air pollution control district
SANTA BARBARA COUNTY

HEARING BOARD STAFF REPORT

TYPE: **REGULAR VARIANCE**

CASE NO: **2025-09-R**

DATE: **July 2, 2025**

1.0 GENERAL INFORMATION:

1.1 PETITIONER COMPANY NAME: County Santa Barbara, Public Works

1.2 EQUIPMENT LOCATION: Tajiguas Landfill, 14470 Calle Real, Goleta, California

1.3 PERMIT NUMBER(S): Authority to Construct 14500-10

1.4 FACILITY NAME/ID: County of Santa Barbara – Tajiguas Anerobic Digestion / FID 11480

1.5 FACILITY DESCRIPTION: The Tajiguas Landfill is owned by the County of Santa Barbara. In an effort to extend the life of the Tajiguas Landfill, reduce the amount of material landfilled, increase the recovery rate of recyclable materials, and generate renewable energy, the Tajiguas ReSource Recovery Project (ReSource Center) equipment was installed at the landfill. In addition, SB 1383 required the Tajiguas Landfill to reduce the amount of organic waste disposed of in the landfill by 50% by 2014. It further required a 75% reduction in landfilled organics by 2025.

The facility is located 26 miles west of the City of Santa Barbara in a canyon known as Cañada de la Pila. Immediately south of the landfill site are U.S. Highway 101, which provides access to the site, Union Pacific Railroad tracks, and the Pacific Ocean. The southern portion of the site is within the California Coastal Zone.

2.0 REASON FOR THE VARIANCE REQUEST: The ReSource Center includes the separation of waste products, anerobic digestion process, composting and combustion equipment. Municipal solid waste (MSW) is received in the tipping area inside the Material Recovery Facility (MRF) building at the landfill. The material is subsequently sorted into organics, recyclables, and residue in the material sorting area. Recyclables collected in the materials sorting area are sold to the market while waste residue is landfilled. The sorted organics are placed in the anaerobic digesters to generate biogas in the Anaerobic Digester Facility (ADF). The biogas is treated and combusted in combined heat and power (CHP) internal combustion (IC) engines for power generation, or an enclosed flare (APCD Device ID 388364) located at the ADF. Following biogas generation, the digestate is processed into soil amendments and compost at the Compost Management Unit (CMU).

Biogas from the ADF digesters is sent to two CHP IC engines (APCD Device IDs 388360 and 389006) to produce electricity for the grid and for onsite needs. Anerobic digesters are necessary to process organic waste. The CHP IC engines, identified by the Petitioner as engine 300 and engine 400, are equipped with Steuler dual SCR/oxidation catalyst control systems (APCD Device IDs 388361 and 389007). The oxidation catalyst reduces CO and ROC emissions while the SCR system uses urea injection to control NOx emissions. These engines are also equipped with a continuous emissions monitor system (CEMS) and data is telemetered to the District via the Data Acquisition System (DAS).

In February 2025, the Petitioner submitted a permit modification application (ATC 14500-14) with requests for new/modified conditioners, including throughput limits, operational parameter, monitoring, recordkeeping and reporting requirements to ensure compliance. District staff reviewed the permit modification request and determined additional air modeling and CEQA review was necessary for the requested revisions, resulting in a permit incompleteness letter to the Petitioner. In response to the incompleteness letter, the Petitioner requested a meeting with the District to discuss the items further.

The Petitioner was advised the best way to expedite the requested permit modifications was to remove some of the items from the ATC 14500-14 application and submit a separate permit modification application for those conditions requiring a potential change in the air model and CEQA review. The Petitioner must continue to operate the facility out of compliance with the permit conditions, until a permit modification and be issued. In addition, there are several items that need to be corrected with new monitoring equipment, existing equipment upgrades, and additional contracts to cover the cost of backup equipment.

As a result, variance coverage was requested until the necessary changes can be implemented at the Petitioner's facility.

Without Variance coverage, the Petitioner will be in violation of District Rules 328.C.2, C.4, G and I.1 and Rule 206, ATC 14500-Mod 10, Conditions 9.B.12, 9.C.1.b.i., 9.C.1.b.ii., 9.C.1.b.iii., 9.C.2.b.ii., 9.C.3.b.i., 9.C.3.b.ii., 9.C.3.b.iii., 9.C.3.b.iv., 9.C.3.c.i., 9.C.3.c.ii., 9.C.3.d.i., 9.C.3.d.ii., 9.C.5.a.ii., 9.C.5.a.iii., 9.C.6.a.ii., 9.C.6.a.iii., 9.C.6.a.iv., 9.C.7.a.i., 9.C.7.a.iv., 9.C.9.a.i., 9.C.9.a.iv., 9.C.9.a.v., 9.C.9.b.iii., 9.C.9.b.iv.1.a., 9.C.9.b.iv.2.a., 9.C.9.b.viii., 9.C.9.b.xvi., 9.C.10.b.i., 9.C.10.b.iii., 9.C.10.b.v., 9.C.10.b.xvi., 9.C.10.b.xvii., 9.C.10.c.ii., 9.C.10.c.iv., 9.C.10.c.viii., 9.C.10.d.i, 9.C.11.a., 9.C.11.b.i., 9.C.11.b.iv., 9.C.11.b.v., 9.C.11.b.vii., 9.C.11.b.viii., 9.C.11.b.ix., 9.C.11.b.x., 9.C.11.b.xi., 9.C.11.c.iii., 9.C.11.c.vi., 9.C.11.c.viii., 9.C.11.c.ix., 9.C.11.c.x., 9.C.11.c.xi., 9.C.11.c.xii., 9.C.13.b.iv., 9.C.13.c.iv., 9.C.13.c.v., 9.C.21 (ADF and MRF CHP IC engines only), 9.C.22, 9.C.23, 9.C.34.b., 9.C.34.c., 9.C.34.f., 9.C.34.g., and 9.C.34.i.

BACKGROUND: The Petitioner is currently operating under Interim Variance Order 2025-08-I, granted on June 9, 2025, by Chair Dressler. Variance Order 2025-08-I provides relief from the following requirements at the Tajiguas Landfill: Best Available Control Technology (BACT) emission limits for Anaerobic Digestion Facility (ADF) and Materials Recovery Facility (MRF) combined heat and power (CHP) internal combustion (IC) engines, operational parameters, continuous emissions monitoring system (CEMS) requirements and data telemetry for the ADF and MRF CHP IC engines, and CEMS excursions from May 30, 2025 through August 27, 2025 (not to exceed 90-days), the date a decision is made on Regular Variance 2025-09-R, or the date compliance is achieved, whichever occurs first.

If granted, Variance Order 2025-09-R, would allow continued relief through May 29, 2026.

3.0 PERMITTING HISTORY: The Petitioner has undergone several permitting actions since 2017. These actions are described below.

- On August 18, 2017, the Petitioner submitted a permit modification application (ATC 14500-02) to install one biogas flare to purge the anerobic digesters of excess methane, two combine heat and power co-generation engines to convert biogas from the ADF into electricity and one emergency standby generator. ATC 14500-02 was issued on October 17, 2018. Some of the equipment listed in ATC 14500-02 began operations in December 2020. ATC 14500-02 was superseded on February 1, 2022.
- On February 3, 2020, the Petitioner submitted a permit modification application (ATC 14500-04) to install one emergency standby generator to be operated at the ADF, replace the emergency standby generator with an engine with a greater horsepower rating to be operated at the MRF and other changes. ATC 14500-04 was issued on February 1, 2022.
- On March 30, 2020, the Petitioner submitted a permit modification application (ATC 14500-05) for modifications to the ReSource Center project. ATC 14500-05 was issued on February 1, 2022, and it superseded ATC 14500-02 and ATC 14500-04.
- On November 9, 2020, the Petitioner submitted a permit modification application (ATC 14500-06) to modify source compliance demonstration period conditions. ATC 14500-06 was issued on December 2, 2020, and was superseded on February 3, 2021.
- On February 1, 2021, the Petitioner submitted a permit modification application (ATC 14500-07) to modify source compliance demonstration period conditions. ATC 14500-07 was issued on February 3, 2021, and was superseded on February 1, 2021.
- On June 24, 2021, the Petitioner submitted a permit modification application (ATC 14500-08) for a renewable gas project. This application was deemed incomplete on February 2, 2022, and is pending additional information from the Petitioner.
- On March 11, 2022, the Petitioner submitted a permit modification application (ATC 14500-09), to include the use of a deodorizing misting system. ATC 14500-09 was deemed complete on April 13, 2022, issued final on August 18, 2022, and superseded on May 22, 2024 with the issuance of ATC 14500-10.
- On July 5, 2022, the Petitioner submitted a permit modification application (ATC 14500-10) to remove from permit the MRF biofilters and scrubbers associated with Variance Order 2021-12-M2 (the baghouses will remain) and for additional modifications and new equipment. This permit application was deemed incomplete 7 times, eventually being deemed complete on June 22, 2023. The final permit could not be issued until project changes and the California Environmental Quality Act (CEQA) determination was finalized and approved by Santa Barbara County (County). On May 22, 2024, ATC 14500-10 was issued and it superseded ATC 14500-05.
- On October 20, 2022, the Petitioner submitted a permit modification application (ATC 15993) for modifications and to install a power screen at the compost management unit. ATC 15993 was issued April 12, 2023, and was superseded May 22, 2024 with the issuance of ATC 14500-10.
- On January 27, 2023, the Petitioner submitted a permit application (ATC 16050) to install and conduct an aeration pilot study at the composting management unit. ATC 16050 was issued February 13, 2023, and superseded April 5, 2023.
- On March 8, 2023, the Petitioner submitted a permit modification application (ATC 16050-01) to expand the aeration pilot study at the composting management unit. ATC 16050-01 was issued on April 5, 2023, and cancelled on March 12, 2024.

- On April 11, 2023, the Petitioner submitted a permit modification application (ATC 14500-11) to install an inoculant solutions odor control system and piping from the ADF building to the digestate loadout bunker at the compost management system. The permit modification application was withdrawn on April 13, 2023.
- On August 4, 2023, the Petitioner submitted a permit modification application to install a new odor control misting system at the MRF. ATC 14500-12 was issued on September 1, 2023, and superseded May 22, 2024 with the issuance of ATC 14500-10.
- On August 4, 2023, the Petitioner submitted a permit modification application (ATC 14500-13) to install the GORE windrow cover system. ATC 14500-13 was issued on January 26, 2024, and superseded on May 22, 2024 with the issuance of ATC 14500-10.
- On January 30, 2024, the Petitioner submitted a transfer of owner/operator application. Due to outstanding NOV penalties and invoices, the transfer could not be approved until these were addressed. The Petitioner paid the NOV penalties and invoices, and the transfer was issued final on April 16, 2024.
- On February 27, 2024, the Petitioner submitted an application (ATC 16230) to replace the composting screens. ATC 16230 was superseded on May 22, 2024, with the issuance of ATC 14500-10.
- On March 7, 2024, the Petitioner submitted an application (ATC 16230) to replace the composting screens. ATC 16230-01 was superseded on May 22, 2024, with the issuance of ATC 14500-10.
- On May 9, 2024, the Petitioner submitted an application to install a ferric chloride treatment system. This permit application was deemed complete on May 15, 2024.
- On May 22, 2024, the Petitioner applied for a permit (PTO 16278) for the equipment installed under ATC 14500-13. This permit application was deemed incomplete on June 12, 2024.
- On August 28, 2024, the Petitioner submitted an application (ATC 16312) to install a diesel-fired emergency standby engine. ATC 16312 was issued on February 4, 2025.
- On February 18, 2025, the Petitioner submitted a permit modification application (ATC 14500-14) to align permit and operating conditions. ATC 14500-14 was deemed incomplete on March 14, 2025.
- On May 29, 2025, the Petitioner submitted an application (PTO 16312) which is pending District review.

4.0 **COMPLIANCE HISTORY:** In the past three years, the following Notices of Violations (NOVs) were issued to the facility:

- NOV 13195 issued on September 20, 2022, for failing to obtain written approval prior to conducting source testing on the ADF engines.
- NOV 13196 issued on September 20, 2022, for failing to obtain written approval prior to conducting source testing on the ADF flare.
- NOV 13215 issued on November 10, 2022, for failing to submit the monthly reports by the due date for 10 reporting periods as required by Variance Order 2021-12-R.
- NOV 13255 issued on January 27, 2023, for failing to submit the windrow source test results within 45 days of completion.

- NOV 13258 issued on February 1, 2023, for failing to submit the MRF engine 1 and engine 2 source testing results within 45 days of completion.
- NOV 13315 issued on May 3, 2023, for failing to submit the monthly reports for 3 reporting periods as required by Variance Order 2021-12-M1.
- NOV 13313 issued on May 3, 2023, for failing to submit the ADF biofilter source test results within 45 days of completion.
- NOV 13312 issued on May 3, 2023, for failing to conduct source testing on the following pollutants: acetaldehyde, methanol, naphthalene, ethylbenzene and perchloroethylene during the September 27, 2022 ADF biofilter source test.
- NOV 13310 issued on May 3, 2023, for failing to conduct source testing on the following pollutants: hydrogen sulfide, acetaldehyde, methanol, naphthalene, ethylbenzene and perchloroethylene during the September 28, 2022 windrow source test.
- NOV 13266 issued on May 3, 2023, for installing an odor eliminating misting system without a District permit.
- NOV 13318 issued on May 10, 2023, for venting the ADF exhaust to atmosphere.
- NOV 13338 issued on May 26, 2023, for operating the GORE composting pilot project without a District permit.
- NOV 13541 issued on November 15, 2023, for failing to conduct the ADF CHP IC engine 2 source test by the anniversary date.
- NOV 13540 issued on November 15, 2023, for failing to conduct the ADF CHP IC engine 1 source test by the anniversary date.
- NOV 13539 issued on November 15, 2023, for failing to submit the windrow source test results within 30 days of test completion.
- NOV 13538 issued on November 15, 2023, for failing to conduct the windrow source test by the anniversary date.
- NOV 13537 issued on November 15, 2023, for failing to submit the ADF biofilter source test plan within 30 days of source testing.
- NOV 13536 issued on November 15, 2023, for failing to conduct the ADF biofilter source test by the anniversary date.
- NOV 13535 issued on November 15, 2023, for failing to conduct the ADF flare source test by the anniversary date.
- NOV 13534 issued on November 15, 2023, for failing to conduct the MRF flare source test by the anniversary date.
- NOV 13557 issued on December 21, 2023, for failing to submit the MRF flare source test results within 45 days of source test.
- NOV 13556 issued on December 21, 2023, for failing to submit the ADF flare source test results within 45 days of source test.
- NOV 13632 issued on April 24, 2024, for failing to telemeter CEMS data for the MRF CHP IC engines 1 and 2.
- NOV 13631 issued on April 24, 2024, for failing to telemeter CEMS data for the ADF CHP IC engines 1 and 2.
- NOV 13630 issued on April 24, 2024, for failing to operate within the specified parameters at the ADF.

- NOV 13628 issued on April 24, 2024, for failing to obtain a District permit prior to installing the ferric chloride pretreatment system.
- NOV 13652 issued on May 15, 2024, for failing to thoroughly inspect for asbestos prior to demolition/renovation and failing to notify the District of said demolition.
- NOV 13651 issued on May 15, 2024, for operating the ADF CHP IC engine 2 on biogas exceeding the permitted limit.
- NOV 13650 issued on May 15, 2024, for failing to maintain and operate the SCR/Oxidation Catalyst Control Systems for MRF CHP Engine 2.
- NOV 13649 issued on May 15, 2024, for failing to maintain and operate the SCR/Oxidation Catalyst Control Systems for MRF CHP Engine 1.
- NOV 13648 issued on May 15, 2024, for failing to maintain and operate the SCR/Oxidation Catalyst Control Systems for ADF CHP Engine 2.
- NOV 13647 issued on May 15, 2024, for failing to maintain and operate the SCR/Oxidation Catalyst Control Systems for ADF CHP Engine 1.
- NOV 13646 issued on May 15, 2024, for operating the ADF flare on biogas fuel greater than the permitted limit.
- NOV 13645 issued on May 15, 2024, for operating the ADF CHP engine 1 on biogas fuel greater the permitted limit.
- NOV 13644 issued on May 15, 2024, for failing change the carbon media in the lead vessel within 3 days of a hydrogen sulfide reading of 16 ppm (or greater) on the at the sampling port located between the activate carbon vessels.
- NOV 13748 issued on June 28, 2024, for failing to install the necessary equipment/communication devices to immediately trigger an alarm to notify the operators when a biogas release occurs.
- NOV 13767 issued on June 28, 2024, for releasing biogas into the atmosphere.
- NOV 13770 issued on June 28, 2024, for exceeding the BACT ROC emission limits from the CMU compost piles.
- NOV 13778 issued on July 11, 2024, for releasing biogas into the atmosphere.
- NOV 13782 issued July 23, 2024, for failing to submit and obtain approve of the following plans: CEMS Plan, LF Condensate Disposal Plan, and Rule 333 Inspection and Maintenance Plan.
- NOV 13784 issued July 23, 2024, for operating the biofilter scrubber 1 outside the operational parameters for the differential pressure.
- NOV 13785 issued July 23, 2024, for releasing biogas into the atmosphere.
- NOV 13786 issued July 23, 2024, for releasing biogas into the atmosphere.
- NOV 13799 issued on August 23, 2024, for releasing biogas into the atmosphere.
- NOV 13861 issued on November 27, 2024, for failing to submit the June 28, 2024, MRF flare source test results within 45 days of test competition.
- NOV 13872 issued on January 9, 2025, for failing to submit the October 8, 2024, MRF flare source test results within 45 days of test competition.
- NOV 13928 issued on April 14, 2025, for exceeding the BACT ROC emission limits from the CMU compost piles during the January 25, 2025, source test.
- NOV 13929 issued on April 14, 2025, for exceeding the ammonia emission limits from the CMU compost piles during the January 25, 2025, source test.

- NOV 13931 issued on April 16, 2025, for exceeding the total tipping area throughput and the CSSR daily throughput limit as reported in the 2024 1H CVR.
- NOV 13932 issued on April 16, 2025, for failing to monitor the hydrogen sulfide and ammonia content on June 18, 2024 of the undiluted digester headspace biogas and the treated biogas as reported in the 2024 1H CVR.
- NOV 13933 issued on April 16, 2025, for failing to monitor the food waste throughput of food waste processed at the ADF on a daily and annual basis as reported in the 2024 1H CVR.
- NOV 13934 issued on April 16, 2025, for exceeding the daily heat input limit to the ADF CHP IC engine 2 as reported in the 2024 1H CVR.
- NOV 13935 issued on April 16, 2025, for exceeding 8% landfill gas fuel usage by volume in the ADF CHP IC engines as reported in the 2024 1H CVR.
- NOV 13936 issued on April 16, 2025, for exceeding the differential pressure across the SCR/Oxidation Catalyst Control System as reported in the 2024 1H CVR.
- NOV 13937 issued on April 16, 2025, for operating the ADF flare outside the permitted range as reported in the 2024 1H CVR.
- NOV 13938 issued on April 16, 2025, for operating the MRF flare outside the permitted range as reported in the 2024 1H CVR.
- NOV 13939 issued on April 16, 2025, for failing to monitor the daily quantity of condensate in the condensate evaporator as reported in the 2024 1H CVR.
- NOV 13940 issued on April 16, 2025, for failing to monitor the MRF emergency standby generator (e.g., usage and type of usage) as reported in the 2024 1H CVR.
- NOV 13941 issued on April 16, 2025, for failing to monitor and record the sweeper hours of day and number of days in which the sweeper is used at the Tipping Area, Materials Sorting Area, and ADF Area as reported in the 2024 1H CVR.
- NOV 13942 issued on April 16, 2025, for handling MSW and CSSR at the Materials Sorting Area outside the operational hours as reported in the 2024 1H CVR.
- NOV 13943 issued on April 16, 2025, for operating the CMU delivery area outside the operational hours as reported in the 2024 1H CVR.
- NOV 13944 issued on April 16, 2025, for failing to monitor the hours of day during which the compost screen systems operates as reported in the 2024 1H CVR.
- NOV 13945 issued on April 16, 2025, for failing to record the operating hours for the compost trommel screen prime engine as reported in the 2024 1H CVR.
- NOV 13946 issued on April 16, 2025, for failing to monitor the trommel screen throughput as reported in the 2024 1H CVR.
- NOV 13947 issued on April 16, 2025, for exceeding the daily throughput on the portable trommel compost screen 2024 1H CVR.
- NOV 13987 issued on May 15, 2025, for failing to submit the ADF CHP IC engine 1 source test report within 45 days of source test completion.
- NOV 13988 issued on May 15, 2025, for failing to submit the ADF CHP IC engine 2 source test report within 45 days of source test completion.
- NOV 13989 issued on May 15, 2025, for failing to submit the MRF CHP IC engine 1 source test report within 45 days of source test competition.
- NOV 13990 issued on May 15, 2025, for failing to submit the MRF CHP IC engine 2 source test report within 45 days of source test competition.

5.0 **REGULATORY ANALYSIS**: The Petitioner requested the below permit conditions and rules be included in the Variance Order.

- **Authority to Construct 14500-10, Conditions:**
  - 9.B.12
    - **Continuous Emissions Monitoring (Rule 328).** The permittee shall comply with the requirements of Section C, F, G, H and I of Rule 328. Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit as well as onsite inspections. [*Ref: District Rule 328*]
  - 9.C.1.b.i
    - ***Total Tipping Area Throughput:*** The tipping area total throughput shall not exceed 836.34 tons/day and 290,000 tons/year.
  - 9.C.1.b.ii
    - ***MSW Tipping Area Throughput****:* The tipping area MSW throughput shall not exceed 836.34 tons/day and 250,000 tons/year.
  - 9.C.1.b.iii
    - ***CSSR Tipping Area Throughput****:* The tipping area CSSR throughput shall not exceed 130 tons/day and 40,000 tons/year.
  - 9.C.2.b.ii
    - ***Waste Acceptance Hours****:* The materials sorting area shall only handle MSW and CSSR between the hours of 8 am and 4 pm.
  - 9.C.3.b.i
    - ***Food Waste Throughput****:* The ADF food waste throughput shall not exceed 96.98 tons/day and 35,397 tons/year.
  - 9.C.3.b.ii
    - ***Green Waste Throughput****:* The ADF green waste throughput shall not exceed 104.64 tons/day and 38,193 tons/year.
  - 9.C.3.b.iii
    - ***Food/Green Waste Fractions****:* The amount of material entering the ADF shall not exceed 53.1 percent (based on allowable 5 percent fluctuation from the 48.1 percent value found in the emission calculations) food waste on a wet ton basis on a calendar weekly basis.
  - 9.C.3.b.iv
    - ***ADF Digester Hours****:* The anaerobic digesters shall only be opened between the hours of 8 am and 4 pm.
  - 9.C.3.c.i
    - ***Food Waste Throughput****:* The amount (tons) of food waste processed at the ADF on a daily and annual basis.
  - 9.C.3.c.ii
    - ***Green Waste Throughput****:* The amount (tons) of green waste processed at ADF on a daily and annual basis.
  - 9.C.3.d.i
    - ***Food Waste Throughput****:* The amount (tons) of food waste processed at the ADF on a daily and annual basis.
  - 9.C.3.d.ii

- ***Green Waste Throughput****:* The amount (tons) of green waste processed at the ADF on a daily and annual basis.

- 9.C.5.a.ii
  - ***Inlet Flowrate****:* The inlet flowrate to the ADF biofilter shall not exceed 55,000 scfm.
- 9.C.5.a.iii
  - ***Inlet Temperature****:* The temperature of the ADF biofilter inlet stream shall not exceed 105 °F.
- 9.C.6.a.ii
  - ***Recirculation Water pH****:* The permittee shall maintain the pH of the recirculated water in each biofilter scrubber between 4 and 7.
- 9.C.6.a.iii
  - ***Recirculating Flow****:* The permittee shall maintain the water recirculating flowrate for each biofilter scrubber between 2.7 and 3.2 cubic meters per minute.
- 9.C.6.a.iv
  - ***Pressure Drop***: The permittee shall maintain the pressure drop in each biofilter scrubber between 299 and 796 Pa.
- 9.C.7.a.i
  - ***Sulfur and Ammonia Removal System Operation****:* All biogas routed to the MRF CHP engines shall be treated by the activated carbon vessel system prior to combustion. Except during media change out and system maintenance, the carbon vessel systems shall be operated in a "lead/lag" configuration at all times, i.e., treatment of gas through the first vessel followed by treatment through the second vessel (in series).
- 9.C.7.a.iv
  - ***Media Change Out****:* Media change out of the lead vessel shall occur within 3 days of a hydrogen sulfide reading of 16 ppmv (or greater) or an ammonia reading of 12 ppmv (or greater) at the sampling port located between the activated carbon vessels.
- 9.C.9.a.i
  - *BACT Emissions Limits:* Emissions from the CHP engines shall not exceed the BACT limits of:

    1. *ADF CHP Engines*:

NO_x (as NO_2)	9 ppmvd @ 15% O_2
ROC (as methane)	26 ppmvd @ 15% O_2
CO	38 ppmvd @ 15% O_2

    2. *MRF CHP Engines*:

NO_x (as NO_2)	9 ppmvd @ 15% O_2
ROC (as methane)	25 ppmvd @ 15% O_2
CO	25 ppmvd @ 15% O_2

Compliance with the BACT limits ensures compliance with NSPS Subpart JJJJ emission limits.

- 9.C.9.a.iv
  - ***Ammonia Slip Emission Limit**:* Ammonia emissions from the SCR/Oxidation Catalyst Systems shall not exceed 5 ppmv @ 15% O_2 at any time after system startup. If the ammonia emissions are exceeded at any time, the permittee shall submit an ATC application to the District for the installation of additional ammonia controls no later than 45 days after the discovery of the exceedance, unless alternative compliance measures are approved by the District in writing.
- 9.C.9.a.v
  - *CEMS Emissions Excursions:* Excursions of CEMS concentrations (ppmv @ 15% O_2) for NO_x or CO that are determined by the District to be directly attributable to biogas or LFG quality irregularities are not to be considered a violation of Condition 9.C.9.a, provided a Corrective Action Plan is implemented as required by Condition 9.C.24.
- 9.C.9.b.iii
  - ***Heat Input Limits**:* The hourly, daily, and annual heat input limits to the CHP engines shall not exceed the values listed below. These limits are based on the design rating of the CHP engines.

Engine Make and Model	Device No.	Heat Input Limits		
		(MMBtu/hr)	*(MMBtu/day)*	*(MMBtu/yr)*
ADF CHP Engine 1: Jenbacher/GE JMS 416 GS-L/N.L B82 (1)	388360	9.878	237.072	82,303.496
ADF CHP Engine 2: Jenbacher/GE JMS 416 GS-L/N.L B82 (2)	389006	9.878	237.072	82,303.496
MRF CHP Engine 1: Jenbacher/GE JMS 420 GS-L.L B81 (1)	393170	13.562	325.488	182,802.198 (combined limit)
MRF CHP Engine 2: Jenbacher/GE JMS 420 GS-L.L B81 (2)	383171	13.562	325.488	

- 9.C.9.b.iv.1.a
  - ***ADF CHP Engines**.* Each ADF engine shall not exceed the limits below for startup/shutdown periods:
    a. *Heat Input:* 4.939 MMBtu/hr and 88.902 MMBtu/year.
- 9.C.9.b.iv.2.a
  - ***MRF CHP Engines**:* Each MRF engine shall not exceed the limits below for startup/shutdown periods:
    a. *Heat Input:* 6.781 MMBtu/hr and 1,118.865 MMBtu/year.
- 9.C.9.b.viii
  - ***Fuel Type Limit**:* The following fuel type limits apply to the CHP engines:
    1. The ADF CHP engines shall be exclusively fired on biogas and LFG. On a daily basis, LFG shall not exceed 8 percent of the fuel usage by volume.

2. The MRF CHP engines shall be exclusively fired on LFG and PUC quality natural gas.

- 9.C.9.b.xvi
  - ***Pressure Drop****:* The maximum differential pressure across the SCR/Oxidation Catalyst Control Systems shall not exceed 5.5 inches of water column.
- 9.C.10.b.i
  - ***Enclosed Flare Heat Input Limits****:* The permittee shall comply with the following enclosed flare heat input limits for each type of flaring event. Compliance with heat input limits shall be based on the fuel meter readings and the most recent gas analysis for each fuel type.

    Note that the MRF Flare "One CHP Engine Operational, Remaining LFG Flow" operational scenario in the table below is additive to any of the other four MRF Flare operational scenarios.

Enclosed Flare	Flaring Event Type	Heat Input Limits		
		(MMBtu/hr)	*(MMBtu/day)*	*(MMBtu/yr)*
ADF	Purging	10.367	10.367	2,882.028
ADF	One CHP Engine Offline	8.454	202.895	7,405.675
MRF	One CHP Engine Operational with Normal Flaring	34.146	239.025	87,244.103
MRF	Both CHP Engines Operational with SCS Regeneration Gases	30.172	482.755	140,119.697
MRF	One CHP Engine Operational with SCS Purge Gases	36.933	36.933	13,480.589
MRF	One CHP Engine Operational with SCS Regeneration Gases	43.724	699.583	52,293.808
MRF	One CHP Engine Operational, Remaining LFG Flow	1.410	33.849	617.738

- 9.C.10.b.iii
  - ***ADF Purging Event Hours****:* The ADF enclosed flare purging events shall only occur between the hours of 8 am and 4 pm.
- 9.C.10.b.v
  - ***Flare Operational Limits****:*

    1. ADF enclosed flare hours of operation when one of the ADF CHP engines is nonoperational shall not exceed 24 hours/day and 876 hours/year.

    2. ADF enclosed flare hours of operation for purging events shall not exceed 1 hour/day and 278 hours/year.

    3. MRF enclosed flare hours of operation when one of the MRF CHP engines is nonoperational shall not exceed 7 hours/day and 2,555 hours/year.

4. MRF enclosed flare hours of operation when both MRF CHP engines are operational and SCS regeneration gas is routed to the MRF enclosed flare shall not exceed 16 hours/day and 4,644 hours/year.

5. MRF enclosed flare hours of operation when one of the MRF CHP engines is nonoperational and SCS purge gas is routed to the MRF enclosed flare shall not exceed 1 hours/day and 365 hours/year.

6. MRF enclosed flare hours of operation when one of the MRF CHP engines is nonoperational and SCS regeneration gas is routed to the MRF enclosed flare shall not exceed 16 hours/day and 1,196 hours/year.

- 9.C.10.b.xvi
  - ***MRF Enclosed Flare Venting****:* During restart or startup of the MRF enclosed flare, there shall be a sufficient flow of PUC quality natural gas to the flare to prevent unburned collected LFG from being emitted to the atmosphere.
- 9.C.10.b.xvii
  - ***Operational Temperature Range****:*
    1. The enclosed flares shall operate in a temperature range of 1,600 °F to 1,800 °F measured by the stack thermocouple, except for startup and shutdown periods. This temperature range may be adjusted based on source testing.
    2. The MRF enclosed flare shall be operated within the parameter ranges established during the most recent source test. Except for startup and shutdown periods, the MRF enclosed flare combustion temperature shall not be less than 28 °C below the average combustion temperature during the most recent source test for any three-hour block monitoring period.
- 9.C.10.c.ii
  - ***ADF Enclosed Flare Purging Hours Operating Hours****:* The permittee shall monitor the number of hours as well as the hours of day that the ADF enclosed flare operated for each purging event. In addition, the cumulative total monthly and annual hours shall be monitored.
- 9.C.10.c.iv
  - ***ADF Enclosed Flare Fuel Use****:* The permittee shall install and maintain separate District-approved electronic flow meters that monitor and continuously record the daily and annual volume of biogas, LFG, and propane combusted in the ADF enclosed flare. The fuel meters shall be non-resettable, totalizing, and temperature and pressure corrected. The fuel meters shall be accurate to within 5 percent of the full-scale reading. The fuel meters shall be calibrated in

accordance with the fuel meter manufacturer's procedures, but no later than the date of the next required emissions source test.

- 9.C.10.c.viii
  - ***ADF Enclosed Flare Operational Temperature**:* The ADF enclosed flare shall be equipped with a District-approved temperature measuring and recording system that continuously monitors the stack temperature for the ADF enclosed flare. This equipment shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications.
- 9.C.10.d.i
  - ***Flare Log**:* All flaring events shall be recorded in a log. The log shall include date, duration of flaring event (start and stop times), quantity of biogas flared (for the ADF enclosed flare), quantity of propane flared (for the ADF enclosed flare), quantity of LFG flared (for the MRF and ADF enclosed flares), quantity of SCS regeneration gas (for the MRF enclosed flare), quantity of SCS purge gas (for the MRF enclosed flare) and the type of event (e.g., purging, normal operations, CHP engine nonoperational, etc.).
- 9.C.11.a
  - **Emission Limits**: Mass emissions from CMU equipment listed above shall not exceed the limits listed in Tables 5.1-3 and 5.5-3. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, reporting, and source testing conditions in this permit. In addition, the following specific emission limits apply:
    i. *Ammonia Emission Limit.* Ammonia emissions from the CMU compost piles shall each not exceed 0.81 ppmv.
    ii. *BACT ROC Limit:* ROC emissions from the CMU compost piles shall not exceed the BACT limit of 0.022 lb/wet-ton of digestate, as listed in Table 4.2. Compliance with this limit shall be demonstrated by source testing in accordance with Section 4.14.1, Table 4.6, and Condition 9.C.19 of this permit.
- 9.C.11.b.i
  - ***Delivery Area Hours**:* The CMU delivery area equipment shall only operate between the hours of 8 am and 4 pm.
- 9.C.11.b.iv
  - ***CMU Throughput**:* Digestate delivered to the CMU shall not exceed 201.62 tons/day and 73,590 tons/year.
- 9.C.11.b.v
  - ***Compost Screening Systems Throughput**:* The total amount of compost screened shall not exceed 650 tons/day and 202,150 tons/year.
- 9.C.11.b.vii
  - ***Woodchipper Operational Limit**:* The woodchipper hours of operation shall not exceed 2.7 hours/day and 839.7 hours/year.
- 9.C.11.b.viii

- ***Aeration System Operation**:* The electric blowers for the forced static aeration system shall only be operated when the compost piles are fully covered with the Gore® cover, all edges of the cover are sealed, and the temperature and oxygen probes are in place.

- 9.C.11.b.ix
  - ***Process Control Unit**:* Temperature and oxygen sensors, connected to the Gore® system process control unit, shall be used to continuously monitor the active compost piles (i.e., at all times when piles are not being formed/removed).
- 9.C.11.b.x
  - ***Best Management Practices**:* The permittee shall utilize compost best management practices including use of a semi-permeable Gore® cover and aeration with electric blowers to control odor and ROC emissions from the active compost piles (i.e., at all times when piles are not being formed/removed).
- 9.C.11.b.xi
  - ***Pseudo-Biofilter**:* If the ROC emission limit found in Table 4.6 is exceeded as a result of a source test, the permittee shall submit an ATC application to the District for the installation of compost pile pseudo-biofilters no later than 45 days after the discovery of the exceedance.
- 9.C.11.c.iii
  - ***Woodchipper Hours**:* For each day of operations, the hours of day during which the woodchipper operates. The daily and annual hours of operation shall also be compiled.
- 9.C.11.c.vi
  - ***Woodchipper Throughput**:* The amount (tons) of wood chips produced by the woodchipper on a daily and annual basis.
- 9.C.11.c.viii
  - ***Compost Temperature Monitoring**:* While inserted into the active compost piles, the temperature sensors shall transmit continuous temperature data to the SCADA system.
- 9.C.11.c.ix
  - ***Compost Oxygen Monitoring**:* While inserted into the active compost piles, the oxygen sensors shall transmit continuous temperature data to the SCADA system.
- 9.C.11.c.x
  - ***Compost Cover Components**:* The permittee shall conduct an inspection of the cover each time a Gore® cover is placed on a compost pile. If any rips, tears, or other anomalies are discovered, the cover shall not be used until it is fully repaired.
- 9.C.11.c.xi
  - ***Aeration Blower System and Components**:* The permittee shall conduct inspections of each Gore® cover and blower air distribution system prior to constructing a compost pile. If any abnormalities are found in the system which will affect the aeration capability, the

system shall be repaired before commencing construction of a compost pile with that aeration system.

- 9.C.11.c.xii
  - ***Source Testing***: The permittee shall perform compost pile source testing of the emissions and process parameters listed in Table 4.6. The permittee shall adhere to the requirements of Condition 9.C.19.
- 9.C.13.b.iv
  - ***Evaporated Condensate***: On a daily basis, the permittee shall monitor the quantity of condensate evaporated in the condensate evaporator.
- 9.C.13.c.iv
  - ***Evaporated Condensate***: Daily records shall be maintained of the quantity of condensate that has been evaporated in the condensate evaporator.
- 9.C.13.c.v
  - ***Calibration and Maintenance***: Records of calibration and maintenance of the condensate management monitoring devices and meters, including the results of each calibration.
- 9.C.21 (ADF and MRF CHP IC engines only)
  - **Best Available Control Technology (BACT).** The permittee shall apply emission control technology and plant design measures that represent BACT to the operation of the equipment/facilities as described in this permit. Section 4.14.1, Table 4.1, Table 4.2, and the *Emissions, Operational, Monitoring, Recordkeeping and Reporting* Conditions of this permit define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions. BACT related requirements are also defined in Condition 9.C.19.
- 9.C.22
  - **Continuous Emission Monitoring System (CEMS).** The permittee shall implement a CEMS program for emissions and process parameters as specified in Table 4.3. The permittee shall implement the District-approved CEMS Plan (to be updated) and the CEMS monitors shall be in place and functional for the life of the project. The District shall use the CEMS data alone or in combination with other data, to verify and enforce project conditions. Excess emissions indicated by the CEMS systems shall be considered a violation of the applicable emission limits.

    a. The CEMS shall be installed and operated to measure each ADF and MRF CHP engine exhaust stack concentration for NO_x (as NO_2), CO, ammonia, and O_2 on a dry basis. To determine the ammonia stack concentrations, the permittee shall follow the procedures in the District-approved CEMS Plan. This monitoring system shall comply with the requirements of Rule 328 and the District CEMS Protocol (October 22, 1992). Prior

to installation, this monitoring system shall be approved in writing by the District via the submittal of a CEMS Plan (to be updated) that adheres to the requirements of the District's CEMS Protocol (October 22, 1992).

b. On a semi-annual basis, the permittee shall submit data for CEMS downtime and CEMS detected excess emissions in a format approved by the District. This report shall be submitted for each calendar quarter in accordance with the requirements of Rule 328 and the District-approved CEMS Plan (to be updated).

- 9.C.23
  - **Data Telemetry.** The permittee shall telemeter monitoring data to the District as specified by Condition 9.C.22 of this permit. The data telemetry equipment shall be in place and functional for the life of the project consistent with the above-specified conditions. This telemetry equipment shall be compatible with the District's Central DAS.

- 9.C.34 **Documents Incorporated by Reference.** The documents listed below, including any District-approved updates thereof, are incorporated herein and shall have the full force and effect of a permit condition for this operating permit. These documents shall be implemented for the life of the Project and shall be made available to District inspection staff upon request.
  - 9.C.34.b - Process Monitor Calibration and Maintenance Plan (to be updated)
  - 9.C.34.c - CEMS Plan (to be updated)
  - 9.C.34.f - Biofilter Monitoring Plan (approved November 30, 2020)
  - 9.C.34.g - LFG Condensate Disposal Plan (to be updated)
  - 9.C.34.i - Rule 333 Inspection and Maintenance Plan (to be submitted)

- **District Rule 328.C.2**
  - The Control Officer may require the owner or operator of a stationary source to install, calibrate, operate and maintain in good working order equipment for continuously monitoring and recording emissions from a stationary source, provided that:

    a. The stationary source emits, into the atmosphere, 2.3 kilograms (5 lbs/hr) or more of nonmethane hydrocarbons, oxides of nitrogen, oxides of sulfur, reduced sulfur compounds or particulate matter or 40 lbs/hr of any contaminant and;

    b. The California Air Resources Board has determined and specified, pursuant to Health and Safety Code, Sections 42701 and 42702, that monitoring equipment is available, technologically feasible, and economically reasonable for the type of stationary source in question; and

    c. After considering all of the relevant circumstances, the Control Officer has determined that requiring such monitoring equipment is necessary and

reasonable. In making such determination, the Control Officer shall, without limitations, consider the economic impact on the stationary source and the extent to which similar emission information may be obtained through other less costly methods or reporting procedures with comparable accuracy and control.

- **District Rule 328.C.4**
  - All monitoring devices shall be equipped with a continuously operating chart recorder. The chart recordings shall be annotated with date, time and operator's initials at the following times:

    a. At the beginning of each work shift

    b. At the beginning of each start-up and shut-down of the process equipment.

    c. Anytime any change is made to the monitor and/or its recorder.

    d. Anytime there is a process rate change.

- **District Rule 328.G Reporting Requirements**
  Owners or operators subject to this Rule shall:

  1. Notify the Control Officer of any breakdown or shut-down of the monitoring equipment within 4 hours of the start of the next business day.

  2. Report to the Control Officer, within 48 hours after occurrence, the violation of any emission standard to which the stationary source is required to conform.

  3. Submit a quarterly written report during the first week of each calendar quarter, to include:

  a. Monitoring system failures for periods when the continuous monitoring system was inoperative except:
  1) Zero/Span checks.
  2) Monitoring system repair and adjustments.

  b. The date, time interval, magnitude and nature of excess emissions, reported in the units of the applicable emission standard. The cause of the violation, corrective actions taken and preventive measures adopted shall be provided.

  c. Reports on opacity violations shall provide:
  1) The number of (3) three minute periods during which the average opacity exceeded the standard for each hour of operation.
  2) Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements each minute. Any time period exempted shall be considered before determining the excess averages of opacity.

4. Negative Declarations. Negative declarations shall be submitted quarterly when no excess emissions have occurred.

- **District Rule 328.I Instrumentation**
  Instrumentation required under this Rule shall meet the requirements of the sections below. In the event of conflicting requirements or standards, the strictest or most rigorous requirement shall be followed.

  1. Monitoring devices shall be operated, maintained and calibrated in a manner consistent with the manufacturer's recommendations. The manufacturer shall specify that which is necessary to insure that the devices will continually operate within the performance specification limits. Maintenance and calibration criteria shall include, but is not limited to:

     a. Maintenance and calibration frequency and procedures. (A copy of the manufacturer's recommended maintenance and calibration procedures shall be submitted to the District prior to installation. Any subsequent user changes to these procedures shall be submitted to the District within ten (10) days of adoption.)

     b. Specifications for the calibration standard (gas). The calibration standard value shall be certified by a method approved by the District at a frequency of not less than once every three months.

  2. Systems shall be installed, calibrated, maintained and operated in accordance with the following sections of 40 CFR.

     a. Fossil-Fuel Fired Steam Generators: Section 60.45 CFR.
     b. Sulfuric Acid Plants: Section 60.84 CFR.
     c. Nitric Acid Plants: Section 60.73 CFR.
     d. Petroleum Refineries: Section 60.105 CFR.

  3. Calibration gas mixtures shall meet the specifications in 40 CFR, Part 51, Appendix P, Section 3.3, and Part 60, Appendix B. Performance Specification 2, Section 2.1.

  4. Cycling times shall be those specified in 40 CFR 60, Appendix P, Sections 3.4, 3.4.1 and 3.4.2.

  5. SO2 and NOx monitors shall meet the applicable performance specification requirements in 40 CFR, Part 51, Appendix P, and Part 60, Appendix B.

  6. CO2 and O2 monitors shall meet the performance specification requirements in CFR 40, Part 51, Appendix P, and Part 60.

7. Opacity monitors shall meet the performance specification requirements in CFR 40, Part 51, Appendix P, and part 60, Appendix B.

Minimum Instrument Specifications:

a. Sulfur Dioxide/Nitrogen Oxides

	Parameter	Specification
c.	Accuracy*	20% of the mean value of the reference method test data
d.	Calibration Error*	5% of each (50%, 90%) calibration gas mixture value
e.	Zero Drift (2 hour)*	2% of span
f.	Zero Drift (24 hour)	2% of span
g.	Calibration Drift (2 hour)*	2% of span
h.	Calibration Drift (24 hour)*	2.5% of span
i.	Response Time	15 minutes maximum
j.	Operation Period	168 hours minimum

- Expressed as sum of absolute mean value plus 95 percent confidence interval of series of tests.

Oxygen or Carbon Dioxide

	Parameter	Specification
l.	Zero Drift (2 hour)*	0.4% O2 or CO2
m.	Zero Drift (24 hour)*	0.5% O2 or CO2
n.	Calibration Drift (2 hour)*	0.4% O2 or CO2
o.	Calibration Drift (24 hour)*	0.5% O2 or CO2
p.	Operational Period	168 hours minimum
q.	Response Time	10 minutes

- Expressed as sum of absolute mean value plus 95 percent confidence interval of series of tests.

c. Opacity Instrumentation specifications will be supplied after technical concurrence has been reached between California Air Resources Board and Federal Environmental Protection Agency Region IX.

A copy of the manufacturer's design performance specifications showing compliance to all of the above requirements shall be submitted to the District prior to installation.

6.0 **EMISSIONS ANALYSIS**: At this time, it is unknown what the excess emissions are expected to be with the granting of this variance. The Petitioner will report all excess emissions on a monthly basis.

7.0 ***RESERVED***

8.0 **OTHER FACTORS**: None.

9.0 **DISTRICT RECOMMENDATION**: The District supports the Petitioner's variance request.

10.0 **ATTACHMENTS**:

- Attachment 1 – Variance Petition for 2025-09-R and Petition Attachments
- Attachment 2 – Interim Variance Order 2025-08-I
- Attachment 3 – DRAFT Variance Order 2025-09-R

Aimee Long, Air Quality Specialist
Compliance Division

June 20, 2025
Date