R374747	1	07/06/2018 19:38	MP
Sulfate	7.2	1.0		mg/L	R374747	1	07/06/2018 19:38	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:11	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:11	ZH
Methane	BRL	4.0		ug/L	263638	1	07/09/2018 16:11	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	75.8	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	58.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-35
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:08:00 PM
<b>Lab ID:</b> 1807523-011	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 18:23	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 18:23	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 18:23	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 18:23	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-35
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:08:00 PM
<b>Lab ID:</b> 1807523-011	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 18:23	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 18:23	NP
Surr: 4-Bromofluorobenzene	82.9	68-127		%REC	263963	1	07/13/2018 18:23	NP
Surr: Dibromofluoromethane	95.6	84.4-122		%REC	263963	1	07/13/2018 18:23	NP
Surr: Toluene-d8	91.1	80.1-116		%REC	263963	1	07/13/2018 18:23	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	16	1.0		mg/L	R374747	1	07/06/2018 17:52	MP
Nitrate	BRL	0.25		mg/L	R374747	1	07/06/2018 17:52	MP
Sulfate	53	1.0		mg/L	R374747	1	07/06/2018 17:52	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:15	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:15	ZH
Methane	36	4.0		ug/L	263638	1	07/09/2018 16:15	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.500		mg/L	R374989	5	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	273	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	23.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-36
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:12:00 PM
<b>Lab ID:</b> 1807523-012	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 18:49	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 18:49	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 18:49	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 18:49	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-36
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:12:00 PM
<b>Lab ID:</b> 1807523-012	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 18:49	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 18:49	NP
Surr: 4-Bromofluorobenzene	83.9	68-127		%REC	263963	1	07/13/2018 18:49	NP
Surr: Dibromofluoromethane	98.1	84.4-122		%REC	263963	1	07/13/2018 18:49	NP
Surr: Toluene-d8	93.3	80.1-116		%REC	263963	1	07/13/2018 18:49	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	2.8	1.0		mg/L	R374747	1	07/06/2018 18:07	MP
Nitrate	0.36	0.25		mg/L	R374747	1	07/06/2018 18:07	MP
Sulfate	6.9	1.0		mg/L	R374747	1	07/06/2018 18:07	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:34	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:34	ZH
Methane	BRL	4.0		ug/L	263638	1	07/09/2018 16:34	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	65.8	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	54.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-39
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:45:00 PM
<b>Lab ID:</b> 1807523-013	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,1-Dichloroethene	11	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/14/2018 01:46	NP
2-Butanone	BRL	50		ug/L	263963	1	07/14/2018 01:46	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
Acetone	BRL	50		ug/L	263963	1	07/14/2018 01:46	NP
Benzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Chloroethane	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Chloromethane	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Freon-113	BRL	10		ug/L	263963	1	07/14/2018 01:46	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-39
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:45:00 PM
<b>Lab ID:</b> 1807523-013	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Styrene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Tetrachloroethene	15	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Toluene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Trichloroethene	4200	250		ug/L	263963	50	07/12/2018 23:38	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/14/2018 01:46	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/14/2018 01:46	NP
Surr: 4-Bromofluorobenzene	84.9	68-127		%REC	263963	50	07/12/2018 23:38	NP
Surr: 4-Bromofluorobenzene	83.5	68-127		%REC	263963	1	07/14/2018 01:46	NP
Surr: Dibromofluoromethane	99.2	84.4-122		%REC	263963	50	07/12/2018 23:38	NP
Surr: Dibromofluoromethane	95.6	84.4-122		%REC	263963	1	07/14/2018 01:46	NP
Surr: Toluene-d8	92	80.1-116		%REC	263963	50	07/12/2018 23:38	NP
Surr: Toluene-d8	92	80.1-116		%REC	263963	1	07/14/2018 01:46	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	13	1.0		mg/L	R374747	1	07/06/2018 18:23	MP
Nitrate	BRL	0.25		mg/L	R374747	1	07/06/2018 18:23	MP
Sulfate	33	1.0		mg/L	R374747	1	07/06/2018 18:23	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 16:30	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 16:30	ZH
Methane	32	4.0		ug/L	263638	1	07/09/2018 16:30	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	110	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	21.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-40
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:47:00 AM
<b>Lab ID:</b> 1807523-014	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,1-Dichloroethane	7.5	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 20:07	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 20:07	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 20:07	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
cis-1,2-Dichloroethene	140	5.0		ug/L	263963	1	07/13/2018 20:07	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 20:07	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-40
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:47:00 AM
<b>Lab ID:</b> 1807523-014	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Trichloroethene	640	50		ug/L	263963	10	07/13/2018 20:33	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Vinyl chloride	39	2.0		ug/L	263963	1	07/13/2018 20:07	NP
1,2-Dichloroethene, Total	140	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 20:07	NP
Surr: 4-Bromofluorobenzene	84	68-127		%REC	263963	1	07/13/2018 20:07	NP
Surr: 4-Bromofluorobenzene	84.1	68-127		%REC	263963	10	07/13/2018 20:33	NP
Surr: Dibromofluoromethane	94.7	84.4-122		%REC	263963	10	07/13/2018 20:33	NP
Surr: Dibromofluoromethane	99.8	84.4-122		%REC	263963	1	07/13/2018 20:07	NP
Surr: Toluene-d8	91.7	80.1-116		%REC	263963	1	07/13/2018 20:07	NP
Surr: Toluene-d8	91.5	80.1-116		%REC	263963	10	07/13/2018 20:33	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	30	1.0		mg/L	R374747	1	07/06/2018 18:38	MP
Nitrate	BRL	0.25		mg/L	R374747	1	07/06/2018 18:38	MP
Sulfate	34	1.0		mg/L	R374747	1	07/06/2018 18:38	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 17:02	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 17:02	ZH
Methane	13	4.0		ug/L	263638	1	07/09/2018 17:02	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	168	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	88.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-41
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 11:45:00 AM
<b>Lab ID:</b> 1807523-015	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 23:36	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 23:36	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 23:36	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
cis-1,2-Dichloroethene	58	5.0		ug/L	263963	1	07/13/2018 23:36	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 23:36	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit



<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> MW-41
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 11:45:00 AM
<b>Lab ID:</b> 1807523-015	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Trichloroethene	600	50		ug/L	263963	10	07/14/2018 00:02	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Vinyl chloride	2.1	2.0		ug/L	263963	1	07/13/2018 23:36	NP
1,2-Dichloroethene, Total	58	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 23:36	NP
Surr: 4-Bromofluorobenzene	84.7	68-127		%REC	263963	1	07/13/2018 23:36	NP
Surr: 4-Bromofluorobenzene	85	68-127		%REC	263963	10	07/14/2018 00:02	NP
Surr: Dibromofluoromethane	96.1	84.4-122		%REC	263963	10	07/14/2018 00:02	NP
Surr: Dibromofluoromethane	98.8	84.4-122		%REC	263963	1	07/13/2018 23:36	NP
Surr: Toluene-d8	89.9	80.1-116		%REC	263963	10	07/14/2018 00:02	NP
Surr: Toluene-d8	91.5	80.1-116		%REC	263963	1	07/13/2018 23:36	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263928	1	07/12/2018 14:55	AT
<b>ION SCAN SW9056A</b>								
Chloride	28	1.0		mg/L	R374747	1	07/06/2018 18:53	MP
Nitrate	1.1	0.25		mg/L	R374747	1	07/06/2018 18:53	MP
Sulfate	91	1.0		mg/L	R374747	1	07/06/2018 18:53	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 17:46	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 17:46	ZH
Methane	7.8	4.0		ug/L	263638	1	07/09/2018 17:46	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	108	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	43.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TP-1
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:15:00 AM
<b>Lab ID:</b> 1807523-016	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,1,2-Trichloroethane	9.0	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/14/2018 02:38	NP
2-Butanone	BRL	50		ug/L	263963	1	07/14/2018 02:38	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
Acetone	BRL	50		ug/L	263963	1	07/14/2018 02:38	NP
Benzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Chloroethane	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
Chloroform	11	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Chloromethane	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
cis-1,2-Dichloroethene	60	5.0		ug/L	263963	1	07/14/2018 02:38	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Freon-113	BRL	10		ug/L	263963	1	07/14/2018 02:38	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TP-1
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 10:15:00 AM
<b>Lab ID:</b> 1807523-016	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Styrene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Toluene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Trichloroethene	1400	100		ug/L	263963	20	07/14/2018 01:20	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/14/2018 02:38	NP
1,2-Dichloroethene, Total	60	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/14/2018 02:38	NP
Surr: 4-Bromofluorobenzene	84.2	68-127		%REC	263963	1	07/14/2018 02:38	NP
Surr: 4-Bromofluorobenzene	83	68-127		%REC	263963	20	07/14/2018 01:20	NP
Surr: Dibromofluoromethane	98.7	84.4-122		%REC	263963	1	07/14/2018 02:38	NP
Surr: Dibromofluoromethane	93.2	84.4-122		%REC	263963	20	07/14/2018 01:20	NP
Surr: Toluene-d8	91.4	80.1-116		%REC	263963	1	07/14/2018 02:38	NP
Surr: Toluene-d8	90.2	80.1-116		%REC	263963	20	07/14/2018 01:20	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263970	1	07/12/2018 17:00	AT
<b>ION SCAN SW9056A</b>								
Chloride	37	1.0		mg/L	R374747	1	07/06/2018 19:08	MP
Nitrate	10	2.5		mg/L	R374747	10	07/06/2018 19:53	MP
Sulfate	43	1.0		mg/L	R374747	1	07/06/2018 19:08	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 17:27	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 17:27	ZH
Methane	37	4.0		ug/L	263638	1	07/09/2018 17:27	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	BRL	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	205	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	20.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

**Qualifiers:**

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- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TP-2
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:40:00 AM
<b>Lab ID:</b> 1807523-017	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,1-Dichloroethane	6.2	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,1-Dichloroethene	15	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/14/2018 00:28	NP
2-Butanone	BRL	50		ug/L	263963	1	07/14/2018 00:28	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
Acetone	BRL	50		ug/L	263963	1	07/14/2018 00:28	NP
Benzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Chloroethane	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Chloromethane	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
cis-1,2-Dichloroethene	28	5.0		ug/L	263963	1	07/14/2018 00:28	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Freon-113	BRL	10		ug/L	263963	1	07/14/2018 00:28	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP

**Qualifiers:**

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- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
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- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TP-2
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 9:40:00 AM
<b>Lab ID:</b> 1807523-017	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Styrene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Toluene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Trichloroethene	540	50		ug/L	263963	10	07/14/2018 00:54	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Vinyl chloride	2.2	2.0		ug/L	263963	1	07/14/2018 00:28	NP
1,2-Dichloroethene, Total	28	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/14/2018 00:28	NP
Surr: 4-Bromofluorobenzene	82.8	68-127		%REC	263963	1	07/14/2018 00:28	NP
Surr: 4-Bromofluorobenzene	84.9	68-127		%REC	263963	10	07/14/2018 00:54	NP
Surr: Dibromofluoromethane	96.8	84.4-122		%REC	263963	10	07/14/2018 00:54	NP
Surr: Dibromofluoromethane	99.7	84.4-122		%REC	263963	1	07/14/2018 00:28	NP
Surr: Toluene-d8	90.4	80.1-116		%REC	263963	1	07/14/2018 00:28	NP
Surr: Toluene-d8	91.3	80.1-116		%REC	263963	10	07/14/2018 00:54	NP
<b>Sulfide by SW9030B/9034 (SW9030B)</b>								
Sulfide	BRL	2.00		mg/L	263970	1	07/12/2018 17:00	AT
<b>ION SCAN SW9056A</b>								
Chloride	13	1.0		mg/L	R374747	1	07/06/2018 19:23	MP
Nitrate	0.95	0.25		mg/L	R374747	1	07/06/2018 19:23	MP
Sulfate	23	1.0		mg/L	R374747	1	07/06/2018 19:23	MP
<b>GC Analysis of Gaseous Samples SOP-RSK 175 (RSK175)</b>								
Ethane	BRL	9.0		ug/L	263638	1	07/09/2018 17:32	ZH
Ethylene	BRL	7.0		ug/L	263638	1	07/09/2018 17:32	ZH
Methane	63	4.0		ug/L	263638	1	07/09/2018 17:32	ZH
<b>Ferrous Iron</b>								
Iron, as Ferrous (Fe+2)	0.110	0.100		mg/L	R374989	1	07/06/2018 16:00	LM
<b>CARBON DIOXIDE SM4500-CO2</b>								
Total Carbon Dioxide	97.6	10.0		mg/L	R375323	1	07/14/2018 16:20	CG
<b>Alkalinity by SM2320B</b>								
Alkalinity, Total (As CaCO3)	22.0	3.00		mg/L	R375323	1	07/14/2018 16:20	CG

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<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> DUP
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:45:00 PM
<b>Lab ID:</b> 1807523-018	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,1-Dichloroethene	12	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/14/2018 02:12	NP
2-Butanone	BRL	50		ug/L	263963	1	07/14/2018 02:12	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
Acetone	BRL	50		ug/L	263963	1	07/14/2018 02:12	NP
Benzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Chloroethane	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Chloromethane	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
cis-1,2-Dichloroethene	5.3	5.0		ug/L	263963	1	07/14/2018 02:12	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Freon-113	BRL	10		ug/L	263963	1	07/14/2018 02:12	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP

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<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> DUP
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018 12:45:00 PM
<b>Lab ID:</b> 1807523-018	<b>Matrix:</b> Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Styrene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Tetrachloroethene	15	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Toluene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Trichloroethene	3800	250		ug/L	263963	50	07/13/2018 12:45	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/14/2018 02:12	NP
1,2-Dichloroethene, Total	5.3	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/14/2018 02:12	NP
Surr: 4-Bromofluorobenzene	84.5	68-127		%REC	263963	50	07/13/2018 12:45	NP
Surr: 4-Bromofluorobenzene	85.6	68-127		%REC	263963	1	07/14/2018 02:12	NP
Surr: Dibromofluoromethane	92.1	84.4-122		%REC	263963	50	07/13/2018 12:45	NP
Surr: Dibromofluoromethane	100	84.4-122		%REC	263963	1	07/14/2018 02:12	NP
Surr: Toluene-d8	89.1	80.1-116		%REC	263963	50	07/13/2018 12:45	NP
Surr: Toluene-d8	93.7	80.1-116		%REC	263963	1	07/14/2018 02:12	NP

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- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TRIP BLANK #1
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018
<b>Lab ID:</b> 1807523-019	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 10:35	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 10:35	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 10:35	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 10:35	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP

**Qualifiers:**

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<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TRIP BLANK #1
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018
<b>Lab ID:</b> 1807523-019	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 10:35	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 10:35	NP
Surr: 4-Bromofluorobenzene	83.1	68-127		%REC	263963	1	07/13/2018 10:35	NP
Surr: Dibromofluoromethane	97.6	84.4-122		%REC	263963	1	07/13/2018 10:35	NP
Surr: Toluene-d8	91.7	80.1-116		%REC	263963	1	07/13/2018 10:35	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TRIP BLANK #2
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018
<b>Lab ID:</b> 1807523-020	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
1,1,1-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,1-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,1-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dibromoethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dichloroethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dichloropropane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
1,4-Dioxane	BRL	150		ug/L	263963	1	07/13/2018 11:01	NP
2-Butanone	BRL	50		ug/L	263963	1	07/13/2018 11:01	NP
2-Hexanone	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
4-Methyl-2-pentanone	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
Acetone	BRL	50		ug/L	263963	1	07/13/2018 11:01	NP
Benzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Bromodichloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Bromoform	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Bromomethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Carbon disulfide	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Carbon tetrachloride	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Chlorobenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Chloroethane	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
Chloroform	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Chloromethane	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Cyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Dibromochloromethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Dichlorodifluoromethane	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
Ethylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Freon-113	BRL	10		ug/L	263963	1	07/13/2018 11:01	NP
Isopropylbenzene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
m,p-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Methyl acetate	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Methylcyclohexane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Methylene chloride	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

<b>Client:</b> Environmental Management Associates, LLC	<b>Client Sample ID:</b> TRIP BLANK #2
<b>Project Name:</b> Southern States GW	<b>Collection Date:</b> 7/6/2018
<b>Lab ID:</b> 1807523-020	<b>Matrix:</b> Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS SW8260B (SW5030B)</b>								
o-Xylene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Styrene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Tetrachloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Toluene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Trichloroethene	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Trichlorofluoromethane	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Vinyl chloride	BRL	2.0		ug/L	263963	1	07/13/2018 11:01	NP
1,2-Dichloroethene, Total	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Xylenes, Total	BRL	5.0		ug/L	263963	1	07/13/2018 11:01	NP
Surr: 4-Bromofluorobenzene	83.9	68-127		%REC	263963	1	07/13/2018 11:01	NP
Surr: Dibromofluoromethane	96.1	84.4-122		%REC	263963	1	07/13/2018 11:01	NP
Surr: Toluene-d8	91	80.1-116		%REC	263963	1	07/13/2018 11:01	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
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- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**SAMPLE/COOLER RECEIPT CHECKLIST**

1. Client Name: Environmental Management Associates, LLC

AES Work Order Number: 1807523

2. Carrier: FedEx  UPS  USPS  Client  Courier  Other \_\_\_\_\_

	Yes	No	N/A	Details	Comments
3. Shipping container/cooler received in good condition?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	damaged <input type="checkbox"/> leaking <input type="checkbox"/> other <input type="checkbox"/>	
4. Custody seals present on shipping container?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		
5. Custody seals intact on shipping container?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		
6. Temperature blanks present?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
7. Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cooling initiated for recently collected samples / ice present <input type="checkbox"/>	
8. Chain of Custody (COC) present?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
9. Chain of Custody signed, dated, and timed when relinquished and received?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
10. Sampler name and/or signature on COC?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
11. Were all samples received within holding time?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
12. TAT marked on the COC?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. <input type="checkbox"/>	

13. Cooler 1 Temperature 2.2 °C    Cooler 2 Temperature 2.9 °C    Cooler 3 Temperature 2.0 °C    Cooler 4 Temperature \_\_\_\_\_ °C  
 14. Cooler 5 Temperature \_\_\_\_\_ °C    Cooler 6 Temperature \_\_\_\_\_ °C    Cooler 7 Temperature \_\_\_\_\_ °C    Cooler 8 Temperature \_\_\_\_\_ °C

15. Comments: \_\_\_\_\_

I certify that I have completed sections 1-15 (dated initials). MJ 7/6/18

	Yes	No	N/A	Details	Comments
16. Were sample containers intact upon receipt?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
17. Custody seals present on sample containers?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		
18. Custody seals intact on sample containers?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		
19. Do sample container labels match the COC?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	incomplete info <input type="checkbox"/> illegible <input type="checkbox"/> no label <input type="checkbox"/> other <input type="checkbox"/>	
20. Are analyses requested indicated on the COC?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
21. Were all of the samples listed on the COC received?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	samples received but not listed on COC <input type="checkbox"/> samples listed on COC not received <input type="checkbox"/>	
22. Was the sample collection date/time noted?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
23. Did we receive sufficient sample volume for indicated analyses?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
24. Were samples received in appropriate containers?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
25. Were VOA samples received without headspace (< 1/4" bubble)?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
26. Were trip blanks submitted?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	listed on COC <input checked="" type="checkbox"/> not listed on COC <input type="checkbox"/>	

27. Comments: \_\_\_\_\_

I certify that I have completed sections 16-27 (dated initials). MJ 7/6/18

This section only applies to samples where pH can be checked at Sample Receipt.

	Yes	No	N/A	Details	Comments
28. Have containers needing chemical preservation been checked? *	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
29. Containers meet preservation guidelines?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
30. Was pH adjusted at Sample Receipt?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		

\* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). MJ 7/6/18

Client: Environmental Management Associates, LLC  
 Project Name: Southern States GW  
 Lab Order: 1807523

## Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1807523-001A	MW-9	7/6/2018 5:43:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-001B	MW-9	7/6/2018 5:43:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-001C	MW-9	7/6/2018 5:43:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-001D	MW-9	7/6/2018 5:43:00AM	Groundwater	ION SCAN			07/06/2018
1807523-001D	MW-9	7/6/2018 5:43:00AM	Groundwater	Alkalinity by SM2320B			07/13/2018
1807523-001D	MW-9	7/6/2018 5:43:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-001D	MW-9	7/6/2018 5:43:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/13/2018
1807523-002A	MW-13	7/6/2018 10:45:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-002B	MW-13	7/6/2018 10:45:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-002C	MW-13	7/6/2018 10:45:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-002D	MW-13	7/6/2018 10:45:00AM	Groundwater	ION SCAN			07/06/2018
1807523-002D	MW-13	7/6/2018 10:45:00AM	Groundwater	Alkalinity by SM2320B			07/13/2018
1807523-002D	MW-13	7/6/2018 10:45:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-002D	MW-13	7/6/2018 10:45:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/13/2018
1807523-003A	MW-17	7/6/2018 11:25:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-003B	MW-17	7/6/2018 11:25:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-003C	MW-17	7/6/2018 11:25:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-003D	MW-17	7/6/2018 11:25:00AM	Groundwater	ION SCAN			07/06/2018
1807523-003D	MW-17	7/6/2018 11:25:00AM	Groundwater	Alkalinity by SM2320B			07/13/2018
1807523-003D	MW-17	7/6/2018 11:25:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-003D	MW-17	7/6/2018 11:25:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/13/2018
1807523-004A	MW-18	7/6/2018 8:55:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-004B	MW-18	7/6/2018 8:55:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-004C	MW-18	7/6/2018 8:55:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-004D	MW-18	7/6/2018 8:55:00AM	Groundwater	ION SCAN			07/06/2018
1807523-004D	MW-18	7/6/2018 8:55:00AM	Groundwater	Alkalinity by SM2320B			07/13/2018
1807523-004D	MW-18	7/6/2018 8:55:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-004D	MW-18	7/6/2018 8:55:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/13/2018
1807523-005A	MW-19	7/6/2018 10:47:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018

Client: Environmental Management Associates, LLC  
 Project Name: Southern States GW  
 Lab Order: 1807523

## Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1807523-005B	MW-19	7/6/2018 10:47:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-005C	MW-19	7/6/2018 10:47:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-005D	MW-19	7/6/2018 10:47:00AM	Groundwater	ION SCAN			07/06/2018
1807523-005D	MW-19	7/6/2018 10:47:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-005D	MW-19	7/6/2018 10:47:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-005D	MW-19	7/6/2018 10:47:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-006A	MW-20	7/6/2018 8:30:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-006B	MW-20	7/6/2018 8:30:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-006C	MW-20	7/6/2018 8:30:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-006D	MW-20	7/6/2018 8:30:00AM	Groundwater	ION SCAN			07/06/2018
1807523-006E	MW-20	7/6/2018 8:30:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-006E	MW-20	7/6/2018 8:30:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-006E	MW-20	7/6/2018 8:30:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-007A	MW-21	7/6/2018 9:05:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-007B	MW-21	7/6/2018 9:05:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-007C	MW-21	7/6/2018 9:05:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-007D	MW-21	7/6/2018 9:05:00AM	Groundwater	ION SCAN			07/06/2018
1807523-007E	MW-21	7/6/2018 9:05:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-007E	MW-21	7/6/2018 9:05:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-007E	MW-21	7/6/2018 9:05:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-008A	MW-28	7/6/2018 10:30:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-008B	MW-28	7/6/2018 10:30:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-008C	MW-28	7/6/2018 10:30:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-008D	MW-28	7/6/2018 10:30:00AM	Groundwater	ION SCAN			07/06/2018
1807523-008D	MW-28	7/6/2018 10:30:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-008D	MW-28	7/6/2018 10:30:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-008D	MW-28	7/6/2018 10:30:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-009A	MW-31	7/6/2018 8:28:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-009B	MW-31	7/6/2018 8:28:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018

Client: Environmental Management Associates, LLC  
 Project Name: Southern States GW  
 Lab Order: 1807523

## Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1807523-009C	MW-31	7/6/2018 8:28:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-009D	MW-31	7/6/2018 8:28:00AM	Groundwater	ION SCAN			07/06/2018
1807523-009D	MW-31	7/6/2018 8:28:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-009D	MW-31	7/6/2018 8:28:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-009D	MW-31	7/6/2018 8:28:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-010A	MW-32	7/6/2018 9:06:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-010B	MW-32	7/6/2018 9:06:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-010C	MW-32	7/6/2018 9:06:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-010D	MW-32	7/6/2018 9:06:00AM	Groundwater	ION SCAN			07/06/2018
1807523-010D	MW-32	7/6/2018 9:06:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-010D	MW-32	7/6/2018 9:06:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-010D	MW-32	7/6/2018 9:06:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-011A	MW-35	7/6/2018 12:08:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-011B	MW-35	7/6/2018 12:08:00PM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-011C	MW-35	7/6/2018 12:08:00PM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-011D	MW-35	7/6/2018 12:08:00PM	Groundwater	ION SCAN			07/06/2018
1807523-011D	MW-35	7/6/2018 12:08:00PM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-011D	MW-35	7/6/2018 12:08:00PM	Groundwater	Ferrous Iron			07/06/2018
1807523-011D	MW-35	7/6/2018 12:08:00PM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-012A	MW-36	7/6/2018 12:12:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-012B	MW-36	7/6/2018 12:12:00PM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-012C	MW-36	7/6/2018 12:12:00PM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-012D	MW-36	7/6/2018 12:12:00PM	Groundwater	ION SCAN			07/06/2018
1807523-012D	MW-36	7/6/2018 12:12:00PM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-012D	MW-36	7/6/2018 12:12:00PM	Groundwater	Ferrous Iron			07/06/2018
1807523-012D	MW-36	7/6/2018 12:12:00PM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-013A	MW-39	7/6/2018 12:45:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/12/2018
1807523-013A	MW-39	7/6/2018 12:45:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/14/2018
1807523-013B	MW-39	7/6/2018 12:45:00PM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018

Client: Environmental Management Associates, LLC  
 Project Name: Southern States GW  
 Lab Order: 1807523

## Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1807523-013C	MW-39	7/6/2018 12:45:00PM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-013D	MW-39	7/6/2018 12:45:00PM	Groundwater	ION SCAN			07/06/2018
1807523-013E	MW-39	7/6/2018 12:45:00PM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-013E	MW-39	7/6/2018 12:45:00PM	Groundwater	Ferrous Iron			07/06/2018
1807523-013E	MW-39	7/6/2018 12:45:00PM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-014A	MW-40	7/6/2018 10:47:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-014B	MW-40	7/6/2018 10:47:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-014C	MW-40	7/6/2018 10:47:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-014D	MW-40	7/6/2018 10:47:00AM	Groundwater	ION SCAN			07/06/2018
1807523-014E	MW-40	7/6/2018 10:47:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-014E	MW-40	7/6/2018 10:47:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-014E	MW-40	7/6/2018 10:47:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-015A	MW-41	7/6/2018 11:45:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-015A	MW-41	7/6/2018 11:45:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/14/2018
1807523-015B	MW-41	7/6/2018 11:45:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-015C	MW-41	7/6/2018 11:45:00AM	Groundwater	Sulfide by SW9030/9034		7/11/2018 10:15:00AM	07/12/2018
1807523-015D	MW-41	7/6/2018 11:45:00AM	Groundwater	ION SCAN			07/06/2018
1807523-015E	MW-41	7/6/2018 11:45:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-015E	MW-41	7/6/2018 11:45:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-015E	MW-41	7/6/2018 11:45:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-016A	TP-1	7/6/2018 10:15:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/14/2018
1807523-016B	TP-1	7/6/2018 10:15:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018
1807523-016C	TP-1	7/6/2018 10:15:00AM	Groundwater	Sulfide by SW9030/9034		7/12/2018 12:30:00PM	07/12/2018
1807523-016D	TP-1	7/6/2018 10:15:00AM	Groundwater	ION SCAN			07/06/2018
1807523-016E	TP-1	7/6/2018 10:15:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-016E	TP-1	7/6/2018 10:15:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-016E	TP-1	7/6/2018 10:15:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-017A	TP-2	7/6/2018 9:40:00AM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/14/2018
1807523-017B	TP-2	7/6/2018 9:40:00AM	Groundwater	GC Analysis of Gaseous Samples		7/9/2018 2:48:24PM	07/09/2018



Client: Environmental Management Associates, LLC  
 Project Name: Southern States GW  
 Lab Order: 1807523

**Dates Report**

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1807523-017C	TP-2	7/6/2018 9:40:00AM	Groundwater	Sulfide by SW9030/9034		7/12/2018 12:30:00PM	07/12/2018
1807523-017D	TP-2	7/6/2018 9:40:00AM	Groundwater	ION SCAN			07/06/2018
1807523-017E	TP-2	7/6/2018 9:40:00AM	Groundwater	Alkalinity by SM2320B			07/14/2018
1807523-017E	TP-2	7/6/2018 9:40:00AM	Groundwater	Ferrous Iron			07/06/2018
1807523-017E	TP-2	7/6/2018 9:40:00AM	Groundwater	Carbon Dioxide and Forms of Alkalinity			07/14/2018
1807523-018A	DUP	7/6/2018 12:45:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-018A	DUP	7/6/2018 12:45:00PM	Groundwater	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/14/2018
1807523-019A	TRIP BLANK #1	7/6/2018 12:00:00AM	Aqueous	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018
1807523-020A	TRIP BLANK #2	7/6/2018 12:00:00AM	Aqueous	Volatile Organic Compounds by GC/MS		7/12/2018 10:45:00PM	07/13/2018

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263638**

Sample ID: <b>MB-263638</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/09/2018</b>	Run No: <b>374875</b>							
SampleType: <b>MBLK</b>	TestCode: <b>GC Analysis of Gaseous Samples SOP-RSK 175</b>	BatchID: <b>263638</b>	Analysis Date: <b>07/09/2018</b>	Seq No: <b>8335587</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Ethane	BRL	9.0									
Ethylene	BRL	7.0									
Methane	BRL	4.0									

Sample ID: <b>LCS-263638</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/09/2018</b>	Run No: <b>374875</b>							
SampleType: <b>LCS</b>	TestCode: <b>GC Analysis of Gaseous Samples SOP-RSK 175</b>	BatchID: <b>263638</b>	Analysis Date: <b>07/09/2018</b>	Seq No: <b>8335588</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Ethane	113.9	9.0	200.0		57.0	40.1	115				
Ethylene	83.80	7.0	200.0		41.9	26.3	115				
Methane	139.3	4.0	200.0		69.7	45.1	115				

Sample ID: <b>LCSD-263638</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/09/2018</b>	Run No: <b>374875</b>							
SampleType: <b>LCSD</b>	TestCode: <b>GC Analysis of Gaseous Samples SOP-RSK 175</b>	BatchID: <b>263638</b>	Analysis Date: <b>07/09/2018</b>	Seq No: <b>8335589</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Ethane	109.5	9.0	200.0		54.7	40.1	115	113.9	3.99	20	
Ethylene	80.64	7.0	200.0		40.3	26.3	115	83.80	3.85	20	
Methane	136.6	4.0	200.0		68.3	45.1	115	139.3	1.95	20	

Sample ID: <b>1807523-005BMS</b>	Client ID: <b>MW-19</b>	Units: <b>ug/L</b>	Prep Date: <b>07/09/2018</b>	Run No: <b>374875</b>							
SampleType: <b>MS</b>	TestCode: <b>GC Analysis of Gaseous Samples SOP-RSK 175</b>	BatchID: <b>263638</b>	Analysis Date: <b>07/09/2018</b>	Seq No: <b>8335610</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Ethane	125.4	9.0	200.0		62.7	34.7	115				
Ethylene	90.98	7.0	200.0		45.5	27.3	115				
Methane	154.4	4.0	200.0		77.2	42	115				

**Qualifiers:**

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263638**

Sample ID: <b>1807523-005BMSD</b>	Client ID: <b>MW-19</b>	Units: <b>ug/L</b>	Prep Date: <b>07/09/2018</b>	Run No: <b>374875</b>
SampleType: <b>MSD</b>	TestCode: <b>GC Analysis of Gaseous Samples SOP-RSK 175</b>	BatchID: <b>263638</b>	Analysis Date: <b>07/09/2018</b>	Seq No: <b>8335611</b>

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	118.0	9.0	200.0		59.0	34.7	115	125.4	6.03	20	
Ethylene	85.70	7.0	200.0		42.9	27.3	115	90.98	5.97	20	
Methane	146.5	4.0	200.0		73.2	42	115	154.4	5.24	20	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263928**

Sample ID: <b>MB-263928</b>	Client ID:	Units: <b>mg/L</b>	Prep Date: <b>07/11/2018</b>	Run No: <b>375187</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263928</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8342763</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide BRL 2.00

Sample ID: <b>LCS-263928</b>	Client ID:	Units: <b>mg/L</b>	Prep Date: <b>07/11/2018</b>	Run No: <b>375187</b>							
SampleType: <b>LCS</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263928</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8342764</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 172.0 2.00 172.0 100 70 130

Sample ID: <b>1807523-001CMS</b>	Client ID: <b>MW-9</b>	Units: <b>mg/L</b>	Prep Date: <b>07/11/2018</b>	Run No: <b>375187</b>							
SampleType: <b>MS</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263928</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8342766</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 10.60 2.00 8.600 123 62.8 125

Sample ID: <b>1807523-001CMSD</b>	Client ID: <b>MW-9</b>	Units: <b>mg/L</b>	Prep Date: <b>07/11/2018</b>	Run No: <b>375187</b>							
SampleType: <b>MSD</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263928</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8342767</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 10.40 2.00 8.600 121 62.8 125 10.60 1.90 20

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263963**

Sample ID: <b>MB-263963</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343478</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloroethene, Total	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
1,4-Dioxane	BRL	150									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263963**

Sample ID: <b>MB-263963</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343478</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloroform	BRL	5.0									
Chloromethane	BRL	10									
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	42.48	0	50.00		85.0	68	127				
Surr: Dibromofluoromethane	49.20	0	50.00		98.4	84.4	122				

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263963**

Sample ID: <b>MB-263963</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343478</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Surr: Toluene-d8 45.19 0 50.00 90.4 80.1 116

Sample ID: <b>LCS-263963</b>	Client ID:	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>LCS</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343477</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene 18.16 5.0 20.00 90.8 69 136  
 Benzene 19.92 5.0 20.00 99.6 73.7 126  
 Chlorobenzene 22.27 5.0 20.00 111 73.5 124  
 Toluene 20.30 5.0 20.00 102 76.8 125  
 Trichloroethene 20.43 5.0 20.00 102 70.9 124  
 Surr: 4-Bromofluorobenzene 42.92 0 50.00 85.8 68 127  
 Surr: Dibromofluoromethane 47.87 0 50.00 95.7 84.4 122  
 Surr: Toluene-d8 45.38 0 50.00 90.8 80.1 116

Sample ID: <b>1807523-013AMS</b>	Client ID: <b>MW-39</b>	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>MS</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8343480</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene 860.5 250 1000 86.0 65.7 143  
 Benzene 938.0 250 1000 93.8 66.1 137  
 Chlorobenzene 990.0 250 1000 99.0 70.9 132  
 Toluene 925.0 250 1000 92.5 63.8 141  
 Trichloroethene 4917 250 1000 4150 76.6 70.6 128  
 Surr: 4-Bromofluorobenzene 2124 0 2500 85.0 68 127  
 Surr: Dibromofluoromethane 2459 0 2500 98.4 84.4 122  
 Surr: Toluene-d8 2256 0 2500 90.2 80.1 116

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263963**

Sample ID: <b>1807523-013AMSD</b>	Client ID: <b>MW-39</b>	Units: <b>ug/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375168</b>							
SampleType: <b>MSD</b>	TestCode: <b>Volatile Organic Compounds by GC/MS SW8260B</b>	BatchID: <b>263963</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8343481</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	856.0	250	1000		85.6	65.7	143	860.5	0.524	17.7	
Benzene	953.5	250	1000		95.4	66.1	137	938.0	1.64	20	
Chlorobenzene	1089	250	1000		109	70.9	132	990.0	9.52	20	
Toluene	965.0	250	1000		96.5	63.8	141	925.0	4.23	20	
Trichloroethene	4980	250	1000	4150	83.0	70.6	128	4917	1.28	20	
Surr: 4-Bromofluorobenzene	2104	0	2500		84.2	68	127	2124	0	0	
Surr: Dibromofluoromethane	2426	0	2500		97.1	84.4	122	2459	0	0	
Surr: Toluene-d8	2239	0	2500		89.6	80.1	116	2256	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: 263970**

Sample ID: <b>MB-263970</b>	Client ID:	Units: <b>mg/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375220</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263970</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343515</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide BRL 2.00

Sample ID: <b>LCS-263970</b>	Client ID:	Units: <b>mg/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375220</b>							
SampleType: <b>LCS</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263970</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343516</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 216.0 2.00 216.0 100 70 130

Sample ID: <b>1807523-016CMS</b>	Client ID: <b>TP-1</b>	Units: <b>mg/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375220</b>							
SampleType: <b>MS</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263970</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343518</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 11.60 2.00 10.80 107 62.8 125

Sample ID: <b>1807523-016CMSD</b>	Client ID: <b>TP-1</b>	Units: <b>mg/L</b>	Prep Date: <b>07/12/2018</b>	Run No: <b>375220</b>							
SampleType: <b>MSD</b>	TestCode: <b>Sulfide by SW9030B/9034</b>	BatchID: <b>263970</b>	Analysis Date: <b>07/12/2018</b>	Seq No: <b>8343519</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Sulfide 11.00 2.00 10.80 102 62.8 125 11.60 5.31 20

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R374747**

Sample ID: <b>MB-R374747</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374747</b>							
SampleType: <b>MBLK</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374747</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331826</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	BRL	1.0									
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: <b>LCS-R374747</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374747</b>							
SampleType: <b>LCS</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374747</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331825</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	10.22	1.0	10.00		102	90	110				
Nitrate	5.098	0.25	5.000		102	90	110				
Sulfate	24.73	1.0	25.00		98.9	90	110				

Sample ID: <b>1807523-012DMS</b>	Client ID: <b>MW-36</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374747</b>							
SampleType: <b>MS</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374747</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331842</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	13.10	1.0	10.00	2.781	103	90	110				
Nitrate	5.656	0.25	5.000	0.3591	106	90	110				
Sulfate	31.64	1.0	25.00	6.863	99.1	90	110				

Sample ID: <b>1807523-013DMS</b>	Client ID: <b>MW-39</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374747</b>							
SampleType: <b>MS</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374747</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331844</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	22.76	1.0	10.00	12.77	99.9	90	110				
Nitrate	5.524	0.25	5.000	0.2375	106	90	110				
Sulfate	56.18	1.0	25.00	32.99	92.7	90	110				

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R374747**

Sample ID: <b>1807523-012DMSD</b>	Client ID: <b>MW-36</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374747</b>							
SampleType: <b>MSD</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374747</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331843</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	13.17	1.0	10.00	2.781	104	90	110	13.10	0.482	20	
Nitrate	5.648	0.25	5.000	0.3591	106	90	110	5.656	0.152	20	
Sulfate	31.51	1.0	25.00	6.863	98.6	90	110	31.64	0.412	20	

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<b>Qualifiers:</b>	> Greater than Result value	< Less than Result value	B Analyte detected in the associated method blank
	BRL Below reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside limits due to matrix
	Rpt Lim Reporting Limit	S Spike Recovery outside limits due to matrix	

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R374748**

Sample ID: <b>MB-R374748</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374748</b>							
SampleType: <b>MBLK</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374748</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331848</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	BRL	1.0									
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: <b>LCS-R374748</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374748</b>							
SampleType: <b>LCS</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374748</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331847</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	9.786	1.0	10.00		97.9	90	110				
Nitrate	5.022	0.25	5.000		100	90	110				
Sulfate	25.07	1.0	25.00		100	90	110				

Sample ID: <b>1807523-005DMS</b>	Client ID: <b>MW-19</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374748</b>							
SampleType: <b>MS</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374748</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331860</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	11.31	1.0	10.00	1.251	101	90	110				
Nitrate	5.401	0.25	5.000	0.3770	100	90	110				
Sulfate	29.03	1.0	25.00	4.021	100	90	110				

Sample ID: <b>1807523-005DMSD</b>	Client ID: <b>MW-19</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374748</b>							
SampleType: <b>MSD</b>	TestCode: <b>ION SCAN SW9056A</b>	BatchID: <b>R374748</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8331861</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Chloride	11.35	1.0	10.00	1.251	101	90	110	11.31	0.318	20	
Nitrate	5.558	0.25	5.000	0.3770	104	90	110	5.401	2.86	20	
Sulfate	28.99	1.0	25.00	4.021	99.9	90	110	29.03	0.143	20	

**Qualifiers:** > Greater than Result value < Less than Result value B Analyte detected in the associated method blank  
 BRL Below reporting limit E Estimated (value above quantitation range) H Holding times for preparation or analysis exceeded  
 J Estimated value detected below Reporting Limit N Analyte not NELAC certified R RPD outside limits due to matrix  
 Rpt Lim Reporting Limit S Spike Recovery outside limits due to matrix

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R374989**

Sample ID: <b>MB-R374989</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374989</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Ferrous Iron</b>	BatchID: <b>R374989</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8338135</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Iron, as Ferrous (Fe+2)

BRL 0.100

Sample ID: <b>LCS-R374989</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374989</b>							
SampleType: <b>LCS</b>	TestCode: <b>Ferrous Iron</b>	BatchID: <b>R374989</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8338136</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Iron, as Ferrous (Fe+2)

0.5270 0.100 0.5000 105 85 115

Sample ID: <b>1807523-001DMS</b>	Client ID: <b>MW-9</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374989</b>							
SampleType: <b>MS</b>	TestCode: <b>Ferrous Iron</b>	BatchID: <b>R374989</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8338158</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Iron, as Ferrous (Fe+2)

0.5130 0.100 0.5000 103 80 120

Sample ID: <b>1807523-001DMSD</b>	Client ID: <b>MW-9</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>374989</b>							
SampleType: <b>MSD</b>	TestCode: <b>Ferrous Iron</b>	BatchID: <b>R374989</b>	Analysis Date: <b>07/06/2018</b>	Seq No: <b>8338166</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Iron, as Ferrous (Fe+2)

0.5240 0.100 0.5000 105 80 120 0.5130 2.12 30

<b>Qualifiers:</b>	> Greater than Result value	< Less than Result value	B Analyte detected in the associated method blank
BRL	Below reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S Spike Recovery outside limits due to matrix	

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R375293**

Sample ID: <b>MB-R375293</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375293</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375293</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8345349</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Alkalinity, Total (As CaCO3)

BRL 3.00

Sample ID: <b>MB-R375293</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375293</b>							
SampleType: <b>MBLK</b>	TestCode: <b>CARBON DIOXIDE SM4500-CO2</b>	BatchID: <b>R375293</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8346524</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Total Carbon Dioxide

BRL 10.0

Sample ID: <b>LCS-R375293</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375293</b>							
SampleType: <b>LCS</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375293</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8345350</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Alkalinity, Total (As CaCO3)

125.0 3.00 125.0 100 75 125

Sample ID: <b>1807408-002ADUP</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375293</b>							
SampleType: <b>DUP</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375293</b>	Analysis Date: <b>07/13/2018</b>	Seq No: <b>8345367</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Alkalinity, Total (As CaCO3)

385.0 15.0 380.0 1.31 30

<b>Qualifiers:</b>	> Greater than Result value	< Less than Result value	B Analyte detected in the associated method blank
	BRL Below reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside limits due to matrix
	Rpt Lim Reporting Limit	S Spike Recovery outside limits due to matrix	

**Client:** Environmental Management Associates, LLC  
**Project Name:** Southern States GW  
**Workorder:** 1807523

**ANALYTICAL QC SUMMARY REPORT**

**BatchID: R375323**

Sample ID: <b>MB-R375323</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375323</b>							
SampleType: <b>MBLK</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375323</b>	Analysis Date: <b>07/14/2018</b>	Seq No: <b>8346285</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Alkalinity, Total (As CaCO3)

BRL 3.00

Sample ID: <b>MB-R375323</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375323</b>							
SampleType: <b>MBLK</b>	TestCode: <b>CARBON DIOXIDE SM4500-CO2</b>	BatchID: <b>R375323</b>	Analysis Date: <b>07/14/2018</b>	Seq No: <b>8346409</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Total Carbon Dioxide

BRL 10.0

Sample ID: <b>LCS-R375323</b>	Client ID:	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375323</b>							
SampleType: <b>LCS</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375323</b>	Analysis Date: <b>07/14/2018</b>	Seq No: <b>8346286</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Alkalinity, Total (As CaCO3)

121.0 3.00 125.0 96.8 75 125

Sample ID: <b>1807523-005DDUP</b>	Client ID: <b>MW-19</b>	Units: <b>mg/L</b>	Prep Date:	Run No: <b>375323</b>							
SampleType: <b>DUP</b>	TestCode: <b>Alkalinity by SM2320B</b>	BatchID: <b>R375323</b>	Analysis Date: <b>07/14/2018</b>	Seq No: <b>8346304</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

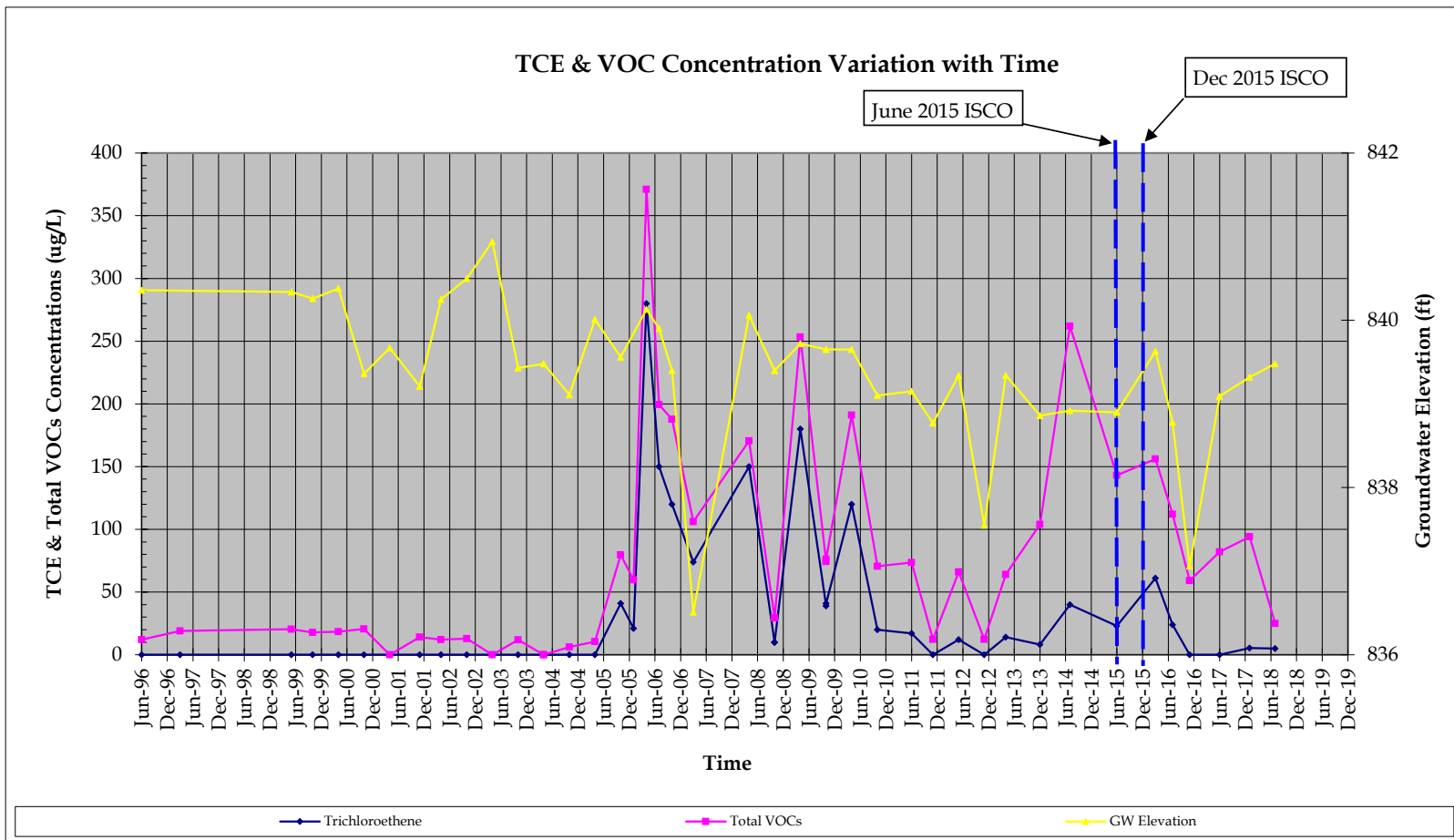
Alkalinity, Total (As CaCO3)

24.00 3.00 23.00 4.26 30

<b>Qualifiers:</b>	> Greater than Result value	< Less than Result value	B Analyte detected in the associated method blank
	BRL Below reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside limits due to matrix
	Rpt Lim Reporting Limit	S Spike Recovery outside limits due to matrix	

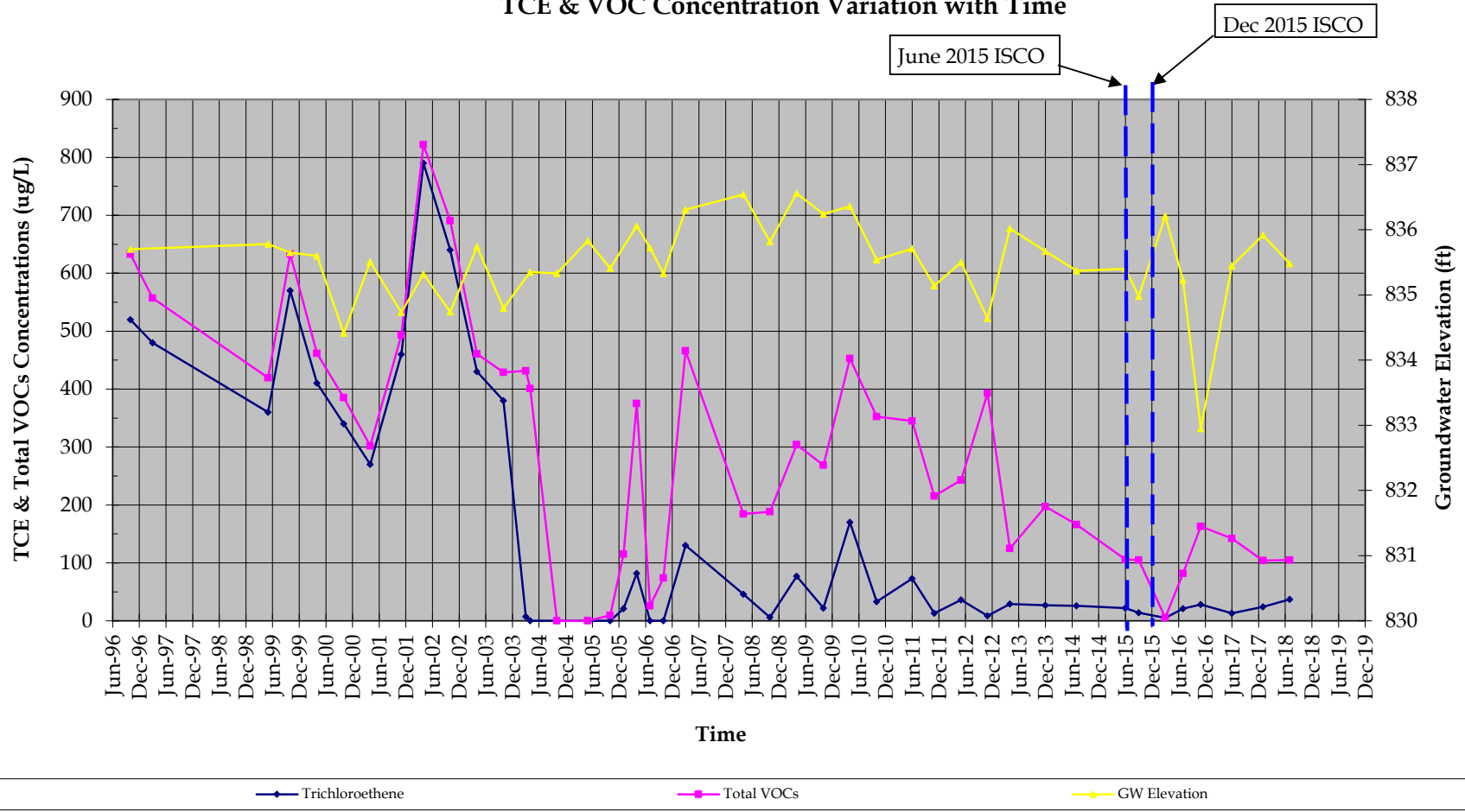
**APPENDIX B**  
**TOTAL VOC TREND GRAPHS FOR SELECT**  
**PERFORMANCE MONITORING WELLS**





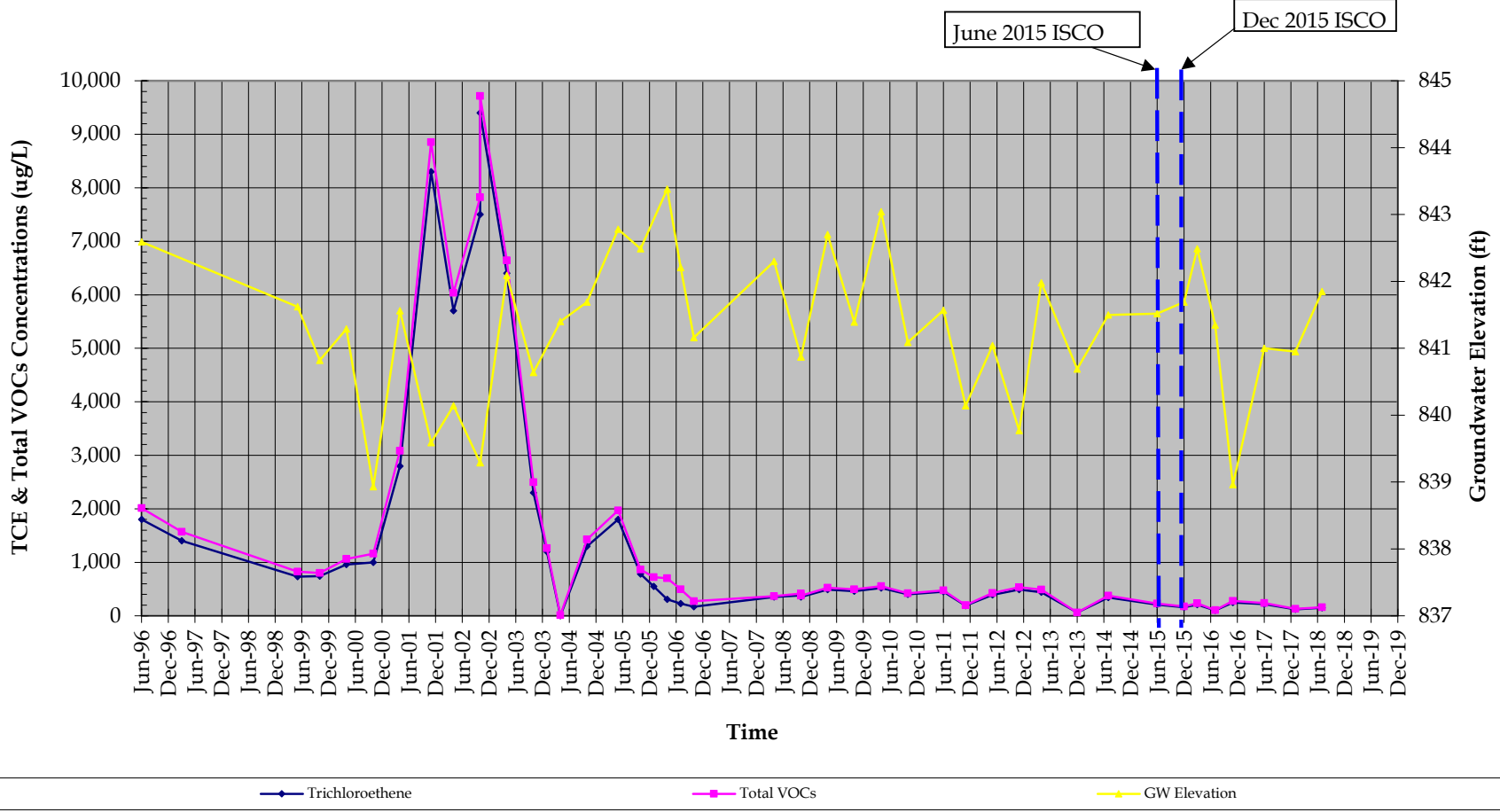
**ORGANIC CONCENTRATIONS AT MW-13**  
**OVERBURDEN MONITORING WELL**  
**SOUTHERN STATES, LLC**  
*Hampton, Georgia*

### TCE & VOC Concentration Variation with Time



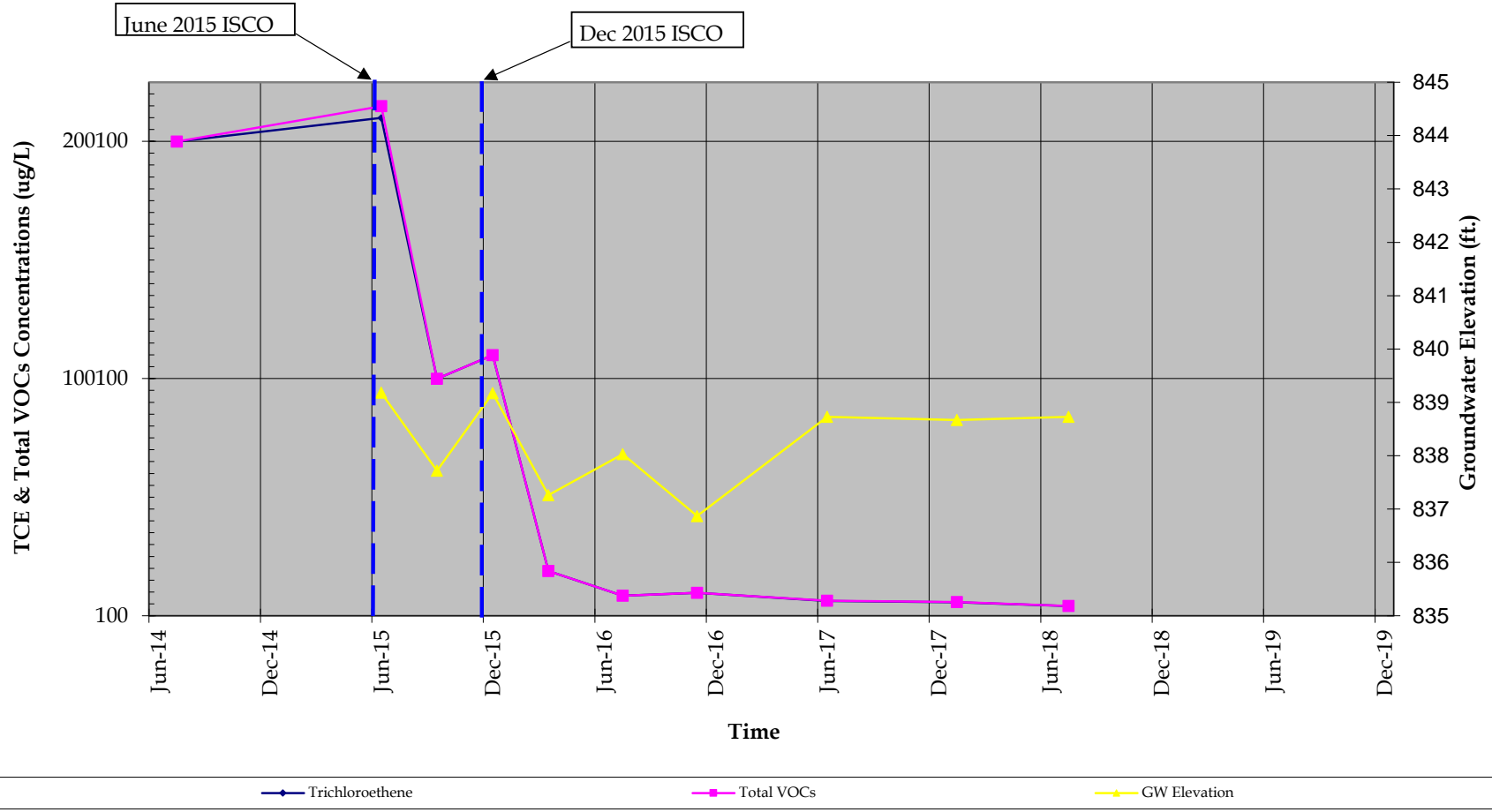
**ORGANIC CONCENTRATIONS AT MW-18  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



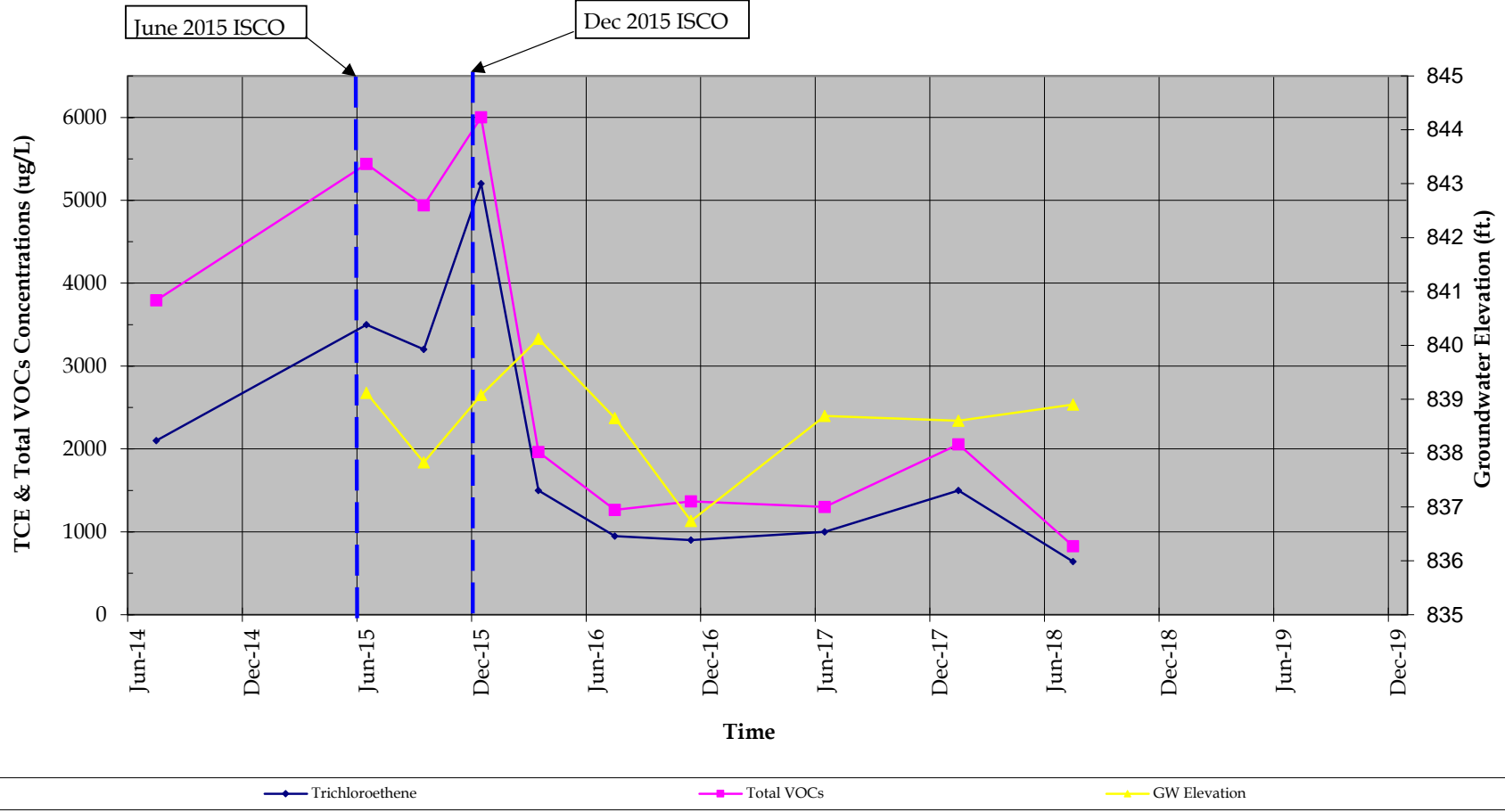
**ORGANIC CONCENTRATIONS AT MW-21  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



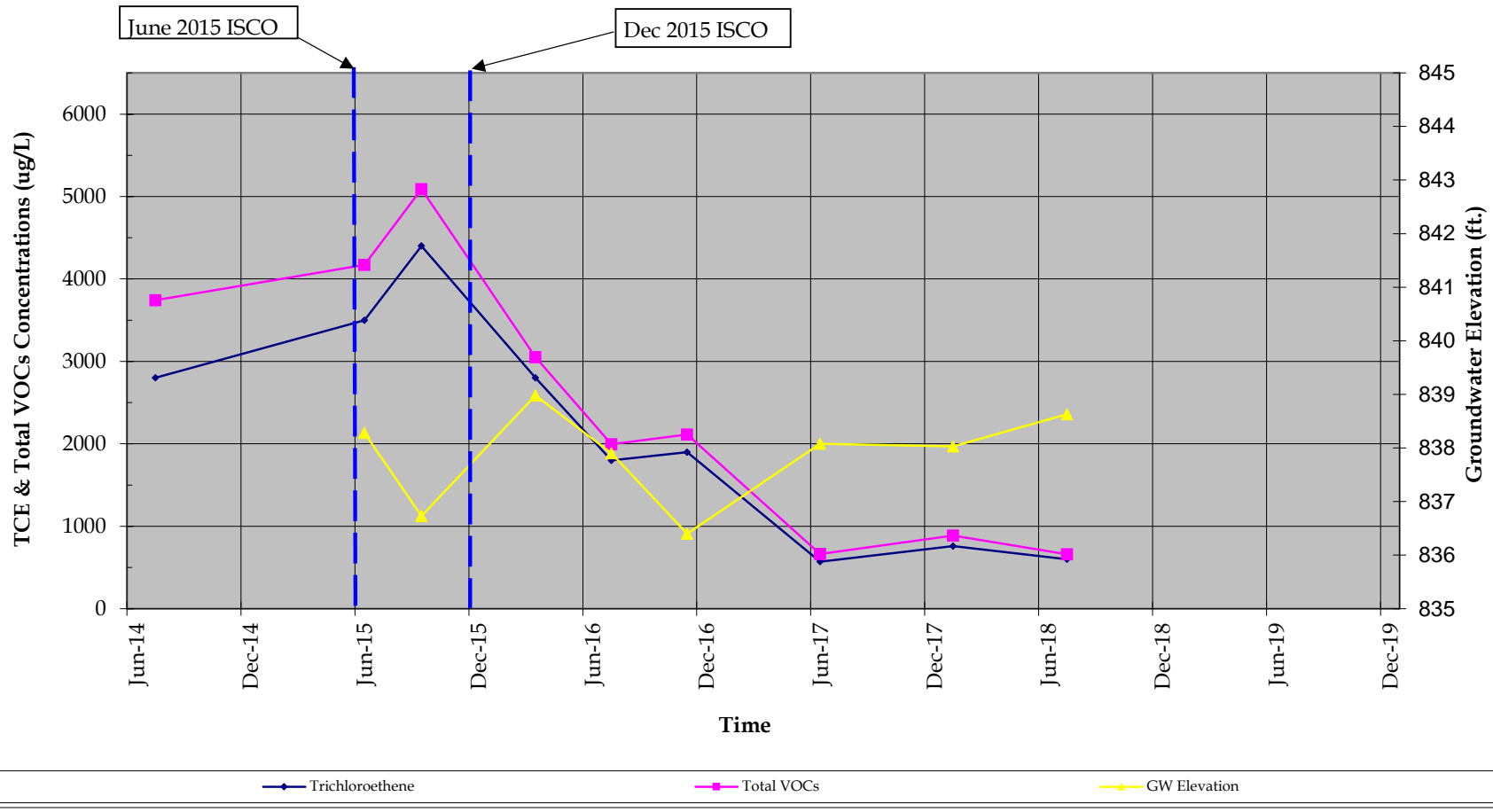
**ORGANIC CONCENTRATIONS AT MW-39  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



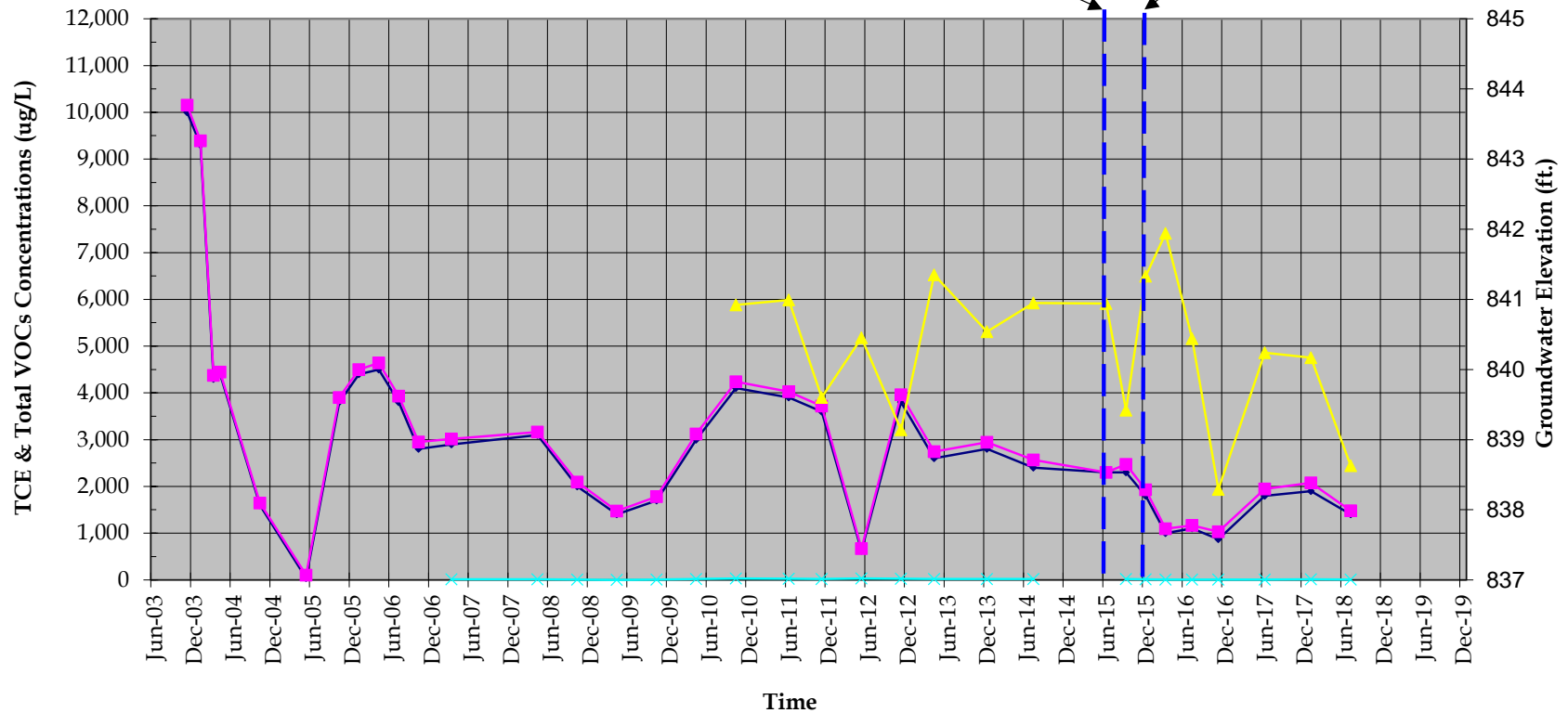
**ORGANIC CONCENTRATIONS AT MW-40  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



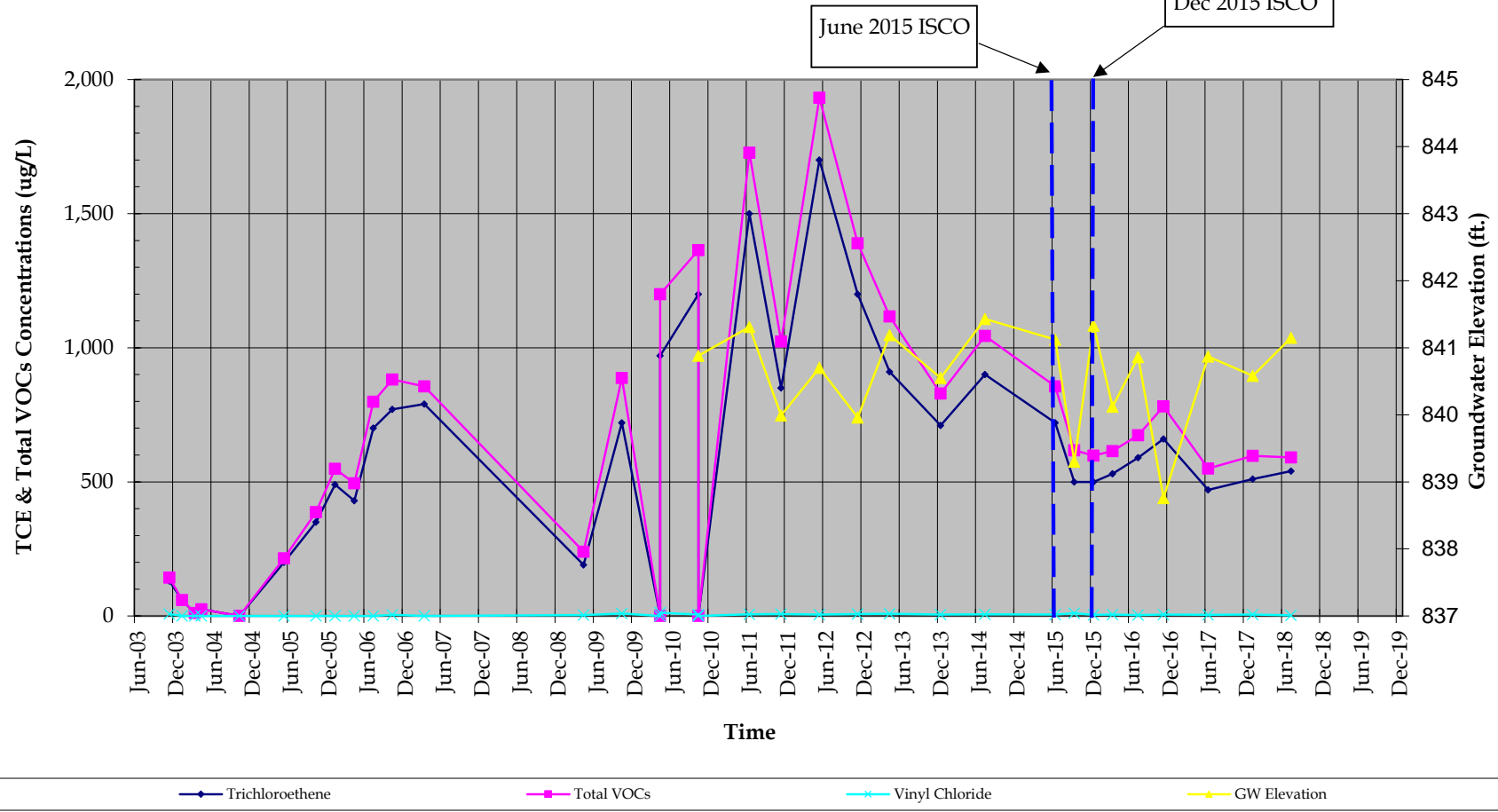
**ORGANIC CONCENTRATIONS AT MW-41  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



**ORGANIC CONCENTRATIONS AT TP-1  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**

### TCE & VOC Concentration Variation with Time



**ORGANIC CONCENTRATIONS AT TP-2  
OVERBURDEN MONITORING WELL  
SOUTHERN STATES, LLC  
Hampton, Georgia**



**APPENDIX C**  
**UPDATED MILESTONE SCHEDULE**



PG OVERSIGHT SUMMARY  
SOUTHERN STATES, LLC  
HAMPTON, GEORGIA

	Units	Unit Cost	
PG Summary Time	Hours	\$140	Sub-total
4/16/18- 4/30/18	0	\$140	\$0
5/1/18 - 5/31/18	5	\$140	\$700
6/1/18 - 6/30/18	0	\$140	\$0
7/1/18 - 7/31/18	30	\$140	\$4,200
8/1/18 - 8/30/18	0	\$140	\$0
9/1/18 - 9/31/18	0	\$140	\$0
10/1/18 - 10/15/18	30	\$140	\$4,200