

Salisbury Renewable Natural Gas Project – Motion to Amend CPG (July 7, 2020)

Exhibit SAD1-MTN-1

I. PROPOSED PROJECT CHANGES THAT ARE “MATERIAL” OR “SUBSTANTIAL” (note: All Map Key References are to Revised Site Plan, *Exhibit SAD1-MTN-2*)

Project Element	As-Approved (Case No. 18-3449-PET)	Proposed Change(s) to Findings or CPG Conditions	Applicable Section 248 Criteria	Other Permit Amendments (if any)	Explanation of Project Changes and Potential Impacts (if any)
Biogas Upgrader (Map Key: 6)	Vendor: DMT Capacity: 520 scfm Type: Membrane system 20 ft. high stack Water use: 400 gpd <i>See prior Exhs. SAD1-02 (Rev.), SAD1-5, SAD1-10, and SAD1-15.</i>	Vendor: Quadrogen Capacity: 650 scfm Type: Pressure swing absorption (PSA) No change in stack height No water use	Air Purity	Applic. For Amended Air Permit filed on 5/6/2020; draft permit issued on 6/09/20	No potential for significant impacts: - PSA system will not change gas quality from upgrader. One technology is not generally regarded as better than the other but the cost-operation relation is better at different flowrates. In addition, the PSA system does not need water to operate. - Air emissions addressed through Amended Air Permit. - Normal operating sound levels unchanged.
Gas Flare Equipment (Map Key: 8)	No change to flare equipment was proposed between the initially approved Project and amended CPG. <i>See prior Exh. SAD1-02 (Rev.).</i>	Revise Amended CPG Condition 9 to reflect correct equipment: <i>“The CPG Holder shall ensure that the flaring equipment will include a protective shield to conceal the flame and prevent blowout. The flare’s ignition system will be gas-powered. The flaring capacity will meet the specifications of the required VTDEC air permit.”</i>	Air Purity	None	No change or increase in impacts: Clerical correction to CPG condition to reflect accurate equipment description
Combined Heat & Power (“CHP”) Unit & Building (Map Key: 10)	600 kW natural gas CHP; two gas fired boilers each with a capacity of 0.99 MMBtu/hour. ¹ <i>See prior Exhs. SAD1-02 (Rev.), SAD1-5, and SAD1-10.</i>	800 kW natural gas-fired CHP; two gas fired boilers, one with a with capacity of 0.65 MMBtu/hour and one with capacity of 1.8 MMBtu/hour.	Air Purity	Air Permit amendment filed on 5/6/2020; draft permit issued on 5/19/20.	No potential for significant impacts: 800 kW CHP unit needed for start-up power. Once facility is in normal operating mode, 600 kW capacity will be sufficient. - Change in boilers based on final design and vendor selection. - Air emissions addressed through Amended Air Permit. - Normal operating sound levels unchanged.
Emergency (Back-Up) Generator (Map Key: 14)	500 kW diesel back-up generator <i>See prior Exhs. SAD1-02 (Rev.), SAD1-5, SAD1-8, and SAD1-10.</i>	760 kW diesel-fired back-up generator	Air Purity Water Purity	Air Permit amendment filed on 5/6/2020; draft permit issued on 5/19/20. SPCC Plan to be prepared in accordance with 40 CFR Part 112.	No potential for significant impacts: 760 kW unit is needed for start-up operations. Once facility is in normal operating mode, 500 kW capacity will be sufficient. - The larger generator will contain a 1,791 gallon fuel tank, consisting of a primary tank sealed inside of an outer secondary tank that provides secondary containment in the event of a release or rupture of the primary tank. - Air emissions addressed through Amended Air Permit. - Sound levels, higher than the as-approved generator, would be temporary, infrequent, and similar in intensity and type to existing on-farm diesel equipment. - Water resources protected via secondary containment.

List of prior exhibits referenced above

Exh. SAD1-02(Rev.) – Project Comparison Matrix

Exh. SAD1-5 – Air Pollution Memo

Exh. SAD1-8 – Waste Water-Water Supply-Soil Erosion Memo

Exh. SAD1-10 – Sound Assessment Memo

Exh. SAD1-15 – Roles & Responsibilities

¹ SAD1’s Air Permit permitted one boiler with a capacity of 0.65 MMBtu/hour, and the second with a capacity of 0.99 MMBtu/hour.

II. OTHER MINOR PROJECT CHANGES THAT ARE NOT “MATERIAL” OR “SUBSTANTIAL”

Project Element	As-Approved	Change(s)	Explanation of Change and Potential Impacts (if any)
RNG Output of Upgrader (Nameplate Capacity)	Estimated to be: 172,000 Mcf/year (gross), 147,000 Mcf/year (net). <i>See Exhs. SAD1-02(Rev.) and SAD1-5.</i>	The actual Upgrader equipment selected has a nameplate capacity of 235,253 Mcf/y (+10%).	No potential for significant impacts: • The nameplate capacity for the Upgrader unit is larger than the previously-estimated output, based on the available equipment and final project design. Because the production rates/emissions estimates in SAD1’s Air Pollution Control Permit must be based on the maximum capacity of the unit, the nameplate capacity must be used. • The RNG output will likely be as previously estimated based on the size of the digester and the anticipated inputs to the facility. The output will vary, however—up or down—depending on the exact mix and energy content of the inputs.
Nutrient Management Equipment (Map Key: 9)	Vendor – DVO <i>See Exh. SAD1-22</i>	Vendor – Trident	No potential for significant impacts: • SAD1 is using a different vendor for this equipment than the vendor previously identified.
Manure Tank (Map Key: 5)	New round concrete tank (26,500-gallon) <i>See Exhs. SAD1-02(Rev.) and SAD1-3(Rev.2)</i>	No new tank; instead, an existing farm tank in same building will be utilized (with upgraded pump and addition of a mixer) (38,800 gallons).	No potential for significant impacts: • Using the existing tank will allow manure collection to continue as is. The tank pump will be replaced and a mixer will be installed to homogenize the manure before it goes into the separation system. • The farm will control the manure flow into the tank; SAD1 will operate and maintain it.
Equipment layout changes	<i>See Exh. SAD1-3 (Rev.2).</i>	Changes to layout/locations for digesters, hydrolyzer, buildings, truck turnaround, non-potable water supply well, covered dumpsters, and other equipment as reflected in <i>Exhibit SAD1-MTN-2</i> .	No potential for significant impacts: • No changes to the limits of disturbance.

List of prior exhibits referenced above

Exh. SAD1-02(Rev.) – Project Comparison Matrix
Exh. SAD1-3(Rev.2) – Site Plan
Exh. SAD1-5 – Air Pollution Memo
Exh. SAD1-22 – Digestate Management Plan