



State of Utah

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Department of Environmental Quality

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DIVISION OF AIR QUALITY
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Director

DAQE-IN162430001-25

March 13, 2025

Richard Peary
Ameresco Wasatch RNG LLC
111 Speen Street, Suite 410
Framingham, MA 01701
rpeary@ameresco.com

Dear Mr. Peary:

Re: Intent to Approve: New Layton Renewable Natural Gas Facility
Project Number: N162430001

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **Christine Bodell**, as well as the DAQE number as shown on the upper right-hand corner of this letter. Christine Bodell, can be reached at (385) 290-2690 or cbodell@utah.gov, if you have any questions.

Sincerely,

Alan D. Humpherys, Manager
New Source Review Section

ADH:CB:jg

cc: Davis County Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN162430001-25
New Layton Renewable Natural Gas Facility

Prepared By
Christine Bodell, Engineer
(385) 290-2690
cbodell@utah.gov

Issued to
Ameresco Wasatch RNG LLC - Davis Landfill Renewable Natural Gas
Facility

Issued On
March 13, 2025

A handwritten signature in black ink, appearing to read "Alan D. Humpherys", with a stylized, flowing script.

New Source Review Section Manager
Alan D. Humpherys

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name

Ameresco Wasatch RNG LLC

Source NameAmeresco Wasatch RNG LLC - Davis Landfill
Renewable Natural Gas Facility**Mailing Address**111 Speen Street, Suite 410
Framingham, MA 01701**Physical Address**1997 East 3500 North
Layton, UT 84040**Source Contact**Name: Richard Peary
Phone: (508) 598-3076
Email: rpeary@ameresco.com**UTM Coordinates**421,452 m Easting
4,552,288 m Northing
Datum NAD83
UTM Zone 12**SIC code** 4925 (Mixed, Manufactured, or Liquefied Petroleum Gas Production/Distribution)

SOURCE INFORMATION

General Description

Ameresco Wasatch RNG LLC (Ameresco) has requested to construct a Renewable Natural Gas (RNG) Facility that will treat landfill gas and deliver the treated gas to a natural gas pipeline distribution system in Layton, Davis County. The landfill gas will come from the adjacent Wasatch Integrated Waste Management District (WIWMD) Davis Landfill.

The raw landfill gas will be delivered to the feed blowers at the inlet of the new Ameresco facility, where it will be filtered and compressed. The gas then enters a fixed-bed hydrogen sulfide (H₂S) removal unit utilizing activated carbon media before being sent to a temperature or pressure swing adsorption technology (TSA or PSA) system, where VOCs are removed from the gas stream.

The conditioned gas will then be sent to a carbon dioxide (CO₂) separation system and PSA nitrogen (N₂) removal unit to remove CO₂ and N₂ from the gas. Oxygen (O₂) may also be removed from the gas stream by use of a catalytic oxidation process in a Deoxo system. Gas will then be dehydrated utilizing a TSA system. The TSA will have closed-loop regeneration and therefore will not vent off-gases.

The processed gas will then be sent to product compressors, where it will be pressurized to meet pipeline pressure requirements. Through the processes described above, the gas will be filtered, de-watered, and compressed, thus meeting the definition of "treatment system" in Federal Code 40 CFR 60.41(f). The waste gas generated from the above processing and treatment system will be sent to a thermal oxidizer (TO) or an open flare.

NSR Classification

New Minor Source

Source ClassificationLocated in Northern Wasatch Front O3 NAA, Salt Lake City UT PM_{2.5} NAA

Davis County

Airs Source Size: SM

Applicable Federal Standards

None

Project Description

Ameresco has requested to construct a RNG Facility, which will treat landfill gas and deliver the treated gas to a natural gas pipeline distribution system in Layton, Davis County.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
Carbon Monoxide		85.41
Nitrogen Oxides		20.15
Particulate Matter - PM ₁₀		6.70
Particulate Matter - PM _{2.5}		6.70
Sulfur Dioxide		19.32
Volatile Organic Compounds		10.54

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Generic HAPs (CAS #GHAPS)		1128
Toluene (CAS #108883)		292
	Change (TPY)	Total (TPY)
Total HAPs		0.71

PUBLIC NOTICE STATEMENT

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Ogden Standard Examiner on March 17, 2025. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as

practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.A THE APPROVED EQUIPMENT

II.A.1	Layton RNG Facility
II.A.2	Landfill Gas Treatment and Processing Equipment
II.A.3	H₂S Adsorption Treatment System Type: Non-regenerative Dry Granular Media
II.A.4	TO Burner Rating: 4 MMBtu/hr Maximum Inlet Heat Rating: 20.0 MMBtu/hr Supplemental Fuel: Natural Gas, RNG, or Treated Landfill Gas Minimum VOC Destruction Efficiency: 98%
II.A.5	Open Flare Burner Rating: 0.1 MMBtu/hr Maximum Inlet Heat Rating: 50 MMBtu/hr Supplemental Fuel: Natural Gas, RNG, or Treated Landfill Gas Minimum VOC Destruction Efficiency: 98%
II.A.6	Storage Tank Content: Landfill Gas Condensate Liquid Capacity: 5,250 gal
II.A.7	Various Components Valves, Pump Seals, Flanges, Fittings, Compressors, Connectors, etc.

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	Site-wide Requirements
II.B.1.a	Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any source on site to exceed 10% opacity. [R307-401-8]
II.B.1.a.1	Unless otherwise specified in this AO, opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]
II.B.1.b	The owner/operator shall not combust more than 613,200 million British Thermal Units (MMBtu) of total gas (including waste gas, treated landfill gas, off-specification gas, depress and purge gas, natural gas, product gas, and propane) in the TO and flare combined per rolling 12-month period. [R307-401-8]

II.B.1.b.1	The owner/operator shall: A. Determine total heat content of the gas to the TO and flare through use of instruments that monitor flow volume and methane content B. Record total heat content of the gas to the TO and flare on a daily basis C. Use the total heat content of the gas data to calculate a new rolling 12-month total by the 20th day of each month using data from the previous 12 months D. Keep the total heat content of the gas records for all periods the plant is in operation. [R307-401-8]
II.B.1.c	The owner/operator shall control all emissions from the landfill gas processing and treatment processes with a TO or open flare. All emissions from the landfill gas processing and treatment processes shall be routed through the TO or open flare before being vented to the atmosphere. [R307-401-8]
II.B.2	TO Requirements
II.B.2.a	The owner/operator shall install a TO that is certified to meet a VOC control efficiency of no less than 98%. [R307-401-8]
II.B.2.a.1	To demonstrate compliance with the above condition, the owner/operator shall maintain records of the manufacturer's emissions guarantee for the installed TO. [R307-401-8]
II.B.2.b	At all times while operating the TO, excluding periods of startup and shutdown, the owner/operator shall maintain a temperature at or above 1,400°F in the TO. [R307-401-8]
II.B.2.b.1	The owner/operator shall monitor and record the operating temperature of the TO once each operating day while the TO is operating. [R307-401-8]
II.B.2.b.2	The owner/operator shall monitor the operating temperature with equipment located such that an inspector/operator can safely read the output at any time. [R307-401-8]
II.B.2.b.3	The owner/operator shall install, operate, and maintain all monitoring instruments according to the manufacturer's instructions. [R307-401-8]
II.B.3	H₂S Treatment System Requirements
II.B.3.a	All emissions from the landfill gas processing and treatment processes shall be routed through the H₂S treatment system before being routed to the TO or flare. [R307-401-8]
II.B.3.b	The owner/operator shall not exceed an H₂S concentration of 150 ppmv at the outlet of the H₂S treatment system at all times. [R307-401-8]
II.B.3.b.1	The owner/operator shall monitor and record the H₂S concentration at the outlet of the H₂S treatment system at least once weekly for all periods the plant is in operation. [R307-401-8]
II.B.3.b.2	The owner/operator shall monitor the H₂S concentration at the outlet of the H₂S treatment system with equipment located such that an inspector/operator can safely read the output at any time. [R307-401-8]
II.B.3.b.3	The owner/operator shall install, operate, and maintain all monitoring instruments according to the manufacturer's instructions. [R307-401-8]

II.B.4	Open Flare Requirements
II.B.4.a	The owner/operator shall operate the flare with no visible emissions. [R307-401-8]
II.B.4.a.1	Visible emissions determinations shall be conducted according to 40 CFR 60, Appendix A, Method 22. [R307-401-8]
II.B.4.b	The flare shall operate with a continuous pilot flame and be equipped with an auto-igniter. [R307-401-8]
II.B.4.c	The owner/operator shall install a flare that is guaranteed to meet a VOC control efficiency of no less than 98%. [R307-401-8]
II.B.4.c.1	To demonstrate compliance with the above condition, the owner/operator shall maintain records of the manufacturer's emissions guarantee for the installed flare. [R307-401-8]
II.B.5	Condensate Storage Tank Requirements
II.B.5.a	The owner/operator shall load the condensate storage tanks on-site by the use of submerged loading. [R307-401-8]
II.B.5.b	The owner/operator shall keep the storage tank thief hatches and other tank openings closed and sealed except during tank unloading or other maintenance activities. [R307-401-8]

PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Is Derived From

NOI dated December 19, 2024

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds