

GROUNDWATER MONITORING SYSTEM CERTIFICATION
40 CFR §257.91(f)
GULF CLEAN ENERGY CENTER
GYP SUM STORAGE AREA
FLORIDA POWER & LIGHT COMPANY

The United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments" (40 Code of Federal Regulations ["CFR"] Part 257, Subpart D) ("CCR Rule") requires the owner or operator of an existing CCR Unit to install a groundwater monitoring system meeting the requirements of 40 CFR §257.91. The owner or operator must obtain a certification from a qualified professional engineer stating that the groundwater monitoring system has been designed and constructed to meet the requirements of 40 CFR Part §257.91.

According to 40 CFR §257.91(a), the groundwater monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that:

1. Accurately represents the quality of background groundwater that has not been affected by leakage from a CCR unit; and
2. Accurately represents the quality of groundwater passing the waste boundary of the CCR unit.

40 CFR §257.91(b) provides that the number, spacing, and depths of a groundwater monitoring system must be determined based upon site-specific technical information that must include a characterization of:

1. Aquifer thickness, groundwater flow rate, groundwater flow direction, including seasonal and temporal fluctuations in groundwater flow; and
2. Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

GROUNDWATER MONITORING SYSTEM

The groundwater monitoring system for the gypsum storage area (“GSA”), an existing CCR Unit at the Gulf Clean Energy Center (“GCEC”), was originally certified in October 2017¹. Since that time, based on continuing evaluation of (hydro)geologic and chemical data, a revised groundwater monitoring system for the GSA is outlined and recertified herein. The recertified monitoring system was selected to meet the performance standards described above. A map depicting the recertified monitoring system is included in Figure 1. Table 1 provides a summary of well construction information for the recertified system. This recertification supersedes the October 17, 2017, certification of the groundwater monitoring system for the GSA.

The recertified groundwater monitoring system locations were chosen to monitor background and downgradient locations within the uppermost aquifer at the GSA based on prevailing groundwater flow directions. Figure 1 presents a representative potentiometric surface.

The recertified system includes the following wells (Figure 1; Table 1):

- Background wells: MW-100, MW-101, MW-107, MW-108, MW-306, and MW-307
- Downgradient wells: MW-200, MW-201, MW-206, MW-200-I, MW-201-I, and MW-206-I

¹ Southern Company Services, 2017. Groundwater Monitoring System Certification – Plant Crist Gypsum Storage Area, Gulf Power Company, Pensacola, Florida, October 17, 2017.

CERTIFICATION

I hereby certify that, based on my experience and knowledge of the GCEC, the groundwater monitoring system for the GSA has been adequately designed and constructed to meet the requirements of 40 CFR §257.91.

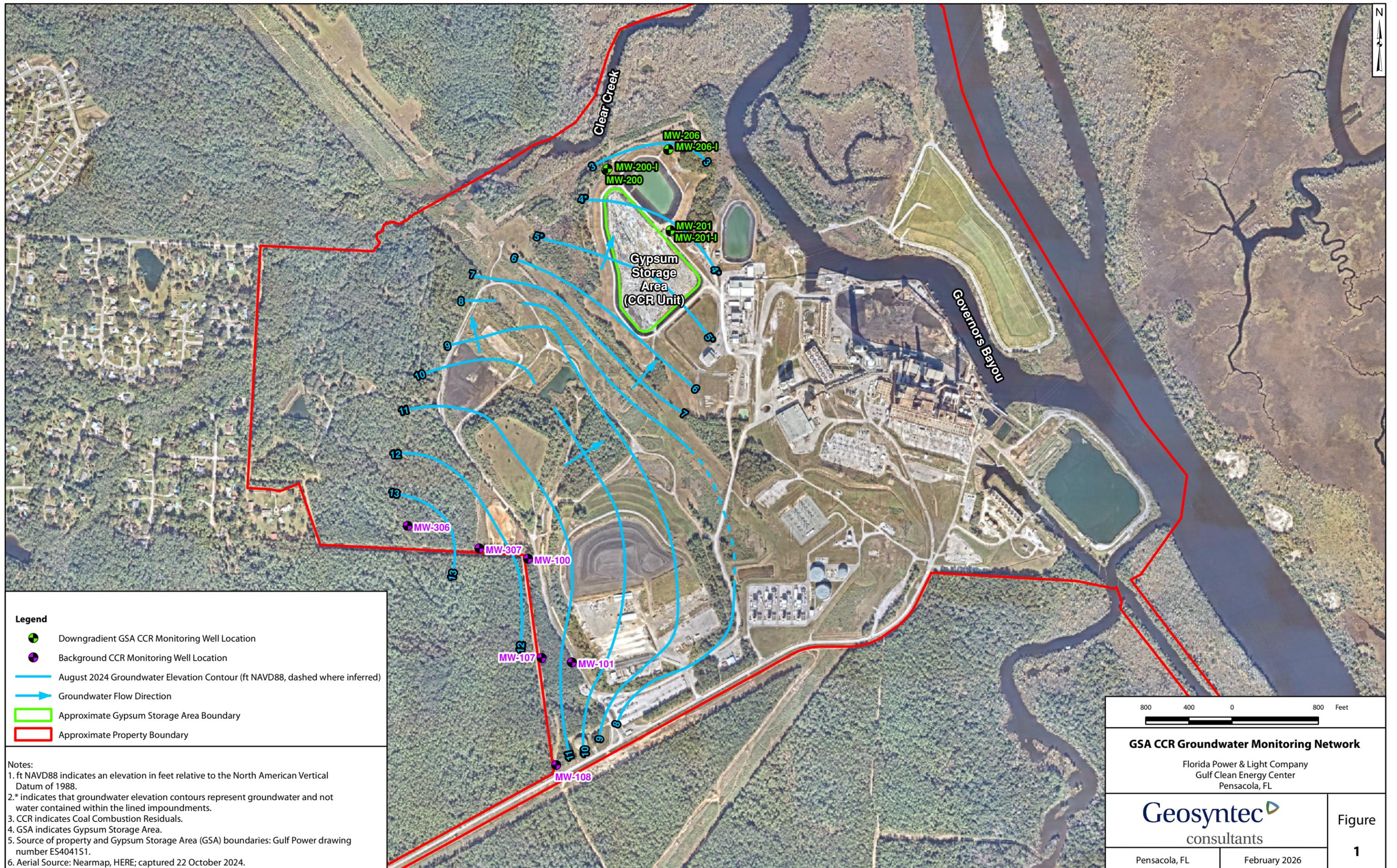
Benjamin K. Amos, Ph.D., P.E. Florida
Professional Engineer No. 82837

Date

Attachments:

Figure 1: GSA CCR Groundwater Monitoring System

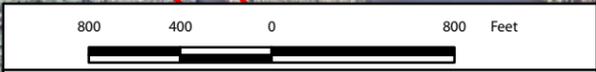
Table 1: Gypsum Storage Area CCR Groundwater Monitoring System



- Legend**
- Downgradient GSA CCR Monitoring Well Location
 - Background CCR Monitoring Well Location
 - August 2024 Groundwater Elevation Contour (ft NAVD88, dashed where inferred)
 - Groundwater Flow Direction
 - Approximate Gypsum Storage Area Boundary
 - Approximate Property Boundary

Notes:

1. ft NAVD88 indicates an elevation in feet relative to the North American Vertical Datum of 1988.
- 2.* indicates that groundwater elevation contours represent groundwater and not water contained within the lined impoundments.
3. CCR indicates Coal Combustion Residuals.
4. GSA indicates Gypsum Storage Area.
5. Source of property and Gypsum Storage Area (GSA) boundaries: Gulf Power drawing number ES4041S1.
6. Aerial Source: Nearmap, HERE; captured 22 October 2024.



GSA CCR Groundwater Monitoring Network
 Florida Power & Light Company
 Gulf Clean Energy Center
 Pensacola, FL

Geosyntec
 consultants

Pensacola, FL February 2026

Figure
1

TABLE 1: GYPSUM STORAGE AREA CCR GROUNDWATER MONITORING SYSTEM
Florida Power & Light Company - Gulf Clean Energy Center, Gypsum Storage Area, Pensacola, Florida

Location	Designation	Northing	Easting	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	TOS Depth (ft BLS)	BOS Depth (ft BLS)	Screen Length (ft)
MW-100	Background	578116.11	1107316.00	99.84	103.03	-5.16	-15.16	105	115	10
MW-101	Background	577158.45	1107724.27	105.1	108	-1.9	-11.9	107	117	10
MW-107	Background	577201.66	1107442.83	111.4	114.71	1.4	-8.6	110	120	10
MW-108	Background	576208.36	1107577.06	80.51	83.54	-4.49	-14.49	85	95	10
MW-200	Downgradient	581703.17	1108041.01	17.2	20.13	-2.8	-12.8	20	30	10
MW-201	Downgradient	581138.29	1108637.91	52.45	52.12	3.15	-6.85	49.3	59.3	10
MW-206	Downgradient	581888.48	1108613.37	26.25	29.11	1.25	-8.75	25	35	10
MW-200-I	Downgradient	581719.30	1108056.49	17.94	21.24	-45.06	-55.06	63	73	10
MW-201-I	Downgradient	581150.61	1108638.00	52.33	51.89	-47.67	-57.67	100	110	10
MW-206-I	Downgradient	581897.17	1108621.95	26.15	29.16	-43.85	-53.85	70	80	10
MW-306	Background	578417.11	1106200.44	67.61	70.56	-12.39	-22.39	80	90	10
MW-307	Background	578209.77	1106865.99	101.11	104.18	-8.89	-18.89	110	120	10

Notes:

1. Northing and easting are in feet relative to the State Plane Florida North Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum of 1988.
3. TOC indicates top of casing.
4. ft BLS indicates feet below land surface.
5. TOS indicates top of screen.
6. BOS indicates bottom of screen.
7. Designations are relative to CCR Unit.
8. ft indicates feet.