SANTA BARBARA COUNTY
Resource Recovery &
Waste Management Division
Innovative Environmental Solutions

Chris Sneddon, P.E.
Public Works Director

Jeanette Gonzales-Knight, P.E.
Deputy Director

May 30, 2025

Sent via electronic email

Ms. Aimee Long
Air Quality Specialist III
Santa Barbara County Air Pollution Control District
260 N. San Antonio Road, Suite A
Santa Barbara, CA 93110

Permit: ATC Mod 14500-10
FID: 11480
SSID: 03717
Variance: Regular Variance

Subject: **Regular Variance Petition**

Dear Ms. Long,

Attached is a regular variance petition for the Resource Center. Coverage is needed to revise the permit to reflect more accurate operating scenarios, install additional monitoring equipment and upgrades, and avoid additional non-compliance with use of the ADF Flare.

Please contact me with any questions or concerns.

Sincerely,

Lindsay Cokeley
Santa Barbara County Public Works
Resource Recovery and Waste Management Division

Attachments: A – Regular Variance Petition Submittal
B – Variance Petition Supporting Documentation

cc: Jeanette Gonzales-Knight, Resource Recovery and Waste Management Division

Attachment A
Regular Variance Petition Submittal

apcd air pollution control district
SANTA BARBARA COUNTY

H.B. Case No.:	2025-09-R
Petitioner:	Santa Barbara County Public Works Department
Permit No.:	ATC 14500-10
Date Rec'd:	05/30/2025
Time Rec'd:	1631 hours
Filing Fee Paid:	$850.00

PETITION FOR VARIANCE

Type of Variance Requested:

Emergency _____ Interim[1] ✓ 90-Day _____ Regular ✓

Length of Variance Requested: Start Date 5/30/2025

End Date 5/30/2026

[1] A 90-Day or Regular Variance must be filed concurrently with an Interim Variance

1. **PETITIONER INFORMATION**

A. Please provide the name, address and phone number of the Petitioner.

Name: County of Santa Barbara Public Works
Address: 130 E. Victoria St Suite 100
Santa Barbara, CA 93101
Phone Number: 805-882-3600

B. Please provide the name, address and phone number of the person authorized to receive correspondence regarding this Petition if different from response in 1.A.

Name: Lindsay Cokeley
Address: 130 E Victoria St, Suite 100
Santa Barbara, CA 93101
Phone Number: 805-448-0725

C. The Petitioner is (please check one):

1) An Individual ( )
2) Partnership ( )
3) Corporation ( )
4) Public Agency (✓)
5) Other Entity (please describe)

2. Location of equipment for which the variance is requested if different from response in 1.A.

14470 Calle Real, Goleta, CA 93117

3. List any District permits that are applicable to the equipment subject to this variance request.

ATC 14500-10

4. Briefly describe the equipment that is the subject of this Petition.

Materials Recovery Facility (MRF) and Anaerobic Digestion Facility (ADF) combined heat and power (CHP) engines (Device IDs: 388360, 389006, 393170, 393171); MRF and ADF Selective Catalytic Reduction and Oxidation Catalysts (Device IDs: 388361, 389007, 393172, 393173), ADF Enclosed Flare (Device ID: 388364), CHP engine Continuous Emissions Monitoring Systems (CEMS), Compost Piles (DID 388367), Gore Covers (398523), Compost Aeration (398524), Tipping Area (388338), ADF (DIDs: 388347, 388348), CMU Trommel Screen (388369), and Biogas Treatment System (388358), Condensate Evaporator (395437)

5. **FINDINGS REQUIRED FOR THE GRANTING OF A VARIANCE**

In order for the Hearing Board to grant a variance to a Petitioner authorizing the operation of a source in violation of any rule, regulation or order of the District, the Hearing Board is required to make "findings" in accordance with the requirements specified in California Health and Safety Code §42352, et. seq. and District rules and regulations. The Hearing Board's variance decision will take into consideration information you provide in this Petition. Please ensure your responses are complete and thorough. Please use additional pages as necessary.

A. Please state 1) what District rule, regulation or order you either are or will be in violation of, and 2) the date said violation will or did occur. Include as appropriate the applicable permit conditions for which variance relief is being sought.

See Attachment B

B. Please describe how compliance with the District rule, regulation or order listed in Section A above is beyond your reasonable control. In addition to any other relevant factors, please include in your discussion 1) what actions you have taken to comply or seek a variance, which were timely and reasonable under the circumstances.

See Attachment B

C. Please describe how you would be impacted if you were required to immediately comply with the District rule, regulation or order the subject of this variance request. In addition to any other relevant factors, please discuss why such impacts would result in 1) an arbitrary or unreasonable taking of property, or 2) the practical closing and elimination of a lawful business.

See Attachment B

D. If you were required to immediately comply with the District rule, regulation or order the subject of this variance request, please describe what impact, if any, that would have on air contaminants.

See Attachment B

E. Please describe what consideration you have given to curtailing operations in lieu of obtaining a variance.

See Attachment B

F. Please describe what steps and measures you will take to reduce excess pollutant emissions the maximum extent feasible during the requested variance period.

See Attachment B

G. If requested to do so by the District, please describe how you will monitor or otherwise quantify and report to the District any pollutant emissions associated with the granting of your variance.

See Attachment B

6. **SUPPLEMENTAL FINDINGS IF APPLYING FOR AN EMERGENCY VARIANCE PURSUANT TO RULE 506 (EMERGENCY VARIANCE FOR BREAKDOWNS)**

A. Please provide the date and time the breakdown was reported to the District

Date: _____ Time: _____

N/A

B. Breakdown number (as provided by the District): N/A

C. Please provide a description of the "breakdown condition", including equipment involved and the cause to the extent it is known.

N/A

D. Please describe why the continued operation of your facility in a "breakdown condition" is not likely to cause an immediate threat or hazard to public health or safety and will not interfere with the attainment or maintenance of any primary national ambient air quality standard.

N/A

7. Will the operation of the equipment subject to this variance result in violation of District Rule 303, Nuisance?

No

8. Please state whether or not any civil or criminal case involving the equipment subject to this variance is pending any court.

N/A

The undersigned is authorized to submit the above Petition on behalf of the Petitioner and further states under penalty of perjury that the above Petition, including any attachments and the items therein set forth, are true and correct.

DATE: 5/30/2025 SIGNATURE: 

TITLE: Regulatory Compliance Manager

PRINT NAME: Lindsay Cokeley

Variance Filing Fees: All variance Petitions must be accompanied by the requisite filing fee at the time of filing or include a letter from the Petitioner on company letterhead authorizing the District to debit the filing fee from the company's reimbursable account. You may also pay your filing fees by credit card using the attached form. Current variance filing fees may be found under Rule 210, schedule F, Sections 12a and 12b at http://www.sbcapcd.org/fees.htm

Credit Card Payment: The Variance Filing Fee may be paid with a credit card. Please use APCD Form -01C to pay via credit card. The form may be downloaded at: http://www.sbcapcd.org/eng/dl/dl01.htm

Attachment B
Variance Petition Supporting Documentation

1. *Section 5.A. Please state 1) what District rule, regulation or order you either are or will be in violation of, and 2) the date said violation will or did occur. Include as appropriate the applicable permit conditions for which variance relief is being sought.*

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.

2. *Section 5.B. Please describe how compliance with the District rule, regulation or order listed in Section A above is beyond your reasonable control. In addition to any other relevant factors, please include in your discussion 1) what actions you have taken to comply or seek a variance, which were timely and reasonable under the circumstances.*

As of January 3, 2024, the County took over environmental compliance of the Resource Center and operations of the Anerobic Digestion Facility (ADF) and Composting Management Unit (CMU). Throughout the 2024 year, the County had to make significant administrative changes related to staffing, budgets, and contracts. By the end of the year, nearly all operations and compliance personnel had been onboarded and trained to run the facility and evaluate compliance. This included a full evaluation of the new permit that had been issued in May of 2024. Due to the lack of staffing, the new permit had not been fully evaluated by compliance or operations staff during the transition until January 2025.

In early 2025, RRWM applied for a permit modification (ATC 14500-14) to ensure compliance with several of the new conditions, throughput limits, and other operational, monitoring, recordkeeping and reporting conditions. In March, the District submitted an incompleteness letter indicating that the permit modification will require additional air modeling and potential CEQA review. In April 2025, RRWM received a proposal from its air quality consultant, AECOM to assist with the revised emission calculations, air modeling, and permit revisions. To ensure that compliance with all conditions is achieved efficiently, RRWM met with the District at the end of May 2025 to understand which items can be corrected without revising the air model. This way, permit compliance can be achieved with items that do not require air model revisions first, effectively leaving a focused list of items needing to be addressed through a revised air model and potential CEQA review. The status of current operations since the variance ended in March was discussed, including use of the ADF Flare, Combined Heat and Power (CHP) engines, Continuous Emission Monitoring System (CEMS) and the CMU operating conditions. It was determined that a variance was the best path toward achieving compliance.

Until the permit has been amended, the facility must continue to operate out of compliance with the conditions specified in Section 5.A. There are several items that need to be corrected with new monitoring equipment, existing equipment upgrades, and additional contract capacity to cover the cost of backup equipment in the case of equipment failure due to wear and tear. RRWM has outlined the conditions that will need a variance and the reasons why below.

Continuous Emissions Monitoring (Rule 328, Sections C.2, C.4, G and I.1)

County staff does not have the expertise to effectively troubleshoot issues that come up regularly, requiring specialty contractors. Immediate troubleshooting relies on outside contractors that are located several hours from the facility. Even though the County has employees trained on these systems, ongoing maintenance and repairs have exceeded staff capabilities. Being able to manage these systems internally will likely require additional staff training and FY 25-26 budget revisions. During the last variance (2024-06-R), RRWM staff was focused on troubleshooting problems associated with CEMS telemetry and sensor accuracy. After source testing for the ADF and MRF CHP engines passed in March 2025, additional gaps were found regarding the system's reporting capabilities and staff training on specialized equipment. This variance will allow the County to work through and close the additional gaps found after source testing was completed and CEMS telemetry was achieved.

Materials Recovery Facility

The MRF Tipping Area and Material Sorting Areas are the first receiving point at the Tajiguas Resource Recovery Center. The tipping area receives waste from the entrance of the landfill, and the materials sorting area sorts the waste received from the tipping area. From this point, waste is effectively sorted into several different categories including paper, recyclables, organics, and residue. The conditions as written in ATC 14500-10 include limitations on total hours, hours of the day, and specific waste throughput limits (municipal solid waste/commingled source separated recyclables). As described, these conditions separate a single building operation into two separate permit sections with separate operating limitations. Because of how the conditions have been written, the facility is not able to achieve compliance as some of these conditions conflict with themselves. If compliance with this condition as written was immediately achieved, there would be a buildup of material within the tipping area as there would be an hour delay between material being received at the tipping area, and material being processed from the day prior to the next morning. Additionally, compliance with the conditions as written would not allow for all waste collected from the community to be processed at the MRF as designed. The most recent environmental impact report evaluated hours of operation at the MRF, and all subsequent operating permits should concur with this CEQA evaluation.

Waste throughputs and hours of operation must be further defined to properly reflect the operation of the facility and the County needs additional time to amend the permit to come into compliance with the operational, monitoring, recordkeeping and reporting conditions written into the permit.

ADF Operational Limits and Monitoring Conditions, Food/Green Waste Throughputs

Waste composition is determined by the residents served by these facilities. Although the MRF can extract organics from the municipal solid waste collected within the County, the types of organics as well as the level of purity of materials collected reflect the consumption and disposal habits of the residents. These external factors make tracking and sorting green waste vs. food waste on a tonnage basis nearly impossible because of how waste is transferred and received at

the Resource Center. Original composition estimates were based on previous waste characterizations. These should remain estimates and new language should reflect the reality of changing compositions and recognize that the impact of these green waste vs food waste variation which will have negligible impact on overall air emissions.

Similarly to how the MRF is conditioned with this permit, the ADF has similar operational restrictions relating to what hours of the day waste is received, what hours of the day digester doors are opened, and limitations on the days of the week when the facility can operate. The ADF digester hours must be adjusted to accommodate county personnel shift start/stop times, as well hours allowed for non-routine operating scenarios such as maintenance or emergencies. If immediate compliance were to be achieved, the County would need to adjust shift start and end times between county personnel at the same facility which would be administratively cumbersome.

Because these conditions require a change to the air model, the County needs additional time to amend the permit to come into compliance.

ADF Biofilter and Biofilter Scrubber Operational Parameters

The biofilter and biofilter scrubber equipment at the ADF have operating conditions that are written based on equipment manufacturer's literature. Operational parameters currently listed in the permit need to be adjusted to reflect actual operating conditions. This includes verifiable and correct units of measure which reflect operational scenarios that were in place during source testing. Because most of the equipment was manufactured outside of the US, the manufacturer's recommendations are based on operating conditions that are often not comparable to the Resource Center. The Biofilter has successfully passed source testing and it makes more sense to amend the permit than adjust operating parameters. Therefore, the County needs additional time to amend the permit to come into compliance. This will not require air modeling revisions and will be processed under ATC 14500-14.

Biogas Treatment System

This system must be re-engineered to accomplish two separate goals.

1) comply with the permit condition as written
2) effectively filter out siloxanes from biogas.

This will require engineering evaluations and additional infrastructure to achieve, which will require budget revisions and additional contractor's expertise. The system was permitted to filter biogas in series (lead/lag), however the equipment was installed to run in-parallel.

Carbon media changeouts must be allowed more than 3 days to take place in the case of a high H2S/NH3 detection. There are multiple factors that influence the filtration of H2S and NH3, and RRWM would like to allow for more time to correct the filtration capabilities of the system with temperature/humidity changes prior to a full carbon changeout. This will reduce the need for costly on-site controlled temperature/humidity storage of carbon media, and premature changeout of media when levels are not in exceedance of the permit limits.

Therefore, the County needs additional time to amend the permit to come into compliance. This will not require air modeling revisions and will be processed under ATC 14500-14.

Combined Heat and Power Engines Emissions and Operations Limits, BACT

Source testing was done in March 2025, and all four CHP engines successfully passed. Shortly after source testing was completed, RRWM operations staff began noticing spikes in NOx. After meeting with several outside consultants to determine the cause, RRWM operations and compliance staff determined that the air/fuel ratio controllers must be upgraded to effectively control emissions spikes on the engines without inflicting damage on the control equipment. After conducting extensive review of the fuel, SCR and engine operational scenarios, it has been determined that this system upgrade will significantly reduce emission spikes. Additional time is needed to further evaluate and install this system so that controls are automated, and the engines can always remain in compliance while running.

Enclosed Flare Operational Limits, Monitoring and Recordkeeping

The ADF enclosed flare has permit restrictions based on operational scenarios such as ADF Digester purging and CHP engine operational changes. When operations were assessed in early 2024, it was determined that biogas production was significantly lower than anticipated. By early 2025, most of the deferred maintenance and necessary repairs had been completed, resulting in a progressive increase in biogas production. However, during this period of ramp-up, the engines were unable to combust all the available biogas due to limitations in the current operational process and the need for further optimization. As a result, excess biogas had to be directed to the ADF Flare, causing it to operate beyond its permitted limits to prevent the intentional release of biogas to the atmosphere. The ADF Flare must continue to operate in this capacity until biogas can be consistently and reliably combusted in the CHP engines with only minimal reliance on the flare. Because the annual flare limit of 876 hours/year has been exceeded, a variance is necessary to allow continued use of the flare for the remainder of the year for both purging and safe operation of the ADF in the case we are unable to burn the biogas in the CHP engines.

Additionally, the permit will need to be amended to allow for additional use of the flare to better reflect consistent biogas production. Because these changes require a change to the air model, the County needs additional time to amend the permit and come into compliance.

CMU Emissions, Operational Limits and Monitoring

Several operational changes were made at the CMU over the last year to come into compliance with water board discharge requirements. Additional operational changes are needing to be made in tandem with permit amendments to more accurately reflect digestate emission profiles and control equipment efficiency. Composting digestate via static aeration at the CMU does not have the same emissions profile as an open windrow, fresh green waste composting operation. When this facility's air permit was being developed, there was not a lot of information on digestate emission factors and what ratios should have been used to adequately characterize the emissions coming off of the compost heaps. Now that the CMU operational changes have been made to come into compliance with water board requirements and source testing of the Gore Covers has been done, we now have a better understanding of the emissions profile and ability of the control equipment to reduce emissions of ROC and Ammonia. A variance is needed to train staff and fully implement the operational changes on the CMU deck to keep moisture levels down and increase air flow within the compost heaps. This in combination with a more accurate depiction of emissions and control efficiency with new emission calculations will allow the compost piles to operate in compliance with a new permit. Because these revisions require a change to the air model, the County needs additional time to amend the permit and come into compliance.

Evaporated Condensate Monitoring

During the last variance (2024-06-R), RRWM staff was focused on troubleshooting and repairing the ADF systems and CHP engines. At this time, there was not adequate staffing to allow for a full evaluation of the entire permit and plan requirements to understand all the compliance gaps that existed. Once staffing became available, additional gaps were found regarding other equipment such as the LFG condensate evaporator. Adequate monitoring equipment had never been installed on the LFG condensate evaporator tanks, which required staff to only estimate the amount of condensate evaporated. Additional flow meters and technology will need to be installed to provide a more accurate measure of condensate evaporated in compliance with the permit monitoring conditions and the Process Monitoring Calibration and Maintenance Plan. The county needs additional time to purchase and install these monitors, as well as determine the best way to separate and accurately monitor condensate evaporated from condensate collected. This involves more than just a simple flow meter and may require additional infrastructure to separately measure evaporated condensate within the evaporator itself. The county needs additional time to fully assess and implement the best solution that can be subsequently approved by the District through the permit revision process.

3. *Section 5.C, Please describe how you would be impacted if you were required to immediately comply with the District rule, regulation or order the subject of this variance request. In addition to any other relevant factors, please discuss why such impacts would result in 1) an arbitrary or unreasonable taking of property, or 2) the practical closing and elimination of a lawful business.*

Immediate compliance would require a shutdown of the MRF and/or ADF and put the ReSource Center in non-compliance with its Material Delivery Agreements (with cities of Santa Barbara, Goleta, Solvang, and Buellton) other State regulations, such as SB 1383 which requires a 75% reduction of organic waste disposal by 2025.

Based on the current rate of waste being deposited into the landfill, the County of Santa Barbara, Public Works' projects that the capacity of the Tajiguas Landfill will be reached in January 2026. Note that this date fluctuates slightly based on landfilling rates. In order to provide the County and community a long term waste solution, Public Works has been working on a landfill capacity increase project. In March 2024, the Environmental Impact Report for the Tajiguas Landfill Capacity increase project was approved by the Board of Supervisors. Construction for this project has an expected completion date of December 2025. When complete, the life of the landfill is expected to last until 2038.

If the Resource Center is closed, the currently expected capacity date of January 2026 would be accelerated. In this event, the landfill's capacity would be reached prior to the construction completion for the capacity increase. It would cost an additional $13.4 million per year to haul waste away from the County. Additionally, this increased distance and added truck trips would also result in a large increase in transportation related greenhouse gases. This scenario was summarized the Environmental Impact Report for the Tajiguas Landfill Capacity Increase Project (approved March 2024). Additionally, the scenario quoted below from the EIR is no longer an option due to the recent closure of this landfill. Therefore, the costs outlined in the EIR would actually be much higher due to the fact that this waste would likely need to be hauled even further away.

> "Under [this scenario], all residual and bypass waste would be transported to the Chiquita Canyon Landfill, a round trip distance between 136 and 210 miles, depending on the

origin of the waste. Based on a tipping fee of $70 per ton, the cost to transport this material on an annual basis is approximately $4.5 million per year. The cost to dispose of the waste would be approximately $12.6 million per year for a total transportation and disposal cost of $17.1 million per year at 2023 pricing. By no longer operating the Tajiguas Landfill for waste disposal, operational costs would be reduced by approximately $3.7 million per year due to reduced operational supplies, labor and fuel. Accounting for these cost savings results in a net cost to the community of approximately $13.4 million per year....

The County would have to increase the tipping fee at its facilities from the projected $192 per ton to $280 per ton for fiscal year 2025/2026 to offset increased costs of approximately $13.4 million per year. This increased tipping fee would have to be maintained through the end of the debt payment schedule for the ReSource Center (fiscal year 2038/2039). This projected increase to the per ton tipping fee is so significant as debt financing obligations for the ReSource Center have to be met ($10.68 million in fiscal year 2025/2026 increasing to $16.9 million in fiscal year 2038/2039) as well as maintaining a debt service coverage ratio of 1.5 (operating revenue is required to exceed operating expenses by 1.5 excluding the cost of capital).
The County maintains waste delivery agreements with the communities (public participants) it serves. Section 4.3.D of the waste delivery agreements executed between the County and the cities of Goleta, Santa Barbara, Solvang, and MarBorg (for the City of Buellton) contains a protocol to address the scenario that the County has to increase its tipping fee at the ReSource Center greater than 7.5 percent in a single year or 15 percent in the past three consecutive years. Increasing the tipping fee from $192 to $280 per ton is an approximate increase of 46 percent and would require an operating committee to be convened and a two-thirds vote (representation based on the quantity of material delivered to the ReSource Center by each public participant) to approve a proposed tipping fee. Therefore, the County's ability to increase the tipping fee by 46 percent is uncertain and its ability to meet the bond financing obligations could be jeopardized. In summary, [this scenario] is considered financially infeasible as the annual cost would be over eight times ($13.4 million/$1.6 million) that of the proposed project and increases in tipping fees to offset this cost are unlikely to be approved."

4. *Section 5.D. If you were required to immediately comply with the District rule, regulation or order the subject of this variance request, please describe what impact, if any, that would have on air contaminants.*

The original EIR for this project indicated a Class IV impact on GHG emissions with an annual reduction of 117,000 MTCO2e. This is accomplished by digesting the organics at the ADF as opposed to allowing for the less controlled anaerobic decomposition in the landfill (with most effecting landfill gas collection systems only able to capture 75% of emissions as opposed 100% at ADFs). Additional GHG reductions also occur from the generation of renewable energy and the use of compost displacing petrochemical derived soil amendments. The ReSource Center is a significant mitigation of environmental impacts of the waste generated by Santa Barbara County residents. Immediate compliance would require a shutdown of the ADF and MRF as well as subsequent burial of more waste, including organic waste. This would result in a loss of all environmental benefits derived from the project. Consequences include increased methane surface emissions, accelerating the reduction of available landfill air space (which is already projected to reach full capacity by January 2026).

Diversion of waste to an off-site facility in Los Angeles County is no longer an option, and non-compliance with Senate Bill 1383 organic waste diversion requirements with Cal Recycle would be imminent. Should the division need to divert waste outside of the County after landfill capacity is reached, there would be a net increase in GHG emissions from the increased truck trips to facilities hundreds of miles away. Additionally, the combustion of the methane rich biogas (i.e. ADF option) is more environmentally friendly than letting the biogas vent to the atmosphere (i.e. landfilling option) from a greenhouse gas standpoint. For reference, methane has 28 to 100 times more global warming potential compared to carbon dioxide.

To be clear, shutting down this facility would result in a far greater negative impact to the environment than all of the variances requested in this document.

5. *Section 5.E. Please describe what consideration you have given to curtailing operations in lieu of obtaining a variance.*

Prior to the Regular Variance 2024-06-R, the County evaluated shutting down the ADF engines intermittently while processing biogas through the ADF Flare. However, this requires an alternative means for supplying hot water that is supplied by the ADF engines' water jacket system to heat the ADF and percolate tank. There are safety concerns with bring a portable boiler onsite for this purpose. This additional equipment would also result in greater energy consumption and greater carbon footprint. For further clarification, heat from the ADF CHP engines is needed to keep the percolate microorganisms alive and metabolizing the organic matter in the ADF digesters, and additional flare usage would cause more excess emissions.

Curtailing operations at the Resource Center would require more waste to be diverted to the landfill, which at this point is simply not an option. Based on the current rate of waste being deposited into the landfill, the County of Santa Barbara, Public Works' projects that the capacity of the Tajiguas Landfill will be reached in January 2026. It should be noted that the generation of methane from organics in the community's waste is a zero-sum game. Reducing biogas production at the ADF would require burying organic material in the landfill, shifting methane emissions to a less controlled environment. Landfill-generated methane is more difficult to capture effectively and typically results in higher greenhouse gas (GHG) emissions, undermining the County's climate goals.

Furthermore, the County is required to generate a minimum amount of renewable energy from its biogas production through its Power Purchase Agreement (PPA) with Southern California Edison. A reduction in biogas production could result in failure to meet the Guaranteed Energy Production, triggering liquidated damages and causing lost revenue. These financial consequences would ultimately be borne by the community's ratepayers, compounding the environmental cost with economic impacts.

6. *Section 5.F. Please describe what steps and measures you will take to reduce excess pollutant emissions the maximum extent feasible during the requested variance period.*

Anaerobic Digestion Facility

In February 2024, Eggersmann was brought in to conduct a full assessment of the facility and its operations. In January 2025, Eggersmann sent full time staff to work directly with County staff to improve operations. By March 2025, the facility had gotten up to 16 digester changeouts per

month, which is what the facility was designed to deliver. This was possible due to improved planning, and implementation of daily and periodic preventative maintenance.

Through these operational improvements, biogas production increased considerably and required use of the AD Flare in excess of its quarterly limit of 219 hours under the "one engine offline" operating scenario. This is because there was not enough biogas production to sustain the operation of two CHP engines, even at minimum load. At the end of the May 2025, biogas production increased to a point where the operation of two CHP engines could be achieved consistently. However, through this operational change and increased biogas production, the annual ADF Flare operational limit of 876 hours was exceeded. A variance is being requested to use the flare for both safety purposes and purging operations, which must continue despite the increased biogas production. The ADF Flare operational scenarios listed in the permit must also be amended to account for potential fluctuations in biogas production, which is highly dependent on feedstock quality.

Excess emissions from the ADF Flare will be reduced through continued consistent production of biogas that can be combusted in two engines at reduced load. We have planned for increased maintenance and repair costs due to running two engines at reduced load to reduce the use of the ADF Flare. Additionally, as the organic inputs into the ADF improve in quality through improved agreements with the MRF operator Marborg Recovery, more biogas will be produced over time, allowing for more consistent CHP engine use and less flare usage.

Furthermore, RRWM staff is working with John Zink (the ADF Flare manufacturer) to negotiate contract terms to optimize reliability and monitoring capabilities of the ADF Flare. This is to ensure accurate records are being kept by County staff on flare fuel usage.

Compost Management Unit

CMU operational changes were made to address the issue of stormwater runoff leading to non-compliance with both water board and air district source tests. Moisture levels within the digestate coming from the ADF were decreased through lowered percolation rates. Additionally, the recirculation of post-gore composted material back into the digestate on the CMU has allowed for lower runoff on the CMU deck and it allows for a faster onset of the composting process. This process change was implemented in March 2025 in response to the failed Gore cover source test.

Excess emissions at the CMU will be reduced by continuing to utilize screened compost materials mixed with digestate. Although this may increase emissions from compost screening operations, it will likely reduce ammonia and ROC emissions within the compost heaps and increase the control efficiency of the Gore covers. The emissions from the compost screening operations will likely be offset by the removal of the woodchipper from the CMU operation. RRWM believes that with these operational changes and a permit amendment, the facility will be able to operate in compliance with all federal and state environmental regulations as well as lead to even greater GHG reductions.

CHP Engines

In March 2025, the Regular Variance 2024-06-R ended, and all facility equipment source tests passed. The CHP engine source tests were done after completing extensive repairs and replacement of parts, including all new SCR bricks and new carbon media. Shortly after source tests were completed and the variance ended, RRWM operations staff began witnessing spikes in NOx above the permitted limits. Extensive diagnostics were done on the engines, SCRs, and

CEMS to determine what the causes were. After approximately 2 months, RRWM staff determined that new software, hardware, and equipment upgrades were needed to prevent these spikes from occurring.

Excess emissions from the CHP engines are not expected, as the ADF CHP engines will not be running at full capacity.

Permit Revisions

In February 2025, an application for a permit modification was received by the District to address several of these operating changes. In March, the District responded with an incomplete letter that required a new air model and health risk assessment. RRWM promptly entered a contract with AECOM, the original consultant most familiar with the project to address these operational changes. It is expected that new emission calculations will need to be done to address the operational changes needed since RRWM took over control of the facility in early 2024.

RRWM staff is working with the District to separate the non-compliant permit revisions subject to this variance that require additional air modeling. This will allow the facility to come into compliance with the minor permit revisions first, as ATC Mod 14500-14 has already started its review with the District. A response to that incompleteness letter is planned to be submitted no later than July 2025. RRWM is planning to submit a new ATC Modification application to the District addressing the air model incompleteness items in August of 2025.

RRWM has worked diligently with several consultants to ensure that the facility can operate in compliance with all regulatory requirements if specific operating procedures are implemented and equipment upgrades are made. As previously stated, this in combination with a successful permit will allow the facility to finally operate in compliance with all regulatory agency requirements.

7. *Section 5.G, If requested to do so by the District, please describe how you will monitor or otherwise quantify and report to the District any pollutant emissions associated with the granting of your variance.*

RRWMD would rely on the CEMS data, fuel meter data, and hour meter data available to quantify pollutant emissions from the engines.