

STATEMENT OF BASIS

Initial Title V Permit

Facility Name: Encina Wastewater Authority

Title V App. Number: APCD2024-APP-008117

Title V Permit Number: APCD2024-TVP-00049

Facility ID: APCD1984-SITE-03370

Equipment Address: 6200 Avenida Encinas, Carlsbad, CA 92011

Facility Contact: Alicia Appel, Director of Environmental Compliance

Contact Phone: (760) 268 - 8861

Permit Engineer: Priscilla Castanon

Date: August 14, 2025

X

Senior Engineer:

Joe Herzig
Senior Air Pollution Control Engineer

1.0 Type of Action and Summary of Changes

This application is for an initial Title V permit for Encina Wastewater Authority. This is an existing site with operating equipment that now exceeds the New Source Review thresholds of a Major Stationary Source with the EPA's designation for the San Diego Air Basin as severe ozone nonattainment.

2.0 History of Title V Application:

This is the initial Title V application for this facility and as such has not had a previous history of Title V applications. The initial application was received on 2/08/2024, prior to the deadline of 2/28/2024, therefore the application is timely.

The District has received applications from this facility as shown in the following table for Encina Water Authority equipment. These applications are submitted under the District's local permitting program (see appendix A of the permit).

Relevant Application History for Facility				
Application Number	Affected Permit(s) to Operate	Description	Affected Emission Units	Outcome
APCD1997-	APCD2008-PTO-	Initial – Permit the wastewater	Wastewater	Approved

APP-961446	961446	treatment plant.	Treatment Equipment	
APCD2009-APP-000669	APCD2011-PTO-001004	Initial – Permit the digester gas flare at Encina Wastewater.	Flare(s)	Approved
APCD2021-APP-006734	APCD2011-PTO-001004	Modification – Add an additional emergency digester gas flare.	Flare(s)	Open
APCD2009-APP-000770	APCD2011-PTO-001016	Initial – Permit wastewater treatment plant biosolids processing operations.	Biosolids Processing Operation	Approved
APCD2004-APP-982044	APCD2008-PTO-982044	Initial – Permit for one emergency standby diesel engine	Diesel Emergency Engine	Approved
APCD2006-APP-984241	APCD2010-PTO-000542	Initial – Permit for one of four identical cogeneration digester gas engines.	Cogeneration Engine	Approved
APCD2009-APP-000740	APCD2010-PTO-000542	Modification – Lower CO emission limit for natural gas, request a combined fuel limit for digester and natural gas, and increase daily fuel limit for natural gas.	Cogeneration Engine	Approved
APCD2006-APP-984242	APCD2010-PTO-000543	Initial – Permit for one of four identical cogeneration digester gas engines.	Cogeneration Engine	Approved
APCD2009-APP-000742	APCD2010-PTO-000543	Modification – Lower CO emission limit for natural gas, request a combined fuel limit for digester and natural gas, and increase daily fuel limit for natural gas.	Cogeneration Engine	Approved
APCD2006-APP-984243	APCD2010-PTO-000544	Initial – Permit for one of four identical cogeneration digester gas engines.	Cogeneration Engine	Approved
APCD2009-APP-000743	APCD2010-PTO-000544	Modification – Lower CO emission limit for natural gas, request a combined fuel limit for digester and natural gas, and increase daily fuel limit for natural gas.	Cogeneration Engine	Approved
APCD2006-APP-984244	APCD2010-PTO-000545	Initial – Permit for one of four identical cogeneration digester gas engines.	Cogeneration Engine	Approved
APCD2009-APP-000744	APCD2010-PTO-000545	Modification – Lower CO emission limit for natural gas, request a combined fuel limit for digester and natural gas, and increase daily fuel limit for natural gas.	Cogeneration Engine	Approved
APCD2017-APP-004926	APCD2010-PTO-000542, APCD2010-PTO-000543, APCD2010-PTO-000544, APCD2010-PTO-000545	Modification – Lower CO emission limit for digester gas and increase combined digester and natural gas fuel limit.	Cogeneration Engine	Approved

3.0 Facility Description

Encina Wastewater Authority operates a comprehensive wastewater treatment facility that includes liquid treatment systems, biosolids processing equipment, and combustion engines. Air emissions from the site are limited to gaseous pollutants generated by the treatment processes and associated combustion sources. The facility operates under eight active air permits, as listed below:

Permit Number	Permit Description
APCD2008-PTO-982044	Diesel Emergency Standby Engine
APCD2008-PTO-961446	A 36 Million Gallons Per Day (MGD) Secondary Wastewater Treatment Facility
APCD2010-PTO-000542	Cogeneration Engine Fueled by Digester Gas, Natural Gas Backup Fuel
APCD2010-PTO-000543	Cogeneration Engine Fueled by Digester Gas, Natural Gas Backup Fuel
APCD2010-PTO-000544	Cogeneration Engine Fueled by Digester Gas, Natural Gas Backup Fuel
APCD2010-PTO-000545	Cogeneration Engine Fueled by Digester Gas, Natural Gas Backup Fuel
APCD2011-PTO-001004	Flare(s)
APCD2011-PTO-001016	Biosolid Processing Operations

4.0 Compliance History

There have been no compliance actions related to Title V at this facility, as this is an initial permit application. The site has experienced only one violation to date, which occurred in 2022 and involved the use of a portable diesel engine without a valid permit or registration. The issue was promptly addressed, and no further violations have occurred since.

5.0 Title V Applicability and Non-Major HAP Source

The Title V regulation applies to any stationary source that is a major stationary source as defined in Rule 1401(c)(26) or is subject to the acid rain provisions of Title IV of the federal Clean Air Act (CAA). Encina Wastewater Authority is a major source as defined in Rule 1401(c)(26) and is therefore subject to Title V regulations.

The District conducted a review of the facility's potential to emit emissions. The forms submitted with the application indicated that the facility is not a major source of HAP and exceeds the Title V thresholds for criteria pollutants Nitrogen Oxides (NO_x) and Carbon Monoxide (CO), as well as a non-major source for HAP.

Based on the District emissions inventory and related emissions determinations, Encina Wastewater Authority is determined to be a major source under Title V for nitrogen oxides (NO_x) and a non-major source for HAPs, at the time of this evaluation.

To ensure that the site is recognized as a non-major source for HAPs, the following is applicable for the site's Title V permit:

1. Total Federal Hazardous Air Pollutant (HAP) emissions from the stationary source shall not exceed 25 tons per consecutive twelve (12) month period. Additionally, the emissions of any single HAP from the stationary source shall not exceed 10 tons per consecutive twelve (12)

month period (40 CFR 63 Subpart A).

2. To demonstrate that HAP emissions from stationary source do not exceed the above limits, the permit holder shall comply with one of the following requirements:
 - a. Hazardous air pollutant (HAP) emissions from this stationary source shall be calculated on a monthly basis no later than two months following the end of the month the calculation is for. These calculations shall either be performed according to standard District calculation methods or a protocol approved by the District. Emissions from insignificant units must be included in these calculations. Or,
 - b. Maintain documentation to demonstrate that the facility has a potential to emit less than or equal to 25 tons per consecutive twelve (12) month period of combined HAP, and less than or equal to 10 tons per consecutive twelve (12) month period of any single HAP. Calculation of potential to emit shall be based on the provisions described in District Rules 20.1 and Regulation XIV and specifically must be based on equipment's maximum capacity unless enforceable permit conditions otherwise restrict those emissions to a lower level. Emissions from insignificant units must be calculated based on maximum capacity and may not include any control efficiencies not specified by an enforceable permit condition.

The permit holder shall maintain all records necessary to demonstrate compliance with this condition for at least five (5) years. This includes all data used to calculate actual emissions in accordance with (a), or the calculations used to establish that potential to emit is less than that described in (b). Note that compliance with option (b) does not relieve the owner or operator from the need to ensure that actual emissions do not exceed the limits of the above condition. (Rule 1421)
3. If, for any consecutive 12-month period, the facility is unable to demonstrate that the total or individual Federal HAP emissions from the stationary source do not exceed the above limits, it shall be considered a violation of the terms of this permit and the permit holder shall comply with all applicable requirements of 40 CFR Subpart 63, including, but not limited to, a timely submittal of all required applications to modify all applicable District and Title V permits, as necessary. (40 CFR 63 Subpart A)

6.0 Potential to Emit and Actual Emissions

The following table shows the actual and potential emissions for the facility that are used to establish the major source status for Title V. Emission calculations and assumptions are attached.

Title V Major Source Determination Tons per Year:				
Pollutant	Thresholds	Facility Actual Emissions*	Facility Potential to Emit**	Major Source
Highest Federal HAP	10	<10	<10	No
Sum of Federal HAPs	25	<25	<25	No
NOx	25	19.08	29.68	Yes
VOC	25	19.88	21.46	No
PM10	100	8.34	13.24	No
SOx	100	1.31	2.43	No
CO	100	56.65	84.48	No

*The actual emissions are from the District's 2024 emission inventory.

**Determined by permit application PTEs and actual emissions

7.0 40 CFR Part 64 CAM (Compliance Assurance Monitoring)

The requirements of this part apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:

1) The unit is subject to an emission limitation or standard for the applicable air pollutant other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; 2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and 3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. Additionally, if the equipment is subject to a section 111 or 112 requirement pursuant to the Clean Air Act (NSPS or NESHAP) or otherwise is subject to federally enforceable continuous monitoring requirements, CAM does not apply. By these criteria, the majority of emission units at this facility are exempt from CAM requirements as follows:

Wastewater Treatment Facility: The emissions from the operations of wastewater treatment are volatile organic compounds (VOC) which are not a major source for the facility, therefore CAM does not apply to this equipment.

Flare(s): This unit is not equipped with emission controls, therefore CAM does not apply.

Biosolid Processing Operations: The unit does not have potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Emergency Diesel Engine: The emergency engine operated at this facility is not equipped with emission controls and meets the 64.2(b)(2) exemption, therefore is not subject to CAM.

Cogeneration Digester Gas Engine: The digester engines operated at this facility are not equipped

with emission controls and therefore are not subject to CAM.

8.0 Applicable Requirements

This section summarizes the major types of requirements for this facility. These types of requirements include facility-wide and permit specific applicable requirements. Additionally for each emission unit, the rule that results in the primary emission limitation is listed.

General Facility-wide Applicable Requirements

Regulation	Rule Citation	Title
SDCAPCD Reg. II	10(a) 10(b)	Permits Required – (a) Authority to Construct Permits Required – (b) Permit to Operate
SDCAPCD Reg. II	19	Provision of Sampling & Testing Facilities
SDCAPCD Reg. II	19.3	Emission Information
SDCAPCD Reg. II	20.1-20.3	New Source Review
SDCAPCD Reg. II	21	Permit Conditions
SDCAPCD Reg. II	24	Temporary Permit to Operate
SDCAPCD Reg. II	25	Appeals
SDCAPCD Reg. IV	50	Visible Emissions
SDCAPCD Reg. IV	51	Nuisance
SDCAPCD Reg. IV	60	Circumvention
SDCAPCD Reg. IV	67.0	Architectural Coatings
SDCAPCD Reg. IV	67.17	Storage of Materials Containing VOC
SDCAPCD Reg. V	98***	Breakdown Conditions: Emergency Variance

Facility-wide Prohibitory Requirements

Regulation	Rule Citation	Title
SDCAPCD Reg. IV	50	Visible Emissions
SDCAPCD Reg. IV	51	Nuisance
SDCAPCD Reg. IV	52	Particulate Matter
SDCAPCD Reg. IV	53	Specific Contaminants
SDCAPCD Reg. IV	54	Dust and Fumes
SDCAPCD Reg. IV	62	Sulfur Content of Fuels
SDCAPCD Reg. IV	68	Fuel Burning Equipment – NOx
SDCAPCD Reg. IV	69.4.1*	Medium Boilers, Process Heaters and Steam Generators
SDCAPCD Reg. X	40 CFR 60 Subpart A	NSPS General Provisions
40 CFR Part 60	Subpart A	NSPS General Provisions
40 CFR Part 60	Subpart IIII	Stationary Compression Ignition Combustion Engines
40 CFR Part 60	Subpart JJJJ	Stationary Spark Ignition Internal Combustion Engines
SDAPCD Reg. X	17 CCR 93115	Stationary Compression Ignition Engines

SDCAPCD Reg. XI	40 CFR 63 Subpart A	NESHAP General Provisions
40 CFR Part 63	Subpart ZZZZ	Stationary Reciprocating Internal Combustion Engines
SDCAPCD Reg. XII	1200**	Toxic Air Contaminants – New Source Review
SDCAPCD Reg. XII	1206	Asbestos Removal, Demolition and Renovation

**The District has submitted a revised version of Rule 69.4.1 for approval into the SIP which will replace 69.4 which has been repealed by the District. However, because EPA has not acted on this submittal, the current version of Rule 69.4 is still federally enforceable and Rule 69.4.1 is not.*

***Not federally enforceable*

****Breakdowns/variances are not recognized by EPA and cannot grant relief from federal enforcement of requirements.*

Permit Specific Applicable Requirements:

SDAPCD Permit Nos.	Permit Description	Applicable Rules
APCD2008-PTO-961446	Wastewater Treatment	Rules 51, 1200*, 20.2/20.3
APCD2008-PTO-982044	Diesel Emergency Standby Engine	Rules 50, 51, 52, 1200*, 20.2/20.3, 69.4.1, 17 CCR 93115, 40 CFR 60 Subpart ZZZZ, 40 CFR 60 IIII
APCD2010-PTO-000542, 000543, 000544, 000545	Cogeneration Engine Digester Gas w/Natural Gas Backup Fuel	Rules 50, 51, 52, 1200*, 20.2/20.3, 69.4.1, 40 CFR 60 Subpart ZZZZ, 40 CFR 60 JJJJ
APCD2011-PTO-001004	Flare(s)	Rules 50, 51, 53, 1200*, 20.2/20.3
APCD2011-PTO-001016	Biosolids Processing Operations	Rules 51, 54, 1200*, 20.2/20.3

*Indicated rules are not federally enforceable

Emission Limitations

Wastewater Treatment & Biosolid Operations	
Pollutant	Primary Limiting Regulations*
NOx	Rule 20.3
SO2	Rule 20.3, Rule 51
VOC	Rule 20.3
CO	Rule 20.3 (AQIA Only)
PM10	Rule 20.3
Toxic Pollutants/HAP	Rule 51, Rule 54

Digester Gas Combustion (Engines, Flares)	
Pollutant	Primary Limiting Regulations*
NOx	Rule 20.3, Rule 69.4.1**
SO2	Rule 20.3, Rule 51, Rule 53
VOC	Rule 20.3
CO	Rule 20.3 (AQIA Only), Rule 69.4.1**
PM10	Rule 20.3, Rule 52, Rule 53
Toxic Pollutants/HAP	Rule 51, Rule 53

Diesel Engine	
Pollutant	Primary Limiting Regulations*
NOx	Rule 20.3, Rule 69.4.1**
SO2	Rule 20.3, Rule 69.4.1**, 17 CCR 93115
VOC	Rule 20.3
CO	Rule 20.3 (AQIA only), Rule 69.4.1**
PM10	Rule 20.3, Rule 52, 17 CCR 93115
Toxic Pollutants/HAP	Rule 1200

*There are certain operating scenarios where a different rule may be the most stringent limitation.

**The District has submitted a revised version of Rule 69.4.1 for approval into the SIP which will replace 69.4 which has been repealed by the District. However, because EPA has not acted on this submittal, the current version of Rule 69.4 is still federally enforceable and Rule 69.4.1 is not.

Basis of Permit Conditions

This section is intended to summarize the applicable requirements for each rule that forms the basis for permit conditions in each category of emission unit.

Rule 50 – The only requirement of this rule is setting a maximum emission opacity standard that applies to all equipment. All sources of emissions from permitted operations are subject to Rule 50. Compliance for all sources is typically ensured by operational limits or control requirements (e.g. filters) which have been evaluated to ensure that emission opacity cannot be exceeded and are specified in permit conditions as necessary.

Rule 51 – The requirement of this rule is to prohibit the discharge of air contaminants or other materials in amounts that may cause harm or nuisance to people, property, or the public. This applies to all sources of emissions and is intended to protect public health, comfort, safety, and business interests. Compliance is typically ensured through proper operation and maintenance of equipment, emission controls, and process limits that prevent emissions from reaching levels that could result in nuisance or adverse impacts.

Rule 52 – The requirement of this rule is setting a maximum particulate emission standard that applies to all equipment. Except for some equipment which is subject to Rule 53 (combustion particulate emission standards) and a few minor exceptions, all sources of particulate matter from permitted operations are subject to Rule 52. Compliance for all sources is typically ensured by

operational limits or control requirements (e.g. filters) which have been evaluated to ensure that the emission concentration cannot be exceeded and are specified in permit conditions as necessary.

Rule 53 – This rule is very similar to Rule 52, except applies to certain combustion sources and includes limits on emissions of sulfur compounds in addition to particulate matter. The only sources subject to this rule at this facility are the flares, which comply with the requirements under normal operation without any restrictions.

Rule 54 – This rule is similar to Rule 51. The requirement of this rule is to set limits on visible emissions from any emission source to prevent excessive smoke or particulate matter from being discharged into the atmosphere. In general, visible emissions must not exceed 20% opacity for more than three minutes in any one hour, with certain exceptions allowed under specific conditions. This standard applies to most permitted equipment, except where more specific visible emission limits are established by other applicable rules or permit conditions.

Rule 1200 – This rule is the District's toxics new source review program, which requires that projects which increase emissions of toxic air contaminants (including HAPs), do not cause excessive health risks to the surrounding community, as determined by a health risk assessment – including imposing applicable emission limits, monitoring and recordkeeping requirements. While Rule 1200 itself is not federally enforceable, in many cases these limits also result in ensuring that federally applicable requirements are complied with. Additionally, these conditions are typically imposed through an Authority to Construct and/or Permit to Operate issued pursuant to Rule 10, which is federally enforceable – and for this reason, some requirements originally imposed through Rule 1200 are also federally enforceable.

Rule 69.4.1 – This rule applies to Stationary Reciprocating Internal Combustion Engines and sets maximum NO_x, VOC, and CO standards for different types of engines, fuel specification requirements, control equipment requirements for some engine types, associated monitoring, inspection and maintenance frequency, and recordkeeping. The applicable requirement(s) per engine type are listed in each permit with the rule as the basis. Although Rule 69.4.1 is not yet approved in the SIP, its implemented conditions are more stringent than those of 69.4.

17 CCR 93115 – Applicable requirements of the Stationary ATCM include purchasing an engine certified to EPA standards and meeting specified emission standards of the rule, installing an hour meter, conducting maintenance according to a written plan, restrictions on operating the engine for purposes other than emergency use and limited (50 hours/year) use for maintenance and testing, and maintaining records to substantiate compliance with these requirements.

40 CFR 60 Subpart ZZZZ – The requirement of this rule is to establish national emission standards for hazardous air pollutants (HAPs) for existing, new, and reconstructed stationary reciprocating internal combustion engines (RICE). The rule applies to a wide range of engine types and sizes located at both major and area sources of HAPs. Depending on the engine classification (e.g., compression ignition vs. spark ignition, emergency vs. non-emergency use), the regulation sets limits on emissions such as formaldehyde, carbon monoxide, and other toxic pollutants. Compliance is typically achieved through the use of control technologies, work practice standards and performance testing or monitoring. Specific requirements are outlined based on engine type, size, fuel, and installation date, and may be further enforced through

permit conditions where applicable.

40 CFR 60 Subpart IIII – This rule applies stationary compression ignition (CI) and internal combustion engines (ICE) with requirements including purchasing a certified engine, operating it as directed by the manufacturer, and maintaining records to substantiate compliance. These requirements closely mirror the ATCM requirements, except that the NSPS is somewhat less stringent on allowable PM emission rate and contains some allowance for other types of operation not allowed by the Stationary Engine ATCM (17 CCR 93115). Permits that are used for operations subject to this rule have the more stringent ATCM applicable conditions applied.

40 CFR 60 Subpart JJJJ – This subpart applies to stationary spark-ignition (SI) internal combustion engines (ICE), with requirements similar to those of subpart IIII. These requirements include purchasing an EPA-certified engine (if applicable), operating it according to the manufacturer's instructions, and maintaining records to demonstrate compliance. The rule sets emission limits for NO_x, CO, and VOCs, and requires either certification or performance testing depending on the engine type and size. These requirements are generally aligned with California's ATCM for spark-ignition engines (17 CCR 93115), although the NSPS may be less stringent in certain areas, such as allowing greater operational flexibility for non-emergency use. Permits for engines subject to this rule typically incorporate the more stringent ATCM conditions where applicable.

9.0 Permit Shields

Encina Wastewater Authority did not request a permit shield.

10.0 Streamlining

Encina Wastewater Authority did not request Multiple Applicable Requirements Streamlining.

11.0 Updates to the Title V Permit Incorporated into this Action

In 2020, SDAPCD replaced Rule 69.4 with Rule 69.4.1, expanding coverage to all stationary reciprocating engines 50 bhp and above, including many previously exempt units. The update introduced stricter NO_x limits requiring some engines to install retrofit controls. Most non-emergency gas engines must undergo quarterly portable analyzer testing by certified operators, with a 20-day correction period for exceedances, while larger engines must use continuous emissions monitoring and annual testing. Additionally, the facilities must keep detailed maintenance and emission records. With these updates, the following permits were modified to align with the changes:

Cogeneration Engines: APCD2010-PTO-000542, -000543, -000544, -000545

Emergency Engine: APCD2008-PTO-982044

12.0 Permit Process-Public Notification and Notice to EPA and Affected States

Before issuing the final permit, The District will provide the opportunity for review by EPA and affected states and a public notice period. Notice will be provided to the EPA electronically through

the EPS and will be sent electronically to affected states and tribes. The public notice and associated documents will be provided on our website and the public notice will be published in a newspaper. The public notice contains information on how to petition EPA for review of a proposed action.

If no comments or objections are received, the District intends to promptly issue the Title V permit after conclusion of the review period. If comments are received the District will review and respond to the comments as necessary. If comments identify issues which require modification to the permit, revisions will be made and the permit either issued if the changes do not require re-review by EPA or the public, or will be re-noticed if changes are made which do require review

13.0 Recommendations

The facility is expected to comply with all applicable requirements including those cited in the current District permit as well as those under District Rule 1401 and 40 CFR Part 70. Therefore, the recommendation of this report is for the subject Initial Title V permit to be issued following public notice, EPA review, and response to any comments.

14.0 Attachments

The following are attached:

- Application Package
- Draft Permit
- Public Notice
- Emission Calculations