



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: August 22, 2023
Revision Date: November 17, 2025
Revision Type: Modification

Effective Date: November 17, 2025
Expiration Date: May 17, 2027

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 65-01131A

Federal Tax Id - Plant Code: 04-3512838-01

Owner Information

Name: AMERESCO GREENRIDGE RNG LLC
Mailing Address: 111 SPEEN ST STE 410
FRAMINGHAM, MA 01701-2090

Plant Information

Plant: AMERESCO GREENRIDGE RNG/GREENRIDGE RENEWABLE NATURAL GAS FAC
Location: 65 Westmoreland County 65931 East Huntingdon Township
SIC Code:

Responsible Official

Name: ROBERT MEHARG
Title: VP ENERGY ASSET OPS
Phone: (207) 274 - 3950 Email: rmeharg@ameresco.com

Plan Approval Contact Person

Name: RICHARD PEARY
Title: COMPLIANCE DIRECTOR
Phone: (508) 598 - 3076 Email: rpeary@ameresco.com

[Signature] _____

MARK R. GOROG, P.E., ENVIRONMENTAL PROGRAM MANAGER, SOUTHWEST REGION



Plan Approval Description

The plan approval authorizes the construction and operation of a renewable natural gas (RNG) processing facility by Ameresco at the existing Greenridge Reclamation Landfill located in East Huntingdon Township, Westmoreland County.

Plan Approval modified on November 17, 2025, to allow an increased heat input to the backup open flare, C02.



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Note: These same sub-sections are repeated for each source!

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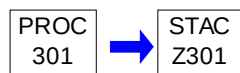
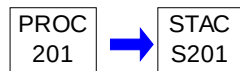
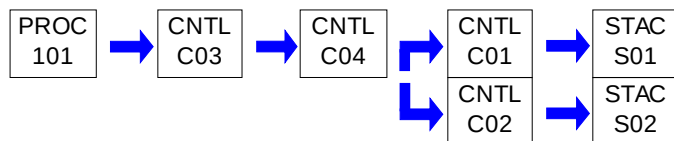
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**SECTION A. Plan Approval Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
101	RNG REFINING PROCESS		
201	ONE (1) 300 KW DIESEL-FIRED EMERGENCY BACKUP GENERATOR		
301	ONE (1) 250-GALLON WASTE OIL STORAGE TANK		
C01	ONE (1) 23.8 MMBTU/HR THERMAL OXIDIZER		
C02	ONE (1) 85.0 MMBTU/HR BACKUP OPEN FLARE		
C03	ONE (1) FIXED BED SYSTEM CONTAINING SOLID ADSORPTION MEDIA		
C04	ONE (1) MEMBRANE TAIL GAS FILTRATION SYSTEM		
S01	THERMAL OXIDIZER STACK		
S02	OPEN FLARE STACK		
S201	GENERATOR STACK		
Z301	TANK STACK		

PERMIT MAPS

**SECTION B. General Plan Approval Requirements****#001 [25 Pa. Code § 121.1]****Definitions**

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.12b (a) (b)]**Future Adoption of Requirements**

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

#003 [25 Pa. Code § 127.12b]**Plan Approval Temporary Operation**

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 30 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

#004 [25 Pa. Code § 127.12(a) (10)]**Content of Applications**

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]**Public Records and Confidential Information**

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

**SECTION B. General Plan Approval Requirements**

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

#006 [25 Pa. Code § 127.12b]**Plan Approval Terms and Conditions**

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

- (i) A justification for the extension,
- (ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

#007 [25 Pa. Code § 127.32]**Transfer of Plan Approvals**

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

#008 [25 Pa. Code § 127.12(a)(4) & 35 P.S. § 4008 & § 114 of the CAA]**Inspection and Entry**

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

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(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

#009 [25 Pa. Code 127.13a]**Plan Approval Changes for Cause**

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

- (a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.
- (b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.
- (c) The permittee fails to submit a report required by this plan approval.
- (d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

#010 [25 Pa. Code §§ 121.9 & 127.216]**Circumvention**

- (a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.
- (b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#011 [25 Pa. Code § 127.12c]**Submissions**

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager
PA Department of Environmental Protection
(At the address given on the plan approval transmittal letter or otherwise notified)

#012 [25 Pa. Code § 127.12(a)(9) & 40 CFR Part 68]**Risk Management**

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

**SECTION B. General Plan Approval Requirements**

- (i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
- (ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

#013 [25 Pa. Code § 121.7]**Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the Air Pollution Control Act (35 P.S. §§ 4001-4015).

#014 [25 Pa. Code § 127.25]**Compliance Requirement**

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

**SECTION C. Site Level Plan Approval Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §121.7]****Prohibition of air pollution.**

No person may permit air pollution as that term is defined in the act.

002 [25 Pa. Code §123.1]**Prohibition of certain fugitive emissions**

The permittee may not permit the emission into the outdoor atmosphere of a fugitive air contaminant contrary to 25 Pa. Code §123.1.

003 [25 Pa. Code §123.13]**Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

004 [25 Pa. Code §123.2]**Fugitive particulate matter**

The permittee may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in §123.1(a)(1)-(9) if the emissions are visible at the point the emissions pass outside the permittee's property.

005 [25 Pa. Code §123.31]**Limitations**

The permittee may not allow the emission into the outdoor atmosphere of any malodorous air contaminants from any source, in such a manner that the malodors are detectable outside the permittee's property.

006 [25 Pa. Code §123.42]**Exceptions**

The limitations of §123.41 (relating to limitations) shall not apply to a visible emission in any of the following instances:

- (1) When the presence of uncombined water is the only reason for failure of the emission to meet the limitations.
- (2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.
- (3) When the emission results from sources specified in §123.1(1)-(9).
- (4) N/A

007 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is equal to or greater than 10% at any time.

II. TESTING REQUIREMENTS.**# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

If, at any time, the Department has cause to believe that air contaminant emissions from the sources listed in this plan approval may be in excess of the limitations specified in, or established pursuant to this plan approval or the permittee's operating permit, the permittee may be required to conduct test methods and procedures deemed necessary by the Department to determine the actual emissions rate. Such testing shall be conducted in accordance with 25 Pa. Code Chapter 139, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.

009 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The Owner/Operator shall submit a pre-test protocol to the Department for review at least 90 days prior to the performance of any EPA reference method stack test. The test report may be submitted via PSIMS*Online at <https://www.depgreenport.state.pa.us/ecommm/Login.jsp>. All proposed performance test methods shall be identified in the pre-test protocol and approved by the Department prior to testing.

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The Department Source Testing Manual is available at this web address:
<http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4563>]

- (a) At least 90 calendar days prior to commencing an emissions testing program, a test protocol shall be submitted to the Department for review and approval in accordance with paragraph (h) of this condition. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.
- (b) When testing of a source is required on a recurring basis, a single procedural protocol may be submitted for approval; thereafter, a letter, submitted at least 90 calendar days prior to commencing an emissions testing program, referencing the previously approved procedural protocol is sufficient if the letter is approved by the Department. The letter shall be submitted as required in paragraph (a). If modifications are made to the process(es), if a different stack testing company is used, or if an applicable section of the stack test manual has been revised since the approval, a new protocol shall be submitted for approval.
- (c) At least 15 calendar days prior to commencing an emission testing program, notification as to the date and time of testing shall be given to the Department in accordance with paragraph (h) of this condition. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.
- (d) If the proposed testing did not occur per the required notification in paragraph (b) above, an electronic mail notification shall be sent within 15 calendar days after the expected completion date of the onsite testing to the Department, in accordance with paragraph (h) of this condition, indicating why the proposed completion date of the on-site testing was not adhered to.
- (e) A complete test report shall be submitted to the Department no later than 60 calendar days after completion of the onsite testing portion of an emission test program.
- (1) The test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions.
- (2) The summary results will include, at a minimum, the following information:
- (A) A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.
- (B) Permit number(s) and condition(s) which are the basis for the evaluation.
- (C) Summary of results with respect to each applicable permit condition.
- (D) Statement of compliance or non-compliance with each applicable permit condition.
- (f) Pursuant to 25 Pa. Code § 139.3, all submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.
- (g) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.
- (h) Pursuant to 25 Pa. Code §§ 139.53(a)(1) and 139.53(a)(3):
- (1) All submittals, except test notifications & portable emission monitor tests, shall be accomplished through PSIMS*Online, available through <https://www.depgreenport.state.pa.us/ecommm/Login.jsp>, if it is available.
- (2) For test notifications & portable analyzer results, or if internet submittal cannot be accomplished, one electronic copy of the test submission (notifications, protocols, reports, supplemental information, etc.) shall be sent to both PSIMS Administration in Central Office and to the Regional Office AQ Program Manager at the following addresses.

CENTRAL OFFICE:

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RA-EPstacktesting@pa.gov

SOUTHWEST REGIONAL OFFICE:
RA-EPSWstacktesting@pa.gov

(i) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

(j) Actions Related to Noncompliance Demonstrated by a Stack Test:

(1) If the results of a stack test, performed as required by this approval, exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. Within 30 days of the Permittee receiving the stack test results, a written description of the corrective actions shall be submitted to the Department. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. The Department shall notify the Permittee within 30 days, if the corrective actions taken are deficient. Within 30 days of receipt of the notice of deficiency, the Permittee shall submit a description of additional corrective actions to the Department. The Department reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(2) If the results of the required stack test exceed any limit defined in this permit, the test was not performed in accordance with the stack test protocol or the source and/or air cleaning device was not operated in accordance with the permit, then another stack test shall be performed to determine compliance. Within 120 days of the Permittee receiving the original stack test results, a retest shall be performed. The Department may extend the retesting deadline if the Permittee demonstrates, to the Department's satisfaction, that retesting within 120 days is not practicable. Failure of the second test to demonstrate compliance with the limits in the permit, not performing the test in accordance with the stack test protocol or not operating the source and/or air cleaning device in accordance with the permit may be grounds for immediate revocation of the permit to operate the affected source.

III. MONITORING REQUIREMENTS.**# 010 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

- (1) A device approved by the Department and maintained to provide accurate opacity measurements.
- (2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

011 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

On an annual basis, the permittee shall sample and analyze the inlet landfill gas to the process for heat content, flow rate, and the content of total reduced sulfur, VOC, total HAP, and speciated HAP, including, but not limited to, benzene, toluene, ethylbenzene, xylenes, vinyl chloride, and methylene chloride.

012 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

A facility-wide inspection shall be conducted at a minimum of once each operating day. The facility-wide inspection shall be conducted for the presence of the following:

- (a) Visible stack emissions;
- (b) Fugitive emissions; and
- (c) Potentially objectionable odors at the property line.

**SECTION C. Site Level Plan Approval Requirements**

These observations are to ensure continued compliance with source-specific visible emission limitations, fugitive emissions prohibited under 25 Pa. Code §123.1 or §123.2, and malodors prohibited under 25 Pa. Code §123.31.

Observations for visible stack emissions shall be conducted during daylight hours, and all observations shall be conducted while sources are in operation.

If visible stack emissions, fugitive emissions, or potentially objectionable odors are apparent, the permittee shall take corrective action. If any visible emissions are apparent after the correction action, sources of emissions shall not start until the permittee can verify compliance with the opacity standards specified in the permit through methods prescribed in §123.43, such as EPA Method 9 readings taken by a certified visible emissions reader.

Records of each inspection shall be maintained in a log and at the minimum include the date, time, name, and title of the observer, along with any corrective action taken as a result.

IV. RECORDKEEPING REQUIREMENTS.**# 013 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain the following comprehensive and accurate records:

- (1) Facility-wide emissions on a 12-month rolling basis for NO_x, CO, SO_x, VOC, PM₁₀, PM_{2.5}, total HAP, and speciated HAP;
- (2) Amount of gas received by the facility on a 12-month rolling basis;
- (3) The analysis of the inlet landfill gas to the process performed on an annual basis for heat content, flow rate, and the content of total reduced sulfur, VOC, total HAP, and speciated HAP, including, but not limited to, benzene, toluene, ethylbenzene, xylenes, vinyl chloride, and methylene chloride;
- (4) Results of facility-wide inspections including the date, time, name, and title of the observer, along with any corrective action taken as a result; and
- (5) Results of any visible emissions observations to demonstrate compliance with 25 Pa. Code §123.41.
- (6) Copies of the manufacturers' recommended specifications and maintenance schedules for each air contamination source and air cleaning device and/or site-specific developed maintenance schedules.
- (7) All maintenance performed on each air contamination source and air cleaning device.
- (8) Twelve month rolling total of the fuel usage of the 85.0 MMBtu/hr backup open flare in standard cubic feet.

014 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

All logs and required records shall be maintained either on site, electronically, or at an alternative location acceptable to the Department, for a minimum of five (5) years and shall be made available to the Department upon request.

V. REPORTING REQUIREMENTS.**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Annual emissions reporting shall be conducted as follows [25 Pa. Code §127.12b and §135.3]:

- (1) The permittee shall submit by March 1 of each year, a source report for the preceding calendar year for all sources authorized under this plan approval to the Department via AES*Online or AES*XML at www.depgreenport.state.pa.us. The report shall include information for all previously reported sources, new sources which were first operated during the preceding calendar year and sources modified during the same period which were not previously reported.
- (2) The source report; in a form as the Department may prescribe; for classes or categories of sources; shall show the actual emissions of carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter less than 10 micrometers in diameter (PM₁₀), particulate matter less than 2.5 micrometers in diameter (PM_{2.5}), sulfur dioxide (SO₂), volatile organic compounds (VOC), total hazardous air pollutants (HAP), speciated individual HAP emissions (per the Department's Emissions Inventory Reporting Instructions), and greenhouse gases, expressed as CO₂e for each reporting period. A

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description of the method used to calculate the emissions and the time period over which the calculation is based shall be included. The statement shall also contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.

(3) A source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

016 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Malfunction reporting shall be conducted as follows:

(a) The permittee shall report malfunctions, emergencies or incidents of excess emissions to the Department. A malfunction is any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator of a facility which requires immediate corrective action to restore normal operation and which causes the emission source to exceed emissions, due to unavoidable increases in emissions attributable to the situation. An emergency shall not include situations caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

(b) When the malfunction, emergency or incident of excess emissions poses an imminent danger to the public health, safety, welfare, or environment, it shall be reported to the Department and the County Emergency Management Agency by telephone within one (1) hour after the discovery of the malfunction, emergency or incident of excess emissions. The owner or operator shall submit a written or emailed report of instances of such malfunctions, emergencies or incidents of excess emissions to the Department within three (3) business days of the telephone report.

(c) The report shall describe the following:

1. Name, permit or authorization number, and location of the facility,
2. Nature and cause of the malfunction, emergency or incident,
3. Date and time when the malfunction, emergency or incident was first observed,
4. Expected duration of excess emissions,
5. Estimated rate of emissions,
6. Corrective actions or preventative measures taken.

(d) Any malfunction, emergency or incident of excess emissions that is not subject to the notice requirements of paragraph (b) of this condition shall be reported to the Department by telephone within 24 hours (or by 4:00 PM of the next business day, whichever is later) of discovery and in writing or by e-mail within five (5) business days of discovery. The report shall contain the same information required by paragraph (c), and any permit specific malfunction reporting requirements.

(e) During an emergency an owner or operator may continue to operate the source at their discretion provided they submit justification for continued operation of a source during the emergency and follow all the notification and reporting requirements in accordance with paragraphs (b)-(d), as applicable, including any permit specific malfunction reporting requirements.

(f) Reports regarding malfunctions, emergencies or incidents of excess emissions shall be submitted to the appropriate DEP Regional Office Air Program Manager.

(g) Any emissions resulted from malfunction or emergency are to be reported in the annual emissions inventory report, if the annual emissions inventory report is required by permit or authorization.

017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]**Subpart A - General Provisions****Address.**

The Facility is subject New Source Performance Standards from 40 CFR Part 60 Subpart IIII. In accordance with 40 CFR

**SECTION C. Site Level Plan Approval Requirements**

§60.4, copies of all requests, reports, applications, submittals, and other communications regarding the affected sources shall be forwarded to the Department at the address listed below unless otherwise noted [40 CFR §60.4].

Pennsylvania Department of Environmental Protection
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

Copies of all requests, reports, applications, submittals, and other communications shall also be submitted to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) accessible at <https://cdx.epa.gov/> unless electronic reporting is not available, in which case a copy shall be sent to the following address:

United States Environmental Protection Agency
Region III, Air and Radiation Division
Permits Branch (3AD10)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852

018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.13]**Subpart A--General Provisions****Addresses of State air pollution control agencies and EPA Regional Offices.**

The Facility is subject National Emission Standards for Hazardous Air Pollutants from 40 CFR Part 63 Subpart ZZZZ. In accordance with 40 CFR §63.13, copies of all requests, reports, applications, submittals, and other communications regarding the affected sources shall be forwarded to the Department at the address listed below unless otherwise noted.

Pennsylvania Department of Environmental Protection
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

Copies of all requests, reports, applications, submittals, and other communications shall also be submitted to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) accessible at <https://cdx.epa.gov/> unless electronic reporting is not available, in which case a copy shall be sent to the following address:

United States Environmental Protection Agency
Region III, Air and Radiation Division
Permits Branch (3AD10)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852

VI. WORK PRACTICE REQUIREMENTS.**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall construct, operate, and maintain all air contamination sources and air cleaning devices authorized under this Plan Approval in accordance with the manufacturer's specifications and recommended maintenance schedules, or site-specific specifications developed in accordance with good engineering practice and prior operating experience.

VII. ADDITIONAL REQUIREMENTS.**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

This plan approval authorizes the installation and operation of the following equipment at the proposed renewable natural

**SECTION C. Site Level Plan Approval Requirements**

gas plant owned and operated by Ameresco at the Greenridge Landfill:

- Source ID 101: RNG refining process;
- Source ID C01: One (1) 23.8 MMBtu/hr thermal oxidizer;
- Source ID C02: One (1) 85.0 MMBtu/hr backup open flare;
- Source ID C03: One (1) fixed bed system containing solid adsorption media to reduce the sulfur content of the LFG;
- Source ID C04: One (1) Membrane Tail Gas Filtration System to reduce the VOC, Siloxane, and CO₂ content of the LFG;
- Source ID 201: One (1) 300 kW diesel-fired emergency backup generator; and
- Source ID 301: One (1) 250-gallon waste oil storage tank

021 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Upon determination by the permittee that the air contamination sources and air cleaning devices covered by this plan approval are in compliance with all conditions of the plan approval, the permittee shall contact the Department to schedule the Initial Operating Permit Inspection.

022 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Upon completion of the Initial Operating Permit Inspection and determination by the Department that the permittee is in compliance with all conditions of the plan approval, the permittee shall submit a State Only Operating Permit (SOOP) for this Facility within 120 days to incorporate the conditions of this plan approval.

023 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall submit requests to extend the temporary operation periods at least 15 days prior to the expiration date of any authorized period of temporary operation.

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.

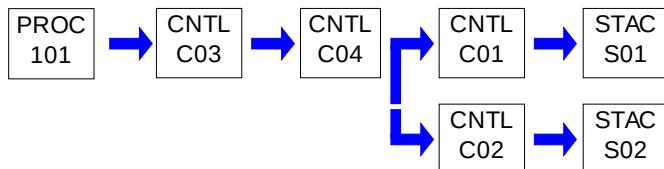
**SECTION D. Source Level Plan Approval Requirements**

Source ID: 101

Source Name: RNG REFINING PROCESS

Source Capacity/Throughput:

Conditions for this source occur in the following groups: G01

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

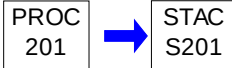
No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 201

Source Name: ONE (1) 300 KW DIESEL-FIRED EMERGENCY BACKUP GENERATOR

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VII. ADDITIONAL REQUIREMENTS.**# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

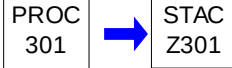
Applicable requirements of New Source Performance Standards (NSPS) from 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines shall be met.

**SECTION D. Source Level Plan Approval Requirements**

Source ID: 301

Source Name: ONE (1) 250-GALLON WASTE OIL STORAGE TANK

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**SECTION E. Source Group Plan Approval Restrictions.**

Group Name: G01

Group Description: RNG Refining Requirements

Sources included in this group

ID	Name
101	RNG REFINING PROCESS
C01	ONE (1) 23.8 MMBTU/HR THERMAL OXIDIZER
C02	ONE (1) 85.0 MMBTU/HR BACKUP OPEN FLARE
C03	ONE (1) FIXED BED SYSTEM CONTAINING SOLID ADSORPTION MEDIA
C04	ONE (1) MEMBRANE TAIL GAS FILTRATION SYSTEM

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Pursuant to the best available technology requirements of 25 Pa. Code 127.1 and 127.12, emissions from the thermal oxidizer, Source ID C01, shall not exceed the following:

- (a) Nitrogen Oxides (NO_x): 0.056 lb/MMBtu
- (b) Carbon Monoxide (CO): 0.20 lb/MMBtu
- (c) Total Particulate Matter with an aerodynamic diameter less than 10 microns (PM₁₀): 0.01 gr/dscf

002 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer, Source ID C01, shall maintain the following; destruction/removal efficiency of at least 98%, by weight, of non-methane organic compounds (NMOC); or an outlet NMOC concentration of less than 20 parts per million, by volume, dry basis, as hexane, corrected to 3% oxygen.

003 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The flare, Source ID C02, shall be designed in accordance with 40 CFR §60.18.

004 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

During the initial 60 days of the open flare operation, the open flare may be operated 24 hours a day, seven days a week.

005 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

After entering the Ameresco facility, landfill gas shall be controlled by a treatment system to reduce H₂S in the gas. The system shall be monitored (e.g. Draeger or Gastec tubes, intrinsically safe ionization detector) at an appropriate frequency (e.g., one-fourth the predicted time to breakthrough of the first bed) and must be performed at the treatment system inlet, between each media vessel, and at the outlet of the system. If breakthrough of the first vessel is detected, the second vessel shall be shifted to the first position and a new or replenished vessel shall be placed in the second position. Monitoring, operating, and maintenance records shall be maintained and available to the Department upon request.

006 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be designed such that the flame is concealed within the stack enclosure under normal operating conditions.

007 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Outlet sulfur concentration from the treatment system, prior to combustion in the thermal oxidizer and/or flare, shall be less than 46.9 ppmv.

**SECTION E. Source Group Plan Approval Restrictions.****Throughput Restriction(s).****# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

After the initial 60 days of open flare operation, inlet gas to the open flare shall not exceed 168 MMscf on a 12-month rolling basis.

II. TESTING REQUIREMENTS.**# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Within 180 days after initial startup, or on an alternative schedule as approved by the Department, the permittee shall conduct EPA reference method stack testing on the thermal oxidizer (Source ID C01) for NO_x, CO, PM₁₀, SO_x, PM₁₀, VOC, and HAP, including, but not limited to, benzene, toluene, ethylbenzene, xylenes, vinyl chloride, and methylene chloride. Subsequent testing shall be performed every five (5) years after the initial testing.

010 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

In the event that any of the testing deadlines cannot be met, the permittee may request an extension of the due date(s) in writing and include justification for the extension. The Department may grant an extension for a reasonable cause.

III. MONITORING REQUIREMENTS.**# 011 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The flare shall be equipped with a flow meter and data recorder.

012 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The flare shall be equipped with a continuous pilot ignition system.

013 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The flare shall be equipped with a flame sensing device and automatic shutoff valve designed to close immediately when a flame is not detected.

014 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Quarterly fractional gas analysis shall be performed on the inlet gas to the RNG facility. Each sample shall be collected no sooner than 30 days from the previous sample. The separately permitted Greenridge Landfill is currently required to sample and monitor the landfill gas annually for heat content, flow rate, and the content of total reduced sulfur, VOC, and HAPs, including, but not limited to, benzene, toluene, ethylbenzene, xylenes, vinyl chloride, and methylene chloride. Ameresco may use the analysis required to be performed by Greenridge, have their own analysis performed, or another option approved by the Department in writing. Ameresco may apply to reduce the frequency of the fractional gas analysis after collection of a year's worth of data and demonstration that the sample results are statistically consistent.

015 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be equipped with a pilot ignition system using NG or preprocessed RNG, which will be used during startup to achieve normal operation and during normal operation in order to supplement the combustion of process waste gas.

016 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be designed such that when a flame-out occurs, a thermocouple and/or ultra-violet (or similar) flame scanner will detect the flame outage. The automatic shutoff valve will immediately close and the unit will automatically shut down. During re-start, a pilot ignition system will be used to achieve normal operation; and during normal operation in order to supplement the combustion of process waste gas.

017 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be equipped with temperature monitoring equipment for temperature control and data recording

**SECTION E. Source Group Plan Approval Restrictions.**

equipment which will monitor and record the combustion temperature of Thermal Oxidizer, C01.

018 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Except for the first year, the owner or operator shall conduct a burner tuning procedure on the thermal oxidizer in accordance with the manufacturer's specifications to minimize NO_x and CO emissions each year thereafter.

- (1) The burner shall be tuned so that the emissions do not exceed limits stated in the plan approval;
- (2) The air-to-fuel ratio controls shall be inspected and adjusted to ensure proper operation in accordance with the manufacturer's specifications;
- (3) Monitoring records stating the following information shall be kept on site for a minimum of five years and shall be made available to the Department upon request;
 - a. The date of the tuning procedure;
 - b. The name of the servicing company and technician;
 - c. Landfill gas flow rate;
 - d. The CO and NO_x concentrations (ppmvd) before and after tuning; and
 - e. The percent O₂ before and after tuning.

019 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

Equipment shall be installed to measure and record the inlet plant flow, the waste gas and natural gas flow rates to the Thermal Oxidizer, and the process and waste gas flow rates to the flare.

020 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment when operating the Thermal Oxidizer:

- (a) Temperature monitoring devices equipped with a continuous recorder and having an accuracy of (+/-) 1 percent of the temperature being measured expressed in degrees Celsius or degrees Fahrenheit (+/-) 0.5°C or (+/-) 0.9°F, whichever is greater. whichever is greater.

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall submit to the Department the Manufacturer's operational specifications and recommended maintenance schedule for Source ID C01, C02, C03, and C04 within 60 days of selection of the equipment.

022 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be designed such that the flame is concealed within the stack enclosure under normal operating conditions.

**SECTION E. Source Group Plan Approval Restrictions.****# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The thermal oxidizer shall be designed such that visible emissions are not anticipated under normal operations and will not exceed 10% opacity at any time.

024 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be equipped with a pilot ignition system using natural gas or preprocessed renewable natural gas, which will be used during startup to achieve normal operation and during normal operation in order to supplement the combustion of process waste gas.

025 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be designed such that when a flame-out occurs, a thermocouple and/or ultra-violet (or similar) flame scanner will detect the flame outage. The automatic shutoff valve will immediately close and the unit will automatically shut down.

026 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The thermal oxidizer shall be equipped with temperature monitoring equipment (e.g., thermocouple) for temperature control and data recording equipment which will monitor and record the combustion temperature.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.

**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.



SECTION H. Miscellaneous.



***** End of Report *****
