

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Petition of Salisbury AD 1, LLC for a Certificate)
of Public Good, pursuant to 30 V.S.A. § 231, to)
own and operate a renewable natural gas facility)
in Salisbury, Vermont, and for de minimis) Case No. 18-3449-PET
regulation, and to address motions to transfer and)
amend the 30 V.S.A. § 248 CPG for the facility)
that was issued in Case 8596)

**Salisbury AD 1, LLC's Responses to the First Set of Discovery Requests
Served by the Department of Public Service**

Salisbury AD 1, LLC ("SAD1" or "Petitioner"), by and through the undersigned counsel, hereby responds to the first set of discovery requests served by the Department of Public Service ("DPS") on January 8, 2019.

General Objections

The following General Objections of Petitioner SAD1 are incorporated by reference into its responses to each Interrogatory, Request to Produce, and Request for Admissions reproduced below, whether or not an objection is stated in any particular response. Any response to one of the Interrogatories, Requests to Produce, or Requests for Admission given below is given without waiver of any objection, whether or not an objection is stated.

1. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is overbroad, irrelevant, unduly burdensome, or not proportional to the needs of the case.
2. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it calls for the disclosure of information or production of material privileged under the attorney-client, work-product, or any other applicable privilege.
3. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is unreasonably cumulative or duplicative, or calls for the disclosure of information or production of material that is obtainable from some other source that is more convenient, less burdensome, or less expensive, including, but not limited to, information or material that is publicly available or that has already been disclosed or produced to you in connection with another proceeding.
4. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it calls for the disclosure or production of confidential or proprietary information, trade secrets, or material.

5. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is vague, unintelligible, requires speculation as to the information being sought, or is otherwise incapable of a reasonable answer.
6. Petitioner objects to each Instruction and Definition listed in the requesting party's discovery requests to the extent that it exceeds the bounds of permissible discovery or is unduly burdensome.
7. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of Petitioner's testimony and exhibits.
8. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request would require Petitioner to conduct extensive document review, additional studies, analyses, and/or tests as part of its response.
9. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of the requesting party's intervention.
10. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of the issues on review.
11. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that it calls for a legal conclusion.

INTERROGATORIES AND REQUESTS TO PRODUCE

Q.DPS:PET.1-1. Please provide the following information regarding the gas compressor:

- a. What will be the normal exit operating pressure?**
- b. What will be the maximum exit pressure?**
- c. How will potential corrosive gases be handled?**
- d. What pressure limiting devices will be used to prevent overpressure of the outlet gas lines, if none why none?**

Response: The following information is based on the design provided to SAD1 by DMT:

- a. 245 psi(g).
- b. 250 psi(g). See Exh. SAD1-13 (DMT 11-20-18 Memo and Attachments).

- c. Corrosive gases are trapped in the media vessels prior to entering the compressor. In addition, at the suction side of the compressor the gas passes through a series of filters which further remove any traces of corrosive gases remaining. See Exh. SAD1-14 (DMT 11-6-18 Quote, page 11).
- d. Should the pressure become too high, a high-pressure safety switch shuts down the compressor. In the event of this system failing, there is a relief valve on the gas compressor vessel that will then relieve the over-pressured biogas.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Robert Lems, DMT

Q.DPS:PET.1-2. What are the acceptable Gas Cleaning Device discharge parameters for the following:

- a. Water/moisture;
- b. Carbon Dioxide;
- c. Hydrogen sulfide and other sulfur compounds;
- d. BTU.

Response: Please see Exh. SAD1-13, which provides the following table:

	Biogas IN	RNG OUT	Off Gas	Unit
Flow	300-520	165-345	135-230	scfm
Average flow:	270,000	180,000		Mcf/year
CH ₄	55-65	>96	3-5	%
Calorific value		>970		btu/ft ³
CO ₂	35-45	<4	95-97	%
H ₂ S (average)	500	<4	<4	ppm
VOC	200	<4	<4	mg/Nm ³
Ammonia	150	<4	<4	ppm
O ₂	Negligible	Negligible	Negligible	%
N ₂	Negligible	Negligible	Negligible	%
Dew point	Saturated	<7	<7	lbs/MMSCF
T	77-95	77-95	77-95	°F
P	0.1-1.0	220	1-5	psi (g)

Person Responsible for Response: Maria Sol Ucciani, Vanguard Renewables

Q.DPS:PET.1-3. How often are the Gas Cleaning parameters measured?

Response: Per the DMT design, the parameters are continuously measured (except H₂S which is discontinuous (2 to 8 minute-intervals) and takes place in a chemical test cell in the DMT container). The list of sensors is available in the "Gas Analysis Equipment" section in Appendix A of Exh. SAD1-14 (DMT 11-6-18 Quote, page 16).

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Robert Lems, DMT

Q.DPS:PET.1-4. How is the discharge to the VGS system shutdown when any of the parameters are not met?

- a. What person or process must shut down the system?**
- b. How long will it take to shut down the system?**

Response:

- a. Vermont Gas Systems (VGS) will be monitoring the gas quality remotely at VGS's Gas Control Center located in South Burlington, Vermont. The Gas Control Center will have the ability to remotely shut off the input valve from the Project to the VGS pipeline system if the RNG falls outside the quality parameters. The Gas Control Center is staffed 24 hours a day, 7 days a week, and the on-duty controller will have the responsibility to shut down the valve at the metering station. SAD1 will also be monitoring remotely and be able to execute a shutdown.
- b. Within seconds of detecting an issue, either VGS or SAD1 will be able to execute a shutdown remotely.

Person Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-5. Which industry standards will be followed for the internal gas piping of the Gas Cleaning Device?

Response: The ASME, ANSI, and UL standards, as applicable. For a detailed list, please refer to Section C of Appendix in Exhibit SAD1-14 (DMT 11-6-18 Quote, page 16).

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Robert Lems, DMT

Q.DPS:PET.1-6. Please provide a quality control plan for the Gas Cleaning Device and its installation.

Response: As SAD1 has explained in its PUC filings, the detailed quality control plans and final 100% design plans for the Project will be prepared after an amended CPG is issued and SAD1 has entered into the formal engineering contract with DMT. DMT has informed SAD1 that a quality control plan for the Gas Cleaning Device and installation of the device would be reviewed during HAZOP (Hazard and Operability Study) meetings. A HAZOP meeting will occur after the order for the equipment is placed, and design drawings are generated by the vendor and approved by the Department of Public Service. Once the drawings are approved, a HAZOP takes place. Discovery Document SAD1.DPS1-6 shows a template that would be used during the HAZOP meeting. The review will go through each skid and identify the different incidences for failure and their solutions, in order to create the quality control plan.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Robert Lems, DMT

Q.DPS:PET.1-7. What is the diameter of the pipe between the gas cleaning device and the VGS Metering and Regulation Station?

Response: The diameter will be the same as was proposed and approved in the original Lincoln Renewable Gas proceeding. That is, four (4) inches. See LeForce testimony in Docket 8596, Question 10.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-8. What is the expected normal operating pressure of the gas within the pipe between the gas cleaning device and the VGS Metering and Regulation Station?

Response: 150 to 220 PSI. See Exhibit SAD1-13.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-9. What will be the Maximum Allowable Operating Pressure (MAOP) of this pipe?

Response: The MAOP will be 1843 PSI, which assumes Grade B, Schedule 40 coated steel with a design factor of 0.50.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-10. What will be the specified minimum yield strength (SMYS) at the MAOP?

Response: The SMYS of grade B steel pipe is 35,000 PSI at the MAOP.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-11. If the pipe SMYS is 20% or more, who will write the gas Transmission Integrity Management Plan (TIMP)?

Response: The pipe will be operating at less than 20% SMYS. Nonetheless, it still falls under the definition of a Transmission Line and therefore the requirement of having a TIMP. 49 C.F.R. 192.3 Definitions state: "Transmission line means a pipeline, other than a gathering line, that: (1) Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not down-stream from a distribution center." By definition this line is also outside of the gather system because it is "beyond the furthest downstream compressor used to increase gathering line pressure for delivery to another pipeline." 49 C.F.R. 192.8.

VGS has recommended that SAD1 engage EN Engineering to prepare the TIMP. EN Engineering has worked with VGS in the past in preparing TIMPs and the annual reports. VGS will work with SDA1 to maintain the integrity of this section of pipe, and can assist SAD1 and EN Engineering (or other similarly qualified firm) in developing a TIMP.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-12. If the pipe SMYS is less than 20%, who will write the gas Distribution Integrity Management Plan (DIMP)?

Response: As noted in the response to Question 11 above, this pipeline will be covered under the TIMP.

Person Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-13. What method of corrosion control will be used on the pipe?

Response: This pipeline will be protected from corrosion by using a galvanic system with sacrificial anodes.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-14. Who will perform the required testing for cathodic protection system (CP) and other required periodic tests as required by DIMP, TIMP, or other sections of 49 CFR 192 regulations?

Response: VGS will provide periodic testing, leak surveys, locating services and other activities required to comply with all applicable 49 CFR 192 regulations as part of VGS's operations contract with Salisbury AD1.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-15. [W]hat organization will file the annual reports to US DOT (Pipeline and Hazardous Material Safety Administration, PHMSA)?

Response: SAD1 will file the PHMSA reporting. SAD1 has engaged EN Engineering, per VGS's recommendation, to prepare the PHMSA, and VGS will assist in the preparation of the reports.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-16. Please provide a quality control plan for the fabrication, installation and operation of the pipe between the Gas Cleaning Device and VGS M&R station.

Response: VGS will utilize its existing quality control standards for the fabrication, installation, and operations of this pipe. These include pipe procurement from previously approved suppliers; pipe inspection upon delivery; and real-time inspection of the installation, pressure testing, and ongoing operations/maintenance discussed above.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-17. What will be VGS's involvement with the design, construction, and operation of the short section of pipe between the outlet of the gas cleaning equipment and the VGS M&R station?

Response: VGS has reviewed the preliminary design for this section of pipe, and upon PUC approval of the Project, VGS will have a final design completed by a Vermont-licensed Professional Engineer working in conjunction with SAD1's team. The final design plans would then be provided to the Department for review, prior to construction of the gas pipeline. See Supplemental Affidavit of Maria Sol Ucciani at 4.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

Q.DPS:PET.1-18. Has the Petitioner had any discussions with VGS on gas safety, gas quality, etc.?

Response: Yes. SAD1 and VGS have discussed gas safety and quality with respect to a draft of VGS's Gas Quality Plan for renewable natural gas projects that it intends to file with the Department in the coming months.

Persons Responsible for Response: Maria Sol Ucciani, Vanguard Renewables; Thomas Murray, VGS

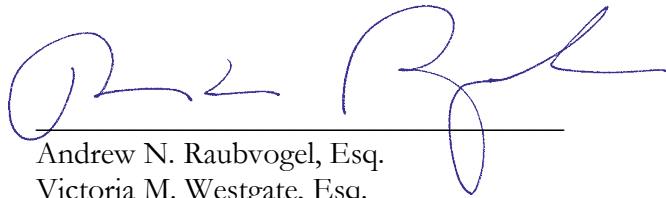
Q.DPS:PET.1-19. How will the microbial population of the anaerobic digesters be cultivated, monitored, and maintained?

Response: Microbes capable of performing anaerobic digestion will be cultivated by inoculating the digester with manure and/or digestate. The microbial community will be monitored during operation via secondary chemical indicators of anaerobic breakdown including volatile fatty acid content, pH, total inorganic carbon, and methane percentage of the gas. The microbial community will be maintained by operating the digester under conditions conducive to anaerobic digestion (i.e. proper recipe, mixing, and heating).

Person Responsible for Response: Maria Sol Ucciani, Vanguard Renewables

Dated at Burlington, Vermont this 23rd day of January, 2019.

As to Objections:

A handwritten signature in blue ink, appearing to read 'Andrew N. Raubvogel', is written over a horizontal line.

Andrew N. Raubvogel, Esq.

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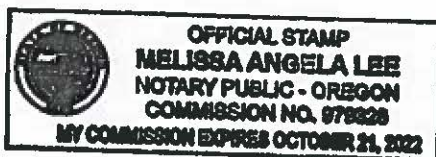
Dated at 19125 SW 125th Ct, Tualatin, OR 97062, Oregon this 21 day of January, 2019.

Respondent Signature

By: _____

Robert Lems

Subscribed and sworn before me this 21 day of January, 2019.



Notary Public

Name of Notary: Melissa Lee

Commission Expires: 10/21/2022

Dated at South Burlington, Vermont this 18 day of January, 2019.

Respondent Signature

By: Thomas Murray
Thomas Murray

Subscribed and sworn before me this 18th day of January, 2019.

Kathleen McCann
Notary Public

Name of Notary: Kathleen McCann

Commission Expires:

**Kathleen McCann
My Commission Expires
February 10, 2019**



Dated at Wellesley Massachusetts this 22 day of January, 2019.

Respondent Signature

By: 

Maria Sol Ucciani

Subscribed and sworn before me this 22 day of January, 2019.



Notary Public
Name of Notary: Maura B. Shoulkin
Commission Expires: March 2, 2023

