



Vac - Stephanie

Groundwater & Environmental Services, Inc.

104 Corporate Boulevard, Suite 420
West Columbia, SC 29169

T. 866.765.4851

December 18, 2025

Ms. Denise Place
South Carolina Department of Environmental Services
Regulatory and Compliance Section
Underground Storage Tank Management Division
2600 Bull Street
Columbia, South Carolina 29201

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UST DIVISION

**Re: CASE Report – 2nd Semi-Annual Period 2025
Circle K 2720886
4315 Savannah Highway
Ravenel, South Carolina
UST Permit #01589**



Dear Ms. Place:

Groundwater and Environmental Services, Inc. (GES), on behalf of Circle K Stores Inc., is pleased to provide you with this Corrective Action System Evaluation and Monitoring report for the above referenced site.

Should you have any questions or require additional information, please do not hesitate to contact me at 1-866-765-4851 extension 3119.

Sincerely,
Groundwater & Environmental Services, Inc.
Class I Site Rehabilitation Contractor No. 330

Julian M Canavan

Julian M. Canavan
Staff Environmental Scientist
(803)-629-4228
jcanavan@gesonline.com

Maureen A Jackson

Maureen A. Jackson
Principal Project Manager
(866) 765-4851, ext. 4522
mjackson@gesonline.com

cc: Anthony Bell, Circle K Stores, Inc., abell@circlek.com



Corrective Action System Evaluation and Monitoring Report 2nd Semi-Annual Period 2025

Circle K 2720886

4315 Savannah Highway

Ravenel, South Carolina 29470

SCDES Site #01589

December 18, 2025





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Mr. Robert Dunn, Hydrogeologist III
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management
South Carolina Department of Environmental Services
2600 Bull Street
Columbia, SC 29201

**Re: Corrective Action System Evaluation and Monitoring Report
2nd Semi-Annual Period 2025
Circle K 2720886
4315 Savannah Hwy, Ravenel, South Carolina
SCDES Site #01589**

Dear Mr. Dunn:

Groundwater & Environmental Services (GES) is providing this letter to summarize a semi-annual groundwater sampling event conducted as part of the monitored natural attenuation (MNA) program at the above-referenced site. A topographic map is provided as **Figure 1**, and a site map is included as **Figure 2**.

On September 8-10, 2025, GES personnel gauged the depths to water in all accessible targeted wells (with an electronic water level indicator) relative to the top of each well casing. Water levels were measured in groundwater monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-25, MW-28, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, DMW-1, DMW-2, DMW-5, RW-1, RW-2, RW-3, RW-4, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, and RW-12.

Monitoring wells MW-10, MW-16, MW-24, MW-26, MW-26R, MW-27, MW-29, MW-29R, MW-36, MW-37, MW-37R, MW-38, MW-38R, DMW-3, DMW-4, RW-11, RW-11A, and RW-11B were either destroyed, silted in, or could not be located or accessed during this gauging/sampling event.



The locations of all monitoring wells are shown in **Figure 2**. Monitoring well construction details and current groundwater elevation data are included in **Table 1**. Groundwater elevation contour maps based on the September 2025 data are presented as **Figure 3** for the shallow monitoring wells, and as **Figure 4** for the deep-screened wells.

Sampling and Analysis

After gauging, GES personnel collected groundwater samples from all accessible targeted wells located on-site and across multiple properties in the general vicinity. Groundwater Sampling Logs are presented in **Appendix A**. Duplicate sets of groundwater samples were collected from monitoring wells MW-3 (DUP-1), RW-3 (DUP-2), MW-32 (DUP-3), and MW-35 (DUP-4). Field blanks were collected for analysis on each day of sampling to examine laboratory accuracy and provide data validation. All samples were placed in iced coolers immediately following collection. Trip blanks accompanied the coolers during sampling activities and shipment to the laboratory.

Surface water sampling was performed on September 10, 2025. Of the nine established sampling points for this site, six surface water samples were able to be collected (identified as SW-1, SW-2, SW-3, SW-4, SW-5, and SW-7). Samples were collected in PVC bailers and subsequently transferred to the appropriate sample containers for analysis. All surface water sample locations are indicated in **Figure 6**.

Water supply well sampling was performed on September 10, 2025. Of the three water supply wells located in the vicinity of the site, only one (WSW-12) was able to be sampled. A snake was found inside WSW-13, and WSW-16 was located behind a locked fence, so these wells were not sampled. Sample WSW-12 was collected from a spigot connected to the water supply well after allowing water to run for approximately 5 minutes. The sample was collected in a PVC bailer and subsequently transferred to the appropriate sample containers for analysis. All water supply well sample locations are indicated in **Figure 7**.

Groundwater, surface water, and water supply well samples, and the accompanying Quality Assurance/Quality Control (QA/QC) samples were transported under chain of custody protocol to Pace Analytical of Huntersville, North Carolina (Laboratory Certification No. 99006001). The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl



tert-butyl ether (MTBE), naphthalene, 1,2-dichloroethane, and the eight SCDES-regulated oxygenates by EPA method 8260D. The groundwater samples and field blanks were also analyzed for ethylene dibromide (EDB) by EPA method 8011. Additionally, the water supply well sample was analyzed for BTEX, MTBE, naphthalene, and 1,2-dichloroethane by EPA method 524.2, the eight SCDES-regulated oxygenates by EPA method 8260D, and EDB by EPA method 504. A copy of the laboratory analytical report, including internal laboratory QA/QC and chain of custody documentation, is included in **Appendix B**. Laboratory analytical results are presented in **Tables 2** through **7**. A Chemical of Concern analytical map is provided as **Figure 5**.

Analytical Results

Laboratory analytical results of the groundwater, surface water, and water supply well samples were compared to the Site-Specific Target Levels (SSTLs). SSTLs, along with CoC reduction calculations, are presented in **Table 8**. Contaminants of concern (COCs) exceeding SSTLs were reported as follows:

Benzene was detected above its SSTL in wells MW-1, MW-2, MW-3, MW-7, MW-13, MW-32, RW-4, and RW-12, and in surface water sample SW-3.

Toluene was detected above its SSTL in wells MW-1, MW-2, MW-3, MW-32, and RW-12, and in surface water sample SW-3.

Ethylbenzene was detected above its SSTL in wells MW-1, MW-3, MW-32, and RW-12, and in surface water sample SW-3.

Total Xylenes were detected above their SSTL in wells MW-3 and MW-32, and in surface water sample SW-3.

Methyl tert-butyl ether was detected above its SSTL in wells MW-1 and MW-2.

Naphthalene was detected above its SSTL in wells MW-1, MW-2, MW-13, MW-32, and RW-12, and in surface water sample SW-3.

Tert-amyl alcohol was detected above its SSTL in wells MW-1, MW-2, MW-3 and MW-32, and in surface water sample SW-3.

Tert-butyl alcohol was detected above its SSTL in well MW-32.

Conclusions

Based on the results of the September 2025 sampling event, the following observations are presented:

- Water levels on site were generally higher than those measured in the March 2025 sampling event.
- Groundwater appears to flow to the northwest, as measured in both shallow and deep monitoring wells. This is in accordance with historic trends.
- Free product was found in monitoring wells MW-6 (3.03 ft) and MW-33 (0.50 ft). Both wells have historically contained free product; however, the product level in MW-6 has increased drastically from previous events.
- No measurable free product was found in monitoring wells RW-5, RW-6, and RW-10, which, until recently, had contained free product.
- SSTLS were exceeded in wells MW-1, MW-2, MW-3, MW-7, MW-13, MW-32, RW-4, and RW-12.
- Six of the nine established surface water locations were able to be sampled during this event. CoCs were present in sample SW-3 above its respective SSTLs.
- One water supply well, WSW-12, was sampled during this event. No CoCs were detected in this well.

A Chemical of Concern reduction percentage of 80.5% was calculated for this CASE Report by comparing analytical data from this sampling event to results from the initial sampling events of contaminated monitoring wells. Most of the concentrations detected above SSTLs were detected in the vicinity of the source area. Reduction percentages have been calculated for previous groundwater sampling events, as well including the following: March 2025 (69.63%), September 2024 (71.12%), September 2023 (34.41%), March 2023 (48.07%), September 2022 (14.40%), March 2022 (40.67%), October 2021 (51.37%), and April 2021 (6.14%).

If you have any questions or comments, please do not hesitate to contact the undersigned at 866-765-4851 x4522 or MJackson@gesonline.com.



I. Certification

I, Maureen Jackson, a Licensed Geologist employed by Groundwater & Environmental Services, Inc. do certify that the information contained in this report is correct and accurate to the best of my knowledge.

A handwritten signature in black ink that reads 'Maureen Jackson'.

Maureen Jackson, P.G.
Principal Geologist/Project Manager
South Carolina Registered P.G. License No. 2603



cc: Anthony Bell, Project Remediation Lead, Circle K Stores, Inc., 1100 Situs Road, Suite 100, Raleigh, NC

Semi-Annual CASE Report
Circle K 2720886
UST Permit #01589
4315 Savannah Highway
Ravenel, South Carolina 29470



Figures

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Source:
 USGS 7.5 Minute Series
 Ravenel Quadrangle, 2024
 Ravenel, South Carolina Charleston Co.
 Contour Interval = 10'



Approximate Quadrangle Location

LAT. 32° 46' 43" N
 LONG. 80° 8' 41" W
 (Approximate Site Coordinates)

Site Location Map	
Circle K Stores Inc. Circle K #2720886 4315 Savannah Highway Ravenel, South Carolina	
Drawn L.B. Designed E.A.W. Approved M.J.	Date 12/17/25 Figure 1
<p>Scale In Feet 0 1,000</p> <p>Groundwater & Environmental Services, Inc.</p>	