

April 15, 2022

Mr. Greg Cassidy
South Carolina Department of Health and Environmental Control
Division of Site Assessment, Remediation, and Revitalization
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201

SUBJECT: Quarterly Progress Report – First Quarter 2022
Former Bramlette Manufactured Gas Plant
400 East Bramlette Road
Greenville, South Carolina
VCC 16-5857-RP

Dear Mr. Cassidy:

This Quarterly Progress Report pertaining to the Former Bramlette Manufactured Gas Plant (MGP) site has been prepared in accordance with the requirements of the Responsible Party Voluntary Cleanup Contract (VCC 16-5857-RP) between Duke Energy Carolinas, LLC (Duke Energy) and the South Carolina Department of Health and Environmental Control (SCDHEC), dated July 29, 2016. As required in the VCC, this Quarterly Progress Report summarizes:

- Work performed during the reporting period
- Test and sampling results generated during the reporting period
- Environmental problems experienced during the reporting period and their resolution
- Work to be performed during the next reporting period

The work was conducted in accordance with the following approved work plans:

- Remedial Investigation Work Plan Addendum (RIWP) - approved on August 6, 2019
- Interim Surface Water Best Management Practice Work Plan - approved on March 31, 2021

Work Performed During this Reporting Period

Work performed associated with the first quarter (January 1 through March 31, 2022) is summarized in the table below. A site layout map is included as **Figure 1**.

Date	RI Activity
January through March 2022	Surface Water Best Management Practice (BMP) Inspections – Turbidity curtain, rock check dams and concrete cloth were inspected twice per month.
March 15, 2022	Semiannual Monitoring Report – A Semiannual Monitoring Report was submitted on March 15, 2022, and includes work conducted between July and December 2021. SCDHEC approved the report on March 21, 2022.
March 7 through March 15, 2022	Groundwater and Surface Water Sampling – Collected groundwater and surface water samples from 69 groundwater monitoring wells and from 17 surface water monitoring locations in accordance with the RIWP Addendum approved by SCDHEC August 6, 2019, and the September 2018 Quality Assurance Project Plan (QAPP) (SynTerra, 2018).

Summary of Test and Sampling Results Generated During this Reporting Period

Test and sampling results for work performed during the first quarter (January 1 through March 31, 2022) are summarized below:

- Groundwater and surface water samples were analyzed for volatile organic compounds (VOCs) and semi-volatile compounds (SVOCs). Analytical results from these samples will be presented in the Semiannual Monitoring Report – Semiannual Monitoring Event #5, which is scheduled for submittal by July 1, 2022.
- Hydrographs of groundwater level measurements in wells instrumented with data logging pressure transducers are provided in **Figure 2** through **Figure 5**. Observations from these hydrographs include:
 - Groundwater elevation measurements since 2019 at the MW-29 well cluster indicate seasonality with highest elevations generally measured in March and lowest elevation in measured in October (**Figure 2**).
 - Groundwater elevations measured in MW-45BR show a sharp reduction and recovery in water level in March 2021, September 2021, October 2021 (resampling event due to laboratory fire) and March 2022. Those measurements correspond to removal and replacement of the transducer during groundwater monitoring events (**Figure 3**).
 - Groundwater elevation measurements since 2019 at the MW-3 well cluster indicate seasonality with highest elevation generally measured in March and lowest elevation measured in September (**Figure 4**).
 - Groundwater elevation measurements from monitoring wells located along the Swamp Rabbit Trail correlate to Reedy River stage elevation, indicating connectivity between monitoring wells located adjacent to the Swamp Rabbit Trail and the Reedy River (**Figure 5**).

Environmental Problems Identified During Reporting Period and their Resolution

No problems were identified during this reporting period.

Work to be Performed During the Next Reporting Period (second quarter 2022)

The following activities are scheduled to be conducted during the second quarter of 2022 (April 1 through July 1, 2022). The proposed schedule is subject to change based on safe work practices, weather conditions, site access, availability of subcontractors, and other unforeseen delays. Field work notifications will be provided in accordance with the VCC and access agreements.

Proposed Date	RI Activity
April 4, 2020	Download and redeploy data logging pressure transducers – First quarter water level measurements downloaded from 16 transducers.
April 2022	Submit Quarterly Progress Report – First Quarter 2022
Quarter 2, 2022	Download and redeploy data logging pressure transducers
Quarter 2, 2022	Inspect and maintain Surface Water BMPs per approved work plan
July 1, 2022	Submit Semiannual Monitoring Report – Semiannual Monitoring Event #5 (March 2022)

If you have any questions regarding this submittal, please contact me at 980.373.2663 or by email at **Richard.Powell2@duke-energy.com**.

Sincerely,

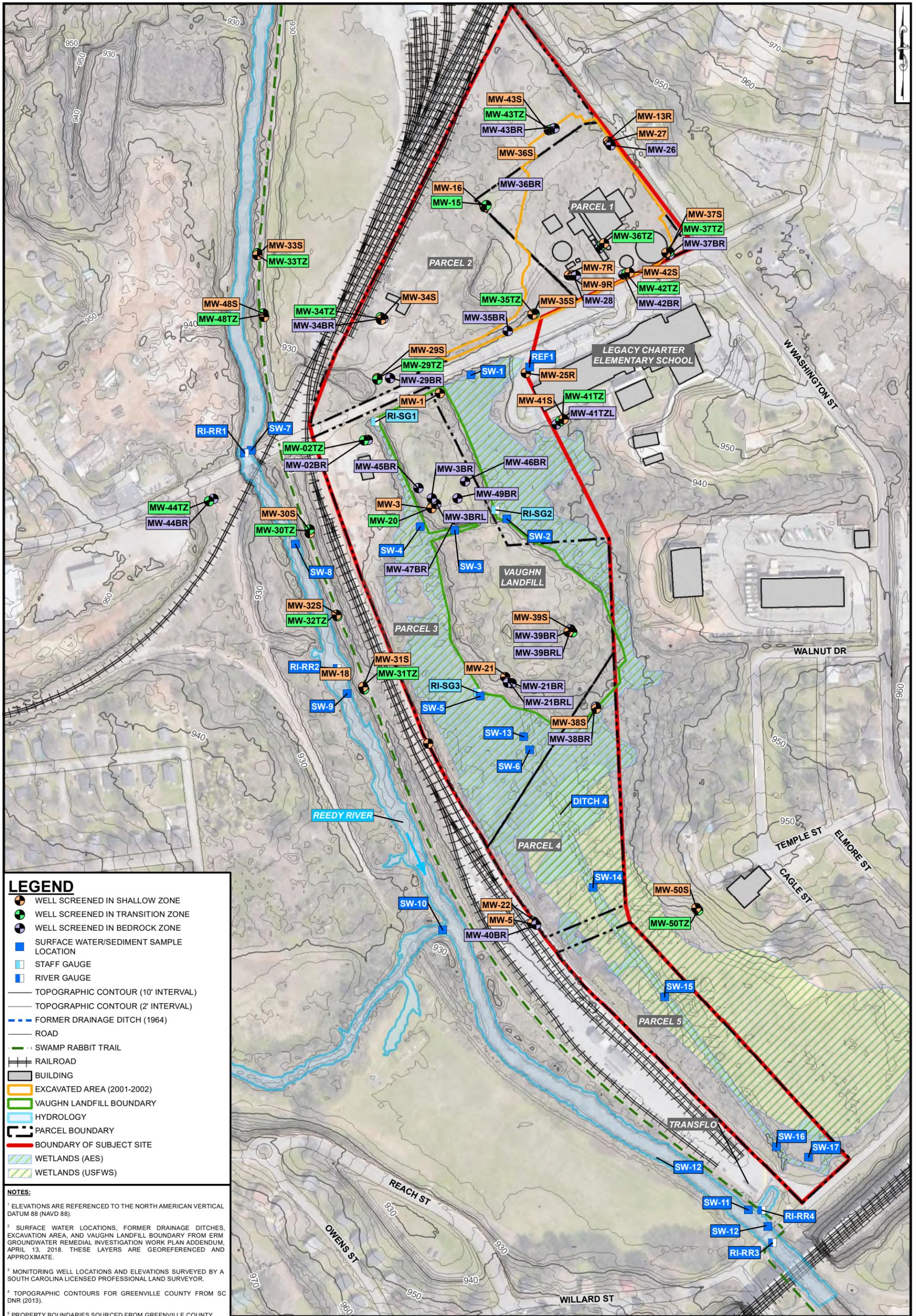
Richard E. Powell

Richard E. Powell, P.G.
Lead Environmental Specialist

Cc: Kevin Boland, CSXT
Daniel Schmitt, Esq., CSXT
Ty Houck, Greenville County
William W. Brown, Legacy School Properties, LLC
Todd Plating, SynTerra

ATTACHMENTS: Figure 1 – Site Layout Map
Figure 2 – MW-29 Cluster Hydrographs
Figure 3 – Vaughn Landfill Hydrographs
Figure 4 – MW-3 Cluster Hydrographs
Figure 5 – Reedy River Well Hydrographs

FIGURES



LEGEND

- WELL SCREENED IN SHALLOW ZONE
- WELL SCREENED IN TRANSITION ZONE
- WELL SCREENED IN BEDROCK ZONE
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- STAFF GAUGE
- RIVER GAUGE
- TOPOGRAPHIC CONTOUR (10' INTERVAL)
- TOPOGRAPHIC CONTOUR (2' INTERVAL)
- - - FORMER DRAINAGE DITCH (1964)
- ROAD
- SWAMP RABBIT TRAIL
- RAILROAD
- BUILDING
- EXCAVATED AREA (2001-2002)
- VAUGHN LANDFILL BOUNDARY
- HYDROLOGY
- PARCEL BOUNDARY
- BOUNDARY OF SUBJECT SITE
- WETLANDS (AES)
- WETLANDS (USFWS)

NOTES:

¹ ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 88 (NAVD 88).

² SURFACE WATER LOCATIONS, FORMER DRAINAGE DITCHES, EXCAVATION AREA, AND VAUGHN LANDFILL BOUNDARY FROM ERM GROUNDWATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM, APRIL 13, 2018. THESE LAYERS ARE GEOREFERENCED AND APPROXIMATE.

³ MONITORING WELL LOCATIONS AND ELEVATIONS SURVEYED BY A SOUTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

⁴ TOPOGRAPHIC CONTOURS FOR GREENVILLE COUNTY FROM SC DNR (2013).

⁵ PROPERTY BOUNDARIES SOURCED FROM GREENVILLE COUNTY.

⁶ WETLANDS (USFWS) BY US FISH AND WILDLIFE NATIONAL WETLAND INVENTORY. WETLANDS (AES) DELINEATED BY APPLIED ENGINEERING AND SCIENCE, INC. IN 1999.

⁷ SWAMP RABBIT TRAIL CENTERLINE FROM CITY OF GREENVILLE.

⁸ AERIAL PHOTOGRAPHY OBTAINED FROM GOOGLE EARTH PRO ON MAY 3, 2019. INSET AERIAL OBTAINED OCTOBER 20, 2020. AERIAL WAS COLLECTED ON MARCH 12, 2018.

⁹ DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83 INTERNATIONAL FEET).

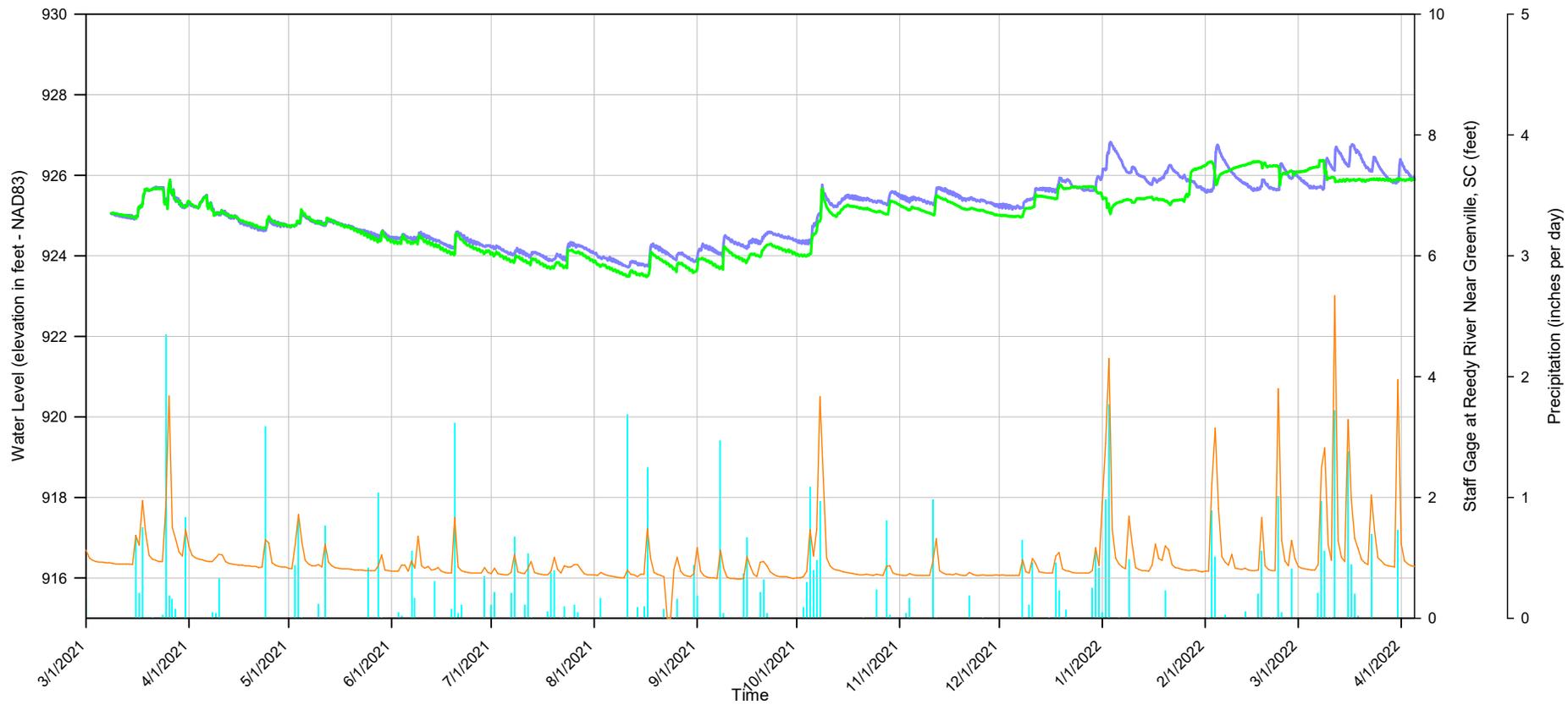
DUKE ENERGY CAROLINAS

synTerra

GRAPHIC SCALE
0 125 250
(IN FEET)

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 REVISED BY: T. KING DATE: 01/04/2022
 CHECKED BY: T. PLATING DATE: 01/04/2022
 APPROVED BY: T. PLATING DATE: 01/04/2022
 PROJECT MANAGER: T. PLATING
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FIGURE 1
SITE LAYOUT MAP
 QUARTERLY PROGRESS REPORT - FIRST QUARTER 2022
 FORMER BRAMLETTE MGP SITE
 EAST BRAMLETTE ROAD
 GREENVILLE, SOUTH CAROLINA



- Notes:
1. Elevations referenced to North American Vertical Datum of 1988
 2. Precipitation obtained from online published data from https://waterdata.usgs.gov/nwis/dv/?site_no=02164000&agency_cd=USGS&referred_module=sw
 3. feet-msl – feet mean sea level

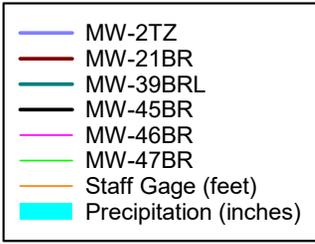
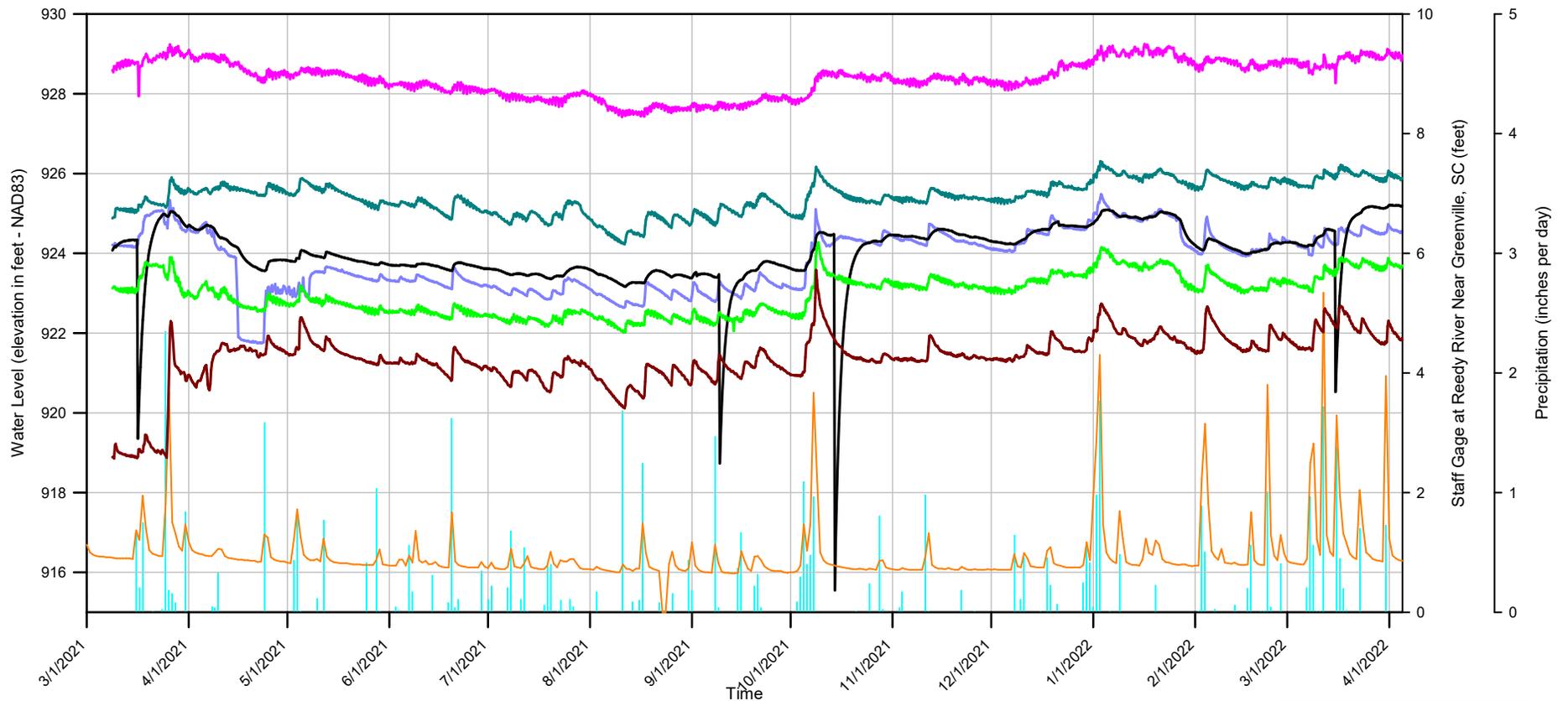


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 APPROVED BY: T. PLATING
 PROJECT MANAGER: T. PLATING

DATE: 1/4/2022
 DATE: 4/5/2022
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FIGURE 2
MW-29 CLUSTER HYDROGRAPHS
QUARTERLY PROGRESS REPORT – FIRST QUARTER 2022
FORMER BRAMLETTE MGP SITE
EAST BRAMLETTE ROAD
GREENVILLE, SOUTH CAROLINA



- Notes:
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 2. Precipitation obtained from online published data from https://waterdata.usgs.gov/nwis/dv/?site_no=02164000&agency_cd=USGS&referred_module=sw
 3. feet-msl – feet mean sea level

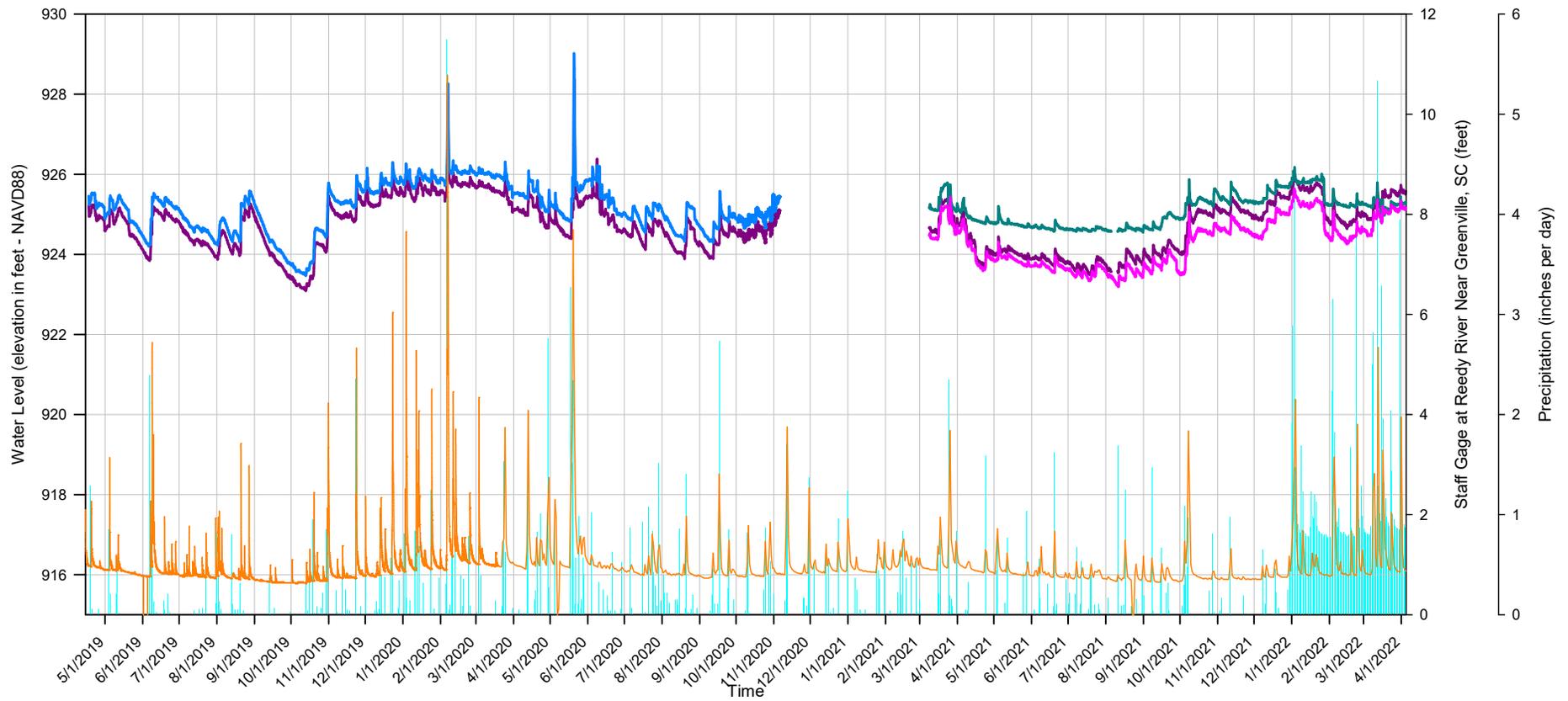


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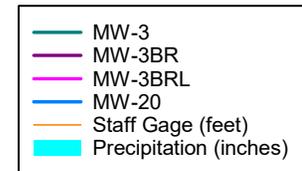
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FIGURE 3
VAUGHN LANDFILL HYDROGRAPHS
QUARTERLY PROGRESS REPORT – FIRST QUARTER 2022
FORMER BRAMLETTE MGP SITE
EAST BRAMLETTE ROAD
GREENVILLE, SOUTH CAROLINA



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2. Precipitation obtained from online published data from https://waterdata.usgs.gov/nwis/dv/?site_no=02164000&agency_cd=USGS&referred_module=sw
3. feet-msl – feet mean sea level



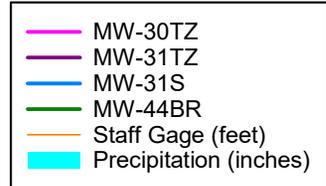
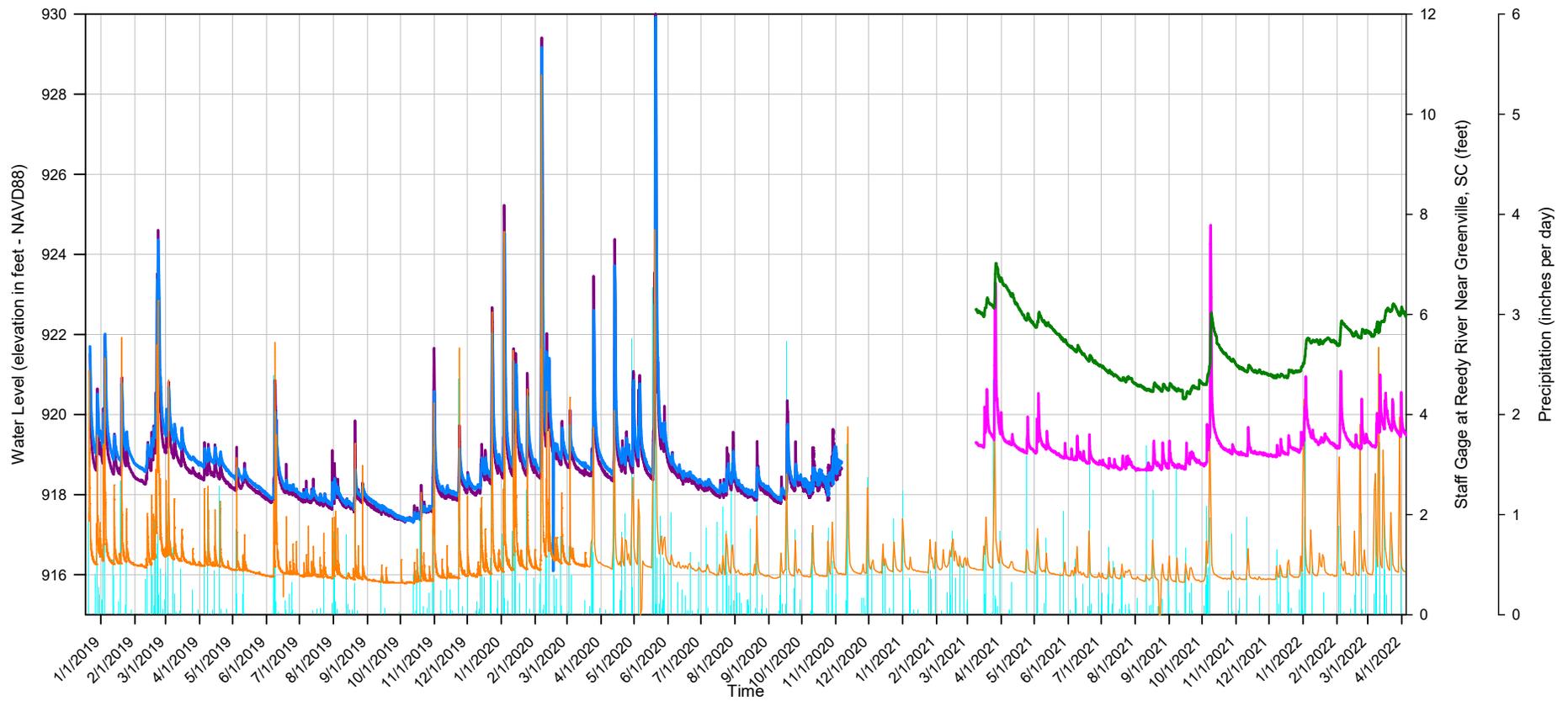
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FIGURE 4
MW-3 CLUSTER HYDROGRAPHS
QUARTERLY PROGRESS REPORT – FIRST QUARTER 2022
FORMER BRAMLETTE MGP SITE
EAST BRAMLETTE ROAD
GREENVILLE, SOUTH CAROLINA



Notes:

1. Elevations referenced to North American Vertical Datum of 1988
2. Precipitation obtained from online published data from https://waterdata.usgs.gov/nwis/dv/?site_no=02164000&agency_cd=USGS&referred_module=sw
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FIGURE 5
REEDY RIVER WELL HYDROGRAPHS
QUARTERLY PROGRESS REPORT – FIRST QUARTER 2022
FORMER BRAMLETTE MGP SITE
EAST BRAMLETTE ROAD
GREENVILLE, SOUTH CAROLINA