PETITION FOR VARIANCE

BEFORE THE HEARING BOARD OF THE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

DOCKET NO. 3756

PETITIONER

Name: _*Ameresco Keller Canyon RNG LLC*_____

Check One: ___Sole Proprietor ___Partnership _*X*_Corporation

___Government ___Non-Profit (specify)_____

Mailing Address: _*901 Bailey Road, Pittsburg, CA 94565*_____

Phone number: _*(508) 661-2242*_____

Email Address:
_*amcclelland@ameresco.com*_____

Name, title, and phone number of person(s) authorized to receive notices (no more than two):

*Andrew McClelland, Environmental Compliance Manager, (508) 661-2242*_____

*Richard Peary, Director – Compliance, (508) 598-3076*_____

Briefly describe the type of business or organization/agency activity:

Facility Background

In April 2024, Ameresco Keller Canyon RNG LLC (Ameresco) began commissioning of a renewable natural gas (RNG) facility (Facility) that was built to receive landfill gas (LFG) from the Keller Canyon Landfill (Facility #A4618) (Landfill) and process the LFG into RNG for injection into a nearby PG&E pipeline (process S-1). Ameresco began pipeline injections in September 2024.

Ameresco takes a waste that would otherwise be unused (that is, LFG) and processes it into a valuable commodity (RNG), reducing the need for the production and use of conventional natural gas, and thereby eliminating criteria pollutant and greenhouse gas emissions that would otherwise occur.

The Facility is located at 901 Bailey Road, Pittsburg, California 94565 (Contra Costa County) and is subject to an Authority to Construct Permit (ATC) initially dated June 29, 2022 and renewed on August 19, 2024 (Application No. 30557, Plant No. 24772). The Facility is permitted, owned, and operated separately from the Landfill. The Facility utilizes one Thermal Oxidizer (A-1) and one Enclosed Flare (A-2) to control waste gas emissions from the RNG processing operations.

Purpose of Variance Petition

The Facility's ATC requires that an initial source test be conducted on the Thermal Oxidizer and Flare within 1,920 operating hours, not to exceed 120 days from the start of operation. On September 24, 2024, the Hearing Board granted Ameresco a short variance (Docket No. 3753), which allowed Ameresco to extend the initial source testing deadline until November 20, 2024. The Hearing Board's Order Granting Short Variance explained that before Ameresco could conduct an accurate source test of the Thermal Oxidizer and Flare, Ameresco was required to satisfy specific PG&E pre-injection testing requirements. The Order also explains that following the start of injection into the commercial pipeline, Ameresco will require several weeks to tune the plant so that it can process higher flows of LFG. At the time of the Order, Ameresco expected that ramp-up could be completed and source testing could be accomplished prior to November 20, 2024. However, as Facility start-up is ongoing and due to limited LFG availability from the Landfill, the Facility has not been able to operate at or near its permitted capacity. While at times the Facility has been able to operate at approximately 50% of its permitted capacity (as measured by plant inlet flows), typical operations currently average around 35% of the Facility's permitted capacity (that is, current average plant inlet flows are approximately 1700 SCFM, and permitted capacity is 4700 SCFM).

Even though the Facility has not been able to operate at its maximum permitted capacity, Ameresco conducted source testing of the Thermal Oxidizer on November 5, 2024. However, Ameresco was unable to complete testing of the Flare, which had been scheduled for November 7, 2024, due to a utility power outage and subsequent difficulty restarting the Facility. Upon completing the source testing of the Thermal Oxidizer, Ameresco contacted District Principal Air Quality Engineer – Source Test Section, Marco Hernandez to ask whether completing the Thermal Oxidizer source testing while the Thermal Oxidizer was operating around 30% of its permitted capacity was compliant with the initial source testing requirement (Condition 27707.12) in Ameresco's ATC, consistent with USEPA's national source testing guidance, which states that if a facility contacts the relevant agency before the test deadline has passed and requests additional time to conduct an initial stack test because it is unable to reach its maximum production rate within the start-up period, it may be appropriate to postpone the test because the information obtained during the test would not be

meaningful in determining compliance with the underlying emissions requirements.[1] Mr. Hernandez directed Ameresco to District permitting staff. Ameresco reached out to permitting staff but has not received a definitive response. Ameresco does not believe a variance is needed for the initial source testing requirement for the Thermal Oxidizer, but Ameresco is still working on confirming this point with District staff.

Thus, Ameresco is requesting an extension of the November 20, 2024, source testing deadline for the Flare to allow sufficient time to reschedule and complete the postponed test. Ameresco requests an additional 40 days, until December 30, 2024, to complete the initial source testing for the Flare, which is required by Condition 27708.12.

In addition, if Ameresco is required by the District to source test the Thermal Oxidizer at higher fuel flow rates than those occurring during the November 2024 source test to comply with Condition 27707.12, Ameresco respectfully requests additional time to comply with Condition 27707.12 because Ameresco has not been able to receive enough LFG to operate the Facility at or near full capacity. (Ameresco believes that its November 2024 source test suffices to comply with Condition 27707.12 but includes this condition in the variance petition out of an abundance of caution, in case the District determines that testing at higher fuel flow rates is required.) While difficult to predict accurately, Ameresco anticipates that there will be sufficient LFG supply to operate the Thermal Oxidizer at or near its full permitted capacity prior to the end of 2025. Thus, if additional source testing is required for the Thermal Oxidizer, Ameresco requests until November 15, 2025 to complete the initial source testing required by Condition 27707.12.

Are you a Small Business as defined in Health and Safety Code Section 42352.5(b)?

___Yes _*X*_No

Are you a public agency providing an "essential public service" as defined in Health and Safety Code Section 42352?

___Yes _*X*_No

VARIANCE REQUEST

Type of Variance Requested:

[1] USEPA, *Clean Air Act National Stack Testing Guidance* (April 27, 2009), p. 7. Available here: https://www.epa.gov/sites/default/files/2013-09/documents/stacktesting_1.pdf.

If you are selecting Interim Variance, you must also select a Short or Regular Variance to follow.

___Interim __Short _*X*_Regular ___Emergency ___Product ___Group

Good Cause: (Required only for Emergency and Interim Variances Explain why this Petition was not filed in sufficient time to issue the required public notice.)

N/A

OPERATION

Briefly describe the type of equipment or process that is the subject of this variance petition, and why it is necessary to your operation. Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate for the subject equipment. For Title V facilities, attach only the relevant sections of the Facility Permit showing the equipment or process and conditions that are subject to this Petition. You must bring the entire Facility Permit to the hearing:

The pieces of equipment that are the subject of this variance petition are the Facility's Hydrogen Sulfide Scrubber (A-3), Thermal Oxidizer (A-1) and Process Enclosed Flare (A-2). LFG going to the Facility is first processed in the Hydrogen Sulfide Scrubber, which employs a non-regenerative carbon-based media to entrain H2S. The H2S scrubber is a pass-through, closed system with no emissions to the atmosphere. Gas exiting the H2S scrubber, referred to as preprocessed RNG (PPRNG) is then routed to dehydration systems as well as systems for the removal of VOCs, carbon dioxide, and nitrogen.

There are no emissions to the atmosphere prior to the Thermal Oxidizer or Flare outlets. The Thermal Oxidizer is the Facility's primary emissions control device for waste gases from PPRNG processing operations, and the Flare is used to control waste gases during startup, shutdown, and process upsets. Both emissions control devices use PPRNG and natural gas to start up and/or maintain combustion temperature. The Thermal Oxidizer and Flare are necessary for the Facility's operation because, absent their operation, the waste gases from PPRNG processing operations would be emitted directly to the atmosphere without being controlled.

REGULATORY REQUIREMENTS

List all District Regulations, rules, and permit conditions that are the subject of this variance request. Identify all applicable subsections:

**Only if the District require additional source testing for the Thermal Oxidizer: Permit Condition 27707.12 – A-1 Thermal Oxidizer – The initial source test for A-1 must be conducted within 1,920 operating hours, not to exceed 120 days from initial operation.*

Permit Condition 27708.12 – A-2 Process Enclosed Flare – The initial source test for A-2 must be conducted within 1,920 operating hours, not to exceed 120 days from initial operation.

Regulation 8-34-412 – The initial compliance demonstration test must be conducted within 120 days after initial startup of the control devices.

Regulation 2-1-307 – Failure to Meet Permit Conditions

INFORMATION FOR VARIANCE FINDINGS

Is there a regular maintenance and/or inspection schedule for this equipment?

_*X*_Yes ___No

If yes, how often:

For the H2S treatment system, the H2S scrubber is monitored for breakthrough on a monthly basis and the carbon media is changed out with fresh carbon media once breakthrough is detected. For the Thermal Oxidizer and Flare, maintenance is conducted as recommended by the manufacturer.

Date of last maintenance and/or inspection: *TBD as this is a new facility.*

Was there any indication of problems with the subject equipment?

___Yes _*X*_No

Were you issued any Notice(s) of Violation or Notice(s) to Comply concerning the equipment or activity that are the subject of this variance request within the past year?

_*X*_Yes ___No

If yes, attach a copy of each notice.

Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six months?

_X__Yes __No

If yes, be prepared to present detailed testimony about the nature of these complaints at the hearing.

We understand that there have been noise complaints related to the Facility. However, the noise complaints are not related to the equipment that is the subject of this petition—the H2S treatment system, Thermal Oxidizer, and Flare.

Has this matter been the subject of previous variance requests?

Yes, this matter was the subject of a short variance.

If yes, provide date of hearing, type of variance, and Hearing Board decision:

The hearing date was September 17, 2024, and the Hearing Board granted the short variance.

Explain why it is beyond your reasonable control to comply with the regulations and permit conditions that will be the subject of this variance:

It is beyond Ameresco's reasonable control to comply with the November 20, 2024, initial source testing deadline because Ameresco was unable to complete scheduled testing of the Flare on November 7, 2024, due to a utility power outage and subsequent difficulty restarting the plant. Ameresco has not been able to find a testing vendor that could complete the testing of the Flare prior to the November 20, 2024, deadline. Ameresco was able to conduct the initial source test for the Thermal Oxidizer at or near 30% of the Facility's maximum permitted throughput on November 5, 2024. However, due to limited LFG availability from the Landfill, Ameresco was unable to conduct the test while the Facility was operating at or near its maximum permitted capacity.

If you are seeking a product variance, briefly describe how you attempted to locate, research, or develop a product that is in compliance with District rules and regulations:

N/A

When and how did you first become aware that you are not (or will not be) in compliance with the regulations, rules and/or permit conditions?

Ameresco realized that it would not be able to ramp up to near maximum permitted operations in early November. However, Ameresco still completed the initial source test for the Thermal Oxidizer even though the Facility was operating at only around 30% of its full capacity. Ameresco attempted to complete the initial source testing for the Flare on November 7, 2024, but was unable to do so due to a utility power outage. Ameresco then rescheduled the test for the next day (November 8, 2024), but was unable to restart the Facility in time to complete the testing. Ameresco then contacted multiple vendors to attempt to reschedule the testing before the November 20, 2024, deadline but none of the vendors were able to conduct the testing on that timeline. The last vendor

confirmed they would not be able to complete the testing on that timeline on November 14, 2024. Thus, Ameresco was aware it would not be able to comply with the Flare source test requirement on November 14, 2024.

List the date(s) and action(s) you have taken since that time to achieve compliance:

Ameresco scheduled a Flare source test for December 2024, and Ameresco expects to be able to complete this test at or near full flare capacity. As to the Thermal Oxidizer, although LFG flows to the Facility are outside of Ameresco's control, Ameresco expects the Facility to be operating at near maximum capacity by the end of 2025.

What would be the harm to your business, agency or organization if the variance is not granted?

Economic losses: $1,100,000 per month or greater in revenue

Number of employees laid off, if any: All facility employees

Provide detailed information regarding economic losses, if any (anticipated business closure, breach of contracts, hardship on customers, employees or the public, and/or similar impacts):

If the Facility were forced to comply with the current source testing deadline, its only option would be to relinquish its permit so that the condition no longer applies.

Can you curtail or terminate any operations in lieu of seeking a variance?

___Yes (provide brief explanation)

_*X*_ No

Will any emissions occurring during the variance period result in odor, dust or smoke?

No.

If yes, identify the type and amount of these emissions; what you can do to monitor and mitigate those emissions; and, the likely impact on the surrounding community.

N/A

Will any emissions occurring during the variance period result in excess opacity (total opacity above __%)?

No.

If yes, identify the type and amount of these emissions; the likely duration of the excess opacity during the variance period; and, what you can do to monitor and mitigate those emissions.

N/A

Estimate all other excess emissions that will occur on a daily basis during the variance period. Excess emissions are those that exceed rule and permit condition limits.

N/A, there will be no excess emissions as a result of this variance.

Show calculations used to estimate quantities of excess emissions or explain why there will be no excess emissions:

N/A, there will be no excess emissions as a result of this variance.

Briefly describe the measures that will be taken to mitigate excess emissions to the maximum extent feasible during the variance period, or explain why mitigation measures are not feasible:

N/A, there will be no excess emissions as a result of the Source Test Deadline Extension.

How do you plan to monitor or quantify emissions levels from the equipment or operations during the variance period?

Ameresco will complete the Flare source testing as soon as reasonably feasible. Also, Ameresco performed source testing for the Thermal Oxidizer at approximately 30% of the Facility's capacity in early November 2024 to provide data on its emissions.

Will you provide information regarding emissions during the variance period in a manner and frequency as requested by the District?

_*X*_Yes ___No

COMPLIANCE

How do you intend to achieve compliance with the regulations and permit conditions that are the subject of the variance? Briefly describe any necessary process changes; equipment to be installed; or modifications to equipment or your facility. Identify whether authority to construct or a permit amendment will be necessary. Include dates by which you estimate actions will be completed and an estimate of total costs.

As to the Flare, if currently scheduled testing goes as planned, Ameresco will achieve compliance with the Flare initial source testing requirement in December 2024, which is the soonest Ameresco could reschedule the source test following the cancellation of the November test due to a power outage.

If additional testing is required for the Thermal Oxidizer, Ameresco intends to achieve compliance with the Thermal Oxidizer initial source testing requirement as soon as possible by doing what it can to ensure the Facility operates at or near its maximum operating capacity so that it can conduct an accurate and representative initial source test. Ameresco currently expects to be able to operate the Facility at or near its maximum capacity by the end of 2025.

List any operating conditions or increments of progress, if any, that you propose to include in the variance order. If the variance is to extend beyond one year, you must propose increments of progress:

Proposed Operating Conditions

The regular variance shall be subject to the following conditions:

1. Ameresco shall continue to comply with each of the Conditions in Attachment A of the September 24, 2024, Order Granting Short Variance as if such Conditions were included in this variance.

2. This regular variance shall go into effect on the date upon which the order granting the variance is executed retroactive to November 20, 2204 and shall expire upon the earlier of the satisfactory completion of the source testing or December 30, 2024 for Condition 27708.12 and, if needed, November 15, 2025 for Condition 27707.12, but, as to Condition 27707.12, only if District staff determines that additional initial source testing is required at this time for the Thermal Oxidizer.

State the date you are requesting the variance to begin: *November 20, 2024*

State the date on which you will achieve final compliance: *December 30, 2024 for Condition 27708.12 and, if needed, November 15, 2025 for Condition 27707.12, but only if additional source testing is required for the Thermal Oxidizer.*

List the names of any District staff with whom you or any of your staff or representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply. Include name, title and phone number:

Marco Hernandez
Mark Kiffe
Andrew Kobayashi

If this Petition was completed by someone other than the petitioner, provide their name and title:

_____

The following verification must be signed by the owner, manager, director, or other responsible party of the plant, business, factory, agency or organization requesting the variance:

I, the undersigned, hereby declare under penalty of perjury, under the laws of the State of California, that I have read the foregoing Petition, including attachments, and that their contents are true and correct.

Dated: Nov 20, 2024, at (location) *Framingham, MA*.

Print name: *Robert Meharg*

Signature: _____

Title: *Authorized Representative*

Ameresco Keller RNG - Petition for Variance

Final Audit Report 2024-11-20

Created:	2024-11-20
By:	Andrew McClelland (amcclelland@ameresco.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAb3YI4KSHwZbxnD-L08uHVJOksjRYuljg

"Ameresco Keller RNG - Petition for Variance" History

Document created by Andrew McClelland (amcclelland@ameresco.com)
2024-11-20 - 7:50:19 PM GMT- IP address: 151.203.67.162

Document emailed to Robert Meharg (rmeharg@ameresco.com) for signature
2024-11-20 - 7:50:59 PM GMT

Email viewed by Robert Meharg (rmeharg@ameresco.com)
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Document e-signed by Robert Meharg (rmeharg@ameresco.com)
Signature Date: 2024-11-20 - 8:03:23 PM GMT - Time Source: server- IP address: 24.39.163.250

Agreement completed.
2024-11-20 - 8:03:23 PM GMT

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

June 29, 2022

Ameresco Keller Canyon RNG LLC
901 Bailey Road
Pittsburg, CA 94565

Attention: Alan Siegwarth

Authority to Construct for Permit Application No. 30557, Plant No. 24772

Required Action

Your Authority to Construct is enclosed. This Authority to Construct is not a Permit to Operate. **To receive your Permit to Operate you must:**

1. Complete the Start-up Notification portion of the Authority to Construct.
2. Send the Start-up Notification to the assigned Permit Engineer via e-mail, fax or mail **at least seven days** prior to operating your equipment.

Note: Operation of equipment without sending the Start-up Notification to the District may result in enforcement action.

Authorization of Limited Use

The Authority to Construct authorizes operation during the start-up period from the date of initial operation indicated in your Start-up Notification until the Permit to Operate is issued, up to a maximum of 90 days. All conditions (specific or implied) included in this Authority to Construct will be in effect during the start-up period.

Contact Information

If you have any questions, please contact your assigned Permit Engineer:

Nimrat Sandhu, Senior Air Quality Engineer

Tel: (415) 749-8604 **Fax:** (415) 749-5030 **Email:** nsandhu@baaqmd.gov

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Authority to Construct

(This is not a Permit to Operate)

Plant No. 24772
Application No. 30557

Ameresco Keller Canyon RNG LLC

901 Bailey Road, Pittsburg, CA 94565
is hereby granted an *Authority to Construct* for the following equipment:

S-1 Processing LFG into RNG, 4,700 cfm LFG into 2,041 cfm RNG

abated by

A-3 Scrubber

Hydrogen Sulfide Scrubber, H2S Scrubber: 2-vessel fixed bed adsorbers in series; Max Cap 4.7 mcfm

Equipment above is subject to attached condition no. 27705.

Issue date: June 28, 2022
Expiration date: July 1, 2024

APPROVED BY GREG SOLOMON (SIGNED)
for PAMELA J. LEONG
DIRECTOR OF ENGINEERING

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Nimrat Sandhu, Senior Air Quality Engineer
Tel: (415) 749-8604 **Fax:** (415) 749-5030
Email: nsandhu@baaqmd.gov

Plant No. 24772
Source No. S-1
Application No. 30557

The initial operation of this equipment is scheduled for _____ (month/day/year)

Print your first and last name _____

Telephone No. _____

Equipment Serial No._____

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Authority to Construct

(This is not a Permit to Operate)

Plant No. 24772
Application No. 30557

Ameresco Keller Canyon RNG LLC

901 Bailey Road, Pittsburg, CA 94565
is hereby granted an *Authority to Construct* for the following equipment:

A-1 Thermal Oxidizer, Air Clear, Maximum Capacity on pilot fuel: 8 MM BTU/hr, Maximum Capacity with process gas: 17.3 MM BTU/hr

Equipment above is subject to attached condition no. 27707.

Issue date: June 28, 2022
Expiration date: July 1, 2024

APPROVED BY GREG SOLOMON (SIGNED)
for PAMELA J. LEONG
DIRECTOR OF ENGINEERING

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Nimrat Sandhu, Senior Air Quality Engineer
Tel: (415) 749-8604 **Fax:** (415) 749-5030
Email: nsandhu@baaqmd.gov

Plant No. 24772
Source No. A-1
Application No. 30557

The initial operation of this equipment is scheduled for _____ (month/day/year)

Print your first and last name _____

Telephone No. _____

Equipment Serial No. _____

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Authority to Construct

(This is not a Permit to Operate)

Plant No. 24772
Application No. 30557

Ameresco Keller Canyon RNG LLC

901 Bailey Road, Pittsburg, CA 94565
is hereby granted an *Authority to Construct* for the following equipment:

A-2 Process Enclosed Flare, John Zink Zule Ultra Low Emissions Flare, Maximum Capacity: 35.8 MMBTU/hr

Equipment above is subject to attached condition no. 27708.

Issue date: June 28, 2022
Expiration date: July 1, 2024

APPROVED BY GREG SOLOMON (SIGNED)
for PAMELA J. LEONG
DIRECTOR OF ENGINEERING

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Nimrat Sandhu, Senior Air Quality Engineer
Tel: (415) 749-8604 **Fax:** (415) 749-5030
Email: nsandhu@baaqmd.gov

Plant No. 24772
Source No. A-2
Application No. 30557

The initial operation of this equipment is scheduled for _____ (month/day/year)

Print your first and last name _____

Telephone No. _____

Equipment Serial No. _____

Plant Name: Ameresco Keller Canyon RNG LLC

S-1 Processing LFG into RNG, 4,700 cfm LFG into 2,041 cfm RNG

Condition No. 27705 Plant No. 24772 Application No. 30557

The following permit conditions apply to the S-1 RNG Facility:

1. The owner/operator of S-1 shall not exceed the following landfill gas feed rates to S-1:

   a. A heat input rate of 3,360 MM BTU (HHV) during any 24-hour period.
   b. A heat input rate of 1,226,400 MM BTU (HHV) during any consecutive 12-month period.

   The owner/operator of S-1 shall demonstrate compliance with this limit by maintaining records of the equivalent heat input to S-1 for each day, for each calendar month, and for each consecutive 12-month period. Heat input shall be calculated by multiplying the measured landfill gas flow rate (standard cubic feet per 24-hour period) by the high heating value of methane at 70 F and 1 atmosphere, 993.9 BTU/dscf, and multiplied by the percentage of methane as measured continuously. The calculated heat input rates shall be recorded in a data acquisition system or electronic spreadsheet. The landfill gas flow rate to S-1 shall be continuously monitored and recorded in accordance with Regulation 8-34-508. The landfill gas methane content supplied to S-1 shall be continuously monitored and recorded using a gas chromatograph or other District approved device. The flow meters and methane sensor shall be installed and properly calibrated prior to operation and shall be maintained in good working condition.
   [Basis: Regulations 8-34-501.10 and 8-34-508, Cumulative Increase]

2. The owner/operator of S-1 shall ensure that all waste gas streams from S-1 which are generated during normal operations, during start-up/shut down procedures, during maintenance events, and other malfunctions shall either be vented to the properly maintained and properly operated per manufacturer's specifications, A-1 Thermal Oxidizer and/or to the A-2 Enclosed Flare for further control. Each waste gas stream to A-1 and A-2 shall be burned with a sufficient amount of partially processed renewable natural gas (PPRNG) to maintain compliance with all applicable requirements.
   [Basis: Cumulative Increase and Regulations 8-34-301.3, 8-34-301.4]

3. The owner/operator of S-1 shall ensure that no amount of landfill gas is sent to the A-1 Thermal Oxidizer and/or the A-2 Enclosed Flare without first being treated in the A-3 Hydrogen Sulfide (H2S) Scrubber. The landfill gas passing through this step, known as PPRNG, shall not

exceed a concentration limit of 10 ppmv of total reduced sulfur compounds, expressed as H2S.
[Basis: Cumulative Increase]

4. In order to demonstrate compliance with Part 3, the owner/operator of S-1 shall measure and record the sulfur content of the PPRNG on a monthly basis and during the annual performance test. This fuel sulfur data shall also be used as a surrogate for demonstrating compliance with the sulfur dioxide emission limits in Regulation 9-1-302.
[Basis: BACT, Regulation 9-1-302]

5. The owner/operator of S-1 shall collect quarterly samples from the two condensate tanks for a period of at least one year from the startup of the facility and a sample at least once every 6 months thereafter. The samples shall be tested for volatile organic compounds (VOC) % by weight. Upon completion of a year, the test results shall be submitted to the Engineering Division to determine if the tanks will be exempt as per Regulation 2-1-123.2 or will be subject to permitting. If any of the test results are equal to or greater than 1% by weight organic compounds, the owner/operator shall submit an application to the Air District within 30 days of the test results.
[Basis: Cumulative Increase, Regulation 2-1-123.2]

6. In order to demonstrate compliance with Parts 1 through 5, the owner or operator of the S-1 RNG Facility shall comply with all of the following monitoring and record keeping requirements. All records shall be kept on site or shall be made available to the District staff upon request. All records shall be retained for at least 5 years from the date of entry.

   a. The S-1 RNG Facility shall be equipped with a continuous gas flow meter and recorder, which shall measure the inlet landfill gas flow rate to S-1 and shall meet the requirements of Regulation 8-34-508.

   b. The owner or operator of S-1 shall measure and record the methane concentration in the landfill gas delivered to S-1 on a monthly basis.

   c. On a monthly basis, the owner or operator of S-1 shall use the data collected pursuant to Parts 6(a) and 6(b) to calculate and record the maximum daily and total monthly heat input rate to the S-1 RNG Facility.

   d. The owner or operator of S-1 shall summarize the Part 6(c) monthly heat input records for each

consecutive rolling 12-month period.

e. The owner/operator of S-1 shall measure and record the sulfur concentrations in the PPRNG after being processed through the A-3 H2S scrubber on a monthly basis.

f. The owner/operator of S-1 shall measure and record the VOC sampling data from the two condensate tanks on a quarterly basis.

[Basis: Recordkeeping]

7. The owner/operator of S-1 shall ensure that the emissions from all fugitive components combined shall not exceed 1.096 tons of precursor organic compounds (POC) in any consecutive 12-month period. For the purposes of these conditions, POC is assumed to be equivalent to non-methane organic compounds (NMOC). [Basis: Cumulative Increase]

8. The owner/operator of S-1 shall ensure that the emissions from all fugitive components combined shall not exceed 7.067 tons of non-precursor compounds (NPOC) (including methane) in any consecutive 12-month period. [Basis: Cumulative Increase]

9. The owner/operator of S-1 shall demonstrate compliance with the above emission rate limit in Part 7 and Part 8 by using the following procedures:

a. The owner/operator of S-1 shall not exceed the following fugitive component/equivalent counts and/or leak rates except as provided in Part 9(c) at the facility:

Component	Total Facility Count	Maximum Emission Limit (ppmv)
Valves	1510	100
Pump Seals	2	100
Compressors	17	100
Other Openings	0	100
Connectors	595	100
Flanges	1720	100
Open-ended lines	0	100

b. The owner/operator of S-1 shall ensure that the concentration of organic compounds at every valve, connector, flange, other fitting, compressor, and/or pump shall be inspected every calendar quarter. The first inspection and every inspection thereafter shall be conducted as prescribed by EPA Reference

Method 21 (40 CFR 60, Appendix A). Any instrument used for the measurement of organic compounds shall be a combustible gas detector or any other type of instrument approved by the Air Pollution Control Officer (APCO) that meets the specifications and performance criteria of, and is calibrated in accordance with, EPA Reference Method 21.
[Basis: Cumulative Increase, 8-18-401.2, 8-18-501]

c. The owner/operator of S-1 shall ensure that any valve, flange, connector, compressor, other fitting, and/or pump that leaks total organic compounds in excess of the concentration limits in Part 9(a) as C1 shall be minimized within 24 hours and repaired within 7 days.
[Basis: Regulation 8-18-302.1, Cumulative Increase]

d. The owner/operator of S-1 shall not exceed emission limits of Parts 7, 8 and/or Part 9(a). These emission limits include fugitive component emissions from default zero components, non-pegged components, and from pegged leaking components. Pegged leaking components (pegged leakers) are defined as components leaking at or greater than 10,000 ppmv measured as C1. The owner/operator shall calculate the POC and/or NPOC fugitive emissions combined on a quarterly basis using the California Air Pollution Control Officers Association (CAPCOA) Correlation Equations with the actual screening levels including default zeros and using the 10,000 ppmv pegged emissions factor or other District approved method. The midpoint method shall be used to determine the length of time that a component is assumed to be leaking for the purposes of compliance with these conditions.
[Basis: Regulation 8-18, Cumulative Increase]

e. The owner/operator of S-1 shall repair all pegged leakers as soon as possible. Under no circumstances shall the owner/operator have any individual pegged leaking component leak for more than 90 days in any consecutive 12-month period. The period of 90 days shall be determined using the midpoint method as stated in Part 9(d) above.
[Basis: Cumulative Increase]

f. The owner/operator of S-1 shall assign a unique identification code to each valve, flange, connector, compressor, pump seal, and miscellaneous (other fitting) component. The facility shall keep the following records: The fitting identification code, the date of each inspection, and the

corresponding leak concentration measured. Records shall be maintained for at least 5 years from the date of entry and shall be made available for inspection by District staff upon request. [Basis: Regulations 8-18-402, 8-18-502, Cumulative Increase, Recordkeeping]

g. To determine compliance with the above parts, the owner/operator of S-1 shall maintain a monthly log of the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
   i. Unique identification code of each component.
   ii. Date of each inspection, and the corresponding leak concentration measured.
   iii. Number of days that each individual component leaks at or greater than 10,000 ppmv (measured as C1), type of component, identification number of components.
   iv. The total number of days identified in Part 9(g)(iii).
   v. Quarterly emissions calculations required in Part 9(d).
   vi. Each monitor reading or analysis result for the day of operation that the monitoring reading or analysis result is taken.

   All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. [Basis: Recordkeeping]

10. The owner/operator of S-1 shall calculate the fugitive component POC and/or NPOC emissions from the facility using the following procedure:

    a. The NMOC and total hydrocarbon (THC) mass fractions shall be tested during each annual source test required as per Part 13 below.

    b. The NMOC/THC mass fraction ratio shall be calculated and shall not exceed 0.112.

    c. If the test results indicate that the NMOC/THC ratio is above 0.112, the facility will be considered in compliance as long as the facility can demonstrate that both the fugitive POC and/or fugitive NPOC emissions do not exceed the limits in Parts 7 and/or 8 respectively, of this condition.

    [Basis: Cumulative Increase]

11. The owner/operator of S-1 shall calculate the fugitive component emissions of toxic air contaminants (TACs) from the facility using an Air District approved method and ensure that these shall not exceed any acute and/or chronic trigger levels per Regulation 2-5. The concentration of each TAC shall be taken from the source test results described in Part 13 below and a ratio of each TAC to the NMOC in the PPRNG shall be determined. This ratio shall then be multiplied by the NMOC mass emissions determined in Part 9(d) in order to determine the individual TAC mass emissions.
[Basis: Regulation 2-5 and Cumulative Increase]

12. Within 30 days of the completion of the installation of all fugitive components, the owner/operator of S-1 shall submit a final component count and POC emissions estimate to the District. If any of the fugitive component counts exceed a count stated in Part 9(a), the plant's cumulative increase emissions shall be adjusted as needed, subject to APCO approval, to reflect only the difference between emissions based on predicted component counts versus actual component counts. The owner/operator of S-1 shall provide to the District all additional required offsets at an offset ratio of 1.15:1 no later than 21 days after the submittal of the final POC fugitive equipment count and corresponding final fugitive component POC emissions estimate. If any of the fugitive component counts are less than a count stated in Part 9(a), the total cumulative increase emissions may be adjusted accordingly, and emission offsets applied by the owner/operator in excess of the permitted levels may be requested by the owner/operator through the submittal of a banking application.
[Basis: Cumulative Increase, Offsets, Regulation 2-5]

13. The owner/operator of S-1 shall conduct an annual PPRNG characterization test. The PPRNG sample shall be drawn from the main landfill gas header after it has gone through the A-3 H2S scrubber. The PPRNG shall be analyzed for the organic compounds listed below. All concentrations shall be reported on a dry basis. The test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 60 days of the test date.

NMOC/THC ratio
1,1 Dichloroethane (Ethylidene dichloride)
1,1 Dichloroethene (Vinylidene chloride)
1,1,1-Trichloroethane (Methyl chloroform)
1,1,2-Trichloroethane (Vinyl trichloride)
1,1,2,2-Tetrachloroethane
1,3-Butadiene
1,4-Dichlorobenzene

1,4-Dioxane (1,4-Diethylene dioxide)
2-Propanol (Isopropyl alcohol, IPA)
Acetaldehyde
Acrolein
Acrylonitrile
Allyl Chloride (3-Chloropropene)
Benzene
Benzyl Chloride
Carbon Disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform
Dioxins
Ethylbenzene
Ethylene Dibromide (1,2-dibromoethane)
Ethylene Dichloride (1,2-dichloroethane)
Formaldehyde
Hexane
Hydrochloric Acid
Hydrofluoric Acid
Hydrogen Sulfide (H2S)
Mercury
Methanol (Methyl alcohol)
Methyl Bromide (Bromomethane)
Methyl Ethyl Ketone (2-butanone)
Methyl tert-Butyl Ether
Methylene Chloride (dichloromethane)
Naphthalene
Polycyclic aromatic hydrocarbons (PAHs (as B(a)-P equivalent))
Perchloroethylene (tetrachloroethylene)
Propene (Propylene)
Styrene
Toluene
Trichloroethylene
Vinyl Acetate
Vinyl Chloride
Xylenes
[Basis: Regulation 2-5, Cumulative Increase, and Regulation 8-34-412]

End of Conditions

Plant Name: Ameresco Keller Canyon RNG LLC

A-1 Thermal Oxidizer, Air Clear, 17.3 MM BTU/hr

Condition No. 27707 Plant No. 24772 Application No. 30557

The following permit conditions apply to the A-1 Thermal Oxidizer:

1. The owner/operator of the A-1 Thermal Oxidizer shall not exceed the following heat input limits:

   a. 639 MM BTU during any 24-hour period. This heat input limit shall consist of heat input from the waste gas, the PPRNG, and natural gas usage and shall not exceed the following:
      i. 415 MM BTU for the waste gas flow,
      ii. 96 MM BTU for PPRNG, and
      iii. 128 MMBTU for natural gas.

   b. 186,500 MM BTU during any consecutive 12-month period. This heat input limit shall consist of heat input from the waste gas, PPRNG, and natural gas usage and shall not exceed the following:
      i. 151,460 MM BTU for the waste gas flow,
      ii. 17,520 MM BTU for PPRNG, and
      iii. 17,520 MMBTU for natural gas.

   [Basis: Cumulative Increase]

2. The owner/operator of the A-1 Thermal Oxidizer shall equip A-1 with both local and remote alarms, automatic combustion air control, automatic gas shut-off valves and automatic start/restart system. The local and the remote alarms shall be activated if A-1 shuts down unexpectedly or if the combustion zone temperature is less than the minimum temperature required by Part 5 below.
   [Basis: Regulation 8-34-501]

3. The owner/operator of the A-1 Thermal Oxidizer shall properly install and properly operate, as per manufacturer's recommendations, a continuous flow meter and recorder to measure and record the gas flow into the A-1 Thermal Oxidizer.
   [Basis: Cumulative Increase, Regulation 8-34-508 and 40 CFR 60.756(b)]

4. The owner/operator of the A-1 Thermal Oxidizer shall properly install and properly maintain a continuous temperature monitor with readout display and continuous recorder on or for A-1 per manufacturer's recommendations. One or more thermocouples shall be placed in the primary combustion zone of A-1 and shall accurately indicate flue gas temperature at all times. Temperature charts shall be retained for at least five years from the date of entry and made readily available to District Staff upon request.
   [Basis: Regulations 8-34-501.3 and 2-6-501 and 40 CFR 60.756(b)]

5. The owner/operator of the A-1 Thermal Oxidizer shall maintain the combustion zone temperature of A-1 at a minimum temperature of 1600 degrees F, averaged over any 3-hour period when combusting waste gas and/or PPRNG, excluding startup periods. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature requirements in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for the A-1 Thermal Oxidizer when burning waste gas and/or PPRNG shall be equal to or above the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F on a rolling 3-hour average, provided that the minimum combustion zone temperature is not less than 1400 degrees F at all times of operation, excluding startup periods. During the startup period, the owner/operator of A-1 Thermal Oxidizer shall not combust any waste gas and/or PPRNG and shall only use natural gas exclusively. During the startup period, the owner/operator of A-1 Thermal Oxidizer shall not exceed any of the following Heat input rates:
   a. 16 MM BTU/hour for any individual startup,
   b. 128 MMBTU in any consecutive 24-hour period, and/or
   c. 17,520 MMBTU in any consecutive 12-month period.
   [Basis: Regulations 2-5-301 and 8-34-501.3, RACT, and Cumulative Increase]

6. The owner/operator of the A-1 Thermal Oxidizer shall not exceed any of the following limits:

   a. 0.05 pounds of nitrogen oxide (NOx), expressed as NO2, per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 12 ppmv of NOx, expressed as NO2 at 15% oxygen on a dry basis.

   b. 0.08 pounds of carbon monoxide (CO) per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 32 ppmv of CO at 15% oxygen on a dry basis.

   [Basis: RACT]

7. The owner/operator of A-1 Thermal Oxidizer shall achieve either a minimum destruction efficiency of 98.5% by weight or not exceed an outlet NMOC concentration of 120 ppmv at 3% O2.
   [Basis: Cumulative Increase, Regulation 8-34-301.4]

8. The owner/operator of A-1 Thermal Oxidizer shall not exceed 1.41 pounds per hour of NMOC emissions. [Basis: Cumulative Increase, Regulation 8-34-301.4]

9. The owner/operator of the A-1 Thermal Oxidizer shall not exceed any of the following limits:

   a. The total SO2 emissions from A-1 shall not exceed any of the following limits:
      i. 7.23 pounds per day of SO2 during any 24-hour period
      ii. 1.291 tons of SO2 during any consecutive 12-month period.

   b. The owner/operator shall demonstrate compliance with the emission limits in Part 9(a) by complying with the heat input limits of A-1 and monitoring procedures in Part 9(d).

   c. The owner/operator of S-1 shall demonstrate that the PPRNG contains no more than 10 ppmv of total reduced sulfur (TRS) compounds (dry basis), expressed as H2S.

   d. To demonstrate compliance with Part 9(c), the owner/operator shall conduct monthly measurements of PPRNG. The owner/operator shall use either a District approved portable hydrogen sulfide monitor or a District approved Laboratory analysis method to determine the concentration of TRS, measured as H2S and corrected to 50% methane in the PPRNG. Methane concentrations measured pursuant to Part 1 of Condition # 27705 shall be used to correct the calculated TRS concentrations to a landfill gas methane concentration of 50% by volume (corrected TRS = measured TRS/measured % CH4 * 50). The sampling dates and results shall be recorded in a District approved log.
      i. If the portable H2S analysis method is used, the TRS concentration shall be calculated by multiplying the measured H2S concentration by 1.2
         (TRS = 1.2 * H2S).
      ii. If a laboratory analysis method is used, the TRS concentration shall be calculated as the sum of the measured concentrations for the individual sulfur compounds, expressed as H2S.
      iii. If the corrected TRS concentration determined pursuant to Part 9(d) is 10 ppmv of TRS or less for each monthly measurement during a rolling 12-month period, no additional calculations are required to verify compliance with the SO2 emission limits identified above in Part 9(a).

If any corrected TRS concentration measurement is greater than 10 ppmv of TRS during a rolling 12-month period, the Permit Holder shall use the calculation procedures in Part 9(d) to demonstrate compliance with the daily and annual SO2 emission limits above.
[Basis: Cumulative Increase]

10. The owner/operator of A-1 Thermal Oxidizer shall not exceed 0.012 grains/dscf of PM10.
[Basis: Cumulative Increase, Regulation 6-1]

11. The owner/operator of A-1 Thermal Oxidizer shall submit a permit application for a change of permit conditions, if any site-specific PPRNG characterization test indicates that the PPRNG at this site contains any of the following compounds at a level greater than the concentration listed below. The permit application shall be submitted to the Engineering Division, within 30 days of receipt of test results indicating a concentration above the levels listed below.

Compound	Concentration (ppbv)
1,3-Butadiene	386
1,4-Dichlorobenzene	2,590
Acrylonitrile	938
Benzene	8,850
Ethylbenzene	28,600
Ethylene dibromide	235
Ethylene dichloride	4,505
Hydrochloric Acid	70,910
Hydrofluoric Acid	18,885
Hydrogen Sulfide	570,000
Vinyl Chloride	680

The following TACs should not exceed the following emission factors:

Compound	Emission Factor (lb/MM scf)
Acetaldehyde	2.58E-01
Acrolein	8.44E-02
Dioxins	1.09E-09
Formaldehyde	1.80E-01
Naphthalene	3.56E-02
PAHs (as B(a)P-equivalent)	2.52E-06

[Basis: Regulation 2-5-302]

12. In order to demonstrate compliance with Parts 1 through 11 above, Regulations 8-34-301.4 and 8-34-412, 40 CFR 60.8, and 40 CFR 60.752(b)(2)(iii)(B), the owner/operator of A-1 Thermal Oxidizer shall conduct a source test at A-1 at least once annually. The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The

first source test for A-1 shall be conducted within 1,440 operating hours, not to exceed 90 days from the date of initial operation of A-1. The annual source test shall be conducted when the A-1 Thermal Oxidizer is operating at or near its maximum operating rate. The source test shall be conducted in accordance using only District approved source test procedures and/or methods. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement, Engineering Divisions and the Source Test Section within 60 days of the test date. Each annual source test shall determine the following:

a. Gas flow rate to A-1 (dry basis);

b. Concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), total NMOC, H2S, TRS in the gas;

c. Stack gas flow rate from A-1 (dry basis);

d. Concentrations (dry basis) of NOx, CO, NMOC, PM10, PM2.5 (including both filterable and condensable fractions) and O2 in the stack gas of A-1;

e. NMOC/THC ratio;

f. NMOC destruction efficiency of A-1;

g. Hourly mass emission rate of NMOC in pounds per hour;

h. NMOC concentrations in the exhaust of A-1 in lb/hr;

i. NOx and CO emission rates from A-1 in units of pounds per MM BTU;

j. Average combustion zone temperature in A-1 during the test period;

k. High heating value of the PPRNG (BTU/scf);

l. PM10 emission rates in units of grains per dscf from A-1;

m. PPRNG characterization results as per Condition #27705, Part 13.

[Basis: Regulation 8-34-301.4, RACT, 40 CFR 60.752(b)(2)(iii)]

13. In order to demonstrate compliance with the above parts,

the owner/operator of A-1 shall maintain the following records in a District-approved logbook. All records shall be maintained on-site and shall be made readily available to the District staff upon request for a period of 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations.

a. Record the date and time of each startup, shutdown and/or malfunction of A-1 and the reason for each shutdown.

b. Summarize the operating hours of A-1 on a daily basis.

c. Calculate and record, on a monthly basis, the maximum daily and the total monthly heat input rate to A-1 based on the operating hours for A-1, the waste gas, PPRNG and natural gas flow rate recorded pursuant to Part 3, the average methane concentration in the waste gas and PPRNG as determined by the most recent source test, and a high heating value for methane of 993.9 BTU/scf of landfill gas at 70 degrees F and 1 atmosphere.

d. Maintain records of all test dates and tests results performed to maintain compliance with Parts 11, 12 or with any applicable part, rule, and/or regulation.

e. All temperature monitoring data.

f. All TRS data and SO2 calculations.
[Basis: Cumulative Increase, Regulation 2-6-501, 8-34-301, 8-34-501]

End of Conditions

Plant Name: Ameresco Keller Canyon RNG LLC

A-2 Process Enclosed Flare, John Zink Zule Ultra Low Emissions Flare, 35.8 MMBTU/hr

Condition No. 27708 Plant No. 24772 Application No. 30557

The following permit conditions apply to the A-2 Enclosed Flare:

1. The owner/operator of the A-2 Enclosed Flare shall not exceed the following heat input limits:

   a. 933 million BTU during any 24-hour period. This heat input limit should consist of heat input from the propane, waste gas flow from upsets, PPRNG, and natural gas usage and shall not exceed any of the following:
      i. 1 MM BTU for propane,
      ii. 842 MM BTU for waste gas flow,
      iii. 18 MM BTU for PPRNG, and
      iv. 72 MM BTU for natural gas.

   b. 95,865 million BTU during any consecutive 12-month period. This heat input limit should consist of heat input from the propane, waste gas flow from upsets, PPRNG, and natural gas usage and shall not exceed the following:
      i. 17 MM BTU for propane,
      ii. 63,144 MM BTU for waste gas flow,
      iii. 6,570 MM BTU for PPRNG, and
      iv. 26,134 MM BTU for natural gas.

   [Basis: Cumulative Increase]

2. The owner/operator of the A-2 Enclosed Flare shall equip A-2 with both local and remote alarms, automatic combustion air control, and automatic start/restart system. The local and the remote alarms shall be activated if A-2 shuts down unexpectedly or if the combustion zone temperature is less than the minimum temperature required by Part 5 below.
   [Basis: Regulation 8-34-501]

3. The owner/operator of the A-2 Enclosed Flare shall properly install and properly operate, as per manufacturer's recommendations, a continuous flow meter and recorder to measure and record the gas flow into the A-2 Flare.
   [Basis: Cumulative Increase, Regulation 8-34-508 and 40 CFR 60.756(b)]

4. The owner/operator of the A-2 Enclosed Flare shall properly install and properly maintain a continuous temperature monitor with readout display and continuous recorder on A-2 per manufacturer's recommendations. One or more thermocouples shall be placed in the primary combustion zone of A-2 and shall accurately indicate flue gas temperature at all times. Temperature charts shall be retained for at least five years from the date of entry and made readily available to District Staff

upon request.
[Basis: Regulations 8-34-501.3 and 2-6-501.3 and 40 CFR 60.756(b)]

5. The owner/operator of the A-2 Enclosed Flare shall maintain the combustion zone temperature of A-2 at a minimum temperature of 1600 degrees F, averaged over any 3-hour period when combusting waste gas and/or PPRNG, excluding startup periods. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature requirements in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for the A-2 Enclosed Flare when burning waste gas and/or PPRNG shall be equal to or above the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F on a rolling 3-hour average, provided that the minimum combustion zone temperature is not less than 1400 degrees F at all times of operation, excluding startup periods. During the startup period, the owner/operator of A-2 Enclosed Flare shall not combust any waste gas and/or PPRNG and shall only use natural gas exclusively. During the startup period, the owner/operator of A-2 Enclosed Flare shall not exceed any of the following heat input rates:

   a. 72 MMBTU per hour for any individual startup,
   b. 72 MMBTU in any consecutive 24-hour period, and
   c. 26,134 MMBTU in any consecutive 12-month period.

   [Basis: Regulations 2-5-301 and 8-34-501.3, RACT, and Cumulative Increase]

6. The owner/operator of the A-2 Enclosed Flare shall not exceed any of the following limits:

   a. 0.025 pounds of nitrogen oxide (NOx), expressed as NO2, per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 6 ppmv of NOx, expressed as NO2 at 15% oxygen on a dry basis.

   b. 0.06 pounds of carbon monoxide (CO) per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 24 ppmv of CO at 15% oxygen on a dry basis.

   [Basis: RACT]

7. The owner/operator of A-2 Enclosed Flare shall achieve either a minimum destruction efficiency of 98% by weight

or not exceed an outlet NMOC concentration of 30 ppmv at 3% O2.
[Basis: Cumulative Increase, Regulation 8-34-301.3]

8. The owner/operator of A-2 Enclosed Flare shall not exceed 0.90 pounds per hour of NMOC emissions.
[Basis: Cumulative Increase, Regulation 8-34-301.3]

9. The owner/operator of the A-2 Enclosed Flare shall not exceed any of the following limits:

   a. The total SO2 emissions from A-2 shall not exceed any of the following limits:
      i. 6.40 pounds per day of SO2 during any 24-hour period
      ii. 0.248 tons of SO2 during any consecutive 12-month period.

   b. The owner/operator shall demonstrate compliance with the emission limits in Part 9(a) by complying with the heat input limits of A-2 and monitoring procedures in Part 9(d).

   c. The owner/operator of S-1 shall demonstrate that the PPRNG contains no more than 10 ppmv of TRS compounds (dry basis), expressed as H2S.

   d. To demonstrate compliance with Part 9(c), the owner/operator shall conduct monthly measurements of PPRNG. The owner/operator shall use either a District approved portable hydrogen sulfide monitor or a District approved Laboratory analysis method to determine the concentration of TRS, measured as H2S and corrected to 50% methane in the PPRNG. Methane concentrations measured pursuant to Part 1 of Condition # 27705 shall be used to correct the calculated TRS concentrations to a landfill gas methane concentration of 50% by volume (corrected TRS = measured TRS/measured % CH4 * 50). The sampling dates and results shall be recorded in a District approved log.
      i. If the portable H2S analysis method is used, the TRS concentration shall be calculated by multiplying the measured H2S concentration by 1.2
         (TRS = 1.2 * H2S).
      ii. If a laboratory analysis method is used, the TRS concentration shall be calculated as the sum of the measured concentrations for the individual sulfur compounds, expressed as H2S.
      iii. If the corrected TRS concentration determined pursuant to Part 9(d) is 10 ppmv of TRS or less for each monthly measurement during a

rolling 12-month period, no additional calculations are required to verify compliance with the SO2 emission limits identified above in Part 9(a). If any corrected TRS concentration measurement is greater than 10 ppmv of TRS during a rolling 12-month period, the Permit Holder shall use the calculation procedures in Part 9(d) to demonstrate compliance with the daily and annual SO2 emission limits above.
[Basis: Cumulative Increase]

10. The owner/operator of the A-2 Enclosed Flare shall not exceed 0.012 grains/dscf PM10.
[Basis: Cumulative Increase, Regulation 6-1]

11. The owner/operator of A-2 Enclosed Flare shall submit a permit application for a change of permit conditions, if any of the annual site-specific PPRNG characterization test indicates that the PPRNG at this site contains any of the following compounds at a level greater than the concentration listed below. The permit application shall be submitted to the Engineering Division, within 30 days of receipt of test results indicating a concentration above the levels listed below.

Compound	Concentration (ppbv)
1,3-Butadiene	77
1,4-Dichlorobenzene	518
Acrylonitrile	188
Benzene	1770
Ethylbenzene	5720
Ethylene dibromide	47
Ethylene dichloride	901
Hydrochloric Acid	14182
Hydrofluoric Acid	3777
Hydrogen Sulfide	114000
Vinyl Chloride	136

The following TACs should not exceed the following emission factors:

Compound	Emission Factor (lb/MM scf)
Acetaldehyde	2.58E-01
Acrolein	8.44E-02
Dioxins	1.09E-09
Formaldehyde	1.80E-01
Naphthalene	3.56E-02
PAHs (as B(a)P-equivalent)	2.52E-06

[Basis: Regulation 2-5-302]

12. In order to demonstrate compliance with Parts 1 through 11 above, Regulations 8-34-301.3 and 8-34-412, 40 CFR 60.8, and/or 40 CFR 60.752(b)(2)(iii)(B), the

owner/operator of A-2 Enclosed Flare shall conduct a source test at A-2 at least once annually. The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The first source test for A-2 shall be conducted within 1,440 operating hours, not to exceed 90 days from the date of the initial operation of A-2. The annual source test shall be conducted when the A-2 Enclosed Flare is operating at or near its maximum operating rate. The source test shall be conducted in accordance using only District approved source test procedures and/or methods. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement, Engineering Divisions and the Source Test Section within 60 days of the test date. Each annual source test shall determine the following:

a. Gas flow rate to A-2 (dry basis);

b. Concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), total NMOC, H2S, TRS in the gas;

c. Stack gas flow rate from A-2 (dry basis);

d. Concentrations (dry basis) of NOx, CO, NMOC, PM10, PM2.5 (including both filterable and condensable fractions) and O2 in the stack gas of A-2;

e. NMOC/THC ratio;

f. NMOC destruction efficiency of A-2;

g. Hourly mass emission rate of NMOC in pounds per hour;

h. NMOC concentrations in the exhaust of A-2 in lb/hr;

i. NOx and CO emission rates from A-2 in units of pounds per MM BTU;

j. Average combustion zone temperature in A-2 during the test period;

k. High heating value of the PPRNG (BTU/scf);

l. PM10 emission rates in units of grains/dscf from A-2;

m. PPRNG characterization results as per Condition #27705, Part 13.

[Basis: Regulation 8-34-301.3, RACT, 40 CFR 60.752(b)(2)(iii)]

13. In order to demonstrate compliance with the above parts, the owner/operator of A-2 shall maintain the following records in a District-approved logbook. All records shall be maintained on-site and shall be made readily available to the District staff upon request for a period of 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations.

    a. Record the date and time of each startup, shutdown and/or malfunction of A-2 and the reason for each shutdown.

    b. Summarize the operating hours of A-2 on a daily basis.

    c. Calculate and record, on a monthly basis, the maximum daily and the total monthly heat input rate to A-2 based on the operating hours for A-2, the propane, waste gas, PPRNG, and natural gas flow rate recorded pursuant to Part 3, the average methane concentration in the waste gas and PPRNG as determined by the most recent source test, and a high heating value for methane of 993. 9 BTU/scf of landfill gas at 70 degrees F and 1 atmosphere.

    d. Record the total amount of propane used in a consecutive 12-month period.

    e. Maintain records of all test dates and tests results performed to maintain compliance with Parts 11 and 12 or with any applicable part, rule, and/or regulation.

    f. All temperature monitoring data.

    g. TRS data and SO2 calculations.

[Basis: Cumulative Increase, Regulation 2-6-501, 8-34-301, 8-34-501]

End of Conditions

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

April, 11 2024

Ameresco Keller Canyon Renewable Natural Gas, LLC

Attention: Richard Peary
111, Speen St., Suite 410
Framingham, MA 01701

Application Number: 30557
Plant Number: 24772
Equipment Location:
901 Bailey Road,
Pittsburg, CA, 94565

Dear Applicant:

SUBJECT: CHANGE OF PERMIT CONDITIONS

This letter is to advise you that your request for changes in permit conditions as requested in your letter to the District on April 9, 2024 for the following equipment at this facility have been approved:

S-1 Processing and Cleaning of Landfill gas (LFG) to high BTU energy renewable natural gas (RNG) Operation, 4,700 cfm of LFG processed into 2,041 cfm of RNG

abated by

A-1 Thermal Oxidizer, Air Clear, 25.3 MMBTU/hr
A-2 Process Enclosed Flare, John Zink, 35.8 MMBTU/hr
A-3 Hydrogen Sulfide scrubber, 2-vessel fixed bed adsorbers, Maximum 4700 scfm

The equipment (A-1 and A-2) described above is subject to condition no. 27707 and 27708.

The requested condition change was to extend the deadline for the source test for A-1 and A-2.

If you have any questions regarding this matter, please contact **Mark Kiffe, Air Quality Engineer** at **mkiffe@baaqmd.gov**.

Very truly yours,

Pamela J. Leong
Director of Engineering

by Sanjeev Kamboj
Air Quality Engineering Manager

BFC: MK~
Attachment: Permit Condition no. 27707 and 27708

Plant No. 24772, Ameresco Keller Canyon RNG
Source No. A-1, Thermal Oxidizer
Condition No. 27707 Application No. 30557

The following permit conditions apply to the A-1 Thermal Oxidizer:

1. The owner/operator of the A-1 Thermal Oxidizer shall not exceed the following heat input limits:

   a. 639 MM BTU during any 24-hour period. This heat input limit shall consist of heat input from the waste gas, the PPRNG, and natural gas usage and shall not exceed the following:
      i. 415 MM BTU for the waste gas flow,
      ii. 96 MM BTU for PPRNG, and
      iii. 128 MMBTU for natural gas.

   b. 186,500 MM BTU during any consecutive 12-month period. This heat input limit shall consist of heat input from the waste gas, PPRNG, and natural gas usage and shall not exceed the following:
      i. 151,460 MM BTU for the waste gas flow,
      ii. 17,520 MM BTU for PPRNG, and
      iii. 17,520 MMBTU for natural gas.

   [Basis: Cumulative Increase]

2. The owner/operator of the A-1 Thermal Oxidizer shall equip A-1 with both local and remote alarms, automatic combustion air control, automatic gas shut-off valves and automatic start/restart system. The local and the remote alarms shall be activated if A-1 shuts down unexpectedly or if the combustion zone temperature is less than the minimum temperature required by Part 5 below.
   [Basis: Regulation 8-34-501]

3. The owner/operator of the A-1 Thermal Oxidizer shall properly install and properly operate, as per manufacturer's recommendations, a continuous flow meter and recorder to measure and record the gas flow into the A-1 Thermal Oxidizer.
   [Basis: Cumulative Increase, Regulation 8-34-508 and 40 CFR 60.756(b)]

4. The owner/operator of the A-1 Thermal Oxidizer shall properly install and properly maintain a continuous temperature monitor with readout display and continuous recorder on or for A-1 per manufacturer's recommendations. One or more thermocouples shall be placed in the primary combustion zone of A-1 and shall accurately indicate flue gas temperature at all times. Temperature charts shall be retained for at least five years from the date of entry and made readily available

to District Staff upon request.
[Basis: Regulations 8-34-501.3 and 2-6-501 and 40 CFR 60.756(b)]

5. The owner/operator of the A-1 Thermal Oxidizer shall maintain the combustion zone temperature of A-1 at a minimum temperature of 1600 degrees F, averaged over any 3-hour period when combusting waste gas and/or PPRNG, excluding startup periods. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature requirements in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for the A-1 Thermal Oxidizer when burning waste gas and/or PPRNG shall be equal to or above the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F on a rolling 3-hour average, provided that the minimum combustion zone temperature is not less than 1400 degrees F at all times of operation, excluding startup periods. During the startup period, the owner/operator of A-1 Thermal Oxidizer shall not combust any waste gas and/or PPRNG and shall only use natural gas exclusively. During the startup period, the owner/operator of A-1 Thermal Oxidizer shall not exceed any of the following Heat input rates:
   a. 16 MM BTU/hour for any individual startup,
   b. 128 MMBTU in any consecutive 24-hour period, and/or
   c. 17,520 MMBTU in any consecutive 12-month period.
   [Basis: Regulations 2-5-301 and 8-34-501.3, RACT, and Cumulative Increase]

6. The owner/operator of the A-1 Thermal Oxidizer shall not exceed any of the following limits:

   a. 0.05 pounds of nitrogen oxide (NOx), expressed as NO2, per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 12 ppmv of NOx, expressed as NO2 at 15% oxygen on a dry basis.

   b. 0.08 pounds of carbon monoxide (CO) per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 32 ppmv of CO at 15% oxygen on a dry basis.
   [Basis: RACT]

7. The owner/operator of A-1 Thermal Oxidizer shall achieve either a minimum destruction efficiency of 98.5% by weight or not exceed an outlet NMOC concentration of 120

ppmv at 3% O2.
[Basis: Cumulative Increase, Regulation 8-34-301.4]

8. The owner/operator of A-1 Thermal Oxidizer shall not exceed 1.41 pounds per hour of NMOC emissions.
[Basis: Cumulative Increase, Regulation 8-34-301.4]

9. The owner/operator of the A-1 Thermal Oxidizer shall not exceed any of the following limits:

   a. The total SO2 emissions from A-1 shall not exceed any of the following limits:
      i. 7.23 pounds per day of SO2 during any 24-hour period
      ii. 1.291 tons of SO2 during any consecutive 12-month period.

   b. The owner/operator shall demonstrate compliance with the emission limits in Part 9(a) by complying with the heat input limits of A-1 and monitoring procedures in Part 9(d).

   c. The owner/operator of S-1 shall demonstrate that the PPRNG contains no more than 10 ppmv of total reduced sulfur (TRS) compounds (dry basis), expressed as H2S.

   d. To demonstrate compliance with Part 9(c), the owner/operator shall conduct monthly measurements of PPRNG. The owner/operator shall use either a District approved portable hydrogen sulfide monitor or a District approved Laboratory analysis method to determine the concentration of TRS, measured as H2S and corrected to 50% methane in the PPRNG. Methane concentrations measured pursuant to Part 1 of Condition # 27705 shall be used to correct the calculated TRS concentrations to a landfill gas methane concentration of 50% by volume (corrected TRS = measured TRS/measured % CH4 * 50). The sampling dates and results shall be recorded in a District approved log.
      i. If the portable H2S analysis method is used, the TRS concentration shall be calculated by multiplying the measured H2S concentration by 1.2
         (TRS = 1.2 * H2S).
      ii. If a laboratory analysis method is used, the TRS concentration shall be calculated as the sum of the measured concentrations for the individual sulfur compounds, expressed as H2S.
      iii. If the corrected TRS concentration determined pursuant to Part 9(d) is 10 ppmv of TRS or less for each monthly measurement during a rolling 12

-month period, no additional calculations are required to verify compliance with the SO2 emission limits identified above in Part 9(a). If any corrected TRS concentration measurement is greater than 10 ppmv of TRS during a rolling 12-month period, the Permit Holder shall use the calculation procedures in Part 9(d) to demonstrate compliance with the daily and annual SO2 emission limits above.
[Basis: Cumulative Increase]

10. The owner/operator of A-1 Thermal Oxidizer shall not exceed 0.012 grains/dscf of PM10.
[Basis: Cumulative Increase, Regulation 6-1]

11. The owner/operator of A-1 Thermal Oxidizer shall submit a permit application for a change of permit conditions, if any site-specific PPRNG characterization test indicates that the PPRNG at this site contains any of the following compounds at a level greater than the concentration listed below. The permit application shall be submitted to the Engineering Division, within 30 days of receipt of test results indicating a concentration above the levels listed below.

Compound	Concentration (ppbv)
1,3-Butadiene	386
1,4-Dichlorobenzene	2,590
Acrylonitrile	938
Benzene	8,850
Ethylbenzene	28,600
Ethylene dibromide	235
Ethylene dichloride	4,505
Hydrochloric Acid	70,910
Hydrofluoric Acid	18,885
Hydrogen Sulfide	570,000
Vinyl Chloride	680

The following TACs should not exceed the following emission factors:

Compound	Emission Factor (lb/MM scf)
Acetaldehyde	2.58E-01
Acrolein	8.44E-02
Dioxins	1.09E-09
Formaldehyde	1.80E-01
Naphthalene	3.56E-02
PAHs (as B(a)P-equivalent)	2.52E-06

[Basis: Regulation 2-5-302]

12. In order to demonstrate compliance with Parts 1 through 11 above, Regulations 8-34-301.4 and 8-34-412, 40 CFR 60.8, and 40 CFR 60.752(b)(2)(iii)(B), the owner/operator of A-1 Thermal Oxidizer shall conduct a

source test at A-1 at least once annually. The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The first source test for A-1 shall be conducted within ~~1,440~~ 1,920 operating hours, not to exceed ~~90~~ 120 days from the date of initial operation of A-1. The annual source test shall be conducted when the A-1 Thermal Oxidizer is operating at or near its maximum operating rate. The source test shall be conducted in accordance using only District approved source test procedures and/or methods. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement, Engineering Divisions and the Source Test Section within 60 days of the test date. Each annual source test shall determine the following:

a. Gas flow rate to A-1 (dry basis);

b. Concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), total NMOC, H2S, TRS in the gas;

c. Stack gas flow rate from A-1 (dry basis);

d. Concentrations (dry basis) of NOx, CO, NMOC, PM10, PM2.5 (including both filterable and condensable fractions) and O2 in the stack gas of A-1;

e. NMOC/THC ratio;

f. NMOC destruction efficiency of A-1;

g. Hourly mass emission rate of NMOC in pounds per hour;

h. NMOC concentrations in the exhaust of A-1 in lb/hr;

i. NOx and CO emission rates from A-1 in units of pounds per MM BTU;

j. Average combustion zone temperature in A-1 during the test period;

k. High heating value of the PPRNG (BTU/scf);

l. PM10 emission rates in units of grains per dscf from A-1;

m. PPRNG characterization results as per Condition #27705, Part 13.

[Basis: Regulation 8-34-301.4, RACT, 40 CFR

60.752(b)(2)(iii)]

13. In order to demonstrate compliance with the above parts, the owner/operator of A-1 shall maintain the following records in a District-approved logbook. All records shall be maintained on-site and shall be made readily available to the District staff upon request for a period of 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations.

    a. Record the date and time of each startup, shutdown and/or malfunction of A-1 and the reason for each shutdown.

    b. Summarize the operating hours of A-1 on a daily basis.

    c. Calculate and record, on a monthly basis, the maximum daily and the total monthly heat input rate to A-1 based on the operating hours for A-1, the waste gas, PPRNG and natural gas flow rate recorded pursuant to Part 3, the average methane concentration in the waste gas and PPRNG as determined by the most recent source test, and a high heating value for methane of 993.9 BTU/scf of landfill gas at 70 degrees F and 1 atmosphere.

    d. Maintain records of all test dates and tests results performed to maintain compliance with Parts 11, 12 or with any applicable part, rule, and/or regulation.

    e. All temperature monitoring data.

    f. All TRS data and SO2 calculations.

[Basis: Cumulative Increase, Regulation 2-6-501, 8-34-301, 8-34-501]

End of Conditions

The following permit conditions apply to the A-2 Enclosed Flare:

1. The owner/operator of the A-2 Enclosed Flare shall not exceed the following heat input limits:

   a. 933 million BTU during any 24-hour period. This heat input limit should consist of heat input from the propane, waste gas flow from upsets, PPRNG, and natural gas usage and shall not exceed any of the following:
      i. 1 MM BTU for propane,
      ii. 842 MM BTU for waste gas flow,
      iii. 18 MM BTU for PPRNG, and
      iv. 72 MM BTU for natural gas.

   b. 95,865 million BTU during any consecutive 12-month period. This heat input limit should consist of heat input from the propane, waste gas flow from upsets, PPRNG, and natural gas usage and shall not exceed the following:
      i. 17 MM BTU for propane,
      ii. 63,144 MM BTU for waste gas flow,
      iii. 6,570 MM BTU for PPRNG, and
      iv. 26,134 MM BTU for natural gas.

   [Basis: Cumulative Increase]

2. The owner/operator of the A-2 Enclosed Flare shall equip A-2 with both local and remote alarms, automatic combustion air control, and automatic start/restart system. The local and the remote alarms shall be activated if A-2 shuts down unexpectedly or if the combustion zone temperature is less than the minimum temperature required by Part 5 below.
   [Basis: Regulation 8-34-501]

3. The owner/operator of the A-2 Enclosed Flare shall properly install and properly operate, as per manufacturer's recommendations, a continuous flow meter and recorder to measure and record the gas flow into the A-2 Flare.
   [Basis: Cumulative Increase, Regulation 8-34-508 and 40 CFR 60.756(b)]

4. The owner/operator of the A-2 Enclosed Flare shall properly install and properly maintain a continuous temperature monitor with readout display and continuous recorder on A-2 per manufacturer's recommendations. One or more thermocouples shall be placed in the primary combustion zone of A-2 and shall accurately indicate flue gas temperature at all times. Temperature charts

shall be retained for at least five years from the date of entry and made readily available to District Staff upon request.
[Basis: Regulations 8-34-501.3 and 2-6-501.3 and 40 CFR 60.756(b)]

5. The owner/operator of the A-2 Enclosed Flare shall maintain the combustion zone temperature of A-2 at a minimum temperature of 1600 degrees F, averaged over any 3-hour period when combusting waste gas and/or PPRNG, excluding startup periods. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature requirements in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for the A-2 Enclosed Flare when burning waste gas and/or PPRNG shall be equal to or above the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F on a rolling 3-hour average, provided that the minimum combustion zone temperature is not less than 1400 degrees F at all times of operation, excluding startup periods. During the startup period, the owner/operator of A-2 Enclosed Flare shall not combust any waste gas and/or PPRNG and shall only use natural gas exclusively. During the startup period, the owner/operator of A-2 Enclosed Flare shall not exceed any of the following heat input rates:

   a. 72 MMBTU per hour for any individual startup,
   b. 72 MMBTU in any consecutive 24-hour period, and
   c. 26,134 MMBTU in any consecutive 12-month period.

   [Basis: Regulations 2-5-301 and 8-34-501.3, RACT, and Cumulative Increase]

6. The owner/operator of the A-2 Enclosed Flare shall not exceed any of the following limits:

   a. 0.025 pounds of nitrogen oxide (NOx), expressed as NO2, per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 6 ppmv of NOx, expressed as NO2 at 15% oxygen on a dry basis.

   b. 0.06 pounds of carbon monoxide (CO) per million BTU of heat input. Compliance with this emission limit may be demonstrated by not exceeding the following exhaust gas concentration limit: 24 ppmv of CO at 15% oxygen on a dry basis.

   [Basis: RACT]

7. The owner/operator of A-2 Enclosed Flare shall achieve

either a minimum destruction efficiency of 98% by weight or not exceed an outlet NMOC concentration of 30 ppmv at 3% O2.
[Basis: Cumulative Increase, Regulation 8-34-301.3]

8. The owner/operator of A-2 Enclosed Flare shall not exceed 0.90 pounds per hour of NMOC emissions.
[Basis: Cumulative Increase, Regulation 8-34-301.3]

9. The owner/operator of the A-2 Enclosed Flare shall not exceed any of the following limits:

   a. The total SO2 emissions from A-2 shall not exceed any of the following limits:
      i. 6.40 pounds per day of SO2 during any 24-hour period
      ii. 0.248 tons of SO2 during any consecutive 12-month period.

   b. The owner/operator shall demonstrate compliance with the emission limits in Part 9(a) by complying with the heat input limits of A-2 and monitoring procedures in Part 9(d).

   c. The owner/operator of S-1 shall demonstrate that the PPRNG contains no more than 10 ppmv of TRS compounds (dry basis), expressed as H2S.

   d. To demonstrate compliance with Part 9(c), the owner/operator shall conduct monthly measurements of PPRNG. The owner/operator shall use either a District approved portable hydrogen sulfide monitor or a District approved Laboratory analysis method to determine the concentration of TRS, measured as H2S and corrected to 50% methane in the PPRNG. Methane concentrations measured pursuant to Part 1 of Condition # 27705 shall be used to correct the calculated TRS concentrations to a landfill gas methane concentration of 50% by volume (corrected TRS = measured TRS/measured % CH4 * 50). The sampling dates and results shall be recorded in a District approved log.
      i. If the portable H2S analysis method is used, the TRS concentration shall be calculated by multiplying the measured H2S concentration by 1.2
         (TRS = 1.2 * H2S).
      ii. If a laboratory analysis method is used, the TRS concentration shall be calculated as the sum of the measured concentrations for the individual sulfur compounds, expressed as H2S.
      iii. If the corrected TRS concentration determined pursuant to Part 9(d) is 10 ppmv of TRS or less for each monthly measurement during a

rolling 12-month period, no additional calculations are required to verify compliance with the SO2 emission limits identified above in Part 9(a). If any corrected TRS concentration measurement is greater than 10 ppmv of TRS during a rolling 12-month period, the Permit Holder shall use the calculation procedures in Part 9(d) to demonstrate compliance with the daily and annual SO2 emission limits above.
[Basis: Cumulative Increase]

10. The owner/operator of the A-2 Enclosed Flare shall not exceed 0.012 grains/dscf PM10.
[Basis: Cumulative Increase, Regulation 6-1]

11. The owner/operator of A-2 Enclosed Flare shall submit a permit application for a change of permit conditions, if any of the annual site-specific PPRNG characterization test indicates that the PPRNG at this site contains any of the following compounds at a level greater than the concentration listed below. The permit application shall be submitted to the Engineering Division, within 30 days of receipt of test results indicating a concentration above the levels listed below.

Compound	Concentration (ppbv)
1,3-Butadiene	77
1,4-Dichlorobenzene	518
Acrylonitrile	188
Benzene	1770
Ethylbenzene	5720
Ethylene dibromide	47
Ethylene dichloride	901
Hydrochloric Acid	14182
Hydrofluoric Acid	3777
Hydrogen Sulfide	114000
Vinyl Chloride	136

The following TACs should not exceed the following emission factors:

Compound	Emission Factor (lb/MM scf)
Acetaldehyde	2.58E-01
Acrolein	8.44E-02
Dioxins	1.09E-09
Formaldehyde	1.80E-01
Naphthalene	3.56E-02
PAHs (as B(a)P-equivalent)	2.52E-06

[Basis: Regulation 2-5-302]

12. In order to demonstrate compliance with Parts 1 through 11 above, Regulations 8-34-301.3 and 8-34-412, 40 CFR 60.8, and/or 40 CFR 60.752(b)(2)(iii)(B), the owner/operator of A-2 Enclosed Flare shall conduct a

source test at A-2 at least once annually. The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The first source test for A-2 shall be conducted within ~~1,440~~1,920 operating hours, not to exceed ~~90~~ 120 days from the date of the initial operation of A-2. The annual source test shall be conducted when the A-2 Enclosed Flare is operating at or near its maximum operating rate. The source test shall be conducted in accordance using only District approved source test procedures and/or methods. The Source Test Section shall be notified of the scheduled test date at least 7 days in advance of each source test. The source test report shall be submitted to the Compliance and Enforcement, Engineering Divisions and the Source Test Section within 60 days of the test date. Each annual source test shall determine the following:

a. Gas flow rate to A-2 (dry basis);

b. Concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), methane (CH4), total NMOC, H2S, TRS in the gas;

c. Stack gas flow rate from A-2 (dry basis);

d. Concentrations (dry basis) of NOx, CO, NMOC, PM10, PM2.5 (including both filterable and condensable fractions) and O2 in the stack gas of A-2;

e. NMOC/THC ratio;

f. NMOC destruction efficiency of A-2;

g. Hourly mass emission rate of NMOC in pounds per hour;

h. NMOC concentrations in the exhaust of A-2 in lb/hr;

i. NOx and CO emission rates from A-2 in units of pounds per MM BTU;

j. Average combustion zone temperature in A-2 during the test period;

k. High heating value of the PPRNG (BTU/scf);

l. PM10 emission rates in units of grains/dscf from A-2;

m. PPRNG characterization results as per Condition #27705, Part 13.

[Basis: Regulation 8-34-301.3, RACT, 40 CFR 60.752(b)(2)(iii)]

13. In order to demonstrate compliance with the above parts, the owner/operator of A-2 shall maintain the following records in a District-approved logbook. All records shall be maintained on-site and shall be made readily available to the District staff upon request for a period of 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations.

a. Record the date and time of each startup, shutdown and/or malfunction of A-2 and the reason for each shutdown.

b. Summarize the operating hours of A-2 on a daily basis.

c. Calculate and record, on a monthly basis, the maximum daily and the total monthly heat input rate to A-2 based on the operating hours for A-2, the propane, waste gas, PPRNG, and natural gas flow rate recorded pursuant to Part 3, the average methane concentration in the waste gas and PPRNG as determined by the most recent source test, and a high heating value for methane of 993. 9 BTU/scf of landfill gas at 70 degrees F and 1 atmosphere.

d. Record the total amount of propane used in a consecutive 12-month period.

e. Maintain records of all test dates and tests results performed to maintain compliance with Parts 11 and 12 or with any applicable part, rule, and/or regulation.

f. All temperature monitoring data.

g. TRS data and SO2 calculations.
[Basis: Cumulative Increase, Regulation 2-6-501, 8-34-301, 8-34-501]

End of Conditions

been paid. Such denial shall not be based solely on the type of construction or design of equipment.

(Amended March 17, 1982)

2-1-305 **Conformance with Authority to Construct:** A person shall not put in place, build, erect, install, modify, modernize, alter or replace any article, machine, equipment, or other contrivance for which an authority to construct has been issued except in a manner substantially in conformance with the authority to construct. If the APCO finds, prior to the issuance of a permit to operate, that the subject of the application was not built substantially in conformance with the authority to construct, the APCO shall deny the permit to operate.

(Amended December 21, 2004)

2-1-306 **Mandated Reductions Not Applicable:** Emission reductions resulting from requirements of federal, state or District laws, rules or regulations shall not be banked or allowed as emission offsets or emission reduction credits unless a complete application for such banking or emission reduction credits was filed with the District at least 90 days prior to the adoption date of such laws, rules or regulations. Only emission reduction credits exceeding the emission reductions required by measures described in the Air Quality Management Plan or required by permits or orders; and reductions achieved by measures not specified in the Air Quality Management Plan shall be banked or allowed as emission offsets or emission reduction credits.

(Amended 10/7/81; 7/17/91; 6/15/94)

2-1-307 **Failure to Meet Permit Conditions:** A person shall not operate any article, machine, equipment or other contrivance, for which an authority to construct or permit to operate has been issued, in violation of any permit condition imposed pursuant to Section 2-1-403.

(Adopted 3/17/82; Amended 7/17/91)

2-1-308 **Fugitive Emissions:** Fugitive emissions shall be included as emissions from a source or facility except as required under this Regulation.

(Adopted 10/19/83; Amended 7/17/91)

2-1-309 **Canceled Application:** The APCO may cancel an application for an authority to construct and a permit to operate if, within 90 days after the application was deemed incomplete, the applicant fails to furnish the requested information or pay all appropriate fees. The 90 day period may be extended for an additional 90 days upon receipt of a written request from the applicant and written approval thereof by the APCO. The APCO shall notify the applicant in writing of a cancellation, and the reasons therefore. A cancellation shall become effective 10 days after the applicant has been notified. The cancellation shall be without prejudice to any future applications.

(Adopted April 6, 1988)

2-1-310 **Applicability of CEQA:** Except for permit applications which will be reviewed as ministerial projects under Section 2-1-311 or which are exempt from CEQA pursuant to Section 2-1-312, all proposed new and modified sources for which an authority to construct must be obtained from the District shall be reviewed in accordance with the requirements of CEQA.

310.1 For those District permit applications which must be reviewed in accordance with the requirements of CEQA, the District will not normally be a Lead Agency under CEQA. Rather, pursuant to CEQA, the Lead Agency will normally be an agency with general governmental powers, such as a city or county, rather than a special purpose agency such as the District.

Reports containing the information required by Sections 8-34-501, 503, 505, 506, 507, 508, and 509. The initial Annual Report shall include the initial Performance Test Report required by Section 8-34-413 and is due no later than 180 days from the initial start-up of the gas collection system, but not earlier than January 1, 2003.

(Adopted October 6, 1999)

8-34-412 **Compliance Demonstration Test:** Except as provided in Sections 8-34-119 or 120, any operator of equipment that is subject to Sections 8-34-301.3 or 301.4, shall conduct a Compliance Demonstration Test in accordance with the requirements of 40 CFR 60.8 and 60.752(b)(2)(iii)(B) using the test methods identified in 40 CFR 60.754(d). The initial Compliance Demonstration Test shall be conducted within 120 days of initial start up of the gas collection system or by October 1, 2002, whichever is later. Any operator that is subject to this requirement and that is required to have a Major Facility Review Permit, shall conduct annual Compliance Demonstration Tests.

(Adopted October 6, 1999)

8-34-413 **Performance Test Report:** Any operator required to meet Section 8-34-412 shall submit a Performance Test Report to the APCO in accordance with the provisions of 40 CFR 60.8. The initial Performance Test Report shall contain the information specified in 40 CFR 60.757(g) and shall be included in the initial Annual Report required by Section 8-34-411. Any operator required to perform annual Compliance Demonstration Tests shall submit the annual Performance Test Report along with the Annual Report required by Section 8-34-411.

(Adopted October 6, 1999)

8-34-414 **Repair Schedule for Wellhead Excesses:** In accordance with the provisions of 40 CFR 60.755(a)(3 and 5), any operator subject to the requirements of Section 8-34-305 shall meet the following requirements, if any excess of a limit specified in Sections 8-34-305.1, 305.2, 305.3, or 305.4 is detected.

414.1 The operator shall record the date, the excess value and the well identification number.

414.2 The operator shall initiate action to correct the excess within 5 calendar days of discovering the problem.

414.3 If the excess cannot be corrected within 15 days of the date that the problem was first discovered, the gas collection system shall be expanded to correct the excess.

414.4 If a gas collection system expansion is required pursuant to Section 8-34-414.3, the expansion shall be completed and all new wells shall be operating within 120 days of the date that the problem was first discovered.

(Adopted October 6, 1999)

8-34-415 **Repair Schedule for Landfill Surface Leak Excesses:** In accordance with the provisions of 40 CFR 60.755(c)(4), any operator subject to the requirements of Section 8-34-303 shall meet the following requirements, if any excess of the limit specified in Section 8-34-303 is detected:

415.1 The operator shall mark the location and record the date, location and value of each monitored excess.

415.2 The operator shall initiate action, such as cover maintenance or well vacuum adjustments, to correct the excess within 5 calendar days of discovering the excess.

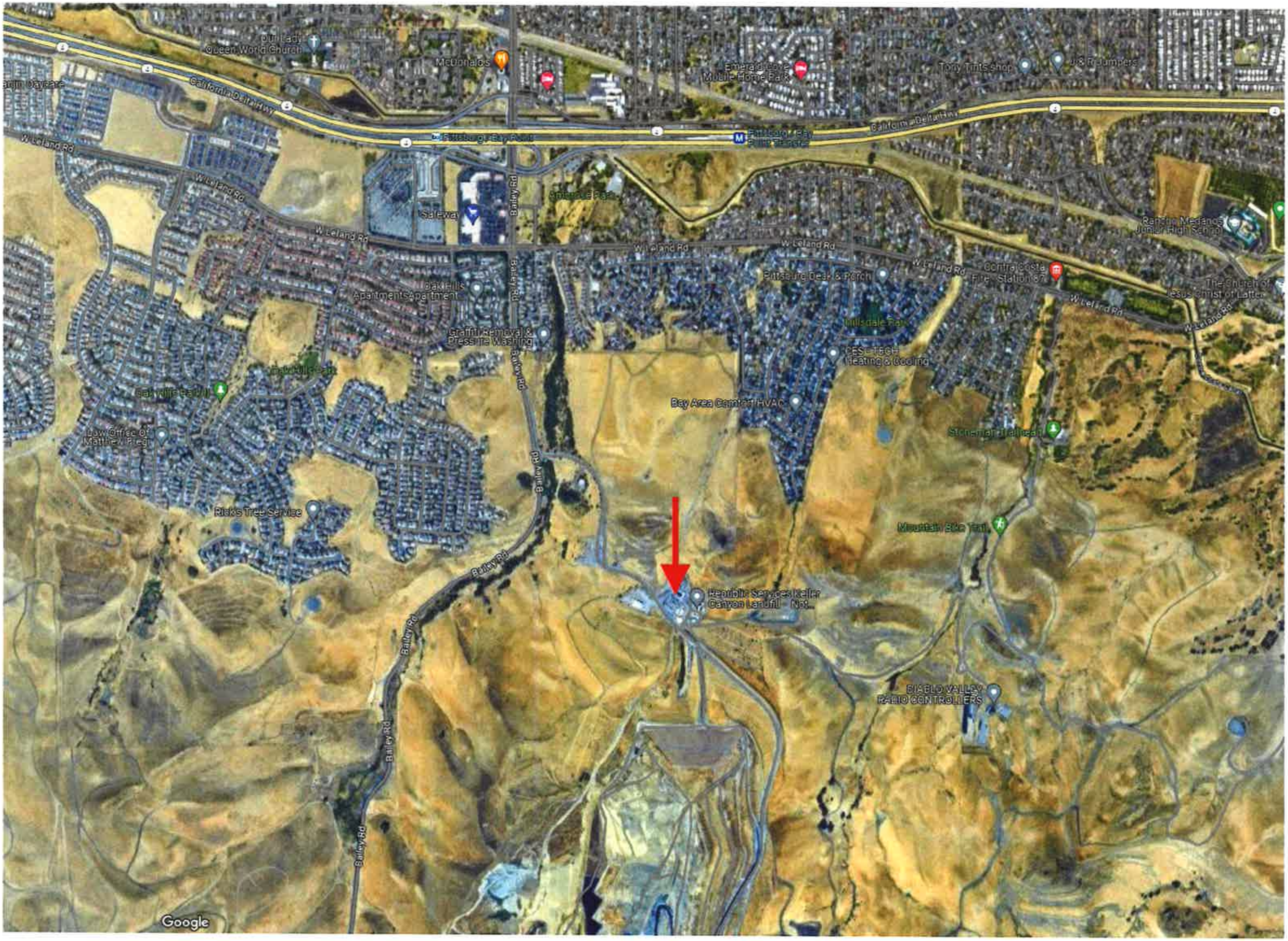
415.3 The location of the excess shall be re-monitored within 10 calendar days of the date that the excess was first discovered.

415.4 If the re-monitoring pursuant to Section 8-34-415.3 indicates no excess of the Section 8-34-303 limit, the location shall be re-monitored within 1 month of the date that the excess was first discovered.

415.5 If the re-monitoring pursuant to Section 8-34-415.4 indicates no excess of the Section 8-34-303 limit, no further monitoring is required until the next regularly scheduled quarterly monitoring date.

415.6 If monitoring pursuant to Sections 8-34-415.3 or 415.4 indicates a second excess of the Section 8-34-303 limit, additional corrective action shall be initiated within 5 calendar days of detecting the second excess.

415.7 Any location exhibiting a second excess within a quarterly period shall be re-monitored within 10 calendar days of detecting the second excess.


Our Lady Queen World Church
McDonald's
Tony Tints shop
California Delta Hwy
W Leland Rd
Safeway
Bailey Rd
Oak Hills Apartments
Graffiti Removal & Pressure Washing
Bay Area Comfort HVAC
Rick's Tree Service
Mountain Bike Trail
Republic Services Keller Canyon Landfill
DIABLO VALLEY RADIO CONTROLLERS
Contra Costa Fire Station 87
Hillsdale Park
Google

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600, San Francisco, CA 94105
(415) 749-5000

NOTICE OF VIOLATION

No. A60769

ISSUED TO: Ameresco Keller Canyon RNG ☑ P ☐ G ☐ N# 24722

ADDRESS: 901 Bailey Rd.

CITY: Pittsburg STATE: CA ZIP: 94565

PHONE: (508) 661-2242

☑ N# Mailing Address on F61

OCCURRENCE

NAME:

ADDRESS: ☑ Same As Above

CITY: ZIP

SOURCE: S# 1 NAME: Processing LFG into RNG

EMISSION PT: P# NAME:

DATE: 05/01/24 TIME: HRS

☐ REG 2 RULE 1 SEC 301
No Authority to Construct

☐ REG 2 RULE 1 SEC 302
No Permit to Operate

☐ REG 1 SEC 301
H & S CODE - 41700
Public Nuisance

☑ REG 2 RULE 1 SEC 307
Failure to Meet Permit Condition

☐ REG 5 SEC 301
Prohibited Open Burning

☐ REG 6 RULE 1 SEC 301
Excessive Visible Emissions

☐ REG RULE SECTION CODE

☐ REG RULE SECTION CODE

Details: Failure to sample A1, A2, and A3 monthly. 27705.4, 27707.9, 27708.9

RECIPIENT NAME: Andrew McClelland

TITLE: Authorized Representative

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT X

→ WITHIN 10 DAYS, RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT CONTINUED OR RECURRENT VIOLATION. **THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY.** YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: A. Kobayashi INSP # 909

DATE: 06/20/24 TIME: 1100 HRS ☑ MAILED

PLEASE PRESS HARD

Continued On Reverse

INSTRUCTIONS

PERMIT VIOLATIONS - (REG 2, RULE 1, SECTION 301 AND/OR 302)

Within 30 days, a permit application must be submitted to the District's Permit Division. The permit application must reference the Violation Notice Number Shown on the front of this notice. If either the Violation Notice Number is not referenced or no permit application is received, then this matter will be referred to the District's Legal Department for legal action. Your response does not preclude further legal action.

If there are any questions regarding the submission of a Permit Application, call the Permit Services Division at (415) 749-4990.

ALL OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation. This violation is subject to substantial penalty. Your response does not preclude further legal action.

A variance should be sought if it is necessary to continue to operate in violation of District Regulations. For information on eligiblity for, or filing of, a variance, call (415) 749-5073.