APEX

May 31, 2019

Mr. McKenzie Mallary
Remedial Project Manager
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street SW
Atlanta GA 30303

Re: Operable Unit #2
Intermediate Groundwater Analytical Results – December 2018
Dominion Energy South Carolina, Inc.
Calhoun Park Area Site, Charleston, South Carolina

Dear Mr. Mallary:

On behalf of Dominion Energy South Carolina, Inc. (DESC, formerly South Carolina Electric & Gas Company), enclosed please find two hard copies of the Intermediate Groundwater Analytical Results Report for groundwater samples collected in December 2018 at the Calhoun Park Area (CPA) site located in Charleston, South Carolina.

The sampling was completed in general accordance with the Revised Technical Memorandum #003 (Request to Modify the Intermediate Groundwater Monitoring Program) that was subsequently approved by the agencies in November 2007. Recommendations for future activities provided in the attached report include:

- Continue the intermediate groundwater monitoring program, with adjustment of the monitoring frequency to an annual basis.
- Reduce the number of monitoring points for future groundwater level measurements, with 26 locations to be included in future events.
- Sample sentinel wells LM-08C and NM-06D during alternating monitoring events (every other year).
- Remove substation well MM-14C from the sampling program.
- Eliminate 2,4-dimethylphenol from the monitoring program.

Assuming the recommended adjustment in monitoring frequency is approved, the next intermediate groundwater monitoring event will be conducted in the fourth quarter of 2019.

Should you have any questions, please contact either Tom Effinger of DESC at (803) 217-9367 or me at (412) 829-9650.

Sincerely,
Apex Companies, LLC

William J. Zeli, P.E.
Senior Program Manager

Enclosures

cc: J. Padget – SCDHEC (w/enclosure)
T. Effinger, P. Biery, R. Contrael – DESC (via email)

11142087

APEX

OPERABLE UNIT #2
INTERMEDIATE GROUNDWATER MONITORING RESULTS
DECEMBER 2018 EVENT

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

May 2019

Prepared for:

Dominion Energy South Carolina, Inc.
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1.0 INTRODUCTION

On behalf of Dominion Energy South Carolina, Inc. (DESC, formerly South Carolina Electric & Gas Company), this report presents the findings of the intermediate groundwater monitoring event that was conducted on December 12 and December 13, 2018 at the Calhoun Park Area (CPA) site in Charleston, South Carolina. The December 2018 event represents a continuation of intermediate groundwater monitoring activities that began in January 1994, and following a number of modifications, has evolved into the current program described below.

The intermediate groundwater program was originally presented to the Agencies on August 31, 2007 as Technical Memorandum #003 ([TM #003], MTR, August 2007). TM #003 was subsequently revised based on comments received from the South Carolina Department of Health and Environmental Control (SCDHEC) on September 19, 2007. The proposed revisions to TM #003 were approved by the Agencies on November 13, 2007 and the revised TM #003 document was re-submitted on December 14, 2007.

In summary, the current groundwater monitoring program was developed to focus sampling to a limited number of wells in order to provide data to demonstrate the long-term effectiveness of the *in-situ* chemical oxidation (ISCO) treatment areas and plume stability via natural attenuation processes at other areas of the site. Over time, the groundwater monitoring analytical parameters were focused to constituents with cleanup goals and groundwater sampling was revised to a nine-month frequency. The following text discusses the March 2018 groundwater field sampling activities and monitoring results as well as evaluates potential trends based on historical data.

2.0 FIELD ACTIVITIES

Groundwater samples were collected from 13 intermediate monitoring wells on December 12 and December 13, 2018 and are listed on Table 1. The wells sampled are the same as those sampled during the March 2018 event. Field activities included groundwater level measurements, total well depth confirmation, a check for DNAPL occurrence, well purging and field measurement of groundwater indicator parameters, and collection of groundwater samples. Table 2 provides the analytical parameters and detection limits.

2.1 Groundwater Level and DNAPL Occurrence/Thickness Measurements

Groundwater level measurements were obtained at a total of 9 upper, 24 middle, and 5 lower intermediate sand unit wells on December 12, 2018 (Figure 1 and Table 3). Groundwater level measurements were started about 3 hours after low tide and generally proceeded from east to west.

Table 3 presents a summary of DNAPL observations and if present, the apparent DNAPL thickness observed at the monitoring locations. Generally, the DNAPL measurements were made at the same time as the groundwater level measurements. Some DNAPL thickness measurements were obtained while implementing the Site Wide DNAPL Removal Program (SWDRP) and are included on Table 3. Generally, the occurrence of DNAPL was similar between the March 2018 and December 2018 events, except at MM-01B where DNAPL was present at a measurable thickness (0.15 feet) in December 2018 but only trace amount in March 2018. Historically, DNAPL has been observed in this well. A figure showing the limited occurrence or absence of DNAPL in the intermediate sand unit wells is provided in Appendix F.

2.2 Groundwater Sampling Locations and Procedures

A total of 13 intermediate monitoring wells were sampled during the December 2018 event, which included:

- 4 - Upper sand unit monitoring wells;
- 7 - Middle sand unit monitoring wells; and
- 2 - Lower sand unit monitoring wells.

Figure 1 shows the intermediate groundwater sampling locations and Table 1 lists the wells evaluated for the December 2018 event.

The groundwater sampling methods generally complied with the United States Environmental Protection Agency (EPA) Region IV guidance on low-flow purging and sampling (EPA, February 1997). The wells were purged using low-flow sampling techniques and groundwater samples were collected after field parameters stabilized. Field parameters included pH, specific conductance, temperature, redox potential, dissolved oxygen (DO), and turbidity. Observations of groundwater color were also recorded. Once stabilized, the final field parameters were recorded and are provided on Table 4. A listing of the measurements collected during purging activities is provided in Appendix A. The groundwater samples were sent via overnight delivery under chain-of-custody procedures to SGS North America Inc. (formerly Accutest Laboratories) located in Scott, Louisiana for analyses.

2.3 QA/QC Sample Collection

Quality assurance/quality control (QA/QC) samples included one equipment blank (EB121318), one field duplicate (FD121318, a duplicate of MM-16D), and the matrix spike/matrix spike duplicate (MS/MSD) samples collected at well MM-01D. One trip blank for BTEX (benzene, toluene, ethylbenzene, and total xylenes) analyses only was included with the sample shipments and labeled TB121218.

3.0 GROUNDWATER FLOW CHARACTERISTICS

3.1 Groundwater Flow Evaluation

The depth to groundwater level measurements for each intermediate sand unit (upper, middle, and lower) and the subsequent groundwater elevations are provided on Table 3. For reference, Appendix E contains geologic cross sections that graphically depict the various intermediate sand units.

The upper intermediate sand unit is generally located in the western portion of the site around the former gasholder area as shown on Figure 2. Historical groundwater contours typically indicate subtle changes in groundwater elevations (e.g., tenth of a foot range) over the areal extent of the upper intermediate sand unit (Table 3 and Figure 2). The groundwater contour pattern indicates convergent flow to the west of Washington Street with flow directed to the north (Figure 2). This groundwater contour pattern has been observed historically with the last observation in December 2012.

A complex groundwater contour pattern continues to be noted in the middle intermediate sand unit. The most notable feature is a "trough" that develops in the southern on-site area and extends south where it is disrupted by a groundwater high on the NPS property. This groundwater high has the affect of bifurcating the trough with groundwater flow directed generally to the north and west. The trough has been observed historically. It is believed that tidal fluctuations in the Cooper River influence groundwater elevations and subsequently groundwater contour patterns in the eastern off-site areas. The general geometric configuration of the middle intermediate sand unit groundwater contour pattern has been observed historically.

The groundwater contour pattern in the lower intermediate sand unit was determined by five data points yielding a semi-radial groundwater contour pattern with flow generally directed from northwest to east (Figure 2). This groundwater contour pattern has been observed historically.

3.2 Estimates of Groundwater Velocity

An estimate of average groundwater linear velocity was calculated for each of the three intermediate sand units. An average horizontal hydraulic gradient was determined generally from the visually longest and most continuous flow segment that could be ascertained from the groundwater contour maps. The groundwater flow segment used to determine the hydraulic gradient is shown in blue on Figure 2. The hydraulic conductivity (K) was determined from the arithmetic mean of the intermediate sand unit slug test results, which were reported in the Intermediate Groundwater Interim Status Report (MTR, February 2002). Effective porosity was assumed to be 0.30 for each of the intermediate sand units, which is an acceptable value for a medium-grained sand (the general lithology of the sand units).

In the upper intermediate sand unit, an average horizontal hydraulic gradient of 1.8×10^{-3} feet/feet was estimated along with an arithmetic mean of K = 2.2 feet/day. Using the assumed effective porosity, an average linear groundwater velocity of 0.01 feet/day (approximately 4 feet/year) in the upper intermediate sand unit was estimated.

The middle intermediate sand unit average horizontal hydraulic gradient was estimated at 1.9×10^{-3} feet/feet and the arithmetic mean of K = 7.8 feet/day. Using the assumed effective porosity, the average linear groundwater velocity is approximately 0.05 feet/day (approximately 18 feet/year).

The horizontal hydraulic gradient estimated for the lower intermediate sand unit is 1.9×10^{-3} feet/feet. The arithmetic mean of K was found to be 6.7 feet/day. Applying the assumed effective porosity, the average linear groundwater velocity is estimated at approximately 0.04 feet/day (about 15 feet/year).

4.0 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples were collected from each well and analyzed for BTEX via EPA Method 8260B and semi-volatile organic compounds (SVOCs) by EPA Method 8270D. The SVOCs consisted of 2,4-dimethylphenol and carbazole and two polynuclear aromatic hydrocarbons (PAHs), specifically naphthalene and benzo(a)pyrene. Table 2 lists the analytical parameters, methods, and project reporting limits (RL). Analyses were completed in accordance with the QA/QC requirements of SW-846. The analytical report from the laboratory (SGS North America Inc.) is provided in Appendix B.

4.1 Data Evaluation

The analytical data were reviewed with respect to sample preservation, dilutions, holding times, field duplicates, equipment blanks, trip blanks (BTEX analyses only), laboratory blanks, surrogates, MS/MSD, and laboratory control samples. A memorandum discussing the analytical data evaluation is provided in Appendix C, and the appropriate data qualifiers are provided on the tables.

To provide analytical results when a sample is diluted, the laboratory provides analytical results between the method detection limit (MDL) and RL and qualifies the results as estimated, "J". During data evaluation, the results were compared to the undiluted project RLs (5 µg/L for VOCs and 10 µg/L for SVOCs) and results below the undiluted project RLs were reported as non-detected at the undiluted project RL with a "U" qualifier.

The QC results were reflective of typical minor QC exceedances and did not indicate that any significant problems existed with data precision and accuracy. The BTEX and SVOC data should be considered acceptable for intended data uses including those data qualified as estimated.

4.2 Equipment and Trip Blanks

Analytical results of the equipment blank and trip blank samples indicated that constituents were not detected.

4.3 Upper Intermediate Sand Unit

A total of four (4) upper intermediate sand unit wells were sampled during the December 2018 event. For discussion purposes, the upper intermediate sand unit wells are grouped into two separate categories and include:

- Fenton's Reagent Treatment Area; and
- Natural Attenuation Areas.

Upper intermediate well BM-03D is located in an area previously treated with Fenton's reagent. Wells PAMW-02, BM-04D, and MM-13C are located in areas where natural attenuation of dissolved phase constituents is being monitored. The well locations and historical benzene and naphthalene results are shown on Figure 3.

4.3.1 Fenton's Reagent Treatment Area (BM-03D)

The initial Fenton's reagent treatment occurred in 2005 with a follow-up polish treatment in 2006 at locations west of Washington Street on Rabin's and East Bay (BM-03D) properties.

BM-03D groundwater analytical results are shown on Figure 4 and Table 6 and indicate the following:

- 2,4-dimethylphenol, benzo(a)pyrene and carbazole were non-detect;
- Benzene, ethylbenzene, and naphthalene were detected within their historical ranges, but above their respective cleanup goals;
- While still within their historical ranges, ethylbenzene was detected at the highest concentration (3,960 µg/L) since June 2011 (4,100 µg/L) and naphthalene was detected at the highest concentration (14,300 µg/L) since March 2009 (18,000 µg/L); and
- Toluene and total xylenes were detected below their respective cleanup goals.

The second historically lowest toluene (110 J µg/L) concentration was observed during this event adding support to a decreasing concentration trend. The toluene and total xylenes concentrations represent a decrease of 98% and 85%, respectively, from baseline conditions (Figure 4).

4.3.2 Natural Attenuation Areas (PAMW-02, BM-04D and MM-13C)

PAMW-02 is located on the SCSPA property as shown on Figure 3. This area was previously treated by injecting PermeOx® Plus and EHC-O™ in 2005. Since March 2012, only benzene has been detected and the other constituents analyzed have been non-detect. Over this time, benzene has been non-detect in five of ten events. Attenuation is demonstrated via benzene since concentrations have decreased from a maximum of 18,000 µg/L (March 2006) to low (less than 65 µg/L) to non-detect levels through June 2017. Benzene was detected during the December 2018 event at a concentration of 174 µg/L, which is substantially lower than the previous event in March 2018 but the second highest concentration since June 2011. Table 6 and Appendix D provide the data.

BM-04D is located on the north side of Charlotte Street and north of the former gasholder (Figure 3). The BM-04D December 2018 analytical results indicate:

- Benzene and naphthalene were detected at concentrations within their historical ranges and above their cleanup goals;
- Ethylbenzene, toluene and total xylenes were detected at concentrations within their historical ranges and below their cleanup goals; and
- The remaining three SVOC constituents (2,4-dimethylphenol, benzo(a)pyrene, and carbazole) analyzed were non-detect and have been non-detect for over a decade.

MM-13C is located in the southwestern corner of the substation (Figure 3). The December 2018 groundwater analytical results indicate benzene (29,000 µg/L), ethylbenzene (3,300 µg/L), and naphthalene (4,570 µg/L) were higher than the prior event, but fell within their respective historical ranges. The remaining detected constituents (toluene and total xylenes) were below cleanup goals. Benzo(a)pyrene, carbazole and 2,4-dimethylphenol were non-detect representing the dominant historical response for these three constituents.

4.4 Middle Intermediate Sand Unit

A total of 7 middle intermediate sand unit monitoring wells were sampled during the December 2018 event. Table 7 provides the analytical results and Figure 5 provides the monitoring well locations with a historical summary of benzene and naphthalene concentrations for the wells sampled in December 2018. Appendix D provides the historical middle intermediate sand unit groundwater analytical results. For evaluation purposes and similar to the upper intermediate sand unit, the middle intermediate sand unit will be discussed in terms of the Fenton's reagent treatment areas (BM-10C), natural attenuation areas (MM-02D, PM-01C, MM-12B, and MM-14C), and the sentinel areas (NM-06D and LM-08C). Sentinel wells are intended to detect potential dissolved phase plume migration, should it occur.

4.4.1 Fenton's Reagent Treatment Area (BM-10C)

East Bay (BM-10C)

As shown on Table 7, groundwater analytical results from BM-10C indicate BTEX and naphthalene were detected. Benzene (10,300 µg/L) and ethylbenzene (782 µg/L) exceeded their respective cleanup goals, and

the remaining detected constituents were below their respective cleanup goals. The detected constituents are less than historical maximums and subsequently fall within the historical range (Appendix D). The remaining three SVOC constituents analyzed (2,4-dimethylphenol, benzo(a)pyrene, and carbazole) were not detected in BM-10C, which is consistent with historical results.

The groundwater data from BM-10C may be reflective of groundwater quality variability in the middle intermediate sand unit.

4.4.2 Natural Attenuation Areas (MM-02D, PM-01C, MM-12B, and MM-14C)

The groundwater sample from well MM-14C indicated all constituents analyzed were non-detect. Benzene has been non-detect at this location for five of the last six sampling events and the other constituents have been non-detect since February 2009. Results for three of four monitoring wells (MM-02D, MM-12B, and PM-01C) indicated that benzene concentrations were above cleanup goals and naphthalene exceeded the cleanup goal in MM-02D. The remaining constituents exhibited either non-detect results or results that were below the applicable cleanup goal. Total xylenes were detected at low concentrations in MM-02D, MM-12B and PM-01C and ethylbenzene was detected at a low concentration in MM-02D and MM-12B.

The following observations are made with respect to the December 2018 and historical benzene and naphthalene data (Figure 5):

- MM-02D: Benzene and naphthalene fell within their respective historical range.
- MM-12B: Benzene remains within its historical range, and naphthalene was not detected for the fifth consecutive event.
- MM-14C: Benzene has been non-detect for five of the last six sampling events, while the non-detect naphthalene results date to February 2009.
- PM-01C: Benzene was within its historical range. Naphthalene was non-detect, consistent with data since March 2012 which indicate either non-detect or results slightly above the detection limit.

4.4.3 Sentinel Areas (LM-08C and NM-06D)

Consistent with historical results, constituents were not detected in groundwater samples from sentinel wells LM-08C and NM-06D confirming that potential dissolved phase plume migration into these areas is not occurring (Table 7, Figure 5, and Appendix D).

4.5 Lower Intermediate Sand Unit

Groundwater analytical results from the two (2) lower intermediate sand unit monitoring wells (MM-01D and MM-16D) are provided on Table 8. Historical benzene and naphthalene results are provided on Figure 6. Appendix D includes historical data for the constituents analyzed.

MM-01D exhibited its second consecutive non-detect result for benzene in December 2018 (Figure 6 and Appendix D). The other constituents analyzed in MM-01D remain non-detect.

The benzene concentration in the MM-16D sample and its duplicate (15.2 and 14.5 µg/L), while still above the cleanup goal, were the lowest historically and decreased from a maximum concentration of 430 µg/L (October 2001 and April 2005). Naphthalene continued to be non-detect, which has occurred in nine of the last ten

events. The MM-16D total xylenes concentrations were the lowest historically and the 2,4-dimethylphenol results were the third lowest historically. The other constituents analyzed in MM-16D samples were non-detect.

5.0 SUMMARY AND CONCLUSIONS

The following section presents a brief summary and conclusions based on the intermediate groundwater data obtained from the December 2018 event:

- No new occurrences of DNAPL were observed in any of the monitoring wells indicating that further DNAPL migration is not occurring;
- The groundwater flow pattern in the upper intermediate sand unit has been observed historically and differed from that observed since the September 2013 event;
- The groundwater flow pattern in the middle sand unit was generally consistent with past monitoring events;
- Excluding the June 2017 event, the lower intermediate sand unit groundwater flow pattern has been observed since November 2012;
- The December 2018 groundwater analytical results generally fell within or near the low end of the historical range suggesting attenuative capacity of the intermediate sand units and includes:
  - Groundwater conditions near the former gasholder (BM-03D, BM-04D, MM-02D, and MM-13C) appear to indicate attenuation of ethylbenzene, toluene, and/or total xylenes since decreasing concentration trends are observed, while benzene and naphthalene tend to be range bound;
  - Decreasing concentration trends or non-detect results are observed for a greater number of constituents in wells located generally east (MM-01D, MM-12B, MM-14C, MM-16D) and north (PAMW-02 and PM-01C) of the former gasholder;
- Benzene and naphthalene concentrations in the sample from well BM-10C, located in a Fenton's reagent treatment area, increased in December 2018 compared to the March 2018 results, and are at the upper end of the historical range; and
- Based on the sentinel well results, constituent plume migration is not occurring.

6.0 RECOMMENDATIONS

Based on the information described herein, DESC makes the following recommendations:

- Continue the intermediate groundwater monitoring program, but switch to an annual frequency, with the next monitoring event scheduled to be completed in the fourth quarter of 2019.
- Based on the information available through years of monitoring and to facilitate more efficient collection of groundwater level measurements, a reduction in monitoring points is appropriate. The 14 wells highlighted in Table 3 should be eliminated from the program (26 wells to be included in future events).
- Based on consistently not detected results, sentinel wells LM-08C and NM-06D should be sampled during alternating monitoring events (every other year).
- Based on consistently not detected results for the past six events, except for one minor benzene detection, substation well MM-14C should be removed from the sampling program.

- Eliminate 2,4-dimethylphenol from the monitoring program. Except for MM-16D samples, 2,4-dimethylphenol has not been detected since September 2013. The cleanup goal of 700 ug/L has never been exceeded, and MM-16D sample results have been less than 100 ug/L since September 2016.

DESC will continue to evaluate intermediate groundwater conditions at the site and provide recommendations for future monitoring program modifications as appropriate. Any proposed changes to the program will be submitted for agency review and approval prior to implementation. Assuming agency concurrence with the above recommendations is received, DESC will evaluate the wells no longer utilized for intermediate groundwater monitoring and request approval for abandonments where appropriate.

7.0 REFERENCES

Management and Technical Resources, Inc., Intermediate Groundwater Interim Status Report, February 2002.

Management and Technical Resources, Inc., Technical Memorandum #003, Request to Modify the Intermediate Groundwater Monitoring Program, August 2007.

TABLES

TABLE 1

INTERMEDIATE SAND UNIT GROUNDWATER MONITORING WELLS
MARCH 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Wells	Location
Upper Sand	
BM-03D	Sector 9 - East Bay
BM-04D	Charlotte Street
MM-13C	SCE&G Substation
PAMW-02	Sector 1A - SC State Ports Authority
Middle Sand	
BM-10C	Sector 9 - East Bay
LM-08C	Luden's Property
MM-02D	SCE&G Substation
MM-12B	SCE&G Substation
MM-14C	SCE&G Substation
NM-06D	NPS Property
PM-01C	Sector 2A - SC State Ports Authority
Lower Sand	
MM-01D	SCE&G Substation
MM-16D	SCE&G Substation

Notes:

(1) Three wells were eliminated from the program in 2015 and include BM-08B (abandoned on May 28, 2015), and BM-07C and CM-11D based on multiple non-detections and prior recommendations.

(2) LM-09B was eliminated from the program in May 2017 based on multiple non-detections and prior recommendations.

TABLE 2

ANALYTICAL PARAMETERS AND METHODS
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Constituent	EPA Method	Reporting Limit (µg/L)	Cleanup Goal (µg/L)[1]
Volatile Organic Constituents:			
Benzene	8260B	5	5
Ethylbenzene	8260B	5	700
Toluene	8260B	5	1,000
Xylenes, Total	8260B	5	10,000
Semi-Volatile Organic Constituents			
2,4-Dimethylphenol	8270D	10	700
Benzo(a)pyrene	8270D	10[2]	0.2
Carbazole	8270D	10	5[3]
Naphthalene	8270D	10	1,500

Notes:

(1) Remediation goals obtained from EPA Record of Decision for OU #2 at the CPA Site (September 2002).

(2) This reporting limit was approved by the Agencies on November 14, 2007.

(3) Indicates cleanup goals derived from risk based calculations, rather than drinking water standards (MCLs). A revised goal of 53 µg/L has been proposed for shallow groundwater.

TABLE 3

DECEMBER 12, 2018 GROUNDWATER ELEVATIONS AND DNAPL OBSERVATIONS
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well ID	Top of Casing Elevation (feet mlsl)[1]	DNAPL Thickness (feet)[2]		Depth to Groundwater (feet btoc)	Groundwater Elevation (feet mlsl)[1]
		Mar-18	Dec-18		
Upper Intermediate Sand Unit					
BM-03D	5.52	NP	NP	2.66	2.86
BM-04D	5.52	Trace[5]	Trace	2.42	3.10
MM-02B[3]	9.58	2.63	2.67	8.81	0.77
EBMW-06[4]	6.22	NM	NP	3.11	3.11
EBMW-07	5.50	NP	NP	2.58	2.92
PAMW-02	6.60	NP	NP	3.61	2.99
BM-07B	7.89	NP	NP	4.95	2.94
BM-10B	6.41	NP	NP	3.51	2.90
MM-13C	8.46	NP	NP	5.31	3.15
PM-03B[4]	7.00	NM	NM	NM	NM
Middle Intermediate Sand Unit					
BM-05D	4.11	NP	NP	1.37	2.74
CM-06D	4.10	NP	NP	1.04	3.06
CM-07D	4.65	NP	NP	1.76	2.89
CM-11D	4.18	NP	NP	1.24	2.94
DRW-52C	5.83	0.63	0.23	3.83	2.00
DRW-53C	6.49	Trace	Trace	4.78	1.71
LM-03D	5.78	NP	NP	3.63	2.15
LM-08C	7.47	NP	NP	5.82	1.65
LM-09B[4]	5.99	NM	NM	NM	NM
LM-10B	6.68	NP	NP	4.95	1.73
MM-01B	6.40	Trace	0.15	3.72	2.68
MM-02D	9.05	NP	NP	6.06	2.99
MM-12B	9.46	NP	NP	7.14	2.32
NM-06D	7.53	NP	NP	5.33	2.20
USGS-02D[3]	6.36	NP	NP	4.43	1.93
USGS-03	5.00	NP	NP	3.00	2.00
BM-06C	3.87	NP	NP	0.22	3.65
BM-07C	7.79	NP	NP	4.57	3.22
BM-10C	6.59	NP	NP	3.37	3.22
MM-14C	9.79	NP	NP	7.68	2.11
MM-15C	6.69	Trace	Trace	0.72	5.97
MM-16B	7.53	NP	NP	5.69	1.84
MM-16C	7.03	NP	NP	4.90	2.13
PM-01C	6.51	NP	NP	3.73	2.78
PM-02B[3]	5.66	NP	NP	3.50	2.16
Lower Intermediate Sand Unit					
LM-10D	5.65	NP	NP	3.18	2.47
MM-01D	6.08	NP	NP	3.33	2.75
MM-13D	8.69	NP	NP	5.62	3.07
MM-15D	6.66	NP	NP	3.80	2.86
MM-16D	7.18	NP	NP	4.28	2.90

Notes:

btoc - below top of casing NP - not present NM - not measured

(1) Elevation datum is NAVD 1988 referencing mean low sea level (mlsl).

(2) December 2018 DNAPL thickness measurements were made coincident with groundwater level measurements except MM-15C made quarterly (10/9/2018); DRW-52C, DRW-53C & MM-01B made monthly (11/19/2018); and MM-02B made weekly (12/7/2018) and consistent with the Site Wide DNAPL Work Plan and subsequent modifications.

(3) Top of PVC casing elevations were adjusted due to historical pad and monitoring well modifications.

(4) PM-03B and LM-09B were not measured at the time of groundwater mesurements. A car was parked ove LM-09B and PM-03B was paved over.

(5) Trace was observed on the probe.

(6) Highlighted wells are proposed for elimination from future groundwater level measurement events.

Checled by: JH and MAF
1/2/2019 and 1/14/19

TABLE 4

SUMMARY OF FINAL GROUNDWATER FIELD MEASUREMENTS - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well I.D.	Sampling Date	pH (S.U.)	Specific Conductance (µs/m)	Temperature (°C)	Dissolved Oxygen (mg/L)	Redox (mV)	Turbidity (NTU)
Upper Sand							
BM-03D	December 13, 2018	6.86	1,447	23.7	1.22	-218	2
BM-04D	December 13, 2018	7.32	590	20.0	0.83	-122	3
MM-13C	December 12, 2018	7.41	2,786	21.5	0.25	-277	2
PAMW-02	December 12, 2018	6.95	3,544	24.7	3.66	-147	34
Middle Sand							
BM-10C	December 13, 2018	6.40	1,266	21.2	0.72	-252	11
LM-08C	December 13, 2018	6.82	29,929	21.1	0.64	-223	1
MM-02D	December 13, 2018	7.19	1,017	19.5	1.19	-226	2
MM-12B	December 12, 2018	6.60	28,203	20.1	0.51	-316	17
MM-14C	December 12, 2018	6.93	39,720	20.3	0.41	-275	2
NM-06D	December 12, 2018	6.96	29,108	21.2	0.51	-314	1
PM-01C	December 12, 2018	6.92	4,779	23.3	1.63	-263	14
Lower Sand							
MM-01D	December 13, 2018	6.89	4,298	20.7	0.81	-154	1
MM-16D	December 13, 2018	7.14	4,585	20.3	0.85	-276	1

TABLE 5

SUMMARY OF EQUIPMENT AND TRIP BLANK RESULTS - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Constituent	Units	Cleanup Goal (µg/L)	EB121318	TB121218
Volatiles				
Benzene	µg/L	5	5 U	5 U
Ethylbenzene	µg/L	700	5 U	5 U
Toluene	µg/L	1,000	5 U	5 U
Xylenes, Total	µg/L	10,000	5 U	5 U
Semi-Volatiles				
2,4-Dimethylphenol	µg/L	700	10 U	--
Benzo(a)pyrene	µg/L	0.2	10 U	--
Carbazole(1)	µg/L	5	10 U	--
Naphthalene	µg/L	1,500	10 U	--

Notes:

(1) Indicates cleanup goals derived from risk based calculations, rather than drinking water standards (MCLs). A revised goal of 53 µg/L has been proposed for shallow groundwater.

U - Indicates the constituent was not detected at the reported detection limit.

Checked by KJ
3/4/2019

TABLE 6

SUMMARY OF UPPER INTERMEDIATE SAND UNIT GROUNDWATER ANALYTICAL RESULTS - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Constituent	Units	Cleanup Goal (µg/L)	BM-03D	BM-04D	MM-13C	PAMW-02
Volatiles						
Benzene	µg/L	5	**24,500**	**7,130**	**29,000**	**174**
Ethylbenzene	µg/L	700	**3,960**	644	**3,300**	5 U
Toluene	µg/L	1,000	110 J	20.1 J	234 J	5 U
Xylenes, Total	µg/L	10,000	610 J	194 J	924 J	5 U
Semi-Volatiles						
2,4-Dimethylphenol	µg/L	700	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U
Carbazole(1)	µg/L	5	10 U	10 U	10 U	10 U
Naphthalene	µg/L	1,500	**14,300**	**4,210**	**4,570**	10 U

Notes:

U - Indicates the consitutent was not detected at the reported detection limit or the undiluted project limit.

J - Indicates that the constituent was detected between the laboratory method detection limit and the diluted project limit.

Bolded value indicates that the concentration is above the groundwater cleanup goal.

[ ] - Indicates that the well is located in a Sector that was treated with Fenton's reagent.

(1) Indicates cleanup goals derived from risk based calculations, rather than drinking water standards (MCLs). A revised goal of 53 µg/L has been proposed for shallow groundwater.

TABLE 7

SUMMARY OF MIDDLE INTERMEDIATE SAND UNIT GROUNDWATER ANALYTICAL RESULTS - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Constituent	Units	Cleanup Goal (µg/L)	BM-10C	LM-08C	MM-02D	MM-12B	MM-14C	NM-06D	PM-01C
Volatiles									
Benzene	µg/L	5	**10,300**	5 U	**30,100**	**180**	5 U	5 U	**557**
Ethylbenzene	µg/L	700	**782**	5 U	76 J	59.5	5 U	5 U	5 U
Toluene	µg/L	1,000	55.2 J	5 U	45 U	5 U	5 U	5 U	5 U
Xylenes, Total	µg/L	10,000	456 J	5 U	140 J	7	5 U	5 U	9.6
Semi-Volatiles									
2,4-Dimethylphenol	µg/L	700	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole(1)	µg/L	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	1,500	988	10 U	**5,520**	10 U	10 U	10 U	10 U

Notes:

U - Indicates the consitutent was not detected at the reported detection limit or the undiluted project limit.

J - Indicates that the constituent was detected between the laboratory method detection limit and the diluted project limit.

Bolded value indicates that the concentration is above the groundwater cleanup goal.

[ ] - Indicates that the well is located in a Sector that was treated with Fenton's reagent.

(1) Indicates cleanup goals derived from risk based calculations, rather than drinking water standards (MCLs). A revised goal of 53 µg/L has been proposed for shallow groundwater.

Checked by KJ
3/4/2019

TABLE 8

SUMMARY OF LOWER INTERMEDIATE SAND UNIT GROUNDWATER ANALYTICAL RESULTS
DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Constituent	Units	Cleanup Goal (µg/L)	MM-01D	MM-16D	MM-16D Duplicate
Volatiles					
Benzene	µg/L	5	5 U	**15.2**	**14.5**
Ethylbenzene	µg/L	700	5 U	5 U	5 U
Toluene	µg/L	1,000	5 U	5 U	5 U
Xylenes, Total	µg/L	10,000	5 U	10.6	10.6
Semi-Volatiles					
2,4-Dimethylphenol	µg/L	700	10 U	31.7	30
Benzo(a)pyrene	µg/L	0.2	10 U	10 U	10 U
Carbazole[1]	µg/L	5	10 U	10 U	10 U
Naphthalene	µg/L	1,500	10 U	10 U	10 U

Notes:

U - Indicates the consitutent was not detected at the reported detection limit or the undiluted project limit.

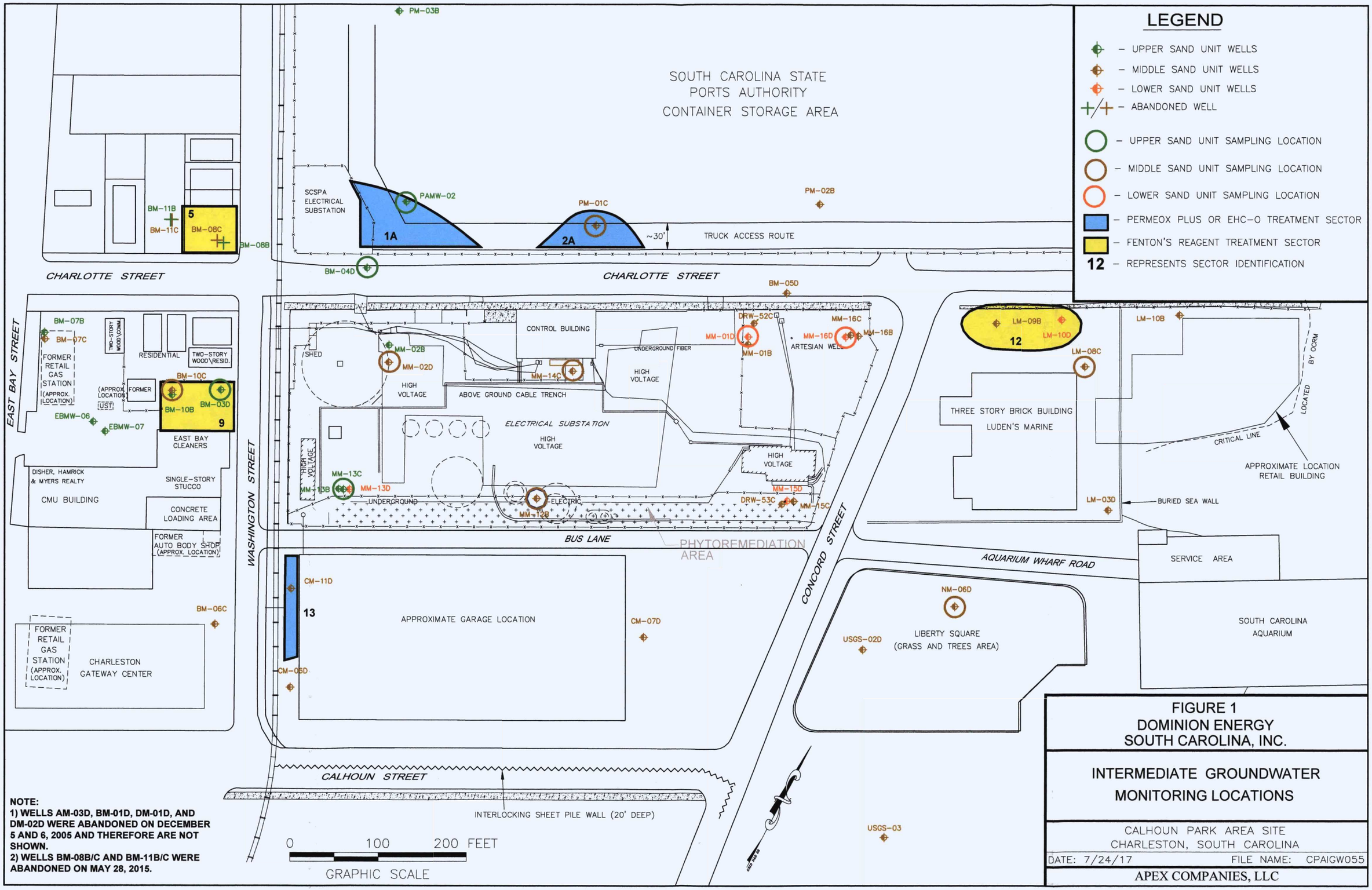
J - Indicates that the constituent was detected between the laboratory method detection limit and the diluted project limit.

Bolded value indicates that the concentration is above the groundwater cleanup goal.

- Indicates that the well is located in a Sector that was treated with Fenton's reagent.

(1) Indicates cleanup goals derived from risk based calculations, rather than drinking water standards (MCLs). A revised goal of 53 µg/L has been proposed for shallow groundwater.

FIGURES



NOTE:
1) WELLS AM-03D, BM-01D, DM-01D, AND DM-02D WERE ABANDONED ON DECEMBER 5 AND 6, 2005 AND THEREFORE ARE NOT SHOWN.
2) WELLS BM-08B/C AND BM-11B/C WERE ABANDONED ON MAY 28, 2015.

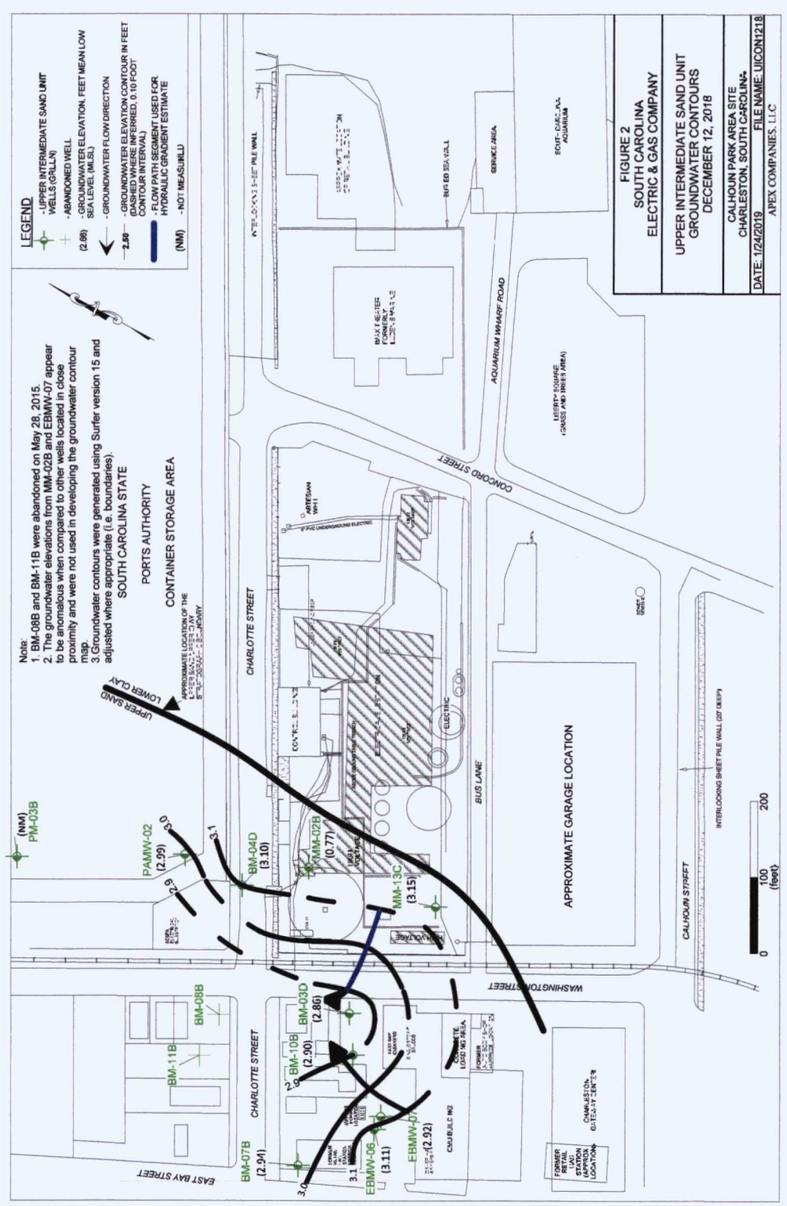
FIGURE 1
DOMINION ENERGY
SOUTH CAROLINA, INC.

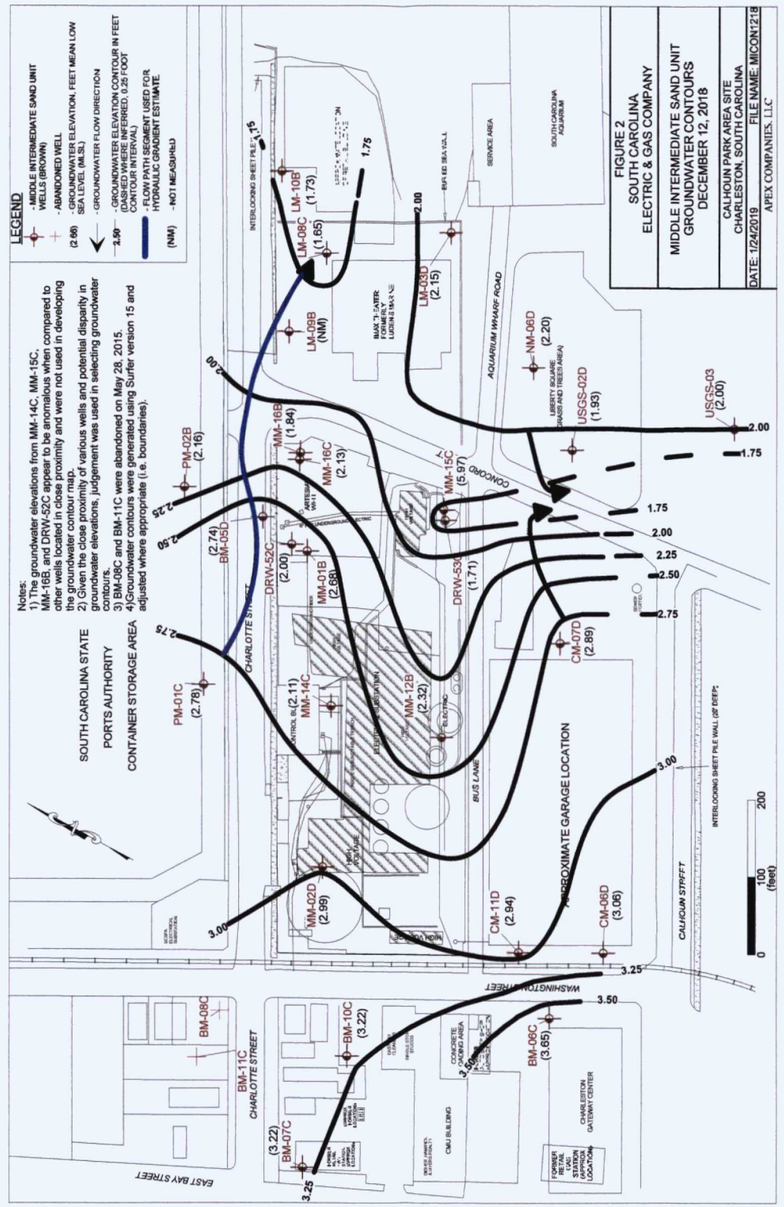
INTERMEDIATE GROUNDWATER
MONITORING LOCATIONS

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 7/24/17 FILE NAME: CPAIGW055

APEX COMPANIES, LLC





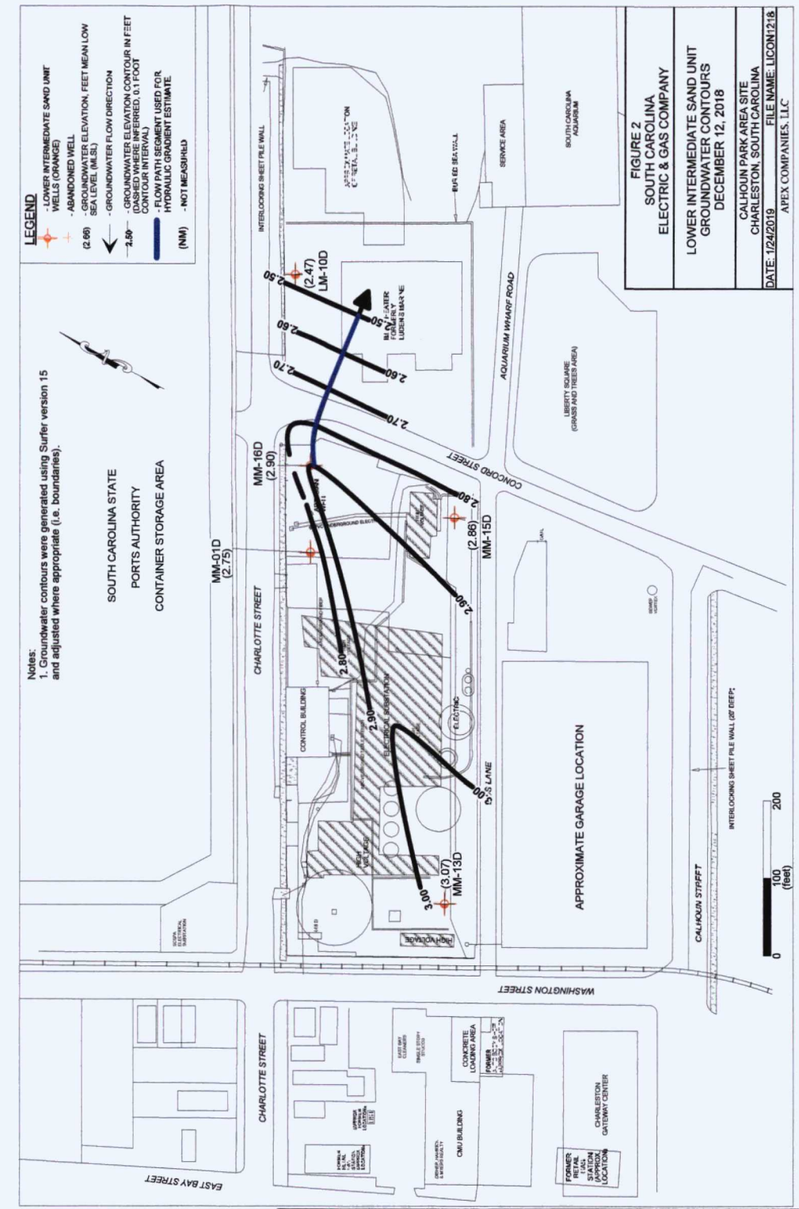


FIGURE 2

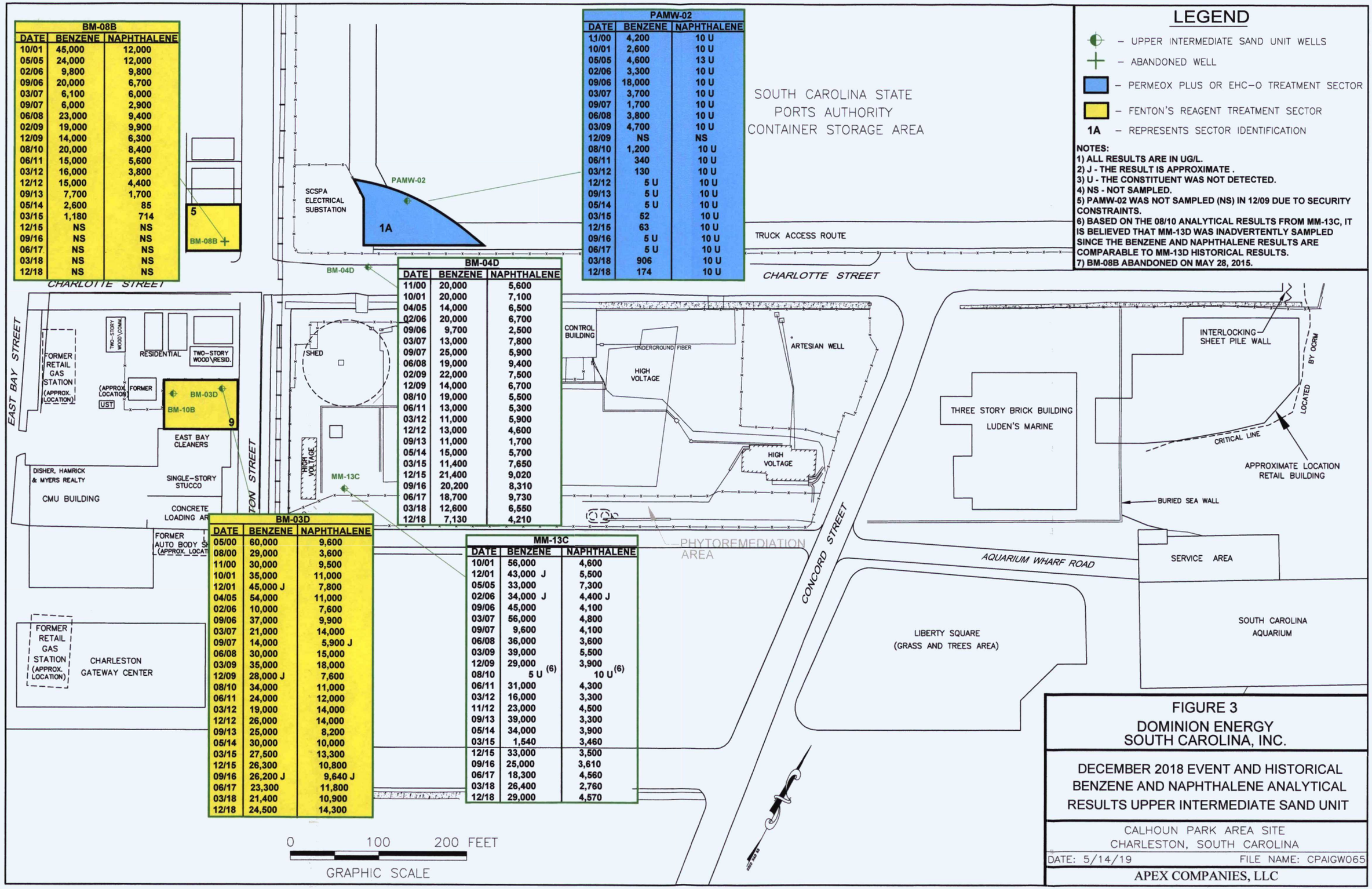
DOMINION ENERGY SOUTH CAROLINA, INC.

INTERMEDIATE GROUNDWATER ELEVATION CONTOURS - DECEMBER 12, 2018

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 05/14/19 FILE NAME: IGWCON1218

APEX COMPANIES, LLC



BM-08B		
DATE	BENZENE	NAPHTHALENE
10/01	45,000	12,000
05/05	24,000	12,000
02/06	9,800	9,800
09/06	20,000	6,700
03/07	6,100	6,000
09/07	6,000	2,900
06/08	23,000	9,400
02/09	19,000	9,900
12/09	14,000	6,300
08/10	20,000	8,400
06/11	15,000	5,600
03/12	16,000	3,800
12/12	15,000	4,400
09/13	7,700	1,700
05/14	2,600	85
03/15	1,180	714
12/15	NS	NS
09/16	NS	NS
06/17	NS	NS
03/18	NS	NS
12/18	NS	NS

PAMW-02		
DATE	BENZENE	NAPHTHALENE
11/00	4,200	10 U
10/01	2,600	10 U
05/05	4,600	13 U
02/06	3,300	10 U
09/06	18,000	10 U
03/07	3,700	10 U
09/07	1,700	10 U
06/08	3,800	10 U
03/09	4,700	10 U
12/09	NS	NS
08/10	1,200	10 U
06/11	340	10 U
03/12	130	10 U
12/12	5 U	10 U
09/13	5 U	10 U
05/14	5 U	10 U
03/15	52	10 U
12/15	63	10 U
09/16	5 U	10 U
06/17	5 U	10 U
03/18	906	10 U
12/18	174	10 U

BM-04D		
DATE	BENZENE	NAPHTHALENE
11/00	20,000	5,600
10/01	20,000	7,100
04/05	14,000	6,500
02/06	20,000	6,700
09/06	9,700	2,500
03/07	13,000	7,800
09/07	25,000	5,900
06/08	19,000	9,400
02/09	22,000	7,500
12/09	14,000	6,700
08/10	19,000	5,500
06/11	13,000	5,300
03/12	11,000	5,900
12/12	13,000	4,600
09/13	11,000	1,700
05/14	15,000	5,700
03/15	11,400	7,650
12/15	21,400	9,020
09/16	20,200	8,310
06/17	18,700	9,730
03/18	12,600	6,550
12/18	7,130	4,210

BM-03D		
DATE	BENZENE	NAPHTHALENE
05/00	60,000	9,600
08/00	29,000	3,600
11/00	30,000	9,500
10/01	35,000	11,000
12/01	45,000 J	7,800
04/05	54,000	11,000
02/06	10,000	7,600
09/06	37,000	9,900
03/07	21,000	14,000
09/07	14,000	5,900 J
06/08	30,000	15,000
03/09	35,000	18,000
12/09	28,000 J	7,600
08/10	34,000	11,000
06/11	24,000	12,000
03/12	19,000	14,000
12/12	26,000	14,000
09/13	25,000	8,200
05/14	30,000	10,000
03/15	27,500	13,300
12/15	26,300	10,800
09/16	26,200 J	9,640 J
06/17	23,300	11,800
03/18	21,400	10,900
12/18	24,500	14,300

MM-13C		
DATE	BENZENE	NAPHTHALENE
10/01	56,000	4,600
12/01	43,000 J	5,500
05/05	33,000	7,300
02/06	34,000 J	4,400 J
09/06	45,000	4,100
03/07	56,000	4,800
09/07	9,600	4,100
06/08	36,000	3,600
03/09	39,000	5,500
12/09	29,000	3,900
08/10	5 U (6)	10 U (6)
06/11	31,000	4,300
03/12	16,000	3,300
11/12	23,000	4,500
09/13	39,000	3,300
05/14	34,000	3,900
03/15	1,540	3,460
12/15	33,000	3,500
09/16	25,000	3,610
06/17	18,300	4,560
03/18	26,400	2,760
12/18	29,000	4,570

LEGEND

- UPPER INTERMEDIATE SAND UNIT WELLS
- ABANDONED WELL
- PERMEOX PLUS OR EHC-O TREATMENT SECTOR
- FENTON'S REAGENT TREATMENT SECTOR
- 1A – REPRESENTS SECTOR IDENTIFICATION

NOTES:
1) ALL RESULTS ARE IN UG/L.
2) J - THE RESULT IS APPROXIMATE .
3) U - THE CONSTITUENT WAS NOT DETECTED.
4) NS - NOT SAMPLED.
5) PAMW-02 WAS NOT SAMPLED (NS) IN 12/09 DUE TO SECURITY CONSTRAINTS.
6) BASED ON THE 08/10 ANALYTICAL RESULTS FROM MM-13C, IT IS BELIEVED THAT MM-13D WAS INADVERTENTLY SAMPLED SINCE THE BENZENE AND NAPHTHALENE RESULTS ARE COMPARABLE TO MM-13D HISTORICAL RESULTS.
7) BM-08B ABANDONED ON MAY 28, 2015.

FIGURE 3
DOMINION ENERGY
SOUTH CAROLINA, INC.

DECEMBER 2018 EVENT AND HISTORICAL BENZENE AND NAPHTHALENE ANALYTICAL RESULTS UPPER INTERMEDIATE SAND UNIT

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

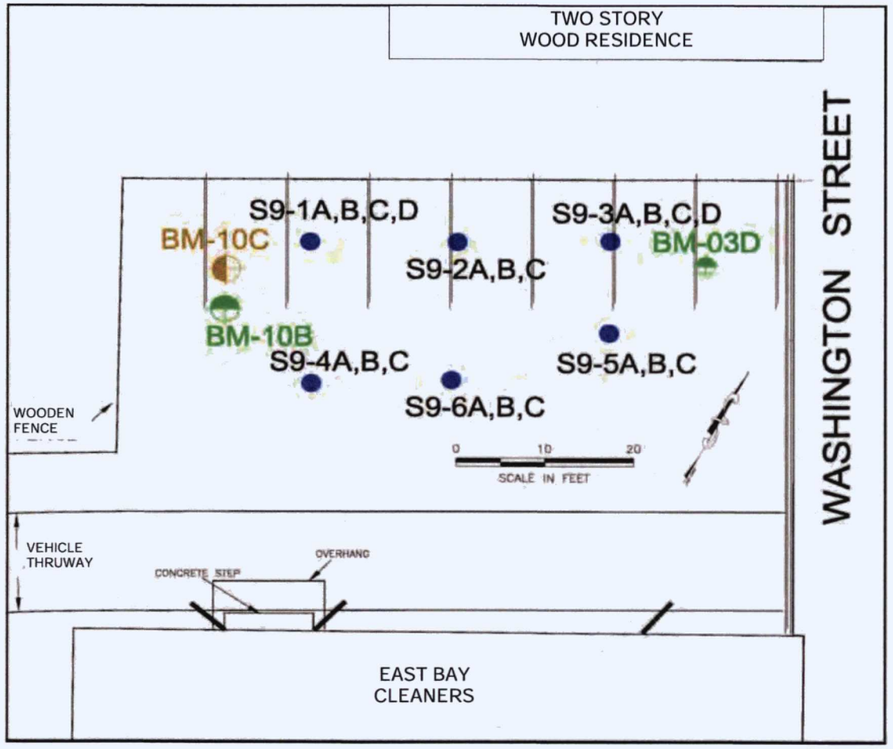
DATE: 5/14/19 FILE NAME: CPAIGW065

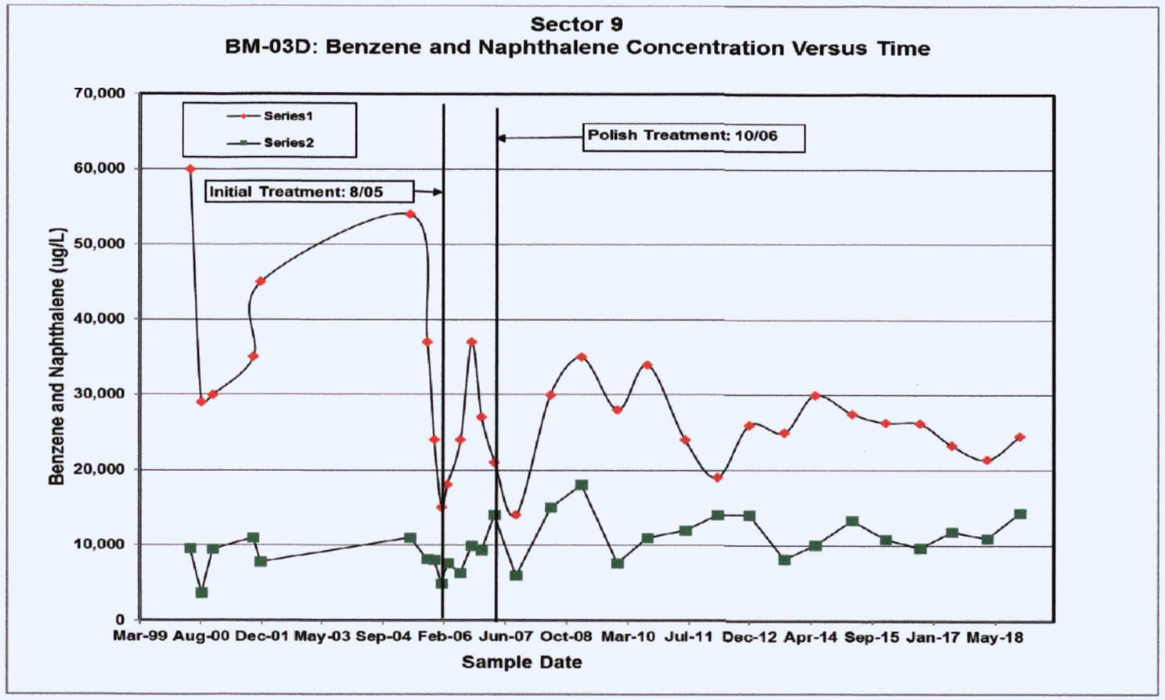
APEX COMPANIES, LLC

BM-03D - EAST BAY PROPERTY

UPPER INTERMEDIATE SAND UNIT

Constituent (ug/L)	Cleanup Goal	Baseline 4/29/05	Initial Treatment 8/05	Polish Treatment 10/06	Effectiveness 12/1/06	3/19/07	9/12/07	6/18/08	3/2/09	12/17/09	8/20/10	6/23/11	3/24/12	12/4/12	9/18/13	5/22/14	3/19/15	12/22/15	9/26/2016	6/8/2017	3/22/2018	12/13/2018	Decrease from Baseline to June 2017
Benzene	5	54,000			27,000	21,000	14,000	30,000	35,000	28,000 J	34,000	24,000	19,000	26,000	25,000	30,000	27,500	26,300	26,200 J	23,300 J	21,400	24,500	93 %
Ethylbenzene	700	3,700			2,400	2,300	2,200	3,200	4,200	3,200 J	4,400	4,100	3,000	3,200	3,400	3,600	2,400	3,280	3,470 J	3,800	2,900	3,960	-7 %
Toluene	1,000	6,900			5,800	940	540	4,100	7,000	5,200	4,600	3,000	1,100	960	340 J	320 J	93	134 J	146 J	132 J	123 J	110 J	98 %
Xylenes, Total	10,000	4,200			3,300	1,810	1,180	2,100	3,800	3,000	3,200	2,400	1,630	1,610	1,440	1,270 J	611	756	439 J	759	468 J	610 J	85 %
2,4-Dimethylphenol	700	10 U			10 U	2,500 U (1)	10 U	10 U	220 UJ	61 J	68	10 UJ	10 UJ	28 J	15 UJ	85 UJ	10 U	10 U	10 U	17 U	10 U	10 U	0 %
Benzo(a)pyrene	0.2	10 U			10 U	10 U	10 U	10 U	37 UJ	13 UJ	10 U	10 UJ	10 UJ	14 UJ	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	0 %
Carbazole	5/53	10 U			10 U	10 U	10 U	10 U	350 UJ	81 UJ	10 U	10 UJ	10 UJ	10 UJ	14 UJ	16 J	10 U	10 U	10 U	10 U	10 U	10 U	0 %
Naphthalene	1,500	11,000			9,300	14,000	5,900 J	15,000	18,000	7,600	11,000	12,000	14,000	14,000	8,200	10,000	13,300	10,800	9,640 J	11,800	10,900	14,300	-30 %





LEGEND

- MULTIPLE INJECTORS (SCREENED IN THE UPPER AND MIDDLE SAND)
- UPPER INTERMEDIATE SAND UNIT MONITORING WELL
- MIDDLE INTERMEDIATE SAND UNIT MONITORING WELL

NOTES:
1) DUPLICATE SAMPLE OF BM-03D IN MARCH 2007 INDICATED 2,4-DIMETHYLPHENOL WAS 10 U.
2) NEGATIVE PERCENTAGE VALUE INDICATES CONCENTRATION INCREASE.
3) FOR DECREASE OF CONCENTRATION ESTIMATES, A NON-DETECT CONCENTRATION IDENTIFIED WITH A "U" WAS ASSUMED TO BE "0".
4) DUE TO THE EXTENT OF THE BM-03D AND BM-08B DATABASES, ONLY THE BASELINE AND EVENTS SUBSEQUENT TO POLISH TREATMENT ARE SHOWN. APPENDIX C PROVIDES THE HISTORICAL DATA GRAPHICALLY, BENZENE AND NAPHTHALENE CONCENTRATIONS ARE PROVIDED SINCE 2000.

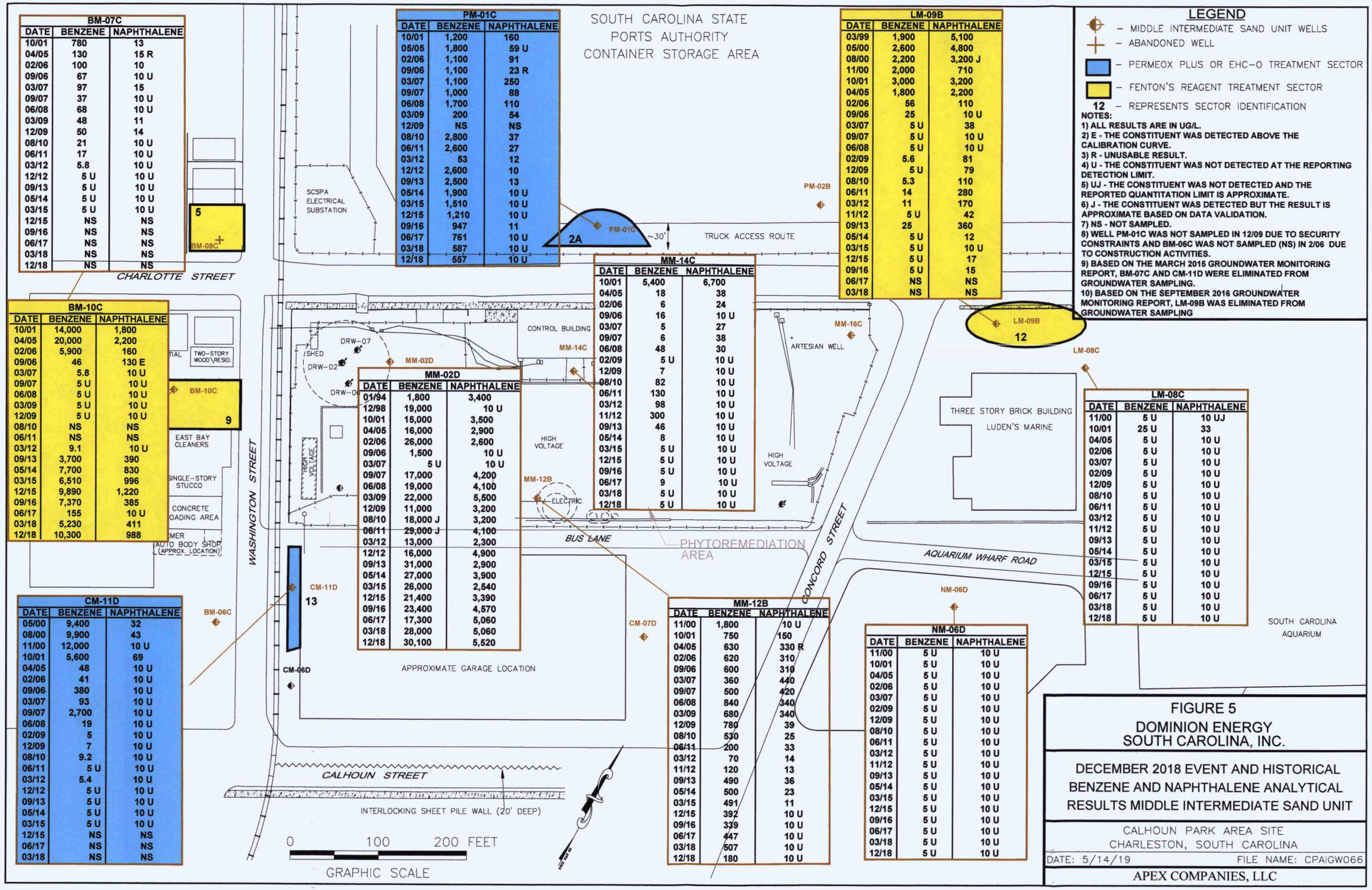
FIGURE 4
DOMINION ENERGY
SOUTH CAROLINA, INC.

DECEMBER 2018 EVENT AND HISTORICAL ANALYTICAL RESULTS
ROD CONSTITUENTS
SECTOR 9 EAST BAY
UPPER INTERMEDIATE SAND UNIT

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 5/14/2019 FILENAME: Figure 4

APEX COMPANIES, LLC



BM-07C

DATE	BENZENE	NAPHTHALENE
10/01	780	13
04/05	130	15 R
02/06	100	10
09/06	67	10 U
03/07	97	15
09/07	37	10 U
06/08	68	10 U
03/09	48	11
12/09	50	14
08/10	21	10 U
06/11	17	10 U
03/12	5.8	10 U
12/12	5 U	10 U
09/13	5 U	10 U
05/14	5 U	10 U
03/15	5 U	10 U
12/15	NS	NS
09/16	NS	NS
06/17	NS	NS
03/18	NS	NS
12/18	NS	NS

PM-01C

DATE	BENZENE	NAPHTHALENE
10/01	1,200	160
05/05	1,800	59 U
02/06	1,100	91
09/06	1,100	23 R
03/07	1,100	250
09/07	1,000	88
06/08	1,700	110
03/09	200	54
12/09	NS	NS
08/10	2,800	37
06/11	2,600	27
03/12	53	12
12/12	2,600	10
09/13	2,500	13
05/14	1,900	10 U
03/15	1,510	10 U
12/15	1,210	10 U
09/16	947	11
06/17	761	10 U
03/18	587	10 U
12/18	557	10 U

LM-09B

DATE	BENZENE	NAPHTHALENE
03/99	1,900	5,100
05/00	2,600	4,800
08/00	2,200	3,200 J
11/00	2,000	710
10/01	3,000	3,200
04/05	1,800	2,200
02/06	56	110
09/06	25	10 U
03/07	5 U	38
09/07	5 U	10 U
06/08	5 U	10 U
02/09	5.6	81
12/09	5 U	79
08/10	5.3	110
06/11	14	280
03/12	11	170
11/12	5 U	42
09/13	25	360
05/14	5 U	12
03/15	5 U	10 U
12/15	5 U	17
09/16	5 U	15
06/17	NS	NS
03/18	NS	NS

LEGEND

- MIDDLE INTERMEDIATE SAND UNIT WELLS
- ABANDONED WELL
- PERMEOX PLUS OR EHC-O TREATMENT SECTOR
- FENTON'S REAGENT TREATMENT SECTOR
- 12 – REPRESENTS SECTOR IDENTIFICATION

NOTES:
1) ALL RESULTS ARE IN UG/L.
2) E - THE CONSTITUENT WAS DETECTED ABOVE THE CALIBRATION CURVE.
3) R - UNUSABLE RESULT.
4) U - THE CONSTITUENT WAS NOT DETECTED AT THE REPORTING DETECTION LIMIT.
5) UJ - THE CONSTITUENT WAS NOT DETECTED AND THE REPORTED QUANTITATION LIMIT IS APPROXIMATE.
6) J - THE CONSTITUENT WAS DETECTED BUT THE RESULT IS APPROXIMATE BASED ON DATA VALIDATION.
7) NS - NOT SAMPLED.
8) WELL PM-01C WAS NOT SAMPLED IN 12/09 DUE TO SECURITY CONSTRAINTS AND BM-06C WAS NOT SAMPLED (NS) IN 2/06 DUE TO CONSTRUCTION ACTIVITIES.
9) BASED ON THE MARCH 2015 GROUNDWATER MONITORING REPORT, BM-07C AND CM-11D WERE ELIMINATED FROM GROUNDWATER SAMPLING.
10) BASED ON THE SEPTEMBER 2016 GROUNDWATER MONITORING REPORT, LM-09B WAS ELIMINATED FROM GROUNDWATER SAMPLING

BM-10C

DATE	BENZENE	NAPHTHALENE
10/01	14,000	1,800
04/05	20,000	2,200
02/06	5,900	160
09/06	46	130 E
03/07	5.8	10 U
09/07	5 U	10 U
06/08	5 U	10 U
03/09	5 U	10 U
12/09	5 U	10 U
08/10	NS	NS
06/11	NS	NS
03/12	9.1	10 U
09/13	3,700	390
05/14	7,700	830
03/15	6,510	996
12/15	9,890	1,220
09/16	7,370	385
06/17	155	10 U
03/18	5,230	411
12/18	10,300	988

MM-14C

DATE	BENZENE	NAPHTHALENE
10/01	5,400	6,700
04/05	18	38
02/06	6	24
09/06	16	10 U
03/07	5	27
09/07	6	38
06/08	48	30
02/09	5 U	10 U
12/09	7	10 U
08/10	82	10 U
06/11	130	10 U
03/12	98	10 U
11/12	300	10 U
09/13	46	10 U
05/14	8	10 U
03/15	5 U	10 U
12/15	5 U	10 U
09/16	5 U	10 U
06/17	9	10 U
03/18	5 U	10 U
12/18	5 U	10 U

MM-02D

DATE	BENZENE	NAPHTHALENE
01/94	1,800	3,400
12/98	19,000	10 U
10/01	15,000	3,500
04/05	16,000	2,900
02/06	26,000	2,600
09/06	1,500	10 U
03/07	5 U	10 U
09/07	17,000	4,200
06/08	19,000	4,100
03/09	22,000	5,500
12/09	11,000	3,200
08/10	18,000 J	3,200
06/11	29,000 J	4,100
03/12	13,000	2,300
12/12	16,000	4,900
09/13	31,000	2,900
05/14	27,000	3,900
03/15	26,000	2,540
12/15	21,400	3,390
09/16	23,400	4,570
06/17	17,300	5,060
03/18	28,000	5,060
12/18	30,100	5,520

LM-08C

DATE	BENZENE	NAPHTHALENE
11/00	5 U	10 UJ
10/01	25 U	33
04/05	5 U	10 U
02/06	5 U	10 U
03/07	5 U	10 U
02/09	5 U	10 U
12/09	5 U	10 U
08/10	5 U	10 U
06/11	5 U	10 U
03/12	5 U	10 U
11/12	5 U	10 U
09/13	5 U	10 U
05/14	5 U	10 U
03/15	5 U	10 U
12/15	5 U	10 U
09/16	5 U	10 U
06/17	5 U	10 U
03/18	5 U	10 U
12/18	5 U	10 U

CM-11D

DATE	BENZENE	NAPHTHALENE
05/00	9,400	32
08/00	9,900	43
11/00	12,000	10 U
10/01	5,600	69
04/05	48	10 U
02/06	41	10 U
09/06	380	10 U
03/07	93	10 U
09/07	2,700	10 U
06/08	19	10 U
02/09	5	10 U
12/09	7	10 U
08/10	9.2	10 U
06/11	5 U	10 U
03/12	5.4	10 U
12/12	5 U	10 U
09/13	5 U	10 U
05/14	5 U	10 U
03/15	5 U	10 U
12/15	NS	NS
06/17	NS	NS
03/18	NS	NS

MM-12B

DATE	BENZENE	NAPHTHALENE
11/00	1,800	10 U
10/01	750	150
04/05	630	330 R
02/06	620	310
09/06	600	310
03/07	360	440
09/07	500	420
06/08	840	340
03/09	680	340
12/09	780	39
08/10	530	25
06/11	200	33
03/12	70	14
11/12	120	13
09/13	490	36
05/14	500	23
03/15	491	11
12/15	392	10 U
09/16	339	10 U
06/17	447	10 U
03/18	507	10 U
12/18	180	10 U

NM-06D

DATE	BENZENE	NAPHTHALENE
11/00	5 U	10 U
10/01	5 U	10 U
04/05	5 U	10 U
02/06	5 U	10 U
03/07	5 U	10 U
02/09	5 U	10 U
12/09	5 U	10 U
08/10	5 U	10 U
06/11	5 U	10 U
03/12	5 U	10 U
11/12	5 U	10 U
09/13	5 U	10 U
05/14	5 U	10 U
03/15	5 U	10 U
12/15	5 U	10 U
09/16	5 U	10 U
06/17	5 U	10 U
03/18	5 U	10 U
12/18	5 U	10 U

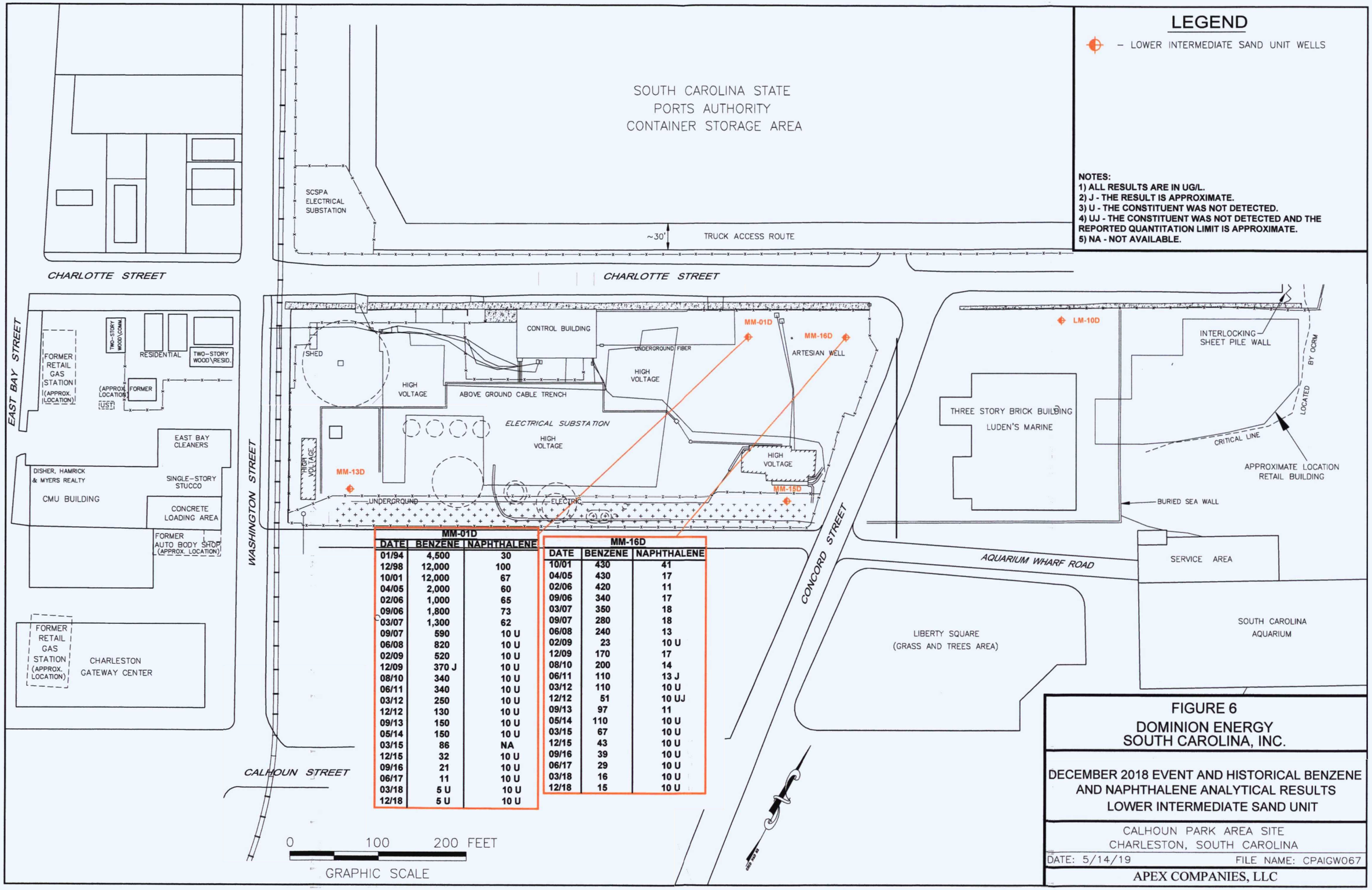
FIGURE 5
DOMINION ENERGY
SOUTH CAROLINA, INC.

DECEMBER 2018 EVENT AND HISTORICAL BENZENE AND NAPHTHALENE ANALYTICAL RESULTS MIDDLE INTERMEDIATE SAND UNIT

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 5/14/19 FILE NAME: CPAIGW066

APEX COMPANIES, LLC



MM-01D

DATE	BENZENE	NAPHTHALENE
01/94	4,500	30
12/98	12,000	100
10/01	12,000	67
04/05	2,000	60
02/06	1,000	65
09/06	1,800	73
03/07	1,300	62
09/07	590	10 U
06/08	820	10 U
02/09	520	10 U
12/09	370 J	10 U
08/10	340	10 U
06/11	340	10 U
03/12	250	10 U
12/12	130	10 U
09/13	150	10 U
05/14	150	10 U
03/15	86	NA
12/15	32	10 U
09/16	21	10 U
06/17	11	10 U
03/18	5 U	10 U
12/18	5 U	10 U

MM-16D

DATE	BENZENE	NAPHTHALENE
10/01	430	41
04/05	430	17
02/06	420	11
09/06	340	17
03/07	350	18
09/07	280	18
06/08	240	13
02/09	23	10 U
12/09	170	17
08/10	200	14
06/11	110	13 J
03/12	110	10 U
12/12	51	10 UJ
09/13	97	11
05/14	110	10 U
03/15	67	10 U
12/15	43	10 U
09/16	39	10 U
06/17	29	10 U
03/18	16	10 U
12/18	15	10 U

FIGURE 6
DOMINION ENERGY
SOUTH CAROLINA, INC.

DECEMBER 2018 EVENT AND HISTORICAL BENZENE AND NAPHTHALENE ANALYTICAL RESULTS
LOWER INTERMEDIATE SAND UNIT

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 5/14/19 FILE NAME: CPAIGW067

APEX COMPANIES, LLC

APPENDIX A

SUMMARY OF INTERMEDIATE GROUNDWATER PURGING DATA – DECEMBER 2018 EVENT

APPENDIX A

SUMMARY OF INTERMEDIATE GROUNDWATER PURGING DATA - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well ID: BM-03D | **IDTW:** 2.71 feet | **Purge Begin:** 8:53 | **Sample Date:** 12/13/2018
Total Depth: 32.57 feet toc | **Set Intake:** 28.50 feet | **Purge End:** 9:30 | **Sample Time:** 9:35

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	9:00	3.82	7.20	1,399	22.2	7.74	-153	6	Clear
0.25	9:03	3.50	7.03	1,379	23.0	3.43	-172	4	Clear
0.35	9:06	3.40	6.95	1,392	23.3	1.87	-187	4	Clear
0.45	9:09	3.35	6.90	1,403	23.5	1.52	-198	3	Clear
0.55	9:12	3.35	6.89	1,409	23.5	1.42	-203	3	Clear
0.65	9:15	3.35	6.88	1,417	23.7	1.36	-206	3	Clear
0.75	9:18	3.35	6.88	1,425	23.7	1.30	-210	3	Clear
0.85	9:21	3.35	6.87	1,430	23.7	1.25	-212	3	Clear
0.95	9:24	3.35	6.87	1,438	23.8	1.20	-215	2	Clear
1.05	9:27	3.35	6.87	1,443	23.7	1.23	-217	2	Clear
1.15	9:30	3.35	6.86	1,447	23.7	1.22	-218	2	Clear

Well ID: BM-04D | **IDTW:** 2.48 feet | **Purge Begin:** 7:48 | **Sample Date:** 12/13/2018
Total Depth: 34.21 feet toc | **Set Intake:** 29.00 feet | **Purge End:** 8:25 | **Sample Time:** 8:30

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	7:58	5.50	7.21	948	19.4	1.82	-73	4	Clear
0.25	8:01	5.60	7.28	793	19.9	1.35	-107	3	Clear
0.35	8:04	5.72	7.31	662	20.0	1.09	-118	4	Clear
0.45	8:07	5.70	7.31	631	19.8	1.01	-120	3	Clear
0.55	8:10	5.60	7.31	607	19.9	0.93	-121	3	Clear
0.65	8:13	5.50	7.30	586	19.9	0.88	-115	3	Clear
0.75	8:16	5.54	7.31	577	20.0	0.84	-120	2	Clear
0.85	8:19	5.49	7.31	577	20.0	0.83	-120	3	Clear
0.95	8:22	5.46	7.31	581	19.9	0.83	-120	3	Clear
1.05	8:25	5.49	7.32	590	20.0	0.83	-122	3	Clear

Well ID: MM-13C | **IDTW:** 5.32 feet | **Purge Begin:** 14:49 | **Sample Date:** 12/12/2018
Total Depth: 38.80 feet toc | **Set Intake:** 35.50 feet | **Purge End:** 15:27 | **Sample Time:** 15:30

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	14:57	7.50	8.22	2,720	21.7	1.40	-135	13	Clear
0.25	15:00	7.30	7.76	2,746	22.0	0.80	-224	3	Clear
0.35	15:03	7.10	7.72	2,742	21.7	0.42	-254	2	Clear
0.45	15:06	6.93	7.68	2,730	21.8	0.28	-274	2	Clear
0.55	15:09	6.90	7.65	2,728	22.3	0.26	-280	2	Clear
0.65	15:12	6.90	7.60	2,757	22.0	0.25	-287	2	Clear
0.75	15:15	6.88	7.57	2,768	21.4	0.26	-286	2	Clear
0.85	15:18	6.85	7.52	2,760	21.7	0.24	-282	2	Clear
0.95	15:21	6.85	7.48	2,766	22.2	0.25	-283	1	Clear
1.05	15:24	6.85	7.44	2,779	21.5	0.29	-281	2	Clear
1.15	15:27	6.85	7.41	2,786	21.5	0.25	-277	2	Clear

Well ID: PAMW-02 | **IDTW:** 3.57 feet | **Purge Begin:** 13:25 | **Sample Date:** 12/12/2018
Total Depth: 19.34 feet toc | **Set Intake:** 16.00 feet | **Purge End:** 14:12 | **Sample Time:** 14:15

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	13:33	4.72	6.67	3,511	24.9	3.32	-163	108	Cloudy
0.25	13:36	4.66	6.69	3,533	25.0	2.44	-163	126	Cloudy
0.35	13:39	4.52	6.73	3,563	25.0	2.35	-163	120	Cloudy
0.45	13:42	4.34	6.73	3,559	24.7	1.88	-161	90	Cloudy
0.55	13:45	4.09	6.76	3,534	24.5	2.38	-160	82	Cloudy
0.65	13:48	3.95	6.82	3,533	24.8	2.98	-159	70	Slightly Cloudy
0.75	13:51	3.95	6.81	3,539	24.4	2.79	-156	64	Slightly Cloudy
0.85	13:54	3.95	6.80	3,539	24.2	2.80	-154	62	Slightly Cloudy
0.95	13:57	3.90	6.85	3,519	24.5	3.25	-152	53	Slightly Cloudy
1.05	14:00	3.90	6.90	3,532	24.6	3.78	-152	57	Slightly Cloudy
1.15	14:03	3.90	6.95	3,538	24.3	3.75	-150	54	Cloudy
1.25	14:06	3.90	6.95	3,514	24.4	4.02	-145	59	Slightly Cloudy
1.35	14:09	3.90	6.94	3,513	24.2	3.86	-143	55	Slightly Cloudy
1.45	14:12	3.90	6.95	3,544	24.7	3.66	-147	34	Slightly Cloudy

APPENDIX A

SUMMARY OF INTERMEDIATE GROUNDWATER PURGING DATA - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well ID: BM-10C | **IDTW:** 3.40 feet | **Purge Begin:** 9:01 | **Sample Date:** 12/13/2018
Total Depth: 48.80 feet toc | **Set Intake:** 44.00 feet | **Purge End:** 9:37 | **Sample Time:** 9:40

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	9:10	3.50	6.49	1,129	20.8	3.39	-205	8	Clear
0.25	9:13	3.47	6.47	1,154	21.0	2.08	-226	7	Clear
0.35	9:16	3.47	6.46	1,172	21.0	1.61	-236	6	Clear
0.45	9:19	3.48	6.45	1,193	21.0	1.31	-243	7	Clear
0.55	9:22	3.48	6.43	1,211	21.0	1.12	-249	7	Clear
0.65	9:25	3.47	6.42	1,229	21.1	0.96	-253	9	Clear
0.75	9:28	3.48	6.42	1,242	21.1	0.87	-254	9	Clear
0.85	9:31	3.49	6.41	1,253	21.2	0.81	-254	10	Clear
0.95	9:34	3.49	6.41	1,261	21.2	0.76	-253	10	Clear
1.05	9:37	3.49	6.40	1,266	21.2	0.72	-252	11	Clear

Well ID: LM-08C | **IDTW:** 5.82 feet | **Purge Begin:** 13:06 | **Sample Date:** 12/13/2018
Total Depth: 50.13 feet toc | **Set Intake:** 39.50 feet | **Purge End:** 13:40 | **Sample Time:** 13:45

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	13:13	6.45	6.80	29,518	21.2	2.17	-195	2	Clear
0.25	13:16	6.09	6.80	29,634	21.3	1.26	-203	1	Clear
0.35	13:19	6.09	6.80	29,700	21.3	0.89	-210	1	Clear
0.45	13:22	6.09	6.80	29,709	21.3	0.79	-214	1	Clear
0.55	13:25	6.10	6.79	29,725	21.2	0.75	-216	1	Clear
0.65	13:28	6.09	6.80	29,710	21.3	0.70	-217	1	Clear
0.75	13:31	6.10	6.80	29,734	21.3	0.67	-209	1	Clear
0.85	13:34	6.10	6.80	29,749	21.3	0.64	-211	1	Clear
0.95	13:37	6.10	6.81	29,824	21.2	0.64	-216	1	Clear
1.05	13:40	6.10	6.80	29,929	21.1	0.64	-223	1	Clear

Well ID: MM-02D | **IDTW:** 6.13 feet | **Purge Begin:** 7:50 | **Sample Date:** 12/13/2018
Total Depth: 58.08 feet toc | **Set Intake:** 53.50 feet | **Purge End:** 8:32 | **Sample Time:** 8:35

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	8:02	6.22	7.75	871	19.3	2.43	-107	14	Clear
0.25	8:05	6.22	7.26	893	19.6	1.64	-168	8	Clear
0.35	8:08	6.21	7.23	919	19.6	1.53	-178	6	Clear
0.45	8:11	6.20	7.21	939	19.4	1.52	-190	5	Clear
0.55	8:14	6.20	7.20	956	19.5	1.53	-198	4	Clear
0.65	8:17	6.20	7.20	976	19.6	1.46	-206	3	Clear
0.75	8:20	6.20	7.19	991	19.6	1.38	-211	3	Clear
0.85	8:23	6.20	7.19	1,001	19.6	1.28	-218	3	Clear
0.95	8:26	6.20	7.19	1,009	19.6	1.21	-221	3	Clear
1.05	8:29	6.20	7.19	1,014	19.6	1.20	-225	2	Clear
1.15	8:32	6.20	7.19	1,017	19.5	1.19	-226	2	Clear

Well ID: MM-12B | **IDTW:** 7.06 feet | **Purge Begin:** 14:55 | **Sample Date:** 12/12/2018
Total Depth: 62.60 feet toc | **Set Intake:** 56.50 feet | **Purge End:** 15:30 | **Sample Time:** 15:35

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	15:06	10.00	6.55	28,037	20.5	2.43	-289	5..5	Clear
0.25	15:09	10.17	6.58	28,220	20.5	1.38	-291	7	Clear
0.35	15:12	10.11	6.60	28,262	20.3	0.94	-298	8	Clear
0.45	15:15	9.96	6.60	28,257	20.2	0.74	-300	11	Clear
0.55	15:18	9.91	6.60	28,240	20.2	0.64	-304	15	Clear
0.65	15:21	9.91	6.60	28,224	20.1	0.59	-307	16	Clear
0.75	15:24	9.91	6.60	28,237	20.1	0.55	-311	17	Clear
0.85	15:27	9.91	6.60	28,227	20.1	0.54	-313	16	Clear
0.95	15:30	9.92	6.60	28,219	20.1	0.52	-314	16	Clear
1.05	15:33	9.93	6.60	28,203	20.1	0.51	-316	17	Clear

APPENDIX A

SUMMARY OF INTERMEDIATE GROUNDWATER PURGING DATA - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well ID: MM-14C | **IDTW:** 7.65 feet | **Purge Begin:** 16:01 | **Sample Date:** 12/12/2018
Total Depth: 57.00 feet toc | **Set Intake:** 54.50 feet | **Purge End:** 16:41 | **Sample Time:** 16:45

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	16:14	10.94	6.89	38,640	20.4	1.63	-231	8	Cloudy
0.25	16:17	11.00	6.94	39,819	20.4	1.83	-238	4	Clear
0.35	16:20	11.09	6.94	39,809	20.5	1.13	-246	2	Clear
0.45	16:23	11.15	6.94	39,868	20.4	0.75	-254	2	Clear
0.55	16:26	11.19	6.93	69,848	20.4	0.59	-264	2	Clear
0.65	16:29	11.22	6.93	39,800	20.4	0.52	-266	2	Clear
0.75	16:32	11.29	6.93	39,774	20.4	0.46	-270	2	Clear
0.85	16:35	11.33	6.93	39,741	20.4	0.42	-272	2	Clear
0.95	16:38	11.33	6.93	39,726	20.4	0.42	-272	2	Clear
1.05	16:41	11.30	6.93	39,720	20.3	0.41	-275	2	Clear

Well ID: NM-06D | **IDTW:** 5.32 feet | **Purge Begin:** 14:04 | **Sample Date:** 12/12/2018
Total Depth: 45.55 feet toc | **Set Intake:** 36.00 feet | **Purge End:** 14:41 | **Sample Time:** 14:45

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	14:14	7.83	6.95	28,646	21.2	2.96	-321	2	Clear
0.25	14:17	7.40	6.95	28,772	21.3	0.94	-308	2	Clear
0.35	14:20	7.22	6.95	28,681	21.3	0.79	-309	2	Clear
0.45	14:23	7.08	6.95	28,743	21.2	0.70	-311	1	Clear
0.55	14:26	6.96	6.95	28,869	21.2	0.64	-312	1	Clear
0.65	14:29	6.89	6.95	28,987	21.2	0.59	-313	1	Clear
0.75	14:32	6.87	6.95	28,972	21.2	0.56	-314	1	Clear
0.85	14:35	6.84	6.95	29,022	21.3	0.53	-315	1	Clear
0.95	14:38	6.84	6.96	29,145	21.2	0.51	-314	1	Clear
1.05	14:41	6.84	6.96	29,108	21.2	0.51	-314	1	Clear

Well ID: PM-01C | **IDTW:** 3.74 feet | **Purge Begin:** 13:04 | **Sample Date:** 12/12/2018
Total Depth: 55.32 feet toc | **Set Intake:** 50.75 feet | **Purge End:** 14:08 | **Sample Time:** 14:10

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	13:41	5.50	6.87	5,337	23.0	2.53	-211	13	Clear
0.25	13:44	5.18	6.89	5,272	23.3	1.92	-202	13	Clear
0.35	13:47	5.08	6.90	5,172	23.3	1.79	-238	14	Clear
0.45	13:50	5.04	6.90	5,081	23.3	1.72	-245	14	Clear
0.55	13:53	5.01	6.91	5,017	23.4	1.64	-249	14	Clear
0.65	13:56	5.00	6.91	4,939	23.3	1.62	-255	15	Clear
0.75	13:59	5.00	6.91	4,845	23.3	1.59	-255	14	Clear
0.85	14:02	5.00	6.91	4,816	23.4	1.57	-257	14	Clear
0.95	14:05	5.00	6.91	4,798	23.4	1.64	-255	14	Clear
1.05	14:08	5.00	6.92	4,779	23.3	1.63	-263	14	Clear

Well ID: MM-01D | **IDTW:** 3.32 feet | **Purge Begin:** 10:34 | **Sample Date:** 12/13/2018
Total Depth: 71.94 feet toc | **Set Intake:** 72.25 feet | **Purge End:** 11:30 | **Sample Time:** 11:35

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	11:03	3.42	6.90	4,157	21.1	1.91	-107	2	Clear
0.25	11:06	3.41	6.91	4,186	21.0	1.26	-125	1	Clear
0.35	11:09	3.41	6.90	4,208	21.0	1.09	-136	1	Clear
0.45	11:12	3.41	6.90	4,224	20.9	1.02	-140	1	Clear
0.55	11:15	3.41	6.90	4,239	20.9	0.97	-144	1	Clear
0.65	11:18	3.41	6.89	4,251	20.8	0.92	-148	1	Clear
0.75	11:21	3.41	6.89	4,269	20.7	0.87	-150	1	Clear
0.85	11:24	3.41	6.89	4,281	20.7	0.84	-152	1	Clear
0.95	11:27	3.41	6.89	4,284	20.7	0.84	-152	1	Clear
1.05	11:30	3.41	6.89	4,298	20.7	0.81	-154	1	Clear

Note: Collected MS/MSD at 11:35.

APPENDIX A

SUMMARY OF INTERMEDIATE GROUNDWATER PURGING DATA - DECEMBER 2018 EVENT
INTERMEDIATE GROUNDWATER MONITORING PROGRAM

DESC Calhoun Park Area Site
Charleston, South Carolina

Well ID:	**MM-16D**		**IDTW:**	4.38	feet	**Purge Begin:**	10:20	**Sample Date:**	12/13/2018
Total Depth:	80.14 feet toc		**Set Intake:**	73.00	feet	**Purge End:**	11:08	**Sample Time:**	11:10

Purge Volume (Gallons)	Time	Water Level (feet toc)	pH (S.U.)	Conductivity (µS/cm)	Temperature (°C)	DO (mg/L)	Redox (mV)	Turbidity (N.T.U.)	Color
0.15	10:38	4.55	7.25	4,591	20.1	1.73	-241	2	Clear
0.25	10:41	4.50	7.20	4,611	20.3	1.27	-248	2	Clear
0.35	10:44	4.50	7.17	4,617	20.3	1.45	-253	1	Clear
0.45	10:47	4.50	7.16	4,617	20.3	1.39	-257	1	Clear
0.55	10:50	4.50	7.15	4,617	20.4	1.15	-262	1	Clear
0.65	10:53	4.50	7.15	4,613	20.4	1.07	-264	1	Clear
0.75	10:56	4.50	7.14	4,608	20.3	1.02	-268	1	Clear
0.85	10:59	4.50	7.14	4,599	20.3	0.94	-272	1	Clear
0.95	11:02	4.50	7.14	4,593	20.3	0.89	-274	1	Clear
1.05	11:05	4.50	7.14	4,586	20.3	0.86	-275	1	Clear
1.15	11:08	4.50	7.14	4,585	20.3	0.85	-276	1	Clear

Note: Collected field duplicate FD121318 at 11:10.

APPENDIX B

LABORATORY ANALYTICAL REPORT FROM SGS NORTH AMERICA INC.

SGS

Scott, LA

12/27/18

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Apex

Intermediate GWS- SCE&G Calhoun Park Area Site

87500612.02

SGS Job Number: LA50650

Sampling Dates: 12/12/18 - 12/13/18

Report to:

Apex
1600 COMMERCE CIRCLE
TRAFFORD, PA 15085
mtrmain@apexcos.com; kjones@apexcos.com

ATTN: Kayla Jones

Total number of pages in report: 75

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-15-7), WV(257)

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Test results relate only to samples analyzed.

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Sample Summary

Apex

Job No: LA50650

Intermediate GWS- SCE&G Calhoun Park Area Site
Project No: 87500612.02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA50650-1	12/13/18	09:35	KJ/GO	12/14/18	AQ	Ground Water	BM-03D
LA50650-2	12/13/18	08:30	KJ/GO	12/14/18	AQ	Ground Water	BM-04D
LA50650-3	12/12/18	15:30	KJ/GO	12/14/18	AQ	Ground Water	MM-13C
LA50650-4	12/12/18	14:15	KJ/GO	12/14/18	AQ	Ground Water	PAMW-02
LA50650-5	12/13/18	09:40	KJ/GO	12/14/18	AQ	Ground Water	BM-10C
LA50650-6	12/13/18	13:45	KJ/GO	12/14/18	AQ	Ground Water	LM-08C
LA50650-7	12/13/18	08:35	KJ/GO	12/14/18	AQ	Ground Water	MM-02D
LA50650-8	12/12/18	15:35	KJ/GO	12/14/18	AQ	Ground Water	MM-12B
LA50650-9	12/12/18	16:45	KJ/GO	12/14/18	AQ	Ground Water	MM-14C
LA50650-10	12/13/18	14:45	KJ/GO	12/14/18	AQ	Ground Water	NM-06D
LA50650-11	12/12/18	14:10	KJ/GO	12/14/18	AQ	Ground Water	PM-01C
LA50650-12	12/13/18	11:35	KJ/GO	12/14/18	AQ	Ground Water	MM-01D
LA50650-12D	12/13/18	11:35	KJ/GO	12/14/18	AQ	Water Dup/MSD	MM-01D

Sample Summary
(continued)

Apex

Job No: LA50650

Intermediate GWS- SCE&G Calhoun Park Area Site
Project No: 87500612.02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA50650-12S	12/13/18	11:35	KJ/GO	12/14/18	AQ	Water Matrix Spike	MM-01D
LA50650-13	12/13/18	11:10	KJ/GO	12/14/18	AQ	Ground Water	MM-16D
LA50650-14	12/12/18	00:00	KJ/GO	12/14/18	AQ	Trip Blank Water	TB121218
LA50650-15	12/13/18	13:15	KJ/GO	12/14/18	AQ	Equipment Blank	EB121318
LA50650-16	12/13/18	11:10	KJ/GO	12/14/18	AQ	Ground Water	FD121318

2

Summary of Hits

Job Number: LA50650
Account: Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site
Collected: 12/12/18 thru 12/13/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA50650-1	BM-03D					
Benzene		24500	1000	45	ug/l	SW846 8260B
Toluene		110 J	1000	45	ug/l	SW846 8260B
Ethylbenzene		3960	1000	45	ug/l	SW846 8260B
Xylene (total)		610 J	1000	78	ug/l	SW846 8260B
Carbazole		9.0 J	9.9	0.054	ug/l	SW846 8270D
Naphthalene		14300	2000	15	ug/l	SW846 8270D
LA50650-2	BM-04D					
Benzene		7130	250	11	ug/l	SW846 8260B
Toluene		20.1 J	250	11	ug/l	SW846 8260B
Ethylbenzene		644	250	11	ug/l	SW846 8260B
Xylene (total)		194 J	250	20	ug/l	SW846 8260B
2,4-Dimethylphenol		0.59 J	9.7	0.060	ug/l	SW846 8270D
Benzo(a)pyrene		0.42 J	9.7	0.083	ug/l	SW846 8270D
Carbazole		1.5 J	9.7	0.053	ug/l	SW846 8270D
Naphthalene		4210	480	3.7	ug/l	SW846 8270D
LA50650-3	MM-13C					
Benzene		29000	1000	45	ug/l	SW846 8260B
Toluene		234 J	1000	45	ug/l	SW846 8260B
Ethylbenzene		3300	1000	45	ug/l	SW846 8260B
Xylene (total)		924 J	1000	78	ug/l	SW846 8260B
2,4-Dimethylphenol		5.1 J	9.7	0.060	ug/l	SW846 8270D
Carbazole		9.1 J	9.7	0.053	ug/l	SW846 8270D
Naphthalene		4570	480	3.7	ug/l	SW846 8270D
LA50650-4	PAMW-02					
Benzene		174	10	0.45	ug/l	SW846 8260B
Toluene		0.79 J	5.0	0.23	ug/l	SW846 8260B
Ethylbenzene		2.0 J	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		1.4 J	5.0	0.39	ug/l	SW846 8260B
Naphthalene		0.40 J	9.7	0.075	ug/l	SW846 8270D
LA50650-5	BM-10C					
Benzene		10300	500	23	ug/l	SW846 8260B
Toluene		55.2 J	500	23	ug/l	SW846 8260B
Ethylbenzene		782	500	23	ug/l	SW846 8260B
Xylene (total)		456 J	500	39	ug/l	SW846 8260B
2,4-Dimethylphenol		2.6 J	9.7	0.060	ug/l	SW846 8270D

2

Summary of Hits

Job Number: LA50650
Account: Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site
Collected: 12/12/18 thru 12/13/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Carbazole		0.20 J	9.7	0.053	ug/l	SW846 8270D
Naphthalene		988	97	0.75	ug/l	SW846 8270D
LA50650-6	LM-08C					
Benzene		3.3 J	5.0	0.23	ug/l	SW846 8260B
Ethylbenzene		0.26 J	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		0.61 J	5.0	0.39	ug/l	SW846 8260B
Naphthalene		0.13 J	9.7	0.075	ug/l	SW846 8270D
LA50650-7	MM-02D					
Benzene		30100	1000	45	ug/l	SW846 8260B
Ethylbenzene		75.9 J	1000	45	ug/l	SW846 8260B
Xylene (total)		140 J	1000	78	ug/l	SW846 8260B
Carbazole		1.8 J	9.6	0.053	ug/l	SW846 8270D
Naphthalene		5520	480	3.7	ug/l	SW846 8270D
LA50650-8	MM-12B					
Benzene		180	5.0	0.23	ug/l	SW846 8260B
Toluene		0.59 J	5.0	0.23	ug/l	SW846 8260B
Ethylbenzene		59.5	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		7.0	5.0	0.39	ug/l	SW846 8260B
Carbazole		1.3 J	9.7	0.053	ug/l	SW846 8270D
Naphthalene		2.0 J	9.7	0.075	ug/l	SW846 8270D
LA50650-9	MM-14C					
Benzene		3.3 J	5.0	0.23	ug/l	SW846 8260B
Ethylbenzene		0.30 J	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		0.76 J	5.0	0.39	ug/l	SW846 8260B
Naphthalene		0.32 J	9.7	0.075	ug/l	SW846 8270D
LA50650-10	NM-06D					
Naphthalene		0.11 J	9.7	0.075	ug/l	SW846 8270D
LA50650-11	PM-01C					
Benzene		557	50	2.3	ug/l	SW846 8260B
Toluene		0.44 J	5.0	0.23	ug/l	SW846 8260B
Ethylbenzene		2.6 J	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		9.6	5.0	0.39	ug/l	SW846 8260B
Carbazole		0.46 J	9.7	0.053	ug/l	SW846 8270D

2

Summary of Hits

Job Number: LA50650
Account: Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site
Collected: 12/12/18 thru 12/13/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Naphthalene		8.1 J	9.7	0.075	ug/l	SW846 8270D
LA50650-12	MM-01D					
Benzene		0.49 J	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		1.0 J	5.0	0.39	ug/l	SW846 8260B
Naphthalene		0.24 J	9.7	0.075	ug/l	SW846 8270D
LA50650-13	MM-16D					
Benzene		15.2	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		10.6	5.0	0.39	ug/l	SW846 8260B
2,4-Dimethylphenol		31.7	10	0.063	ug/l	SW846 8270D
Carbazole		1.3 J	10	0.056	ug/l	SW846 8270D
Naphthalene		0.66 J	10	0.079	ug/l	SW846 8270D
LA50650-14	TB121218					
No hits reported in this sample.						
LA50650-15	EB121318					
Naphthalene		0.17 J	10	0.077	ug/l	SW846 8270D
LA50650-16	FD121318					
Benzene		14.5	5.0	0.23	ug/l	SW846 8260B
Xylene (total)		10.6	5.0	0.39	ug/l	SW846 8260B
2,4-Dimethylphenol		30.0	9.8	0.060	ug/l	SW846 8270D
Carbazole		1.3 J	9.8	0.054	ug/l	SW846 8270D
Naphthalene		0.68 J	9.8	0.076	ug/l	SW846 8270D

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

3.1

Client Sample ID:	BM-03D		
Lab Sample ID:	LA50650-1	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I042675.D	200	12/21/18 14:30	LS	n/a	n/a	V1I2011
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	24500	1000	45	ug/l	
108-88-3	Toluene	110	1000	45	ug/l	J
100-41-4	Ethylbenzene	3960	1000	45	ug/l	
1330-20-7	Xylene (total)	610	1000	78	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	103%		89-111%

U = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.1 (25)

Client Sample ID:	BM-03D		
Lab Sample ID:	LA50650-1	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046241.D	1	12/19/18 19:16	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046287.D	20	12/20/18 13:52	SV	12/18/18 10:55	OP13076	EF1703
Run #3	F0046348.D	200	12/21/18 12:20	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2	1010 ml	1.0 ml
Run #3	1010 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol [a]	1.2 U [b]	9.9	1.2	ug/l	
50-32-8	Benzo(a)pyrene	0.085 U	9.9	0.085	ug/l	
86-74-8	Carbazole	9.0	9.9	0.054	ug/l	J
91-20-3	Naphthalene	14300 [c]	2000	15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	58%	54%	0% [d]	19-84%
4165-62-2	Phenol-d5	41%	35%	0% [d]	10-70%
118-79-6	2,4,6-Tribromophenol	125%	95%	0% [d]	46-145%
4165-60-0	Nitrobenzene-d5	193% [e]	114%	0% [d]	36-143%
321-60-8	2-Fluorobiphenyl	97%	82%	0% [d]	48-116%
1718-51-0	Terphenyl-d14	120%	96%	0% [d]	45-133%

(a) RL manually adusted to report result at dilution. The calibration and MDL supports this adjustment.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Outside control limits due to dilution.
(e) Outside control limits due to matrix interference.

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.2

3

Client Sample ID:	BM-04D		
Lab Sample ID:	LA50650-2	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I042679.D	50	12/21/18 15:26	LS	n/a	n/a	V1I2011
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7130	250	11	ug/l	
108-88-3	Toluene	20.1	250	11	ug/l	J
100-41-4	Ethylbenzene	644	250	11	ug/l	
1330-20-7	Xylene (total)	194	250	20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	102%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.2

Client Sample ID:	BM-04D		
Lab Sample ID:	LA50650-2	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046242.D	1	12/19/18 19:37	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046343.D	50	12/21/18 09:52	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.59	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene	0.42	9.7	0.083	ug/l	J
86-74-8	Carbazole	1.5	9.7	0.053	ug/l	J
91-20-3	Naphthalene	4210 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%	67%	19-84%
4165-62-2	Phenol-d5	40%	37%	10-70%
118-79-6	2,4,6-Tribromophenol	122%	114%	46-145%
4165-60-0	Nitrobenzene-d5	146% [b]	135%	36-143%
321-60-8	2-Fluorobiphenyl	100%	106%	48-116%
1718-51-0	Terphenyl-d14	118%	119%	45-133%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.3

Client Sample ID:	MM-13C		
Lab Sample ID:	LA50650-3	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I042677.D	200	12/21/18 14:58	LS	n/a	n/a	V1I2011
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	29000	1000	45	ug/l	
108-88-3	Toluene	234	1000	45	ug/l	J
100-41-4	Ethylbenzene	3300	1000	45	ug/l	
1330-20-7	Xylene (total)	924	1000	78	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	102%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.3

Client Sample ID:	MM-13C		
Lab Sample ID:	LA50650-3	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046243.D	1	12/19/18 19:58	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046344.D	50	12/21/18 10:14	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	5.1	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	9.1	9.7	0.053	ug/l	J
91-20-3	Naphthalene	4570 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%	62%	19-84%
4165-62-2	Phenol-d5	39%	44%	10-70%
118-79-6	2,4,6-Tribromophenol	121%	130%	46-145%
4165-60-0	Nitrobenzene-d5	130%	118%	36-143%
321-60-8	2-Fluorobiphenyl	97%	115%	48-116%
1718-51-0	Terphenyl-d14	118%	126%	45-133%

(a) Result is from Run# 2

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.4

Client Sample ID:	PAMW-02		
Lab Sample ID:	LA50650-4	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G095153.D	1	12/22/18 15:23	NN	n/a	n/a	V1G5155
Run #2	1I042687.D	2	12/21/18 17:18	LS	n/a	n/a	V1I2011

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	174 [a]	10	0.45	ug/l	
108-88-3	Toluene	0.79	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene	2.0	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)	1.4	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	97%	84-124%
2037-26-5	Toluene-D8	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	99%	103%	89-111%

(a) Result is from Run# 2

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.4

Client Sample ID:	PAMW-02		
Lab Sample ID:	LA50650-4	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046280.D	1	12/20/18 11:18	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.40	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		19-84%
4165-62-2	Phenol-d5	40%		10-70%
118-79-6	2,4,6-Tribromophenol	122%		46-145%
4165-60-0	Nitrobenzene-d5	109%		36-143%
321-60-8	2-Fluorobiphenyl	98%		48-116%
1718-51-0	Terphenyl-d14	116%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.5

Client Sample ID:	BM-10C		
Lab Sample ID:	LA50650-5	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G095090.D	100	12/21/18 23:11	LS	n/a	n/a	V2G5150
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	10300	500	23	ug/l	
108-88-3	Toluene	55.2	500	23	ug/l	J
100-41-4	Ethylbenzene	782	500	23	ug/l	
1330-20-7	Xylene (total)	456	500	39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.5

Client Sample ID:	BM-10C		
Lab Sample ID:	LA50650-5	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046245.D	1	12/19/18 20:42	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046345.D	10	12/21/18 10:35	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	2.6	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene	0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole	0.20	9.7	0.053	ug/l	J
91-20-3	Naphthalene	988 [a]	97	0.75	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%	55%	19-84%
4165-62-2	Phenol-d5	39%	41%	10-70%
118-79-6	2,4,6-Tribromophenol	119%	127%	46-145%
4165-60-0	Nitrobenzene-d5	110%	121%	36-143%
321-60-8	2-Fluorobiphenyl	97%	106%	48-116%
1718-51-0	Terphenyl-d14	115%	123%	45-133%

(a) Result is from Run# 2

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.6

Client Sample ID:	LM-08C		
Lab Sample ID:	LA50650-6	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094890.D	1	12/20/18 11:29	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.3	5.0	0.23	ug/l	J
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.26	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)	0.61	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.6

Client Sample ID:	LM-08C		
Lab Sample ID:	LA50650-6	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046281.D	1	12/20/18 11:40	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.13	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		19-84%
4165-62-2	Phenol-d5	42%		10-70%
118-79-6	2,4,6-Tribromophenol	124%		46-145%
4165-60-0	Nitrobenzene-d5	111%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	122%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.7

Client Sample ID:	MM-02D		
Lab Sample ID:	LA50650-7	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G094985.D	200	12/20/18 21:20	LS	n/a	n/a	V1G5145
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	30100	1000	45	ug/l	
108-88-3	Toluene	45 U	1000	45	ug/l	
100-41-4	Ethylbenzene	75.9	1000	45	ug/l	J
1330-20-7	Xylene (total)	140	1000	78	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.7

Client Sample ID:	MM-02D		
Lab Sample ID:	LA50650-7	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046247.D	1	12/19/18 21:25	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046346.D	50	12/21/18 10:57	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2	1040 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.059 U	9.6	0.059	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.6	0.083	ug/l	
86-74-8	Carbazole	1.8	9.6	0.053	ug/l	J
91-20-3	Naphthalene	5520 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%	65%	19-84%
4165-62-2	Phenol-d5	41%	40%	10-70%
118-79-6	2,4,6-Tribromophenol	126%	119%	46-145%
4165-60-0	Nitrobenzene-d5	166% [b]	142%	36-143%
321-60-8	2-Fluorobiphenyl	99%	103%	48-116%
1718-51-0	Terphenyl-d14	120%	115%	45-133%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.8

Client Sample ID:	MM-12B		
Lab Sample ID:	LA50650-8	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G095154.D	1	12/22/18 15:38	NN	n/a	n/a	V2G5155
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	180	5.0	0.23	ug/l	
108-88-3	Toluene	0.59	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene	59.5	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	7.0	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.8

Client Sample ID:	MM-12B		
Lab Sample ID:	LA50650-8	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046282.D	1	12/20/18 12:02	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	1.3	9.7	0.053	ug/l	J
91-20-3	Naphthalene	2.0	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61% [a]		19-84%
4165-62-2	Phenol-d5	43% [a]		10-70%
118-79-6	2,4,6-Tribromophenol	126% [a]		46-145%
4165-60-0	Nitrobenzene-d5	111% [a]		36-143%
321-60-8	2-Fluorobiphenyl	98% [a]		48-116%
1718-51-0	Terphenyl-d14	121% [a]		45-133%

(a) Recovery corrected for double spike.

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.9

Client Sample ID:	MM-14C		
Lab Sample ID:	LA50650-9	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094888.D	1	12/20/18 11:00	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.3	5.0	0.23	ug/l	J
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.30	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)	0.76	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.9

Client Sample ID:	MM-14C		
Lab Sample ID:	LA50650-9	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046284.D	1	12/20/18 12:45	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.32	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		19-84%
4165-62-2	Phenol-d5	44%		10-70%
118-79-6	2,4,6-Tribromophenol	125%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	97%		48-116%
1718-51-0	Terphenyl-d14	119%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.10

Client Sample ID:	NM-06D		
Lab Sample ID:	LA50650-10	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094886.D	1	12/20/18 10:30	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.23 U	5.0	0.23	ug/l	
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.10

Client Sample ID:	NM-06D		
Lab Sample ID:	LA50650-10	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046250.D	1	12/19/18 22:30	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.11	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		19-84%
4165-62-2	Phenol-d5	43%		10-70%
118-79-6	2,4,6-Tribromophenol	121%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	122%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PM-01C		
Lab Sample ID:	LA50650-11	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094884.D	1	12/20/18 10:00	LS	n/a	n/a	V2G5142
Run #2	1G094989.D	10	12/20/18 22:19	LS	n/a	n/a	V1G5145

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	557 [a]	50	2.3	ug/l	
108-88-3	Toluene	0.44	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene	2.6	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)	9.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	108%	84-124%
2037-26-5	Toluene-D8	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	99%	98%	89-111%

(a) Result is from Run# 2

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.11

Client Sample ID:	PM-01C		
Lab Sample ID:	LA50650-11	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046251.D	1	12/19/18 22:52	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole	0.46	9.7	0.053	ug/l	J
91-20-3	Naphthalene	8.1	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		19-84%
4165-62-2	Phenol-d5	43%		10-70%
118-79-6	2,4,6-Tribromophenol	123%		46-145%
4165-60-0	Nitrobenzene-d5	113%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	118%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.12

Client Sample ID:	MM-01D		
Lab Sample ID:	LA50650-12	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094882.D	1	12/20/18 09:31	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.49	5.0	0.23	ug/l	J
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	1.0	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.12

Client Sample ID:	MM-01D		
Lab Sample ID:	LA50650-12	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046252.D	1	12/19/18 23:14	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.060 U	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.24	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		19-84%
4165-62-2	Phenol-d5	38%		10-70%
118-79-6	2,4,6-Tribromophenol	124%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	98%		48-116%
1718-51-0	Terphenyl-d14	119%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.13

Client Sample ID:	MM-16D		
Lab Sample ID:	LA50650-13	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094880.D	1	12/20/18 09:01	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	15.2	5.0	0.23	ug/l	
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	10.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MM-16D		
Lab Sample ID:	LA50650-13	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046321.D	1	12/21/18 01:48	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	31.7	10	0.063	ug/l	
50-32-8	Benzo(a)pyrene	0.088 U	10	0.088	ug/l	
86-74-8	Carbazole	1.3	10	0.056	ug/l	J
91-20-3	Naphthalene	0.66	10	0.079	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		19-84%
4165-62-2	Phenol-d5	30%		10-70%
118-79-6	2,4,6-Tribromophenol	102%		46-145%
4165-60-0	Nitrobenzene-d5	87%		36-143%
321-60-8	2-Fluorobiphenyl	76%		48-116%
1718-51-0	Terphenyl-d14	90%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.14

Client Sample ID:	TB121218		
Lab Sample ID:	LA50650-14	Date Sampled:	12/12/18
Matrix:	AQ - Trip Blank Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094874.D	1	12/20/18 07:33	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.23 U	5.0	0.23	ug/l	
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.15 (3)

Client Sample ID:	EB121318		
Lab Sample ID:	LA50650-15	Date Sampled:	12/13/18
Matrix:	AQ - Equipment Blank	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094876.D	1	12/20/18 08:02	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.23 U	5.0	0.23	ug/l	
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.15

Client Sample ID:	EB121318		
Lab Sample ID:	LA50650-15	Date Sampled:	12/13/18
Matrix:	AQ - Equipment Blank	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046322.D	1	12/21/18 02:10	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	0.062 U	10	0.062	ug/l	
50-32-8	Benzo(a)pyrene	0.086 U	10	0.086	ug/l	
86-74-8	Carbazole	0.055 U	10	0.055	ug/l	
91-20-3	Naphthalene	0.17	10	0.077	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		19-84%
4165-62-2	Phenol-d5	27%		10-70%
118-79-6	2,4,6-Tribromophenol	95%		46-145%
4165-60-0	Nitrobenzene-d5	83%		36-143%
321-60-8	2-Fluorobiphenyl	74%		48-116%
1718-51-0	Terphenyl-d14	91%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.16

Client Sample ID:	FD121318		
Lab Sample ID:	LA50650-16	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094878.D	1	12/20/18 08:32	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	14.5	5.0	0.23	ug/l	
108-88-3	Toluene	0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	10.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	101%		89-111%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FD121318		
Lab Sample ID:	LA50650-16	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046323.D	1	12/21/18 02:31	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	30.0	9.8	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.085 U	9.8	0.085	ug/l	
86-74-8	Carbazole	1.3	9.8	0.054	ug/l	J
91-20-3	Naphthalene	0.68	9.8	0.076	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		19-84%
4165-62-2	Phenol-d5	28%		10-70%
118-79-6	2,4,6-Tribromophenol	104%		46-145%
4165-60-0	Nitrobenzene-d5	87%		36-143%
321-60-8	2-Fluorobiphenyl	79%		48-116%
1718-51-0	Terphenyl-d14	92%		45-133%

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX: 337.237.7838
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #: LA50650
SGS Quote #: | SGS Job #:

Client / Reporting Information

Company Name: APEX COMPANIES
Street Address: 1600 COMMERCE CIRCLE
City / State / Zip: UPPER MT 15085
Project Contact: | E-mail:
Phone #: 412-829-9050
Sampler(s) Name(s): ZANDER JONES, CONNOR O'TOOLE | Phone #: 412-829-9050

Project Information

Project Name: SCE&G CPA Intermediate Groundwater
Street:
City / State: CHARLESTON SC
Project #: ~~[illegible]~~ 81500612 -02
Client Purchase Order #: KJ
Project Manager:

Billing Information (If different from Report to):
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet): 82603, 8270D

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Comp/Grab	Collection Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZnAc/NaOH	HNO3	H2SO4	None	Di Water	MEOH	TBP	NaHSO4	Encore	82603	8270D									LAB USE ONLY
1	BM-03D	G	12/13/16	935	KJ	GW	6	4					2						X	X									6
2	BM-04D	G	12/13/16	830	GO	GW	6	4					2						X	X									6
3	MM-13C	G	12/12/16	1530	KJ	GW	6	4					2						X	X									6
4	PAMW-02	G	12/12/16	1415	KJ	GW	6	4					2						X	X									6
5	BM-10C	G	12/13/16	910	GO	GW	6	4					2						X	X									6
6	LM-08C	G	12/13/16	1345	GO	GW	6	4					2						X	X									6
7	MM-02D	G	12/13/16	835	KJ	GW	6	4					2						X	X									6
8	MM-12D	G	12/12/16	1535	GO	GW	6	4					2						X	X									6
9	MM-14C	G	12/12/16	1645	KJ	GW	6	4					2						X	X									6
10	NM-06D	G	12/13/16	1445	GO	GW	6	4					2						X	X									6
11	PM-01C	G	12/12/16	1410	GO	GW	6	4					2						X	X									6
12	MM-01D	G	12/13/16	1135	GO	GW	18	12					6						X	X									18

Turnaround Time (Business days)

- [X] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other _____

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+5)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [ ] EDD Format
- [ ] Other _____

Commercial "A" = Results Only.
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample Inventory is verified upon receipt in the Laboratory
WCL 995(00)
EXTRA VOLUME COLLECTED AT MM-01D
1AB

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	12/13/16	1 FEDEX	2 F/E	12-14-16 2	[signature]
3 [signature]	12-14- 1:50	3 [signature]	4	Date / Time:	4
5	Date / Time	5			

Custody Seal #: CSOC ☐ Intact ☐ Not intact ☐ Absent | Preserved where applicable ☐ | On Ice ☐ | Cooler Temp. 2.4, 1.3, 2.6, 1.7, 1.9 | Therm ID

EHSA-QAC-0026-00-FORM-Scott - Standard COC

http://www.sgs.com/en/terms-and-conditions

4.1 4

LA50650: Chain of Custody
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SGS

LA50650

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 . FAX: 337.237.7838
www.sgs.com/ehsusa

FED-EX Tracking #
Bottle Order Control #
SGS Quote #
SGS Job # LA50650

Client / Reporting Information

Company Name: APEX COMPANIES
Street Address: 1600 COMMERCE CIRCLE
City / State / Zip: TRAFFORD PA 15085
Project Contact / E-mail:
Phone #: 412-829-9650
Sampler(s) Name(s): RAYLA JONES, GORDON D'TOOLE
Phone #: 412-829-9650

Project Information

Project Name: SCE&G CPA. INTERMEDIATE GROUNDWATER
Street:
City: CHARLESTON State: SC
Project #: 87500612.02
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Sample #	Field ID / Point of Collection	Comp/Grab	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZnAc/NH4	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	8260B	8270D									LAB USE ONLY
13	MM-16D	G	12/13/18	1110	KJ	GW	4	4					2						X	X								6	
14	TB121218	G	LAB	LAB	LAB	WW	3	3					~~2~~	4					X									3	
15	EB121318	G	12/13/18	1315	KJ	GW	6	4					2						X	X								6	
16	~~[illegible]~~ FD121318	G	12/13/18	1110	KJ	GW	6	4					2						X	X								6	
	KJ																												

Turnaround Time (Business days)

- [x] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+5)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only.
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date / Time	Received By	Relinquished By	Date / Time	Received By
1 [signature]	12/13/18	1 FEDEX	2 F/E	12-14-18 1:30	2 [signature]
3 [signature]	12:14 1:50	3 [signature]	4		4
5		5			

Custody Seal # CSOC ☐ Intact ☐ Not intact ☐ Absent
Preserved where applicable ☑
On Ice ☑ Cooler Temp
Therm ID.

EHSA-QAC-0026-00-FORM-Scott - Standard COC

http://www.sgs.com/en/terms-and-conditions.

LA50650: Chain of Custody
Page 2 of 8

FedEx. Express Package US Airbill 8129 2368 0612

0200

1 From
Date 12/13/18
Sender's Name KAYLA JONES Phone 412 829-91650
Company MAX COMPANIES
Address 1600 COMMERCE CIRCLE
City TRAFFORD State PA ZIP 15085

2 Your Internal Billing Reference

3 To
Recipient's Name Phone
Company SAMPLE RECEIVING
(337) 237-4775
Address SGS NORTH AMERICA INC - SCOTT
Address 109 COMMISSION BLVD
City LAFAYETTE State LA ZIP 70508

Hold Weekday
Hold Saturday

8129 2368 0612

4 Express Package Service

Next Business Day
- FedEx First Overnight
- FedEx Priority Overnight
- FedEx Standard Overnight

2 or 3 Business Days
- FedEx 2Day A.M.
- FedEx 2Day
- FedEx Express Saver

5 Packaging
FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options
Saturday Delivery
No Signature Required
Direct Signature
Indirect Signature
Does this shipment contain dangerous goods?
No Yes Yes Dry Ice
Cargo Aircraft Only

7 Payment Bill to:
Sender Recipient Third Party Credit Card Cash/Check
Total Packages Total Weight Credit Card Auth.

644

fedex.com 1800Go-FedEx 1800.463.3339

4.1 4

LA50650: Chain of Custody
Page 3 of 8

FedEx. Express Package US Airbill

FedEx Tracking Number 8129 2368 0910

0200

1 From
Date 12/13/18 [redacted]
Sender's Name KAYLA JONES Phone 412 829-9650
Company APEX COMPANIES
Address 1600 COMMERCE CIRCLE
City TRAFFORD State PA ZIP 15085

2 Your Internal Billing Reference

3 To
Recipient's Name Phone
Company
Address SAMPLE RECEIVING
(337) 237-4775
Address
City SGS NORTH AMERICA INC - SCOTT State ZIP
109 COMMISSION BLVD

8129 2368 0910

4 Express Package Service

Next Business Day
- [ ] FedEx First Overnight
- [ ] FedEx Priority Overnight
- [x] FedEx Standard Overnight

2 or 3 Business Days
- [ ] FedEx 2Day A.M.
- [ ] FedEx 2Day
- [ ] FedEx Express Saver

5 Packaging
- [ ] FedEx Envelope*
- [ ] FedEx Pak*
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options
- [ ] Saturday Delivery
- [x] No Signature Required
- [ ] Direct Signature
- [ ] Indirect Signature

Does this shipment contain dangerous goods?
- [x] No
- [ ] Yes
- [ ] Yes
- [ ] Dry Ice
- [ ] Cargo Aircraft Only

7 Payment Bill to:
- [ ] Sender
- [ ] Recipient
- [x] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages Total Weight [redacted]

644

fedex.com 1.800.GoFedEx 1.800.463.3339

Kayla 412-608-4369
Gordon 412-889-1820

4.1

4

LA50650: Chain of Custody
Page 4 of 8

FedEx. Express Package US Airbill 8129 2368 0895

1 From
Date 12/13/18
Sender's Name KAYLA JONES Phone 412/829-9650
Company INDEX COMPANIES
Address 11000 COMMERCE CIRCLE
City TRAFFORD State PA ZIP 15085

2 Your Internal Billing Reference

3 To
Recipient's Name Phone
Company SAMPLE RECEIVING
(337) 237-4775
Address SGS NORTH AMERICA INC - SCOTT
Address 109 COMMISSION BLVD
City LAFAYETTE State LA ZIP 70508

Hold Weekday
Hold Saturday

8129 2368 0895

0200

4 Express Package Service
Next Business Day
FedEx First Overnight
FedEx Priority Overnight
FedEx Standard Overnight
2 or 3 Business Days
FedEx 2Day A.M.
FedEx 2Day
FedEx Express Saver

5 Packaging
FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options
Saturday Delivery
No Signature Required
Direct Signature
Indirect Signature
Does this shipment contain dangerous goods?
No Yes Yes Dry Ice
Cargo Aircraft Only

7 Payment
Sender Recipient Third Party Credit Card Cash/Check
Obtain recip Acct. No.
Total Packages Total Weight lbs. Credit Card Auth.

644

fedex.com 1800.GoFedEx 1800.463.3339

4.1 4

LA50650: Chain of Custody
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FedEx. Express Package US Airbill 8129 2368 0998

0200

1 From
Date 12/13/10 [redacted]
Sender's Name KAYLA JONES Phone 412 829-9650
Company APEX COMPANIES
Address 1600 COMMERCE CIRCLE
City TRAFFORD State PA ZIP 15085

2 Your Internal Billing Reference

3 To
Recipient's Name Phone
Company SAMPLE RECEIVING
Address (337) 237-4775
Address SGS NORTH AMERICA INC - SCOTT
City 109 COMMISSION BLVD
LAFAYETTE, LA 70508

8129 2368 0998

4 Express Package Service
Packages up to 150 lbs.

Next Business Day
- [ ] FedEx First Overnight
- [ ] FedEx Priority Overnight
- [x] FedEx Standard Overnight

2 or 3 Business Days
- [ ] FedEx 2Day A.M.
- [ ] FedEx 2Day
- [ ] FedEx Express Saver

5 Packaging
- [ ] FedEx Envelope*
- [ ] FedEx Pak*
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options
- [ ] Saturday Delivery
- [x] No Signature Required
- [ ] Direct Signature
- [ ] Indirect Signature

Does this shipment contain dangerous goods?
- [x] No
- [ ] Yes
- [ ] Yes
- [ ] Dry Ice
- [ ] Cargo Aircraft Only

7 Payment Bill to:
- [ ] Sender
- [ ] Recipient
- [x] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages Total Weight

644

fedex.com 1800.GoFedEx 1800.463.3339

LA50650: Chain of Custody
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(#12)

18 = (12) 40ml HCL (WLL225UW)
(6) 1000ml UNP (1A3)

1-11, 13, 15 HCL 6 = (4) 40ml HCL (WLL225UW)
(2) 1000ml UNP (1A3)

(14) 3 = 40ml HCL (WLL225UW)

ORIGIN ID:CHSA (412) 829-9650
KAYLA JONES
APEX
1600 COMMERCE CTR
TRAFFORD, PA 15085
UNITED STATES US

SHIP DATE: 13DEC18
ACTWGT: 51.60 LB
CAD: 006886691/SSF01022
DIMS: 26x14x13 IN
BILL THIRD PARTY

TO SAMPLE RECEIVING
FEDEX OFFICE PRINT & SHIP CENTER
FEDEX OFFICE PRINT & SHIP CENTER
3808 AMBASSADOR CAFFERY PKWY
LAFAYETTE LA 70503
(337) 237-4776

FedEx Express
E

TRK# 0200 8129 2368 0873
FRI - 14 DEC HOLD
STANDARD OVERNIGHT
HLD AH
LFT
LA-US LFT

XH LFTA

LA50650: Chain of Custody
Page 7 of 8

SGS Sample Receipt Summary

Job Number: LA50650 **Client:** APEX COMPANIES **Project:** SCE & G

Date / Time Received: 12/14/2018 1:50:00 PM **Delivery Method:** FedEx **Airbill #'s:** 8129 2368 0873,8129 2368 0998, 8129 2368 089

Cooler Temps (Initial/Adjusted): #1: (2.4/2.4); #2: (1.3/1.3); #3: (2.6/2.6); #4: (1.7/1.7); #5: (1.9/1.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	DV441;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	5		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☐
2. Trip Blank listed on COC:	☐		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

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LA50650: Chain of Custody
Page 8 of 8

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5142-MB4	2G094860.D	1	12/20/18	LS	n/a	n/a	V2G5142

5.1.1

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-6, LA50650-9, LA50650-10, LA50650-11, LA50650-12, LA50650-13, LA50650-14, LA50650-15, LA50650-16

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	106%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G5145-MB2	1G094969.D	1	12/20/18	LS	n/a	n/a	V1G5145

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-7, LA50650-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	104%	84-124%
2037-26-5	Toluene-D8	97%	83-115%
460-00-4	4-Bromofluorobenzene	99%	89-111%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I2011-MB2	1I042649.D	1	12/21/18	LS	n/a	n/a	V1I2011

5.1.3

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-1, LA50650-2, LA50650-3, LA50650-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	102%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5150-MB2	2G095066.D	1	12/21/18	LS	n/a	n/a	V2G5150

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	107%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G5155-MB2	1G095147.D	1	12/22/18	NN	n/a	n/a	V1G5155

5.1.5

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-4

CAS No.	Compound	Result	RL	MDL	Units	Q
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	104%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	97%	89-111%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5155-MB2	2G095148.D	1	12/22/18	NN	n/a	n/a	V2G5155

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	111%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	99%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5142-BS3	2G094856.D	1	12/20/18	LS	n/a	n/a	V2G5142
V2G5142-BSD3	2G094858.D	1	12/20/18	LS	n/a	n/a	V2G5142

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-6, LA50650-9, LA50650-10, LA50650-11, LA50650-12, LA50650-13, LA50650-14, LA50650-15, LA50650-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	23.0	115	23.1	116	0	82-119/30
100-41-4	Ethylbenzene	20	22.9	115	22.8	114	0	84-117/30
108-88-3	Toluene	20	23.0	115	22.7	114	1	80-121/30
1330-20-7	Xylene (total)	60	69.7	116	69.8	116	0	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	106%	84-124%
2037-26-5	Toluene-D8	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G5145-BS2	1G094963.D	1	12/20/18	LS	n/a	n/a	V1G5145
V1G5145-BSD2	1G094965.D	1	12/20/18	LS	n/a	n/a	V1G5145

5.2.2

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-7, LA50650-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	21.5	108	22.4	112	4	82-119/30
100-41-4	Ethylbenzene	20	20.6	103	21.7	109	5	84-117/30
108-88-3	Toluene	20	20.5	103	21.3	107	4	80-121/30
1330-20-7	Xylene (total)	60	63.1	105	65.9	110	4	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	104%	84-124%
2037-26-5	Toluene-D8	100%	99%	83-115%
460-00-4	4-Bromofluorobenzene	98%	102%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I2011-BS1	1I042645.D	1	12/21/18	LS	n/a	n/a	V1I2011
V1I2011-BSD1	1I042647.D	1	12/21/18	LS	n/a	n/a	V1I2011

5.2.3

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-1, LA50650-2, LA50650-3, LA50650-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	21.3	107	21.1	106	1	82-119/30
100-41-4	Ethylbenzene	20	21.8	109	21.8	109	0	84-117/30
108-88-3	Toluene	20	20.6	103	20.4	102	1	80-121/30
1330-20-7	Xylene (total)	60	69.4	116	69.1	115	0	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	98%	100%	84-124%
2037-26-5	Toluene-D8	100%	101%	83-115%
460-00-4	4-Bromofluorobenzene	105%	105%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5150-BS1	2G095060.D	1	12/21/18	LS	n/a	n/a	V2G5150
V2G5150-BSD1	2G095062.D	1	12/21/18	LS	n/a	n/a	V2G5150

5.2.4

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	22.8	114	23.5	118	3	82-119/30
100-41-4	Ethylbenzene	20	22.5	113	23.4	117	4	84-117/30
108-88-3	Toluene	20	22.2	111	22.8	114	3	80-121/30
1330-20-7	Xylene (total)	60	68.8	115	70.6	118	3	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	100%	84-124%
2037-26-5	Toluene-D8	99%	100%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G5155-BS1	1G095141.D	1	12/22/18	NN	n/a	n/a	V1G5155
V1G5155-BSD1	1G095143.D	1	12/22/18	NN	n/a	n/a	V1G5155

5.2.5

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	20	20.9	105	21.5	108	3	84-117/30
108-88-3	Toluene	20	20.6	103	21.0	105	2	80-121/30
1330-20-7	Xylene (total)	60	63.8	106	65.8	110	3	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	109%	105%	84-124%
2037-26-5	Toluene-D8	101%	101%	83-115%
460-00-4	4-Bromofluorobenzene	101%	100%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G5155-BS1	2G095144.D	1	12/22/18	NN	n/a	n/a	V2G5155
V2G5155-BSD1	2G095150.D	1	12/22/18	NN	n/a	n/a	V2G5155

5.2.6

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	23.3	117	21.8	109	7	82-119/30
100-41-4	Ethylbenzene	20	23.2	116	21.1	106	9	84-117/30
108-88-3	Toluene	20	23.2	116	21.0	105	10	80-121/30
1330-20-7	Xylene (total)	60	71.1	119	63.7	106	11	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	106%	84-124%
2037-26-5	Toluene-D8	101%	102%	83-115%
460-00-4	4-Bromofluorobenzene	104%	101%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50650-12MS	2G094898.D	2	12/20/18	LS	n/a	n/a	V2G5142
LA50650-12MSD	2G094900.D	2	12/20/18	LS	n/a	n/a	V2G5142
LA50650-12	2G094882.D	1	12/20/18	LS	n/a	n/a	V2G5142

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-6, LA50650-9, LA50650-10, LA50650-11, LA50650-12, LA50650-13, LA50650-14, LA50650-15, LA50650-16

CAS No.	Compound	LA50650-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.49	J	40	44.7	111	40	44.9	111	0	31-161/15
100-41-4	Ethylbenzene	5.0 U		40	43.5	109	40	42.6	107	2	47-146/30
108-88-3	Toluene	5.0 U		40	43.4	109	40	43.6	109	0	36-155/17
1330-20-7	Xylene (total)	1.0	J	120	131	108	120	130	108	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50650-12	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	103%	108%	84-124%
2037-26-5	Toluene-D8	101%	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	99%	101%	99%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50617-11MS	1G094999.D	50	12/21/18	LS	n/a	n/a	V1G5145
LA50617-11MSD	1G095001.D	50	12/21/18	LS	n/a	n/a	V1G5145
LA50617-11	1G094987.D	20	12/20/18	LS	n/a	n/a	V1G5145

5.3.2

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-7, LA50650-11

CAS No.	Compound	LA50617-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		1000	1050	105	1000	1060	106	1	31-161/15
100-41-4	Ethylbenzene	ND		1000	1000	100	1000	1020	102	2	47-146/30
108-88-3	Toluene	ND		1000	989	99	1000	1000	100	1	36-155/17
1330-20-7	Xylene (total)	ND		3000	3080	103	3000	3060	102	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50617-11	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	108%	107%	84-124%
2037-26-5	Toluene-D8	100%	102%	99%	83-115%
460-00-4	4-Bromofluorobenzene	97%	102%	97%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50702-2MS	1I042689.D	20	12/21/18	LS	n/a	n/a	V1I2011
LA50702-2MSD	1I042691.D	20	12/21/18	LS	n/a	n/a	V1I2011
LA50702-2	1I042681.D	20	12/21/18	LS	n/a	n/a	V1I2011

5.3.3

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-1, LA50650-2, LA50650-3, LA50650-4

CAS No.	Compound	LA50702-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2140		400	2460	80	400	2490	88	1	31-161/15
100-41-4	Ethylbenzene	224		400	659	109	400	670	112	2	47-146/30
108-88-3	Toluene	1150		400	1500	88	400	1530	95	2	36-155/17
1330-20-7	Xylene (total)	1120		1200	2500	115	1200	2560	120	2	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50702-2	Limits
17060-07-0	1,2-Dichloroethane-D4	97%	95%	98%	84-124%
2037-26-5	Toluene-D8	101%	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	105%	105%	101%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50650-5MS	2G095100.D	100	12/22/18	LS	n/a	n/a	V2G5150
LA50650-5MSD	2G095102.D	100	12/22/18	LS	n/a	n/a	V2G5150
LA50650-5	2G095090.D	100	12/21/18	LS	n/a	n/a	V2G5150

5.3.4

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-5

CAS No.	Compound	LA50650-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10300		2000	12100	90	2000	12200	95	1	31-161/15
100-41-4	Ethylbenzene	782		2000	2990	110	2000	3070	114	3	47-146/30
108-88-3	Toluene	55.2	J	2000	2260	110	2000	2330	114	3	36-155/17
1330-20-7	Xylene (total)	456	J	6000	7200	112	6000	7470	117	4	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50650-5	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	104%	105%	84-124%
2037-26-5	Toluene-D8	102%	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	101%	104%	99%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50707-2MS	1G095161.D	5	12/22/18	NN	n/a	n/a	V1G5155
LA50707-2MSD	1G095163.D	5	12/22/18	NN	n/a	n/a	V1G5155
LA50707-2	1G095157.D	5	12/22/18	NN	n/a	n/a	V1G5155

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-4

CAS No.	Compound	LA50707-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	761		100	691	-70* [a]	100	724	-37* [a]	5	47-146/30
108-88-3	Toluene	29.0		100	119	90	100	127	98	7	36-155/17
1330-20-7	Xylene (total)	546		300	721	58	300	752	69	4	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50707-2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	111%	108%	84-124%
2037-26-5	Toluene-D8	103%	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	102%	100%	89-111%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50709-7MS	2G095162.D	20	12/22/18	NN	n/a	n/a	V2G5155
LA50709-7MSD	2G095164.D	20	12/22/18	NN	n/a	n/a	V2G5155
LA50709-7	2G095160.D	5	12/22/18	NN	n/a	n/a	V2G5155

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-8

CAS No.	Compound	LA50709-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	438		400	869	108	400	880	111	1	31-161/15
100-41-4	Ethylbenzene	49.0		400	475	107	400	482	108	1	47-146/30
108-88-3	Toluene	9.3		400	436	107	400	439	107	1	36-155/17
1330-20-7	Xylene (total)	ND		1200	1300	108	1200	1320	110	2	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50709-7	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	104%	104%	84-124%
2037-26-5	Toluene-D8	101%	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	102%	103%	101%	89-111%

* = Outside of Control Limits.

MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-MB	F0046230.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	ND	5.0	0.062	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.086	ug/l	
86-74-8	Carbazole	ND	5.0	0.055	ug/l	
91-20-3	Naphthalene	ND	0.20	0.077	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	53%	19-84%
4165-62-2	Phenol-d5	35%	10-70%
118-79-6	2,4,6-Tribromophenol	108%	46-145%
4165-60-0	Nitrobenzene-d5	102%	36-143%
321-60-8	2-Fluorobiphenyl	92%	48-116%
1718-51-0	Terphenyl-d14	112%	45-133%

Method Blank Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13080-MB	F0046316.D	1	12/21/18	SV	12/20/18	OP13080	EF1704

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-13, LA50650-15, LA50650-16

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	ND	5.0	0.062	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.086	ug/l	
86-74-8	Carbazole	ND	5.0	0.055	ug/l	
91-20-3	Naphthalene	0.15	10	0.077	ug/l	J

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	41%	19-84%
4165-62-2	Phenol-d5	27%	10-70%
118-79-6	2,4,6-Tribromophenol	98%	46-145%
4165-60-0	Nitrobenzene-d5	87%	36-143%
321-60-8	2-Fluorobiphenyl	77%	48-116%
1718-51-0	Terphenyl-d14	94%	45-133%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-BS	F0046231.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
OP13076-BSD	F0046232.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
105-67-9	2,4-Dimethylphenol	50	48.3	97	47.1	94	3	63-103/17
50-32-8	Benzo(a)pyrene	50	55.8	112	53.8	108	4	72-120/17
86-74-8	Carbazole	50	57.3	115* [a]	55.3	111	4	75-112/19
91-20-3	Naphthalene	50	50.9	102* [a]	48.6	97	5	65-100/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	56%	59%	19-84%
4165-62-2	Phenol-d5	38%	41%	10-70%
118-79-6	2,4,6-Tribromophenol	118%	119%	46-145%
4165-60-0	Nitrobenzene-d5	108%	109%	36-143%
321-60-8	2-Fluorobiphenyl	97%	99%	48-116%
1718-51-0	Terphenyl-d14	117%	119%	45-133%

(a) Outside laboratory control limits but within reasonable method acceptance limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-BS	F0046233.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
OP13076-BSD	F0046234.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	53%	55%	19-84%
4165-62-2	Phenol-d5	35%	37%	10-70%
118-79-6	2,4,6-Tribromophenol	115%	116%	46-145%
4165-60-0	Nitrobenzene-d5	106%	107%	36-143%
321-60-8	2-Fluorobiphenyl	97%	98%	48-116%
1718-51-0	Terphenyl-d14	118%	120%	45-133%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13080-BS	F0046317.D	1	12/21/18	SV	12/20/18	OP13080	EF1704
OP13080-BSD	F0046318.D	1	12/21/18	SV	12/20/18	OP13080	EF1704

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-13, LA50650-15, LA50650-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
105-67-9	2,4-Dimethylphenol	50	37.0	74	34.8	70	6	63-103/17
50-32-8	Benzo(a)pyrene	50	44.4	89	42.7	85	4	72-120/17
86-74-8	Carbazole	50	45.8	92	43.0	86	6	75-112/19
91-20-3	Naphthalene	50	39.9	80	36.6	73	9	65-100/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	43%	39%	19-84%
4165-62-2	Phenol-d5	31%	27%	10-70%
118-79-6	2,4,6-Tribromophenol	104%	96%	46-145%
4165-60-0	Nitrobenzene-d5	88%	82%	36-143%
321-60-8	2-Fluorobiphenyl	81%	75%	48-116%
1718-51-0	Terphenyl-d14	98%	92%	45-133%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13080-BS	F0046319.D	1	12/21/18	SV	12/20/18	OP13080	EF1704
OP13080-BSD	F0046320.D	1	12/21/18	SV	12/20/18	OP13080	EF1704

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-13, LA50650-15, LA50650-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	44%	44%	19-84%
4165-62-2	Phenol-d5	31%	32%	10-70%
118-79-6	2,4,6-Tribromophenol	100%	98%	46-145%
4165-60-0	Nitrobenzene-d5	89%	86%	36-143%
321-60-8	2-Fluorobiphenyl	81%	78%	48-116%
1718-51-0	Terphenyl-d14	97%	96%	45-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-MS	F0046235.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
OP13076-MSD	F0046236.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
LA50650-12	F0046252.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

CAS No.	Compound	LA50650-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
105-67-9	2,4-Dimethylphenol	9.7 U		48.4	45.2	93	48.4	46.3	96	2	57-108/21
50-32-8	Benzo(a)pyrene	9.7 U		48.4	52.0	108	48.4	52.5	109	1	83-113/15
86-74-8	Carbazole	9.7 U		48.4	52.9	109* [a]	48.4	53.8	111* [a]	2	84-106/21
91-20-3	Naphthalene	0.24	J	48.4	45.6	94	48.4	46.6	96	2	76-97/19

CAS No.	Surrogate Recoveries	MS	MSD	LA50650-12	Limits
367-12-4	2-Fluorophenol	53%	53%	57%	19-84%
4165-62-2	Phenol-d5	36%	36%	38%	10-70%
118-79-6	2,4,6-Tribromophenol	114%	116%	124%	46-145%
4165-60-0	Nitrobenzene-d5	103%	105%	110%	36-143%
321-60-8	2-Fluorobiphenyl	92%	94%	98%	48-116%
1718-51-0	Terphenyl-d14	107%	107%	119%	45-133%

(a) Outside laboratory control limits but within reasonable method acceptance limits.

* = Outside of Control Limits.

APPENDIX C

DATA EVALUATION MEMORANDUM

Apex Companies, LLC

Memo

To: Bill Zeli

From: James Dunmyre

Date: April 11, 2019

Re: Evaluation of Analytical Data for Intermediate Groundwater Samples Collected in December 2018
DESC Calhoun Park Area Site, Charleston, South Carolina

Sample Identification

BM-03D	LM-08C	MM-02D	MM-14C	PAMW-02
BM-04D	MM-12B	MM-16D	PM-01C	
BM-10C	MM-01D	MM-13C	NM-06D	

Overview

Thirteen intermediate sand unit groundwater samples were collected from December 12 through December 13, 2018.

The samples collected were submitted to Accutest Laboratories located in Scott, Louisiana for analyses of BTEX (benzene, toluene, ethylbenzene and total xylenes) by EPA Method 8260B and for semi-volatile organic compounds [SVOCs] (2,4-dimethylphenol, benzo(a)pyrene, carbazole and naphthalene) by EPA Method 8270D. The analytical results were reported in one sample delivery group (SDG) LA50650. The attached table summarizes the SDG, samples, and analytical parameters. Level II data packages were provided for the SDGs.

Four quality assurance/quality control (QA/QC) samples were also collected during the December 2018 event. The QA/QC samples collected included one equipment blank (EB121318), one blind field duplicate, (FD121318, a duplicate of MM-16D) and one trip blank (TB121218). The trip blank was analyzed for VOCs only, whereas the other QA/QC samples were analyzed for VOCs and SVOCs. Additional sample volume was collected at well MM-01D for matrix spike/matrix spike duplicate (MS/MSD) analyses.

Summary

Quality control (QC) measures associated with the analytical data were reviewed following the U.S. EPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (January, 2017) to determine the accuracy and precision of the data reported. These QC measures included surrogate recoveries, laboratory and field blank results, field duplicate results, MS/MSD results, and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results. Data usability is presented below.

Data Usability Results

The laboratory reporting limit (RL) varies with dilution. In an effort to provide analytical results when a sample is diluted, the laboratory provides analytical results between the method detection limit (MDL) and RL and qualifies the results as estimated, "J".

During data evaluation, the results were compared to the undiluted project RLs (5 µg/L for VOCs and 10 µg/L for SVOCs) and results below the undiluted project RLs were reported as non-detected at the undiluted project RL with a "U" qualifier.

Notes

One compound in the MS/MSD for VOCs had recoveries outside the control limits. Because the variances were due to high levels in the unspiked samples relative to the spike amount, no action was needed.

One compound in the MS/MSD for SVOCs had recoveries outside the laboratory control limits but within reasonable method acceptance limits. Therefore, no action was needed. Two compounds in the blank spike/blank spike duplicate for SVOCs had recoveries outside the laboratory control limits but within reasonable method acceptance limits. Therefore, no action was needed.

Several samples had one surrogate recovery for SVOCs outside of control limits. Because the procedure allows for one surrogate exceedance, no action was required.

Recommendations for Data Usability

The reviewed QC results were reflective of typical minor QC exceedances and did not indicate any significant problems existed with data precision and accuracy. All BTEX and SVOC data should be considered usable for intended data uses including those data qualified as estimated.

Information Regarding Report Content

Attachment A - Glossary of Data Qualifier Codes

Attachment B - Summary of Groundwater Samples and Sample Delivery Groups – December 2018

Attachment C - Accutest Data Summary Reports. This includes results as originally reported by the laboratory with applicable qualifier codes as annotated by Apex.

Attachment D - Support Documentation. This includes references supporting statements contained in this report.

ATTACHMENT A

GLOSSARY OF DATA QUALIFIER CODES

The following definitions provide a brief explanation of the national qualifiers assigned to results in the data review process.

CODES RELATING TO IDENTIFICATION

(Confidence concerning presence or absence of compounds.)

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

(NO CODE) = Confirmed identification

UR = The analyte was analyzed for, but not detected above the reported sample quantitation limit and the sample results are considered unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria.

R = Unusable Result. The sample results are considered unusable due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N = The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

CODES RELATED TO QUANTITATION

(Can be used for positive results and sample quantitation limits.)

J = The analyte was positively identified; the associated numerical value is approximate concentration of the analyte in the sample.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

ATTACHMENT B

SUMMARY OF INTERMEDIATE GROUNDWATER SAMPLES BY SAMPLE DELIVERY GROUPS - DECEMBER 2018

DESC Calhoun Park Area Site
Charleston, South Carolina

Sample ID	Sample Date	SDGs for SVOC (8270D)	SDGs for VOC (8260B)	Comments
Upper Sand				
BM-03D	12/13/2018	LA50650	LA50650	
BM-04D	12/13/2018	LA50650	LA50650	
MM-13C	12/12/2018	LA50650	LA50650	
PAMW-02	12/12/2018	LA50650	LA50650	
Middle Sand				
BM-10C	12/13/2018	LA50650	LA50650	
LM-08C	12/13/2018	LA50650	LA50650	
MM-02D	12/13/2018	LA50650	LA50650	
MM-12B	12/12/2018	LA50650	LA50650	
MM-14C	12/12/2018	LA50650	LA50650	
NM-06D	12/12/2018	LA50650	LA50650	
PM-01C	12/12/2018	LA50650	LA50650	
Lower Sand				
MM-01D	12/13/2018	LA50650	LA50650	
MM-16D	12/13/2018	LA50650	LA50650	
QA/QC Samples				
EB121318	12/13/2018	LA50650	LA50650	
FD121318	12/13/2018	LA50650	LA50650	field duplicate of MM-16D (VOC & SVOCs)
TB121218	12/12/2018	--	LA50650	

Note:
1) SDG - Sample Delivery Group

ATTACHMENT C

ACCUTEST DATA SUMMARY REPORTS

SGS North America Inc.

Report of Analysis

3.1

Client Sample ID:	BM-03D		
Lab Sample ID:	LA50650-1	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046241.D	1	12/19/18 19:16	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046287.D	20	12/20/18 13:52	SV	12/18/18 10:55	OP13076	EF1703
Run #3	F0046348.D	200	12/21/18 12:20	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2	1010 ml	1.0 ml
Run #3	1010 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol [a] ID U	~~1.2 U~~ [b]	9.9	1.2	ug/l	
50-32-8	Benzo(a)pyrene	~~0.085 U~~	9.9	0.085	ug/l	
86-74-8	Carbazole	~~9.0~~	9.9	0.054	ug/l	J
91-20-3	Naphthalene	14300 [c]	2000	15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	58%	54%	0% [d]	19-84%
4165-62-2	Phenol-d5	41%	35%	0% [d]	10-70%
118-79-6	2,4,6-Tribromophenol	125%	95%	0% [d]	46-145%
4165-60-0	Nitrobenzene-d5	193% [e]	114%	0% [d]	36-143%
321-60-8	2-Fluorobiphenyl	97%	82%	0% [d]	48-116%
1718-51-0	Terphenyl-d14	120%	96%	0% [d]	45-133%

(a) RL manually adusted to report result at dilution. The calibration and MDL supports this adjustment.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Outside control limits due to dilution.
(e) Outside control limits due to matrix interference.

ALL CHANGES

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.2

Client Sample ID:	BM-04D		
Lab Sample ID:	LA50650-2	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046242.D	1	12/19/18 19:37	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046343.D	50	12/21/18 09:52	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10 U	~~0.59~~	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene	0.12	9.7	0.083	ug/l	J
86-74-8	Carbazole	1.5	9.7	0.053	ug/l	J
91-20-3	Naphthalene	4210 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%	67%	19-84%
4165-62-2	Phenol-d5	40%	37%	10-70%
118-79-6	2,4,6-Tribromophenol	122%	114%	46-145%
4165-60-0	Nitrobenzene-d5	146% [b]	135%	36-143%
321-60-8	2-Fluorobiphenyl	100%	106%	48-116%
1718-51-0	Terphenyl-d14	118%	119%	45-133%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

All changes 70

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.3

Client Sample ID:	MM-13C		
Lab Sample ID:	LA50650-3	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046243.D	1	12/19/18 19:58	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046344.D	50	12/21/18 10:14	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10 U	~~5.1~~	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	9.1	9.7	0.053	ug/l	J
91-20-3	Naphthalene	4570 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%	62%	19-84%
4165-62-2	Phenol-d5	39%	44%	10-70%
118-79-6	2,4,6-Tribromophenol	121%	130%	46-145%
4165-60-0	Nitrobenzene-d5	130%	118%	36-143%
321-60-8	2-Fluorobiphenyl	97%	115%	48-116%
1718-51-0	Terphenyl-d14	118%	126%	45-133%

(a) Result is from Run# 2

ALL CHANGES

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.4

Client Sample ID:	PAMW-02		
Lab Sample ID:	LA50650-4	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G095153.D	1	12/22/18 15:23	NN	n/a	n/a	V1G5155
Run #2	1I042687.D	2	12/21/18 17:18	LS	n/a	n/a	V1I2011

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene		174 [a]	10	0.45	ug/l	
108-88-3	Toluene	S U	~~0.79~~	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene		2.0	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)		1.4	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	97%	84-124%
2037-26-5	Toluene-D8	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	99%	103%	89-111%

(a) Result is from Run# 2

ALL CHANGES JB

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.4

Client Sample ID:	PAMW-02		
Lab Sample ID:	LA50650-4	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046280.D	1	12/20/18 11:18	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10 v	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.40	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		19-84%
4165-62-2	Phenol-d5	40%		10-70%
118-79-6	2,4,6-Tribromophenol	122%		46-145%
4165-60-0	Nitrobenzene-d5	109%		36-143%
321-60-8	2-Fluorobiphenyl	98%		48-116%
1718-51-0	Terphenyl-d14	116%		45-133%

ALL CHANGES 4B

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.5

Client Sample ID:	BM-10C		
Lab Sample ID:	LA50650-5	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046245.D	1	12/19/18 20:42	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046345.D	10	12/21/18 10:35	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2	1030 ml	1.0 ml

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	10U	~~2.8~~	9.7	0.060	ug/l	J
50-32-8	Benzo(a)pyrene		0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole		0.20	9.7	0.053	ug/l	J
91-20-3	Naphthalene		988 [a]	97	0.75	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%	55%	19-84%
4165-62-2	Phenol-d5	39%	41%	10-70%
118-79-6	2,4,6-Tribromophenol	119%	127%	46-145%
4165-60-0	Nitrobenzene-d5	110%	121%	36-143%
321-60-8	2-Fluorobiphenyl	97%	106%	48-116%
1718-51-0	Terphenyl-d14	115%	123%	45-133%

(a) Result is from Run# 2

ALL CHANGES JB

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.6

Client Sample ID:	LM-08C		
Lab Sample ID:	LA50650-6	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094890.D	1	12/20/18 11:29	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	500	~~3.5~~	5.0	0.23	ug/l	J
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.26	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)		0.61	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

ALL CHANGES 7D

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.6

Client Sample ID:	LM-08C		
Lab Sample ID:	LA50650-6	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046281.D	1	12/20/18 11:40	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10 U	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.13	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		19-84%
4165-62-2	Phenol-d5	42%		10-70%
118-79-6	2,4,6-Tribromophenol	124%		46-145%
4165-60-0	Nitrobenzene-d5	111%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	122%		45-133%

All changes SO

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.7

Client Sample ID:	MM-02D		
Lab Sample ID:	LA50650-7	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046247.D	1	12/19/18 21:25	SV	12/18/18 10:55	OP13076	EF1702
Run #2	F0046346.D	50	12/21/18 10:57	SV	12/18/18 10:55	OP13076	EF1705

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2	1040 ml	1.0 ml

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	100	~~0.059~~ U	9.6	0.059	ug/l	
50-32-8	Benzo(a)pyrene		0.083 U	9.6	0.083	ug/l	
86-74-8	Carbazole		1.8	9.6	0.053	ug/l	J
91-20-3	Naphthalene		5520 [a]	480	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%	65%	19-84%
4165-62-2	Phenol-d5	41%	40%	10-70%
118-79-6	2,4,6-Tribromophenol	126%	119%	46-145%
4165-60-0	Nitrobenzene-d5	166% [b]	142%	36-143%
321-60-8	2-Fluorobiphenyl	99%	103%	48-116%
1718-51-0	Terphenyl-d14	120%	115%	45-133%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ALL CHANGES SB

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.8

Client Sample ID:	MM-12B		
Lab Sample ID:	LA50650-8	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G095154.D	1	12/22/18 15:38	NN	n/a	n/a	V2G5155
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene		180	5.0	0.23	ug/l	
108-88-3	Toluene	5.00	~~0.59~~	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene		59.5	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		7.0	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

All changes JB

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.8

Client Sample ID:	MM-12B		
Lab Sample ID:	LA50650-8	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046282.D	1	12/20/18 12:02	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10-U	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	1.3	9.7	0.053	ug/l	J
91-20-3	Naphthalene	2.0	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61% [a]		19-84%
4165-62-2	Phenol-d5	43% [a]		10-70%
118-79-6	2,4,6-Tribromophenol	126% [a]		46-145%
4165-60-0	Nitrobenzene-d5	111% [a]		36-143%
321-60-8	2-Fluorobiphenyl	98% [a]		48-116%
1718-51-0	Terphenyl-d14	121% [a]		45-133%

(a) Recovery corrected for double spike.

ALL CHANGES JD

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.9

Client Sample ID:	MM-14C		
Lab Sample ID:	LA50650-9	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094888.D	1	12/20/18 11:00	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	5.0 ✓	~~3.5~~	5.0	0.23	ug/l	J
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.30	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)		0.16	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

DIL CHANGES 90

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.9

Client Sample ID:	MM-14C		
Lab Sample ID:	LA50650-9	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046284.D	1	12/20/18 12:45	SV	12/18/18 10:55	OP13076	EF1703
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	10 U ~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene	0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole	0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene	0.32	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		19-84%
4165-62-2	Phenol-d5	44%		10-70%
118-79-6	2,4,6-Tribromophenol	125%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	97%		48-116%
1718-51-0	Terphenyl-d14	119%		45-133%

ALL CHANGES JA

U = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.10

Client Sample ID:	NM-06D		
Lab Sample ID:	LA50650-10	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094886.D	1	12/20/18 10:30	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	5.00	~~0.23 U~~	5.0	0.23	ug/l	
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

All changes 98

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.10

Client Sample ID:	NM-06D		
Lab Sample ID:	LA50650-10	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046250.D	1	12/19/18 22:30	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	100	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene		0.083 U	9.7	0.083	ug/l	
86-74-8	Carbazole		0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene		0.11	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		19-84%
4165-62-2	Phenol-d5	43%		10-70%
118-79-6	2,4,6-Tribromophenol	121%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	122%		45-133%

ALL CHANGES 70

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.11

Client Sample ID:	PM-01C		
Lab Sample ID:	LA50650-11	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094884.D	1	12/20/18 10:00	LS	n/a	n/a	V2G5142
Run #2	1G094989.D	10	12/20/18 22:19	LS	n/a	n/a	V1G5145

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene		557 [a]	50	2.3	ug/l	
108-88-3	Toluene	5.00	~~0.44~~	5.0	0.23	ug/l	J
100-41-4	Ethylbenzene	L	2.6	5.0	0.23	ug/l	J
1330-20-7	Xylene (total)	9.6	9.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	108%	84-124%
2037-26-5	Toluene-D8	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	99%	98%	89-111%

(a) Result is from Run# 2

AL CHANGES 90

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.11

Client Sample ID:	PM-01C		
Lab Sample ID:	LA50650-11	Date Sampled:	12/12/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046251.D	1	12/19/18 22:52	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	100	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene		0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole		0.46	9.7	0.053	ug/l	J
91-20-3	Naphthalene		8.1	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		19-84%
4165-62-2	Phenol-d5	43%		10-70%
118-79-6	2,4,6-Tribromophenol	123%		46-145%
4165-60-0	Nitrobenzene-d5	113%		36-143%
321-60-8	2-Fluorobiphenyl	99%		48-116%
1718-51-0	Terphenyl-d14	118%		45-133%

ALL CHANGES 9B

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.12

Client Sample ID:	MM-01D		
Lab Sample ID:	LA50650-12	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094882.D	1	12/20/18 09:31	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	5.00	~~0.49~~	5.0	0.23	ug/l	J
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		1.0	5.0	0.39	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

ALL CHANGES 9B

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.12

Client Sample ID:	MM-01D		
Lab Sample ID:	LA50650-12	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046252.D	1	12/19/18 23:14	SV	12/18/18 10:55	OP13076	EF1702
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	10U	~~0.060 U~~	9.7	0.060	ug/l	
50-32-8	Benzo(a)pyrene		0.084 U	9.7	0.084	ug/l	
86-74-8	Carbazole		0.053 U	9.7	0.053	ug/l	
91-20-3	Naphthalene		0.24	9.7	0.075	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		19-84%
4165-62-2	Phenol-d5	38%		10-70%
118-79-6	2,4,6-Tribromophenol	124%		46-145%
4165-60-0	Nitrobenzene-d5	110%		36-143%
321-60-8	2-Fluorobiphenyl	98%		48-116%
1718-51-0	Terphenyl-d14	119%		45-133%

ALL CHANGES 98

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.13

Client Sample ID:	MM-16D		
Lab Sample ID:	LA50650-13	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094880.D	1	12/20/18 09:01	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene		15.2	5.0	0.23	ug/l	
108-88-3	Toluene	5.00	~~0.23 U~~	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	L	0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		10.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

NO CHANGES 90

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

3.13

Client Sample ID:	MM-16D		
Lab Sample ID:	LA50650-13	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046321.D	1	12/21/18 01:48	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol	31.7	10	0.063	ug/l	
50-32-8	Benzo(a)pyrene 10 U	~~0.088 U~~	10	0.088	ug/l	
86-74-8	Carbazole	1.3	10	0.056	ug/l	J
91-20-3	Naphthalene	0.66	10	0.079	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		19-84%
4165-62-2	Phenol-d5	30%		10-70%
118-79-6	2,4,6-Tribromophenol	102%		46-145%
4165-60-0	Nitrobenzene-d5	87%		36-143%
321-60-8	2-Fluorobiphenyl	76%		48-116%
1718-51-0	Terphenyl-d14	90%		45-133%

All changes JA

U = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.14

Client Sample ID:	TB121218		
Lab Sample ID:	LA50650-14	Date Sampled:	12/12/18
Matrix:	AQ - Trip Blank Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094874.D	1	12/20/18 07:33	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	5.0 U	~~0.23 U~~	5.0	0.23	ug/l	
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

ALL CHANGES 90

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.15

Client Sample ID:	EB121318		
Lab Sample ID:	LA50650-15	Date Sampled:	12/13/18
Matrix:	AQ - Equipment Blank	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094876.D	1	12/20/18 08:02	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound		Result	RL	MDL	Units	Q
71-43-2	Benzene	5.0 U	~~0.23 U~~	5.0	0.23	ug/l	
108-88-3	Toluene		0.23 U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene		0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)		0.39 U	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

ALL CHANGES

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.15

Client Sample ID:	EB121318		
Lab Sample ID:	LA50650-15	Date Sampled:	12/13/18
Matrix:	AQ - Equipment Blank	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046322.D	1	12/21/18 02:10	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol 10 J	~~0.082 U~~	10	0.062	ug/l	
50-32-8	Benzo(a)pyrene	0.086 U	10	0.086	ug/l	
86-74-8	Carbazole	0.055 U	10	0.055	ug/l	
91-20-3	Naphthalene	0.17	10	0.077	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		19-84%
4165-62-2	Phenol-d5	27%		10-70%
118-79-6	2,4,6-Tribromophenol	95%		46-145%
4165-60-0	Nitrobenzene-d5	83%		36-143%
321-60-8	2-Fluorobiphenyl	74%		48-116%
1718-51-0	Terphenyl-d14	91%		45-133%

ALL CHANGES 40

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.16

Client Sample ID:	FD121318		
Lab Sample ID:	LA50650-16	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G094878.D	1	12/20/18 08:32	LS	n/a	n/a	V2G5142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	14.5	5.0	0.23	ug/l	
108-88-3	Toluene	5.00 ~~0.23~~ U	5.0	0.23	ug/l	
100-41-4	Ethylbenzene	5.00 0.23 U	5.0	0.23	ug/l	
1330-20-7	Xylene (total)	10.6	5.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	101%		89-111%

All changes 9B

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

3.16

Client Sample ID:	FD121318		
Lab Sample ID:	LA50650-16	Date Sampled:	12/13/18
Matrix:	AQ - Ground Water	Date Received:	12/14/18
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	Intermediate GWS- SCE&G Calhoun Park Area Site		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0046323.D	1	12/21/18 02:31	SV	12/20/18 06:30	OP13080	EF1704
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound		Result	RL	MDL	Units	Q
105-67-9	2,4-Dimethylphenol		30.0	9.8	0.060	ug/l	
50-32-8	Benzo(a)pyrene	10U	~~0.085 U~~	9.8	0.085	ug/l	
86-74-8	Carbazole		13	9.8	0.054	ug/l	J
91-20-3	Naphthalene		0.68	9.8	0.076	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		19-84%
4165-62-2	Phenol-d5	28%		10-70%
118-79-6	2,4,6-Tribromophenol	104%		46-145%
4165-60-0	Nitrobenzene-d5	87%		36-143%
321-60-8	2-Fluorobiphenyl	79%		48-116%
1718-51-0	Terphenyl-d14	92%		45-133%

AK CHANGES 90

U = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ATTACHMENT D

SUPPORT DOCUMENTATION

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA50707-2MS	1G095161.D	5	12/22/18	NN	n/a	n/a	V1G5155
LA50707-2MSD	1G095163.D	5	12/22/18	NN	n/a	n/a	V1G5155
LA50707-2	1G095157.D	5	12/22/18	NN	n/a	n/a	V1G5155

The QC reported here applies to the following samples: Method: SW846 8260B

LA50650-4

CAS No.	Compound	LA50707-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	761		100	691	-70* a	100	724	-37* a	5	47-146/30
108-88-3	Toluene	29.0		100	119	90	100	127	98	7	36-155/17
1330-20-7	Xylene (total)	546		300	721	58	300	752	69	4	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA50707-2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	111%	108%	84-124%
2037-26-5	Toluene-D8	103%	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	102%	100%	89-111%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-BS	F0046231.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
OP13076-BSD	F0046232.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
105-67-9	2,4-Dimethylphenol	50	48.3	97	47.1	94	3	63-103/17
50-32-8	Benzo(a)pyrene	50	55.8	112	53.8	108	4	72-120/17
86-74-8	Carbazole	50	57.3	115* [a]	55.3	111	4	75-112/19
91-20-3	Naphthalene	50	50.9	102* [a]	48.6	97	5	65-100/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	56%	59%	19-84%
4165-62-2	Phenol-d5	38%	41%	10-70%
118-79-6	2,4,6-Tribromophenol	118%	119%	46-145%
4165-60-0	Nitrobenzene-d5	108%	109%	36-143%
321-60-8	2-Fluorobiphenyl	97%	99%	48-116%
1718-51-0	Terphenyl-d14	117%	119%	45-133%

(a) Outside laboratory control limits but within reasonable method acceptance limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA50650
Account: APEXPAT Apex
Project: Intermediate GWS- SCE&G Calhoun Park Area Site

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13076-MS	F0046235.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
OP13076-MSD	F0046236.D	1	12/19/18	SV	12/18/18	OP13076	EF1702
LA50650-12	F0046252.D	1	12/19/18	SV	12/18/18	OP13076	EF1702

The QC reported here applies to the following samples: Method: SW846 8270D

LA50650-1, LA50650-2, LA50650-3, LA50650-4, LA50650-5, LA50650-6, LA50650-7, LA50650-8, LA50650-9, LA50650-10, LA50650-11, LA50650-12

6.3.1

6

CAS No.	Compound	LA50650-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
105-67-9	2,4-Dimethylphenol	9.7 U		48.4	45.2	93	48.4	46.3	96	2	57-108/21
50-32-8	Benzo(a)pyrene	9.7 U		48.4	52.0	108	48.4	52.5	109	1	83-113/15
86-74-8	Carbazole	9.7 U		48.4	52.9	109* [a]	48.4	53.8	111* [a]	2	84-106/21
91-20-3	Naphthalene	0.24	J	48.4	45.6	94	48.4	46.6	96	2	76-97/19

CAS No.	Surrogate Recoveries	MS	MSD	LA50650-12	Limits
367-12-4	2-Fluorophenol	53%	53%	57%	19-84%
4165-62-2	Phenol-d5	36%	36%	38%	10-70%
118-79-6	2,4,6-Tribromophenol	114%	116%	124%	46-145%
4165-60-0	Nitrobenzene-d5	103%	105%	110%	36-143%
321-60-8	2-Fluorobiphenyl	92%	94%	98%	48-116%
1718-51-0	Terphenyl-d14	107%	107%	119%	45-133%

(a) Outside laboratory control limits but within reasonable method acceptance limits.

* = Outside of Control Limits.

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
AM-03D	1/14/1994	200 U	10 U	10 U	10 U	10 U	200 U	200 U	200 U
AM-03D	12/1/1998	5 U	9.6 U	9.60 U	0.29 U	4.8 U	5 U	5 U	5 U
AM-03D	11/14/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
AM-03D	10/12/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-01D	1/6/1994	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
BM-01D	12/3/1998	5 U	9 U	10 U	0.28 U	4.70 U	5 U	5 U	5 U
BM-01D	11/13/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-03D	11/14/2000	30,000	9,500	37 J	100 U	45 J	3,400	3,100	2,500 U
BM-03D	10/16/2001	35,000	11,000	35	10 U	10 U	3,800	4,200	2,800
BM-03D LOWER	12/4/2001	53,000 J	5,700	15	10 U	10 U	5,000	5,100	3,600
BM-03D UPPER	12/4/2001	45,000 J	7,800	25	10 U	10 U	5,300	5,900	3,800
BM-03D	4/29/2005	54,000	11,000	10 U	10 U	10 U	3,700	6,900	4,200
BM-03D	9/13/2005	37,000 J	8,200	10 UJ	10 U	10 U	2,300	6,600	4,600
BM-03D	11/9/2005	24,000	8,100	220 UJ	37 UJ	350 UJ	2,300	4,300	3,200
BM-03D	1/9/2006	1,500	4,900	10 U	10 U	10 U	1,600	2,100	1,020
BM-03D	2/24/2006	18,000	7,600	86	10 U	10 U	2,200	1,600	1,880
BM-03D	6/13/2006	24,000	6,300	100 U	100 U	100 U	2,100	2,600	1,050
BM-03D	9/11/2006	37,000	9,900	10 U	10 U	10 U	3,300	3,100	1,790
BM-03D	12/1/2006	27,000	9,300	10 U	10 U	10 U	2,400	5,800	3,300
BM-03D	3/19/2007	21,000	14,000	2,500 U	10 U	10 U	2,300	940	1,810
BM-03D	9/12/2007	14,000	5,900 J	10 U	10 U	10 U	2,200	540	1,180
BM-03D	6/18/2008	30,000	15,000	10 U	10 U	10 U	3,200	4,100	2,100
BM-03D	3/2/2009	35,000	18,000	220 UJ	37 UJ	350 UJ	4,200	7,000	3,800
BM-03D	12/17/2009	28,000 J	7,600	61 J	13 UJ	81 UJ	3,200 J	5,200	3,000
BM-03D	8/20/2010	34,000	11,000	68	10 U	10 U	4,400	4,600	3,200
BM-03D	6/23/2011	24,000	12,000	10 UJ	10 UJ	10 UJ	4,100	3,000	2,400
BM-03D	3/14/2012	19,000	14,000	10 UJ	10 UJ	10 UJ	3,000	1,100	1,630
BM-03D	12/4/2012	26,000	14,000	28 J	14 UJ	10 UJ	3,200	960	1,610
BM-03D	9/18/2013	25,000	8,200	15 UJ	10 UJ	14 UJ	3,400	340 J	1,440
BM-03D	5/22/2014	30,000	10,000	85 UJ	10 UJ	16 J	3,600	320 J	1,300 J
BM-03D	3/19/2015	27,500	13,300	10 U	10 U	10 U	2,400	93	611
BM-03D	12/22/2015	26,300	10,800	10 U	10 U	10 U	3,280	134 J	756
BM-03D	9/26/2016	26,200 J	9,640 J	10 U	10 U	10 U	3,470 J	146 J	439 J
BM-03D	6/8/2017	23,300	11,800	17 U	10 U	10 U	3,800	132 J	759
BM-03D	3/22/2018	21,400	10,900	10 U	10 U	10 U	2,900	123 J	468 J
BM-03D	12/13/2018	24,500	14,300	10 U	10 U	10 U	3,960	110 J	610 J
BM-03D DUP	11/14/2000	30,000	8,000	17 J	100 U	45 J	3,600	2,700	2,500 U
BM-03D DUP	12/4/2001	32,000 J	6,800	18	10 U	10 U	5,500	6,000	3,900
BM-03D DUP	3/19/2007	20,000	12,000	10 U	10 U	10 U	2,400	960	1,870
BM-03D DUP	9/12/2007	15,000	4,000 J	10 U	10 U	10 U	2,400	590	1,260
BM-03D DUP	6/18/2008	29,000	15,000	10 U	10 U	10 U	2,900	3,700	2,200

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
BM-03D DUP	3/2/2009	38,000	20,000	220 UJ	37 UJ	350 UJ	4,500	7,600	4,000
BM-03D DUP	12/17/2009	20,000 J	7,000	54 UJ	13 UJ	81 UJ	4,000 J	6,300	3,600
BM-04D	11/13/2000	20,000	5,600	50 U	50 U	50 U	2,500 U	2,500 U	2,500 U
BM-04D	10/16/2001	20,000	7,100	24	10 U	10 U	2,700	1,400	2,600
BM-04D	4/28/2005	14,000	6,500	10 U	10 U	10 U	1,700	590	1,340
BM-04D	2/23/2006	20,000	6,700	10 U	10 U	10 U	2,800	500 U	1,980
BM-04D	9/11/2006	9,700	2,500	50 U	50 U	50 U	1,400	1,000 U	1,000 U
BM-04D	3/19/2007	13,000	7,800	10 U	10 U	10 U	1,900	250	1,350
BM-04D	9/11/2007	25,000	5,900	10 U	10 U	10 U	3,400	500 U	2,080
BM-04D	6/17/2008	19,000	9,400	10 U	10 U	10 U	2,500	350	1,240
BM-04D	2/25/2009	22,000	7,500	220 UJ	37 UJ	350 UJ	3,100	250	1,710
BM-04D	12/15/2009	14,000	6,700	10 U	10 U	10 U	2,400	300	1,440
BM-04D	8/19/2010	19,000	5,500	10 U	10 U	10 U	3,100	261	1,550
BM-04D	6/22/2011	13,000	5,300	10 UJ	10 UJ	10 UJ	1,700	130	910
BM-04D	3/13/2012	11,000	5,900	10 UJ	10 UJ	10 UJ	1,600	150 J	740
BM-04D	12/3/2012	13,000	4,600	10 UJ	10 UJ	10 UJ	1,900	130 J	900
BM-04D	9/18/2013	11,000	1,700	10 U	10 U	10 U	990	45 J	440
BM-04D	5/22/2014	15,000	5,700	10 U	10 U	10 U	1,300	75 J	660
BM-04D	3/18/2015	11,400	7,650	84 UJ	10 UJ	12 UJ	1,090	57	607
BM-04D	12/21/2015	21,400	9,020	10 U	10 U	10 U	27 UJ	112 J	39 UJ
BM-04D	9/27/2016	20,200	8,310	10 U	10 U	10 U	1,760	168 J	778 J
BM-04D	6/7/2017	18,700	9,730	10 U	10 U	10 U	2,410	338 J	1,290
BM-04D	3/22/2018	12,600	6,550	10 U	10 U	10 U	1,170	62 J	286 J
BM-04D	12/13/2018	7,130	4,210	10 U	10 U	10 U	644	20 J	194 J
BM-05D	11/14/2000	220	25	24	10 U	88	25 U	25 U	75
BM-05D	10/18/2001	14	10 U	10 U	10 U	52	5 U	5 U	28
BM-06C	10/11/2001	100	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	4/26/2005	62	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	3/19/2007	66	10 U	10 U	10 U	10 U	38	5 U	357
BM-06C	9/9/2007	25	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	6/18/2008	29	11	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	3/2/2009	12	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	12/21/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	8/20/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	6/22/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	3/14/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	12/4/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-06C	9/18/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07B	10/15/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
BM-07C	10/15/2001	780	13	10 U	10 U	10 U	130	170	130
BM-07C	4/27/2005	130	15 R	10 UR	10 UR	10 UR	71	5 U	65
BM-07C	2/24/2006	100	10	10 U	10 U	10 U	57	5 U	15
BM-07C	9/11/2006	67	10 U	10 U	10 U	10 U	52	5 U	8
BM-07C	3/19/2007	97	15	10 U	10 U	10 U	56	5 U	28
BM-07C	9/12/2007	37	10 U	10 U	10 U	10 U	41	5 U	7
BM-07C	6/17/2008	68	10 U	10 U	10 U	10 U	33	5 U	5 U
BM-07C	3/2/2009	48	11	10 U	10 U	10 U	23	5 U	6.5
BM-07C	12/17/2009	50	14	10 U	10 U	10 U	15	5 U	5 U
BM-07C	8/20/2010	21	10 U	10 U	10 U	10 U	7	5 U	5 U
BM-07C	6/22/2011	17	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07C	3/8/2012	5.8	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07C	12/4/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07C	9/19/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07C	5/20/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-07C	3/19/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08B	10/12/2001	45,000	12,000	35	10 U	10 U	3,600	8,000	4,500
BM-08B	5/3/2005	24,000	12,000	10 U	10 U	10 U	3,000	3,700	2,500
BM-08B	9/13/2005	13,000	2,700	22	10 U	10 U	640	580	1,060
BM-08B	11/9/2005	14,000	4,300	10 U	10 U	10 U	1,000	1,300	1,550
BM-08B	1/9/2006	9,500	6,900	26	10 U	10 U	1,000	1,800	1,200
BM-08B	2/24/2006	9,600	9,800	72	10 U	10 U	890	1,400	1,660
BM-08B	6/14/2006	22,000	5,500	34	10 U	10 U	1,200	990	680
BM-08B	9/8/2006	18,000	7,800	10 U	10 U	10 U	2,000	1,900	1,810
BM-08B	11/30/2006	400	10 U	10 U	10 U	10 U	46	110	250
BM-08B	3/19/2007	6,100	6,000	10 U	10 U	10 U	640	800	1,170
BM-08B	9/11/2007	6,000	2,900	10 U	10 U	10 U	660	920	560
BM-08B	6/17/2008	23,000	9,400	10 U	10 U	10 U	1,800	2,900	2,400
BM-08B	2/25/2009	19,000	9,900	220 UJ	37 UJ	350 UJ	2,300	2,900	2,800
BM-08B	12/15/2009	14,000	6,300	10 U	10 U	10 U	1,900	2,000	1,920
BM-08B	8/20/2010	20,000	8,400	10 U	10 U	10 U	2,100	1,700	2,000
BM-08B	6/22/2011	15,000	5,600	23 J	10 UJ	10 UJ	1,900	1,700	1,450
BM-08B	3/8/2012	16,000	3,800	10 UJ	10 UJ	10 UJ	1,800	1,300	1,380
BM-08B	12/3/2012	15,000	4,400	18 J	10 UJ	10 UJ	1,600	1,100	1,180
BM-08B	9/17/2013	7,700	1,700	10 U	10 U	10 U	1,100	620	660
BM-08B	5/20/2014	2,600	85	10 U	10 U	10 U	450	190	230
BM-08B	3/17/2015	1,180	714	10 U	10 U	10 U	345	104	190
BM-08C	10/12/2001	10,000	2,800	10 U	10 U	10 U	1,300	820	720
BM-08C	5/3/2005	4,800	780 J	10 U	10 U	10 U	880	400	470
BM-08C	9/13/2005	38	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	11/9/2005	8	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	1/9/2006	2,100	180	10 U	10 U	10 U	300	44	91

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
BM-08C	2/24/2006	130	27	10 U	10 U	10 U	120	5 U	61
BM-08C	6/14/2006	19	10 U	10 U	10 U	10 U	5 U	5 U	8
BM-08C	9/8/2006	7	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	11/30/2006	7	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	3/19/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	9/11/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	6/17/2008	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	2/25/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	12/15/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	3/8/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C	9/17/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-08C DUP	5/3/2005	4,800	1,600 J	10 U	10 U	10 U	860	400	470
BM-10B	10/12/2001	38	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	4/27/2005	19	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	2/24/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	3/19/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	9/12/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	6/18/2008	5	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	3/2/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	12/21/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	8/20/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	6/23/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	3/8/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	12/4/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B	9/18/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B DUP	12/4/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10B DUP	9/18/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	10/12/2001	14,000	1,800	10 U	10 U	10 U	800	260	260
BM-10C	4/27/2005	20,000	2,200	10 U	10 U	10 U	1,200	250 U	700
BM-10C	9/14/2005	21,000	950				760	250 U	290
BM-10C	11/8/2005	9,800	200	10 U	10 U	10 U	300	100 U	330
BM-10C	1/9/2006	11,000	310 J	10 U	10 U	10 U	250 U	250 U	250 U
BM-10C	2/24/2006	5,900	160 J	10 U	10 U	10 U	270	16	263
BM-10C	6/14/2006	300	110	10 U	10 U	10 U	170	12	67
BM-10C	9/11/2006	46	130 E	10 U	10 U	10 U	19	5 U	16
BM-10C	11/30/2006	16	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	3/19/2007	5.8	10 U	10 U	10 U	10 U	6	5 U	5 U
BM-10C	9/12/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	6/18/2008	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	3/2/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

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SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
BM-10C	12/21/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	3/8/2012	9.1	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	9/18/2013	3,700	390	10 U	10 U	10 U	410	81	205
BM-10C	5/22/2014	7,700	830	10 U	10 U	10 U	680	200 J	320 J
BM-10C	3/19/2015	6,510	996	10 U	10 U	10 U	768	158	309
BM-10C	12/18/2015	9,890	1,220	10 U	10 U	10 U	719	196	321
BM-10C	9/26/2016	7,370	385	10 U	10 U	10 U	349	49 J	129 J
BM-10C	6/7/2017	155	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-10C	3/22/2018	5,230	411	10 U	10 U	10 U	307	30 J	169 J
BM-10C	12/13/2018	10,300	988	10 U	10 U	10 U	782	55 J	456 J
BM-10C DUP	4/27/2005	20,000	2,000	10 U	10 U	10 U	1,200	250 U	670
BM-10C DUP	9/11/2006	48	95	10 U	10 U	10 U	16	5 U	17
BM-11B	6/15/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
BM-11C	6/15/2006	9	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-01D	1/10/1994	15,000	67	20 U	20 U	20 U	770	500 U	420 J
CM-06D	11/13/2000	5 U	10 U	10 U	10 U	10 U	34	5 U	13
CM-06D	10/24/2001	5 U	10 U	10 U	10 U	10 U	18	5 U	19
CM-06D	4/26/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-06D	2/22/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-06D	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-07D	11/16/2000	5 U	10 UJ	10 UJ	10 UJ	10 UJ	5 U	5 U	5 U
CM-07D	10/11/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-07D	4/26/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-07D	2/23/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-07D	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	11/13/2000	12,000	10 U	10 U	10 U	15	500 U	500 U	500 U
CM-11D	10/17/2001	5,600	69	10 U	10 U	10 U	13	5	18
CM-11D	4/29/2005	48	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	9/14/2005	36	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	12/16/2005	30	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	2/22/2006	41	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	4/25/2006	490	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	6/12/2006	350	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	9/11/2006	380	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	11/30/2006	350	10 U	10 U	10 U	10 U	5 U	5 U	6
CM-11D	3/16/2007	93	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	9/12/2007	2,700	10 U	10 U	10 U	10 U	5 U	5 U	5 U

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DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
CM-11D	6/18/2008	19	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	2/26/2009	5.1	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	12/15/2009	7.0	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	8/20/2010	9.2	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	6/22/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	3/14/2012	5.4	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	12/4/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	9/18/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
CM-11D	5/20/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U.
CM-11D	3/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
DM-01D	1/11/1994	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DM-01D	12/1/1998	5 U	9.5 U	9.5 U	0.28 U	4.80 U	5 U	5 U	5 U
DM-01D	11/14/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
DM-01D	10/25/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
DM-02D	1/7/1994	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
DM-02D	12/1/1998	5 U	10 U	10 U	0.31 U	5.20 U	5 U	5 U	5 U
DM-02D	10/24/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
DRW-02	12/3/1998	4,600	2,800	550	0.30 U	57	860	3,000	1,400
DRW-02	11/16/2000	9,200	4,100 J	10 UJ	10 UJ	74 J	1,500	6,400	2,180
EB101801	10/18/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB102301	10/23/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB102401	10/24/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB111400	11/14/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB120501	12/5/2001	5 U	10 U	10 U	10 U	10 U	5 U	6	5 U
EB030905	3/9/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB042805	4/28/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB050305	5/3/2005	5 U	17	10 U	10 U	10 U	5 U	5 U	5 U
EB091305	9/13/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB010906	1/9/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB022206	2/22/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB061306	6/13/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB031507	3/15/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB032107	3/21/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB090907	9/9/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB061708	6/17/2008	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB022509	2/25/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB121609	12/16/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB081910	8/19/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB062011	6/20/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB030512	3/5/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

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BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
EB112912	11/29/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB091713	9/17/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB052014	5/20/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB03172015	3/17/2015	15	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB12182015	12/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB092816	9/28/2016	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB06062017	6/6/2017	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB032218	3/22/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EB121318	12/13/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EBMW-06	11/14/2000	29	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EBMW-06	10/23/2001	25	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EBMW-07	11/14/2000	12	10 U	10 U	10 U	10 U	5 U	5 U	5 U
EBMW-07	10/23/2001	35	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-03D	1/18/1994	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
LM-03D	11/17/1998	5 U	10 U			10 U	5 U	5 U	5 U
LM-03D	12/2/1998	5 U	10 U	9.90 U	0.30 U	5 U	5 U	5 U	5 U
LM-03D	3/10/1999	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
LM-03D	11/15/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-03D	10/24/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	11/16/2000	5 U	10 UJ	10 UJ	10 UJ	10 UJ	5 U	5 U	7
LM-08C	10/10/2001	25 U	33	10 U	10 U	10 U	25 U	25 U	25 U
LM-08C LOWER	12/3/2001	6 UJ	19	10 U	10 U	10 U	5 UJ	5 UJ	5 UJ
LM-08C UPPER	12/3/2001	7 UJ	67	10 U	10 U	10 U	5 UJ	5 UJ	8 J
LM-08C	4/26/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	2/23/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	2/26/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	12/16/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	8/23/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	6/20/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	3/13/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	11/30/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	9/19/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	5/21/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	3/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	12/21/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	9/27/2016	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	6/8/2017	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	3/22/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-08C	12/13/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

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DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
LM-08C DUP	8/23/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	3/10/1999	1,900	5,100	47	5 U	48	1,500	50 U	1,100
LM-09B	11/16/2000	2,000	710 J	10 UJ	10 UJ	71 J	1,100	100 U	690
LM-09B	10/22/2001	3,000	3,200	10 U	10 U	46	1,700	22	790
LM-09B	4/29/2005	1,800	2,200	61	10 U	82	860	50 U	260
LM-09B	9/14/2005	80	1,200	26	10 U	38	79	51	166
LM-09B	11/9/2005	33	550	13	10 U	130	130	6	137
LM-09B	1/10/2006	36 J	420	23	10 U	39	80	6 J	40 J
LM-09B	2/23/2006	56	110	10 U	10 U	41	120	5 U	36
LM-09B	6/14/2006	25	77	10 U	10 U	34	260	12	76
LM-09B	9/13/2006	56	10 U	12 R	10 U	80	180	17	138
LM-09B	12/1/2006	100	5,400	10 U	10 U	27	180	10	40
LM-09B	3/16/2007	5 U	38	10 U	10 U	16	13	5 U	5 U
LM-09B	9/9/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	6/19/2008	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	2/26/2009	5.6	81	10 U	10 U	10 U	18	5 U	6
LM-09B	12/17/2009	5.0 U	79	10 U	10 U	10 U	15	5 U	5 U
LM-09B	8/23/2010	5.3	110	10 U	10 U	10 U	16	5 U	8
LM-09B	6/20/2011	14	280	10 UJ	10 U	10 UJ	20	5 U	15
LM-09B	3/13/2012	11	170	10 U	10 U	10 U	20	5 U	7.8
LM-09B	11/30/2012	5 U	42	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	9/19/2013	25	360	10 U	10 U	10 U	9	5 U	7
LM-09B	5/21/2014	5 U	12	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	3/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	12/21/2015	5 U	17	10 U	10 U	10 U	5 U	5 U	5 U
LM-09B	9/27/2016	5 U	15	10 U	10 U	10 U	5 U	5 U	5 U
LM-10B	3/10/1999	5 U	10	5 U	5 U	5 U	48	5 U	22
LM-10B	10/22/2001	5 U	10 U		10 U	10 U	110	5 U	48
LM-10B	4/26/2005	5 U	10 U	10 U	10 U	10 U	66	5 U	33
LM-10B	2/23/2006	5 U	10 U	10 U	10 U	10 U	46	5 U	24
LM-10B	3/16/2007	5 U	10 U	10 U	10 U	10 U	52	5 U	28
LM-10D	3/9/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-10D	9/14/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-10D	12/16/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-10D	2/23/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-10D	6/14/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
LM-10D	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01B	1/18/1994	3,600	690	130	1 J	81	250	160	290
MM-01B	12/3/1998	19,000	2,600	9.80 U	3	610	1,500	620	1,600

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
MM-01B	11/15/2000	11,000	11,000	480	50 U	320	1,000	2,600	1,680
MM-01B	10/17/2001	18,000	560	10 U	10 U	10 U	1,500	1,700	1,700
MM-01B	12/4/2001	18,000 J	6,100	190	10 U	190	2,100	2,900	2,500
MM-01D	1/17/1994	4,500	30	10 U	10 U	10 U	1,000 U	1,000 U	1,000 U
MM-01D	12/3/1998	12,000	100	10 U	0.30 U	5 U	1,200	16	350
MM-01D	10/17/2001	12,000	67	10 U	10 U	10 U	1,500	100 U	240
MM-01D	4/28/2005	2,000	60	10 U	10 U	10 U	290	5 U	48
MM-01D	2/22/2006	1,000	65	10 U	10 U	10 U	110	6	52
MM-01D	9/8/2006	1,800	73	10 U	10 U	10 U	43	5	55
MM-01D	3/15/2007	1,300	62	10 U	10 U	10 U	12	5 U	19
MM-01D	9/10/2007	590	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	6/17/2008	820	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	2/25/2009	520	10 U	10 U	10 U	10 U	5 U	5 U	38
MM-01D	12/16/2009	370 J	10 U	10 U	10 U	10 U	5 U	5 U	5
MM-01D	8/23/2010	340	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	6/21/2011	340	10 U	10 U	10 U	10 U	5 U	5 U	6
MM-01D	3/14/2012	250	10 U	10 U	10 U	10 U	5 U	5 U	5
MM-01D	11/29/2012	130	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	9/17/2013	150	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	5/23/2014	150	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	3/18/2015	86	NA	NA	NA	NA	5 U	5 U	5 U
MM-01D	12/21/2015	32	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	9/28/2016	21	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	6/6/2017	11	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	3/21/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-01D	12/13/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-02B	12/3/1998	19,000	5,000	9.80 U	0.29 U	4.90 U	1,100	5 U	800
MM-02B	11/17/2000	28,000	380 J	10 UJ	10 UJ	46 J	2,500 U	12,000	2,500 U
MM-02D	1/18/1994	1,800	3,400	10 U	10 U	3 J	3,600	490	2,500
MM-02D	12/3/1998	19,000	10 U	9.90 U	0.30 U	5 U	1,700	46	950
MM-02D	10/18/2001	15,000	3,500	10 U	10 U	10 U	1,300	25 U	260
MM-02D	4/28/2005	16,000	2,900	10 U	10 U	10 U	250 U	250 U	250 U
MM-02D	2/23/2006	26,000	2,600	10 U	10 U	10 U	1,800	500 U	500 U
MM-02D	9/12/2006	1,500	10 U	10 U	10 U	10 U	50 U	50 U	50 U
MM-02D	3/19/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-02D	9/10/2007	17,000	4,200	10 U	10 U	10 U	250 U	250 U	250 U
MM-02D	6/19/2008	19,000	4,100	10 U	10 U	10 U	8 UJ	10 UJ	12 UJ
MM-02D	3/3/2009	22,000	5,500	220 UJ	37 UJ	350 UJ	250 U	250 U	250 U
MM-02D	12/17/2009	11,000	3,200	10 U	10 U	10 U	35 UJ	34 UJ	91 UJ
MM-02D	8/23/2010	18,000 J	3,200	10 U	10 U	10 U	108 J	123 J	157 J
MM-02D	6/21/2011	29,000 J	4,100	10 UJ	10 U	10 UJ	66 UJ	52 UJ	41 UJ

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
MM-02D	3/15/2012	13,000	2,300	10 U	10 U	10 U	22 J	10 J	61 J
MM-02D	12/3/2012	16,000	4,900	10 UJ	10 UJ	10 UJ	81 J	27 J	78 J
MM-02D	9/19/2013	31,000	2,900	10 U	10 U	10 U	88 J	22 J	22 J
MM-02D	5/22/2014	27,000	3,900	10 U	10 U	10 U	83 J	69 Jj	300 Jj
MM-02D	3/19/2015	26,000	2,540	10 U	10 U	10 U	62	11	88
MM-02D	12/22/2015	21,400	3,390	10 U	10 U	10 U	59 J	36 J	98 J
MM-02D	9/27/2016	23,400	4,570	10 U	10 U	10 U	96 J	42	78
MM-02D	6/7/2017	17,300	5,060	10 U	10 U	10 U	58 U	73 J	80 J
MM-02D	3/22/2018	28,000	5,060	10 U	10 U	10 U	123 J	58 U	78 U
MM-02D	12/13/2018	30,100	5,520	10 U	10 U	10 U	76 J	45 U	140 J
MM-02D DUP	6/21/2011	23,000 J	4,000	10 UJ	10 U	10 UJ	33 UJ	26 UJ	21 U
MM-02D DUP	3/15/2012	11,000	2,300	10 U	10 U	10 U	17 UJ	13 UJ	43 J
MM-02D DUP	5/22/2014	27,000	3,700	10 U	10 U	10 U	73 J	36 Jj	120 Jj
MM-02D DUP	3/19/2015	24,900	4,660	10 U	10 U	10 U	58	10	82
MM-02D DUP	12/22/2015	20,000	3,360	10 U	10 U	10 U	66 J	21 UJ	126 J
MM-12B	11/15/2000	1,800	10 U	10 U	10 U	10 U	65	50 U	50 U
MM-12B	10/10/2001	750	150	10 U	10 U	10 U	44	10 U	81
MM-12B	4/29/2005	630	330 R	10 UR	10 UR	10 UR	50 U	50 U	50 U
MM-12B	2/24/2006	620	310	10 U	10 U	10 U	55	5 U	41
MM-12B	9/13/2006	600	310	10 UR	10 U	10 U	62	5 U	42
MM-12B	3/15/2007	360	440	10 U	10 U	10 U	50 U	50 U	50 U
MM-12B	9/10/2007	500	420	10 U	10 U	10 U	47	5 U	23
MM-12B	6/18/2008	640	340	10 U	10 U	10 U	51	5 UJ	27
MM-12B	3/3/2009	680	340	10 U	10 U	10 U	67	5 U	41
MM-12B	12/17/2009	780	39	10 U	10 U	10 U	51	5 UJ	26
MM-12B	8/19/2010	530	25	10 U	10 U	10 U	54	5 U	27
MM-12B	6/20/2011	200	33	10 U	10 U	10 U	47	5 U	25
MM-12B	3/14/2012	70	14	10 U	10 U	10 U	40	5 U	21
MM-12B	11/29/2012	120	13	10 U	10 U	10 U	52	5 U	21
MM-12B	9/19/2013	490	36	10 U	10 U	10 U	55	5 U	25
MM-12B	5/22/2014	500	23	10 U	10 U	10 U	57	5 U	47
MM-12B	3/17/2015	491	11	10 U	10 U	10 U	52	5 U	18
MM-12B	12/18/2015	392	10 U	10 U	10 U	10 U	56	5 U	14
MM-12B	9/26/2016	339	10 U	10 U	10 U	10 U	63	5 U	10
MM-12B	6/7/2017	447	10 U	10 U	10 U	10 U	67	5 U	13
MM-12B	3/22/2018	507	10 U	10 U	10 U	10 U	58	5 U	10 J
MM-12B	12/12/2018	180	10 U	10 U	10 U	10 U	60	5 U	7
MM-13B	10/22/2001	28	10 U	10 U	10 U	10 U	5 U	5 U	19
MM-13C	10/22/2001	56,000	4,600	35	10 U	10 U	3,700	890	1,870
MM-13C	12/5/2001	43,000 J	5,500	47	10 U	10	6,000	1,600	3,600

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
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DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
MM-13C	5/2/2005	33,000	7,300	10 U	10 U	10 U	2,700	500 U	1,340
MM-13C	2/22/2006	34,000 J	4,400 J	10 U	10 U	14	3,100 J	550	1,550 J
MM-13C	9/12/2006	45,000	4,100	50 U	50 U	50 U	3,800	2,500 U	2,500 U
MM-13C	3/16/2007	56,000	4,800	10 U	10 U	10 U	3,100	470	1,520
MM-13C	9/10/2007	9,600	4,100	14 J	10 U	10 U	2,900	870	3,200
MM-13C	6/19/2008	36,000	3,600	10 U	10 U	10 U	2,500	19 UJ	830
MM-13C	3/3/2009	39,000	5,500	220 UJ	37 UJ	350 UJ	3,100	500 U	1,300
MM-13C	12/15/2009	29,000	3,900	10 U	10 U	10 U	2,600	350	1,060
MM-13C	8/23/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-13C	6/21/2011	31,000	4,300	18 J	10 U	10 UJ	2,900	25 UJ	780
MM-13C	3/15/2012	16,000	3,300	120	10 U	10 U	1,100	170 J	439
MM-13C	11/29/2012	23,000	4,500	10 UJ	10 UJ	10 UJ	4,000	330	1,170
MM-13C	9/19/2013	39,000	3,300	10 UJ	10 UJ	12 J	3,200	310	1,040
MM-13C	5/22/2014	34,000	3,900	10 U	10 U	10 U	3,200	330 J	1,000 J
MM-13C	3/19/2015	1,540	3,460	10 U	10 U	10 U	146	13	52
MM-13C	12/22/2015	33,000	3,500	10 U	10 U	10 U	3,140	270 J	1,070
MM-13C	9/27/2016	25,500	3,610	10 U	10 U	10 U	2,650	203 J	755 J
MM-13C	6/7/2017	18,300	4,560	10 U	10 U	10 U	1,860	169 J	678 J
MM-13C	3/22/2018	26,400	2,760	10 U	10 U	10 U	2,750	196 J	704 J
MM-13C	12/12/2018	29,000	4,570	10 U	10 U	10 U	3,300	234 J	924 J
MM-13D	10/13/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-13D	5/2/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-13D	2/22/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-13D	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	10/17/2001	5,400	6,700	220	10 U	180	660	38	550
MM-14C	4/28/2005	18	38	10 U	10 U	10 U	12	5 U	5 U
MM-14C	2/27/2006	6	24	10 U	10 U	10 U	7	5 U	5 U
MM-14C	9/13/2006	16	10 U	10 UR	10 U	10 U	10	5 U	5 U
MM-14C	3/15/2007	5	27	10 U	10 U	10 U	5	5 U	5 U
MM-14C	9/10/2007	6	38	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	6/19/2008	48	30	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	2/26/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	12/17/2009	7	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	8/19/2010	82	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	6/23/2011	130	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	3/15/2012	98	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	11/29/2012	300	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	9/19/2013	46	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	5/21/2014	7.5	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	3/17/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	12/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	9/26/2016	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

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SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
MM-14C	6/8/2017	9	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	3/21/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-14C	12/12/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-15C	10/18/2001	5,100	3,800	230	10 U	110	750	3,000	1,500
MM-15D	10/13/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-15D	4/29/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-15D	2/24/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-15D	3/15/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16B	10/15/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16B	12/3/2001	5 UJ	11	10 U	10 U	10 U	5 UJ	5 UJ	5 UJ
MM-16C	10/15/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	12/3/2001	5 UJ	10 U	10 U	10 U	10 U	5 UJ	5 UJ	5 UJ
MM-16C	4/27/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	2/27/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	3/15/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	2/25/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	12/16/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16C	9/20/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
MM-16D	10/13/2001	430	41	280	10 U	10 U	59	5 U	87
MM-16D	4/26/2005	430	17	350	10 U	10 U	59	5 U	127
MM-16D	2/27/2006	420	11	290	10 U	10 U	50	5 U	118
MM-16D	9/8/2006	340	17	250	10 U	10 U	45	5 U	115
MM-16D	3/15/2007	350	18	310	10 U	10 U	36	5 U	103
MM-16D	9/9/2007	280	18	260	10 U	10 U	24	5 U	90
MM-16D	6/17/2008	240	13	120	10 U	10 U	8	5 U	110
MM-16D	2/25/2009	23	10 U	25	10 U	10 U	5 U	5 U	7.6
MM-16D	12/17/2009	170	17	200	10 U	10 U	7	5 U	93
MM-16D	8/23/2010	200	14	240	10 U	10 U	5	5 U	94
MM-16D	6/20/2011	110	13 J	240	10 U	10 UJ	5 U	5 U	53
MM-16D	3/14/2012	110	10 U	100	10 U	10 U	5 U	5 U	31
MM-16D	11/29/2012	51	10 UJ	170	10 UJ	10 UJ	5 U	5 U	20
MM-16D	9/20/2013	97	11	200	10 U	10 U	5 U	5 U	21
MM-16D	5/23/2014	110	10 U	160	10 U	10 U	5 U	5 U	26
MM-16D	3/19/2015	67	10 U	115	10 U	10 U	5 U	5 U	20
MM-16D	12/21/2015	43	10 U	126	10 U	10 U	5 U	5 U	18
MM-16D	9/28/2016	39	10 U	75	10 U	10 U	5 U	5 U	17
MM-16D	6/6/2017	29	10 U	77	10 U	10 U	5 U	5 U	18
MM-16D	3/21/2018	16	10 U	27	10 U	10 U	5 U	5 U	12
MM-16D	12/13/2018	15	10 U	32	10 U	10 U	5 U	5 U	11

APPENDIX D

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DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
MM-16D DUP	9/28/2016	40	10 U	94	10 U	10 U	5 U	5 U	18
MM-16D DUP	6/6/2017	28	10 U	69	10 U	10 U	5 U	5 U	17
MM-16D DUP	3/21/2018	16	10 U	27	10 U	10 U	5 U	5 U	11
MM-16D DUP	12/13/2018	15	10 U	30	10 U	10 U	5 U	5 U	11
NM-06D	11/15/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	10/24/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	4/27/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	2/23/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	3/16/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	2/26/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	12/16/2009	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	8/19/2010	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	6/20/2011	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	3/13/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	11/30/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	9/17/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	5/21/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	3/18/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	12/21/2015	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	9/27/2016	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	6/8/2017	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	3/22/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D	12/13/2018	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
NM-06D DUP	10/24/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	11/13/2000	4,200	10 U	10 U	10 U	10 U	500 U	500 U	500 U
PAMW-02	10/16/2001	2,600	10 U	10 U	10 U	10 U	7	5 U	22
PAMW-02	5/2/2005	4,600	13 U	10 U	10 U	10 U	23	7	28
PAMW-02	9/13/2005	4,700 J	11	10 U	10 U	10 U	50 U	50 U	50 U
PAMW-02	12/16/2005	1,700	10 U	10 U	10 U	10 U	6	5 U	5 U
PAMW-02	2/22/2006	3,300	10 U	10 U	10 U	10 U	17	5 U	18
PAMW-02	6/13/2006	2,800	10 U	10 U	10 U	10 U	100 U	100 U	100 U
PAMW-02	9/12/2006	18,000	10 U	10 U	10 U	10 U	500 U	500 U	500 U
PAMW-02	11/30/2006	5,200	10 U	10 U	10 U	10 U	500 U	500 U	500 U
PAMW-02	3/20/2007	3,700	10 U	10 U	10 U	10 U	12	5 U	23
PAMW-02	9/11/2007	1,700	10 U	10 U	10 U	10 U	5 U	5 U	7
PAMW-02	6/17/2008	3,800	10 U	10 U	10 U	10 U	5 U	5 U	12
PAMW-02	3/3/2009	4,700	10 U	10 U	10 U	10 U	50 U	50 U	50 U
PAMW-02	8/19/2010	1,200	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	6/21/2011	340	10 U	10 U	10 U	10 U	5 U	5 U	6
PAMW-02	3/5/2012	130	10 U	10 U	10 U	10 U	5 U	5 U	5 U

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
PAMW-02	12/3/2012	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	9/17/2013	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	5/21/2014	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	3/17/2015	52	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	12/18/2015	63	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	9/26/2016	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	6/6/2017	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	3/21/2018	906	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02	12/12/2018	174	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PAMW-02 DUP	9/13/2005	1,300 J	12	10 U	10 U	10 U	18	5 U	20
PAMW-03	11/13/2000	290	10 U	10 U	10 U	10 U	50 U	50 U	50 U
PM-01C	10/11/2001	1,200	160	10 U	10 U	10 U	150	9	110
PM-01C	5/2/2005	1,800	59 U	10 U	10 U	10 U	160	5 U	33
PM-01C	9/13/2005	2,000	210	10 U	10 U	10 U			
PM-01C	12/16/2005	1,000	190	10 U	10 U	10 U	150	8	30
PM-01C	2/22/2006	1,100	91	10 U	10 U	10 U	170	5 U	33
PM-01C	6/13/2006	1,200	61	10 U	10 U	10 U	160	5 U	9
PM-01C	9/12/2006	1,100	23 R	10 UR	10 UR	10 UR	130	5 U	17
PM-01C	11/30/2006	910	97	10 U	10 U	10 U	98	50 U	50 U
PM-01C	3/20/2007	1,100	250	10 U	10 U	10 U	170	6	35
PM-01C	9/11/2007	1,000	88	10 U	10 U	10 U	120	100 U	100 U
PM-01C	6/17/2008	1,700	110	10 U	10 U	10 U	130	5 U	20
PM-01C	3/3/2009	200	54	10 U	10 U	10 U	8.0	5 U	5 U
PM-01C	8/19/2010	2,800	37	10 U	10 U	10 U	41.0	5 U	16
PM-01C	6/21/2011	2,600	27	10 U	10 U	10 U	5 UJ	5 UJ	5 UJ
PM-01C	3/5/2012	53	12	10 U	10 U	10 U	5 U	5 U	5 U
PM-01C	12/3/2012	2,600	10	10 U	10 U	10 U	13 J	5 UJ	12 J
PM-01C	9/17/2013	2,500	13	10 U	10 U	10 U	13 J	5 UJ	14 J
PM-01C	5/21/2014	1,900	10 U	10 U	10 U	10 U	6.3 J	5 UJ	11 J
PM-01C	3/17/2015	1,510	10 U	10 UJ	10 U	10 UJ	5.6	5 U	13
PM-01C	12/18/2015	1,210	10 U	10 U	10 U	10 U	5 U	5 U	10 J
PM-01C	9/26/2016	947	11	10 U	10 U	10	5 U	5 U	8 J
PM-01C	6/6/2017	761	10 U	10 U	10 U	10 U	5 U	5 U	11 J
PM-01C	3/21/2018	587	10 U	10 U	10 U	10 U	5 U	5 U	7 J
PM-01C	12/12/2018	557	10 U	10 U	10 U	10 U	5 U	5 U	10
PM-02B	10/16/2001	6	28	10 U	10 U	10 U	5 U	5 U	5 U
PM-02B	5/2/2005	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PM-02B	2/22/2006	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
PM-02B	3/20/2007	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
PM-02B DUP	10/16/2001	5	25	10 U	10 U	10 U	5 U	5 U	5 U
PM-03B	10/11/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
TB-101001	10/10/2001	5 U					5 U	5 U	5 U
TB-101501	10/15/2001	5 U					5 U	5 U	5 U
TB-101601	10/17/2001	5 U					5 U	5 U	5 U
TB-101801	10/17/2001	5 U					5 U	5 U	5 U
TB-102201	10/22/2001	5 U					5 U	5 U	5 U
TB-102401	10/17/2001	5 U					5 U	5 U	5 U
TB110700	11/7/2000	5 U					5 U	5 U	5 U
TB111300	11/13/2000	5 U					5 U	5 U	5 U
TB111600	11/16/2000	5 U					5 U	5 U	5 U
TB111700	11/17/2000	5 U					5 U	5 U	5 U
TB120301	12/3/2001	7 J					5 UJ	5 UJ	5 UJ
TB-120501	12/5/2001	5 U					5 U	5 U	5 U
TB030905	3/9/2005	5 U					5 U	5 U	5 U
TB042605	4/26/2005	5 U					5 U	5 U	5 U
TB042805	4/28/2005	5 U					5 U	5 U	5 U
TB050205	5/2/2005	5 U					5 U	5 U	5 U
TB091205	9/13/2005	5 U					5 U	5 U	5 U
TB010906	1/9/2006	5 U					5 U	5 U	5 U
TB031507	3/15/2007	5 U					5 U	5 U	5 U
TB032107	3/21/2007	5 U					5 U	5 U	5 U
TB090907	9/9/2007	5 U					5 U	5 U	5 U
TB091207	9/12/2007	5 U					5 U	5 U	5 U
TB061708	6/17/2008	5 U					5 U	5 U	5 U
TB061908	6/19/2008	5 U					5 U	5 U	5 U
TB022509	2/25/2009	5 U					5 U	5 U	5 U
TB030209	3/2/2009	5 U					5 U	5 U	5 U
TB121690	12/16/2009	5 U					5 U	5 U	5 U
TB121709	12/17/2009	5 U					5 U	5 U	5 U
TB122109	12/21/2009	5 U					5 U	5 U	5 U
TB081910	8/19/2010	5 U					5 U	5 U	5 U
TB082310	8/23/2010	5 U					5 U	5 U	5 U
TB062011	6/20/2011	5 U					5 U	5 U	5 U
TB062211	6/22/2011	5 U					5 U	5 U	5 U
TB030512	3/5/2012	5 U					5 U	5 U	5 U
TB030812	3/8/2012	5 U					5 U	5 U	5 U
TB031412	3/14/2012	5 U					5 U	5 U	5 U
TB031512	3/15/2012	5 U					5 U	5 U	5 U
TB112912	11/29/2012	5 U					5 U	5 U	5 U
TB120312	12/3/2012	5 U					5 U	5 U	5 U
TB091713	9/17/2013	5 U					5 U	5 U	5 U

APPENDIX D

SUMMARY OF HISTORICAL INTERMEDIATE GROUNDWATER QUALITY DATA
BASED ON THE ROD CONSTITUENT LIST FROM SEPTEMBER 2002

DESC Calhoun Park Area Site
Charleston, South Carolina

		Benzene	Naphthalene	2,4-Dimethylphenol	Benzo(a)pyrene	Carbazole	Ethylbenzene	Toluene	Total Xylenes
	Cleanup Goal:	5	1,500	700	0.2	5	700	1,000	10,000
Well	Date Sampled								
TB091913	9/19/2013	5 U					5 U	5 U	5 U
TB052014	5/20/2014	5 U					5 U	5 U	5 U
TB052214	5/22/2014	5 U					5 U	5 U	5 U
TB03172015	3/17/2015	5 U					5 U	5 U	5 U
TB03192015	3/19/2015	5 U					5 U	5 U	5 U
TB12182015	12/18/2015	5 U					5 U	5 U	5 U
TB12212015	12/21/2015	5 U					5 U	5 U	5 U
TB092616	9/26/2016	5 U					5 U	5 U	5 U
TB092816	9/28/2016	5 U					5 U	5 U	5 U
TB06062017	6/6/2017	5 U					5 U	5 U	5 U
TB032118	3/21/2018	5 U					5 U	5 U	5 U
TB121218	12/12/2018	5 U					5 U	5 U	5 U
USGS-01	1/13/1994	3 J	3 J	10 U	10 U	10 U	10 U	10 U	6 J
USGS-02D	1/13/1994	10 U	5 J	10 U	10 U	10 U	10 U	10 U	10 U
USGS-02D	12/2/1998	5 U	25 U	25 U	0.75 U	12 U	5 U	5 U	5 U
USGS-02D	11/15/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
USGS-02D	10/23/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
USGS-03	1/7/1994	50 U	10 U	10 UJ	10 U	10 U	50 U	50 U	50 U
USGS-03	12/2/1998	5 U	10 U	9.80 U	0.29 U	4.90 U	5 U	5 U	5 U
USGS-03	11/15/2000	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
USGS-03	10/23/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U
USGS-03 DUP	10/23/2001	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U

Note:
NA - Not available

APPENDIX E

GEOLOGIC CROSS SECTIONS

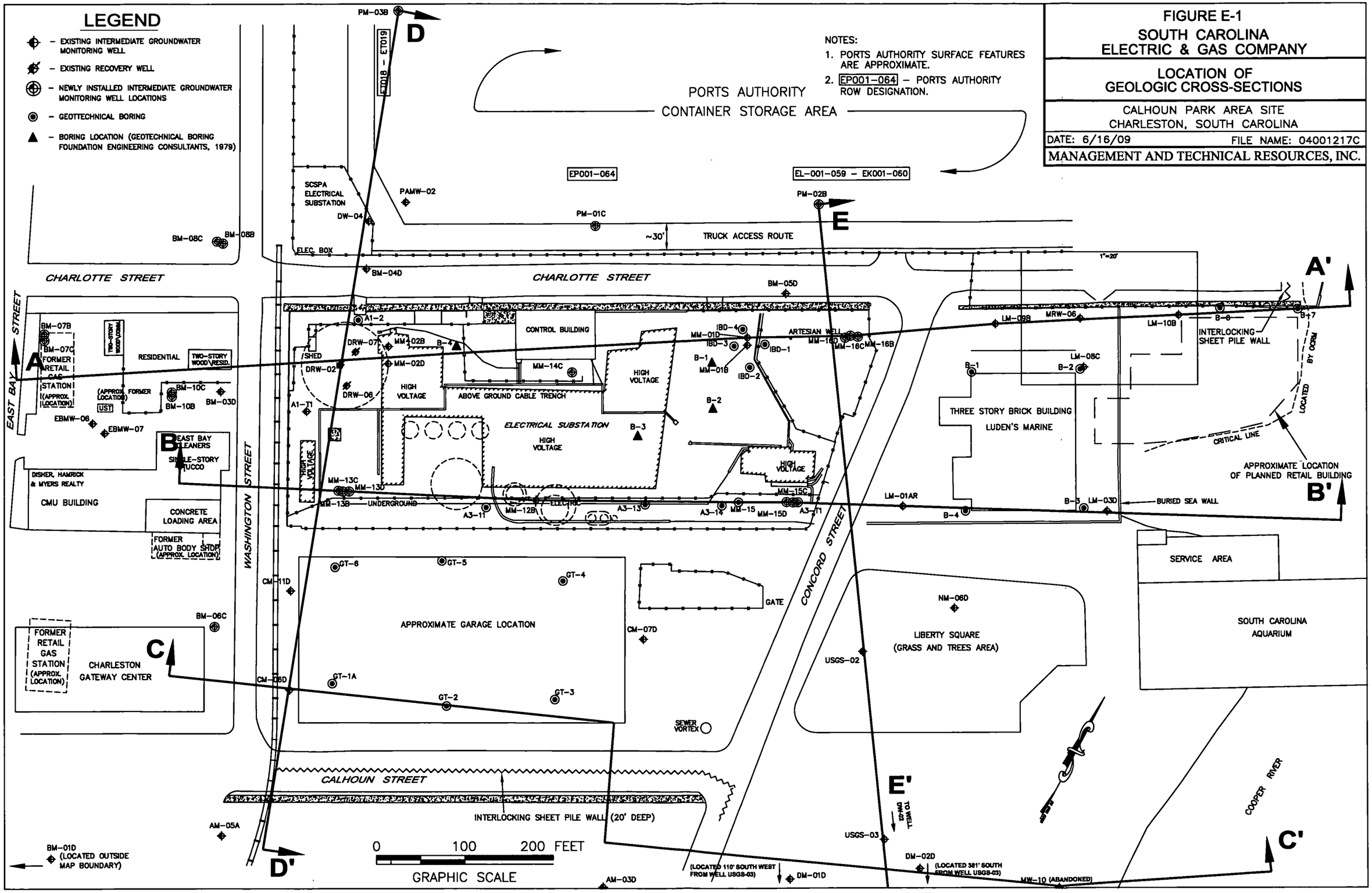


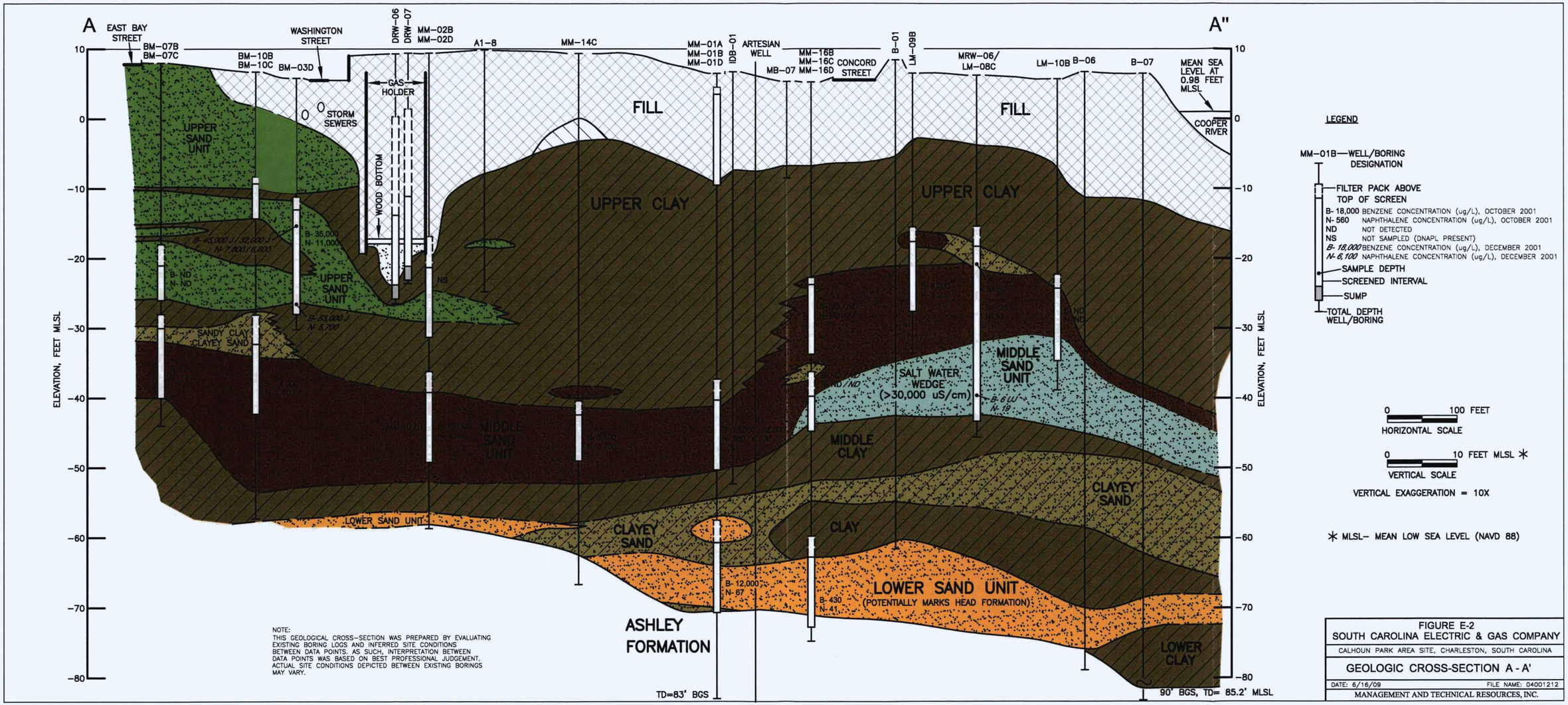
FIGURE E-1
SOUTH CAROLINA ELECTRIC & GAS COMPANY

LOCATION OF GEOLOGIC CROSS-SECTIONS

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 6/16/09 FILE NAME: 04001217C

MANAGEMENT AND TECHNICAL RESOURCES, INC.


A
A"
EAST BAY STREET
BM-07B
BM-07C
BM-10B
BM-10C
BM-03D
WASHINGTON STREET
DRW-06
DRW-07
MM-02B
MM-02D
A1-8
MM-14C
MM-01A
MM-01B
MM-01D
IDB-01
ARTESIAN WELL
MB-07
MM-16B
MM-16C
MM-16D
CONCORD STREET
B-01
LM-09B
MRW-06/
LM-08C
LM-10B
B-06
B-07
MEAN SEA LEVEL AT 0.98 FEET MLSL
COOPER RIVER
GAS HOLDER
STORM SEWERS
WOOD BOTTOM
FILL
FILL
UPPER SAND UNIT
UPPER CLAY
UPPER CLAY
UPPER SAND UNIT
SANDY CLAY
CLAYEY SAND
MIDDLE SAND UNIT
MIDDLE SAND UNIT
SALT WATER WEDGE
(>30,000 uS/cm)
MIDDLE CLAY
CLAYEY SAND
CLAY
CLAYEY SAND
LOWER SAND UNIT
LOWER SAND UNIT
(POTENTIALLY MARKS HEAD FORMATION)
ASHLEY FORMATION
LOWER CLAY
B- 45,000 J / 32,000 J
N- 7,600 / 6,800
B- 35,000
N- 11,000
B- ND
N- ND
B- 53,000 J
N- 5,700
B- 6 U
N- 19
B- 12,000
N- 67
B- 430
N- 41
NS
TD=83' BGS
90' BGS, TD= 85.2' MLSL
ELEVATION, FEET MLSL
10
0
-10
-20
-30
-40
-50
-60
-70
-80
LEGEND
MM-01B—WELL/BORING DESIGNATION
FILTER PACK ABOVE TOP OF SCREEN
B- 18,000 BENZENE CONCENTRATION (ug/L), OCTOBER 2001
N- 560 NAPHTHALENE CONCENTRATION (ug/L), OCTOBER 2001
ND NOT DETECTED
NS NOT SAMPLED (DNAPL PRESENT)
B- 18,000 BENZENE CONCENTRATION (ug/L), DECEMBER 2001
N- 6,100 NAPHTHALENE CONCENTRATION (ug/L), DECEMBER 2001
SAMPLE DEPTH
SCREENED INTERVAL
SUMP
TOTAL DEPTH WELL/BORING
0 100 FEET
HORIZONTAL SCALE
0 10 FEET MLSL *
VERTICAL SCALE
VERTICAL EXAGGERATION = 10X
* MLSL– MEAN LOW SEA LEVEL (NAVD 88)
NOTE:
THIS GEOLOGICAL CROSS-SECTION WAS PREPARED BY EVALUATING EXISTING BORING LOGS AND INFERRED SITE CONDITIONS BETWEEN DATA POINTS. AS SUCH, INTERPRETATION BETWEEN DATA POINTS WAS BASED ON BEST PROFESSIONAL JUDGEMENT. ACTUAL SITE CONDITIONS DEPICTED BETWEEN EXISTING BORINGS MAY VARY.
FIGURE E-2
SOUTH CAROLINA ELECTRIC & GAS COMPANY
CALHOUN PARK AREA SITE, CHARLESTON, SOUTH CAROLINA
GEOLOGIC CROSS-SECTION A - A'
DATE: 6/16/09
FILE NAME: 04001212
MANAGEMENT AND TECHNICAL RESOURCES, INC.

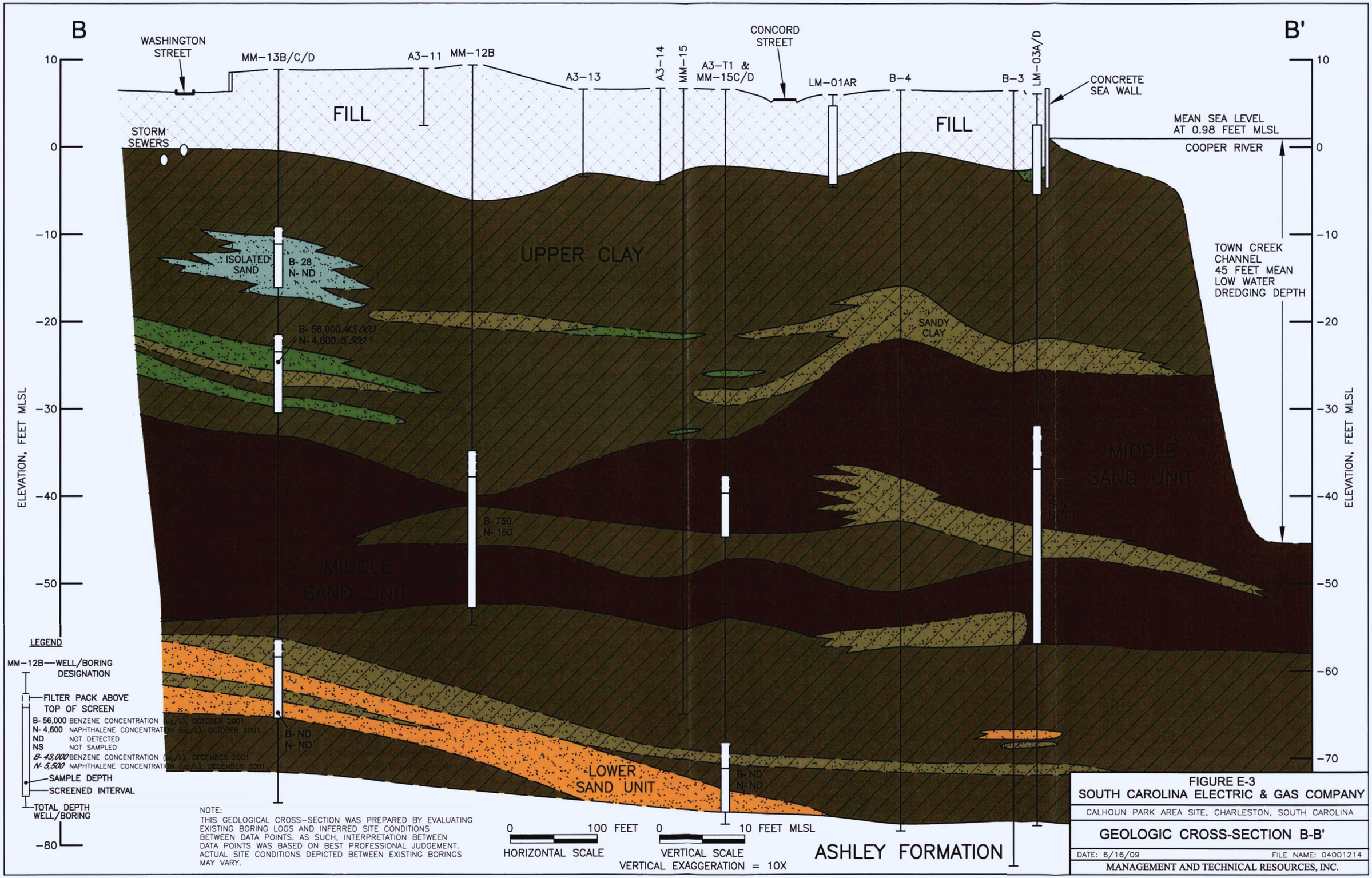


FIGURE E-3
SOUTH CAROLINA ELECTRIC & GAS COMPANY
CALHOUN PARK AREA SITE, CHARLESTON, SOUTH CAROLINA
GEOLOGIC CROSS-SECTION B-B'
DATE: 6/16/09 FILE NAME: 04001214
MANAGEMENT AND TECHNICAL RESOURCES, INC.

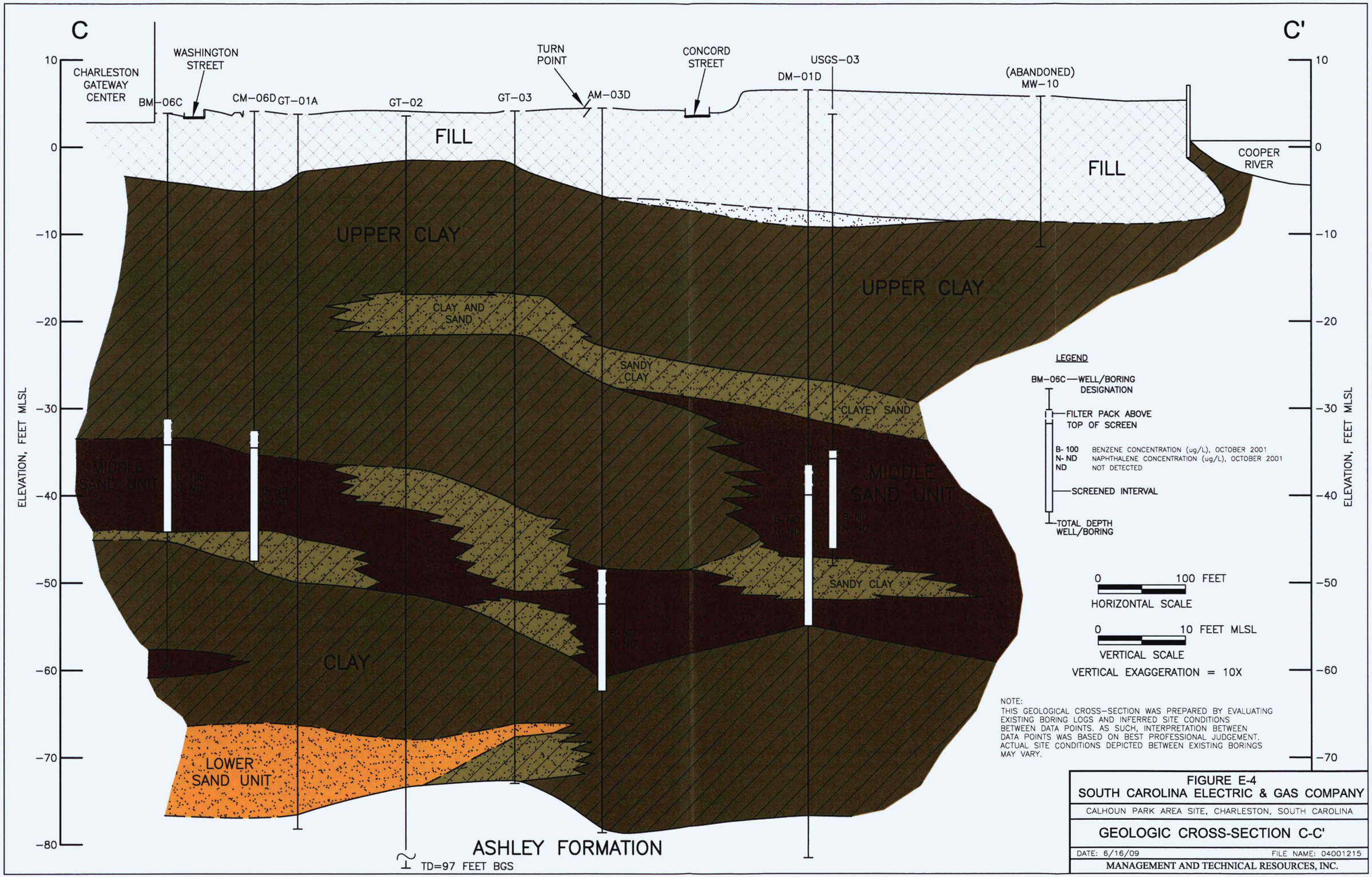


FIGURE E-4
SOUTH CAROLINA ELECTRIC & GAS COMPANY

CALHOUN PARK AREA SITE, CHARLESTON, SOUTH CAROLINA

GEOLOGIC CROSS-SECTION C-C'

DATE: 6/16/09 FILE NAME: 04001215

MANAGEMENT AND TECHNICAL RESOURCES, INC.

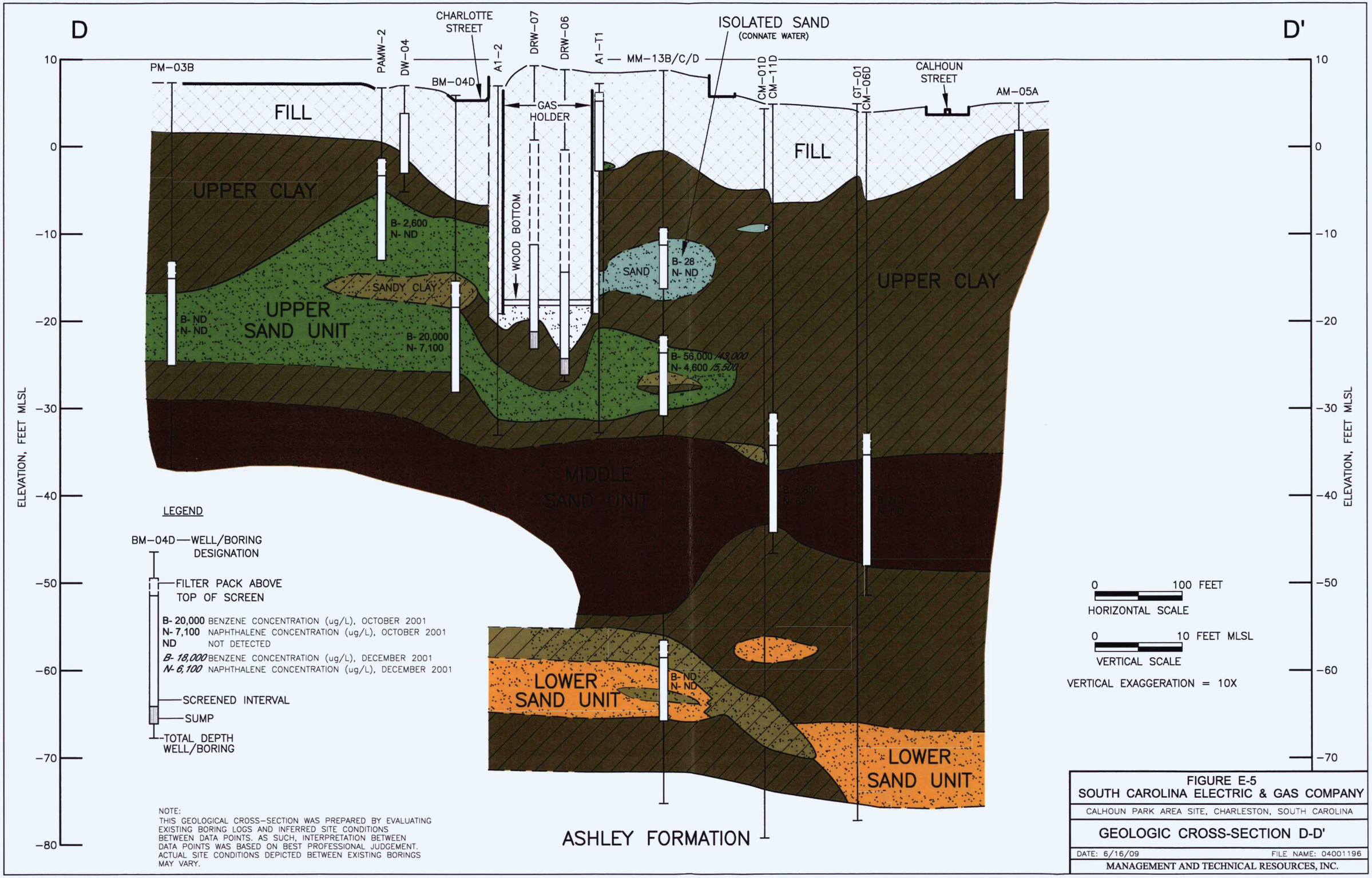


FIGURE E-5
SOUTH CAROLINA ELECTRIC & GAS COMPANY

CALHOUN PARK AREA SITE, CHARLESTON, SOUTH CAROLINA

GEOLOGIC CROSS-SECTION D-D'

DATE: 6/16/09 FILE NAME: 04001196

MANAGEMENT AND TECHNICAL RESOURCES, INC.

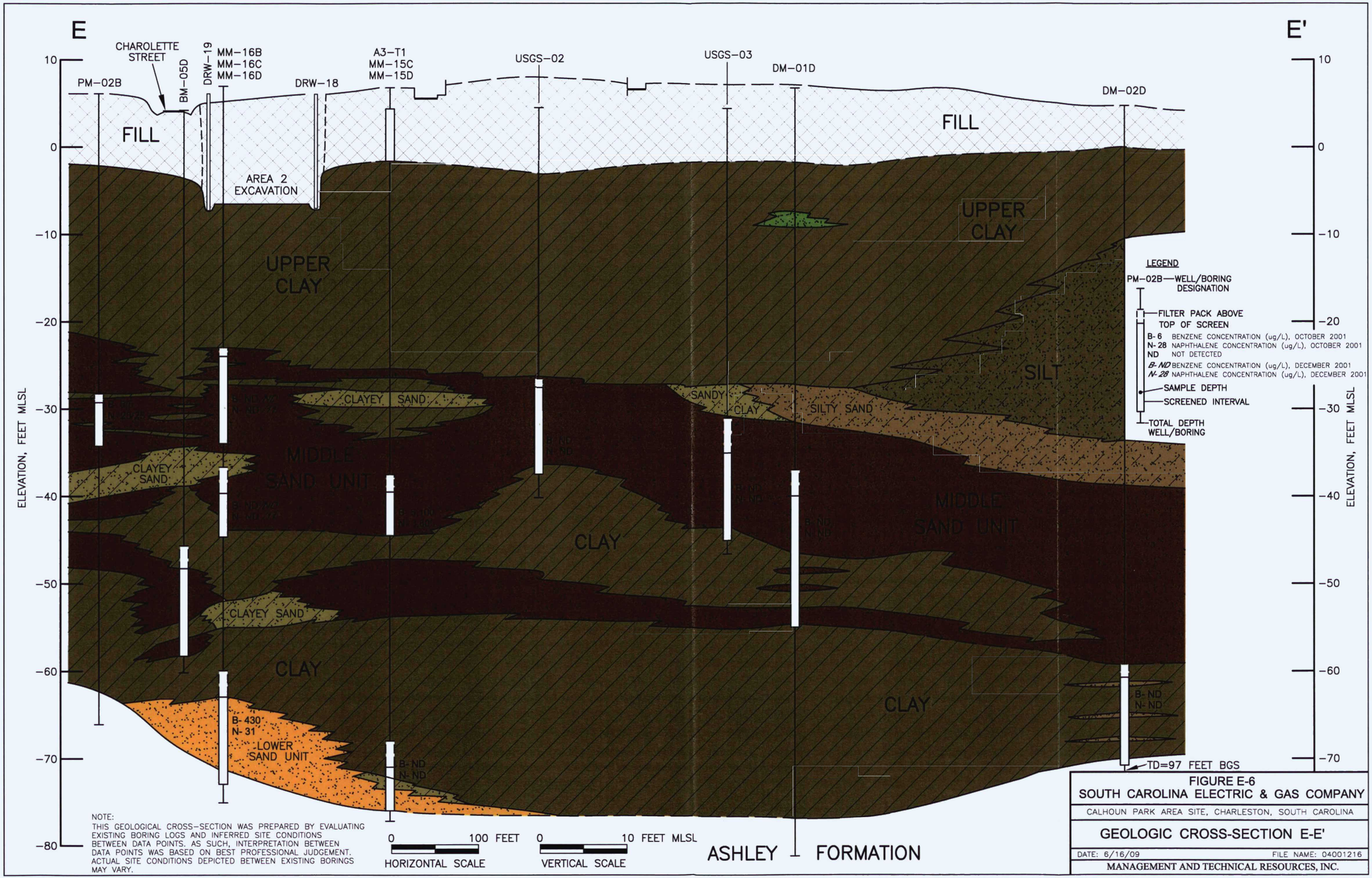
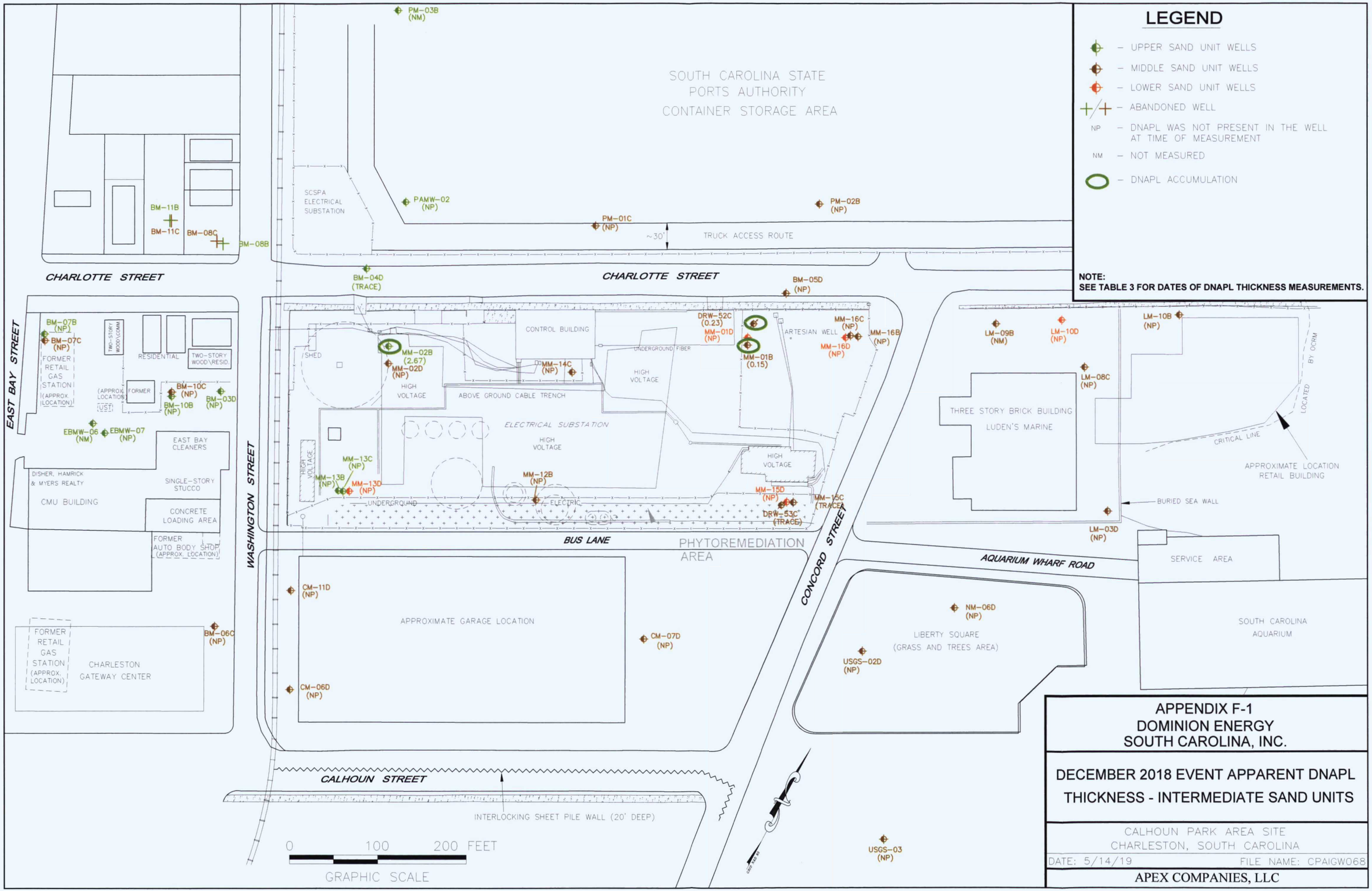


FIGURE E-6
SOUTH CAROLINA ELECTRIC & GAS COMPANY
CALHOUN PARK AREA SITE, CHARLESTON, SOUTH CAROLINA
GEOLOGIC CROSS-SECTION E-E'
DATE: 6/16/09 FILE NAME: 04001216
MANAGEMENT AND TECHNICAL RESOURCES, INC.

APPENDIX F

DECEMBER 2018 EVENT SPATIAL EXTENT OF APPARENT DNAPL THICKNESS



APPENDIX F-1
DOMINION ENERGY
SOUTH CAROLINA, INC.

DECEMBER 2018 EVENT APPARENT DNAPL THICKNESS - INTERMEDIATE SAND UNITS

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 5/14/19 FILE NAME: CPAIGW068

APEX COMPANIES, LLC